

A Lucky Start

If life is like cricket, then chance matters a lot in a successful career

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IS landing a good first job a matter of luck or ability? Is the playing field level between somebody who graduates in a boom and somebody who graduates in a recession? And how long-lasting is the impact of a good first job on a person's career? These questions are central to societal notions of fairness. If, for example, software mogul Bill Gates's wealth were solely a matter of luck, then there would be little harm in redistributing it to the less fortunate. But if successful careers reflect only hard work and ability, then high levels of taxation would be both unfair and inefficient.

The labor literature has found that obtaining a good first job yields many long-term career benefits, such as higher lifetime pay and status. If people were assigned first jobs randomly, this would imply a large role for luck in determining long-term career outcomes. But people are not assigned first jobs randomly. Those perceived to have high ability are likely to receive good initial job placements, and, to the extent that these perceptions are correct, are also likely to have successful careers. Because intrinsic ability is hard for the economist to observe, identifying the extent to which luck matters in labor markets is difficult.

Sports, and in particular, international test cricket—a contest between two national teams that stretches over five days—provides an ideal, if novel, context in which to study the relative importance of luck in career outcomes. Performance is observable and easily measured. The stakes are high, positions in national teams scarce, and success yields large payoffs. Moreover, in the case of test cricket, performance depends not only on ability, but also on familiarity with local geographic and atmospheric conditions, which vary widely and systematically across the nations that play test matches. We used data on all test cricketers who debuted between 1950 and 1985 to isolate intrinsic ability from luck for those playing their first test series. We did so by examining information on whether the debut series was played at home or abroad—which is unlikely to be influenced by the debutant and is largely a matter of luck.

Home sweet home

We find that playing at home has a large and significant beneficial impact on a cricketer's performance in his debut test series and that his first-series performance has a major impact



Cricket test match between South Africa and Australia in Cape Town.

on his career productivity. For batsmen, playing at home raises the debut series batting average by an enormous 33 percent. For bowlers, the defensive players who throw the ball to the batsmen, a home debut lowers the bowling average by about 18 percent—that is, the bowler allows 18 percent fewer runs for each batsman he faces (see box).

Why does the location of the debut series matter so much? To some extent it is simply the home-field advantage that accrues to the home team in any sport, but it is more than the home-crowd effect. Geographical and atmospheric factors play an important role as well. In cricket, the bowler releases the ball from a dead run and bounces it in front of the batsman, in an area called the pitch. Pitch conditions can favor one type of bowling over another, prevailing levels of humidity can influence how much the ball swings away from the batsman in the air, and sun and rain can determine the state of both the pitch and outfield.

England is renowned for aiding swing bowling, whereas the ball bounces higher on Australian pitches. Pitches in the Indian subcontinent are known to deteriorate in the latter stages of a test match and thus to aid slow bowling. Because players from any given nation are much better acquainted with their domestic conditions, the home advantage is powerful. Moreover, the advantage is likely to be greater the less exposed the person has been to international cricket. Debutants—who have spent their career to date playing domestic cricket—tend to be entirely unfamiliar with conditions abroad.

The persistent importance of good fortune

Debut performance is an excellent predictor of career outcomes. For both batsmen and bowlers, a good debut average is strongly linked with a good career average, defined in the case of batsmen as the average number of runs scored during

each “at bat,” and for bowlers, the average number of runs conceded for each batsman dismissed from play. The relationship holds not just for the full sample of players, but also for every test-playing nation individually.

A good debut performance depends on both intrinsic ability and luck. Since we are interested only in the career impact of luck, we employ a two-stage technique, called *instrumental variables*, to eliminate the influence of ability. In the first stage we study the relationship between players’ debut averages and the location of their debut. Because debut location is a matter of luck, the portion of the debut performance explained by location is then used in the second stage as an explanatory variable for career averages. This two-stage procedure isolates the impact of luck on career outcomes. If luck is *not* persistent, we should find that the debut average is unrelated to the career average. In fact we find that the relationship continues to be strongly significant, although, as expected, the magnitude of the relationship diminishes. The bottom line is that not only does luck—in the form of friendly conditions at home—influence debut performance, this impact does not disappear as a player’s international career progresses.

