

Production versus years of experience

Part I: How long will Sidney Crosby take to reach his full potential?

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This series of articles explores the progress in productivity of NHL hockey players over time. The results are of interest not only for hockey organizations, but also for some hockey pools since the question often arises as to when a young player should be drafted.

Instead of looking at the production as a function of the player's age, we will take a look at his productivity with his NHL experience. This article focuses on forwards.

Correction factor

Before going into the results, it is important to mention that productivity in the NHL, like most stats, tend to vary over time. Changes in rules are a major factor for these fluctuations. For example, an additional 1.5 goal, on average, was scored per game in 90-91 than in 02-03. So it's not fair to equate players like Petr Klima (40 goals in 90-91) and Dany Heatley (41 goals in 02-03). Figure 1 shows the average number of goals scored per game over the last 16 NHL regular seasons. This is a good representation of the offensive statistic over the seasons.

Results

Figure 2 shows the point productivity of the best forwards in the 2005-06 season normalized to the average productivity for each year (Fig. 1). The best players are those with an average of 1 point per game or more during the 05-06. Rookies and players with less than 10 games played during that season were not considered. It is important to note that our definition of "year of experience" is defined as a season in which the player played a minimum of 10 games in the NHL. The 2004-05 lock-out didn't count as a year of experience, nor a season loss due to an injury or a season that was played in another professional hockey league.

Figure 1: Goals per game per season, from 1990 to 2007

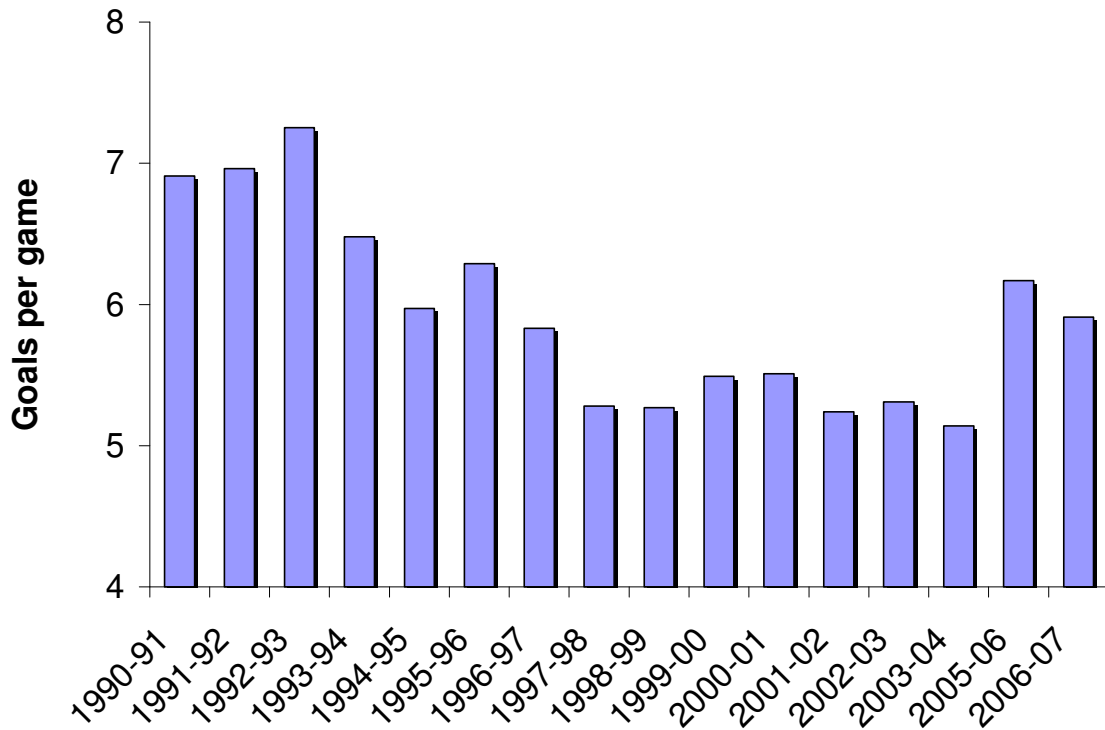