Importantly, our econometric strategy depends on a test cricketer’s debut location being *exogenous*, that is, unrelated to intrinsic ability. In the broader labor market that is often not the case—and seemingly exogenous initial conditions could be related to ability. For example, think of the specific stage of the business cycle as an initial condition. At first blush this may seem unrelated to the ability of a job market entrant. But a high-ability individual could defer entry into the job market during a recession by staying in school. In test cricket by contrast, it is unheard of for a cricketer to turn down a chance to play for the national team because the match is abroad. The available places on the national team are too few, the competition for available places too fierce, and the difference in compensation between domestic and test cricket too stark for such behavior to be plausible. Thus debut location is unlikely to be related to ability. It is because initial conditions are exogenous—rare in other labor markets—that test cricket is such an attractive vehicle for examining the impact of luck on career outcomes.

Why luck persists

Why is luck so persistent? The literature advances at least two possible explanations, both of which have exact analogues

Debutant, superstar

The 33 percent boost in batting average and the 18 percent reduction in bowling average that a debutant gets from starting at home represent roughly the difference in performance between a superstar and a journeyman.

For example, the great Indian opening batsman Sunil Gavaskar’s batting average was about a third higher than that of competent contemporaries such as Keith Fletcher or Larry Gomes. Legendary Australian bowler Dennis Lillee’s average was about 15 percent lower than that of his supporting bowler, Max Walker.

in our sample. First, those who perform well in their debut series—the analogue to a good initial job placement—may accumulate certain skills as a result, and these skills may bear fruit over the remainder of their career. For example, batsmen may acquire more confidence and better technique the more time they spend in their debut facing high-quality international bowlers without getting out. Those traits would continue to benefit them in future series. We call this the *human capital hypothesis*. Second, those responsible for selecting the national team may fail to make allowance for differences in debut location when deciding whom to retain and whom to drop from the test team, thereby penalizing those who debuted abroad. We call this *signal bias*. Note that the human capital hypothesis and signal bias can coexist.

We use data on which players were dropped and which retained to construct a simple model of the selection decision following a player’s debut series. We find evidence for the human capital hypothesis for both batsmen and bowlers: doing well on debut builds useful skills. Similarly, we find that selectors are prone to signal bias for both batsmen and bowlers. But signal bias is much stronger for bowlers than for batsmen. Selection committees penalize both batsmen and bowlers for debuting abroad, but they penalize bowlers disproportionately, perhaps because compared with poor batting performance, poor bowling performance is more likely to cause a team to lose, and is penalized more harshly.

Thanks to a lucky start

It would be wrong to generalize from this study to all other labor markets, but it does seem that luck plays a major role in shaping a successful debut performance, even though ability and hard work may augment that initial good fortune. Our results are therefore likely to disappoint purists from both camps—those who view success as a function solely of luck or ability. But we should add that the market for test cricketers differs from other labor markets in ways that should *reduce* the role of luck, not increase it. Consider that for those who select the test team, player performance is easily measurable, and differences in conditions in different countries are well known. In addition, the effort required for meticulous screening is presumably very low compared with the importance of getting the decision right. Nonetheless, selection committees appear to systematically penalize both bowlers and batsmen for the misfortune of debuting abroad—and systematically penalize bowlers more than batsmen. It would therefore seem likely that similar biases are widespread among employers of all kinds, for whom performance metrics are more ambiguous, differences in initial conditions harder to judge, and the decision itself unlikely to be second-guessed by millions of opinionated fans around the globe. ■

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This article is based on a forthcoming IMF Working Paper, “What Can International Cricket Teach Us About the Role of Luck in Labor Markets?”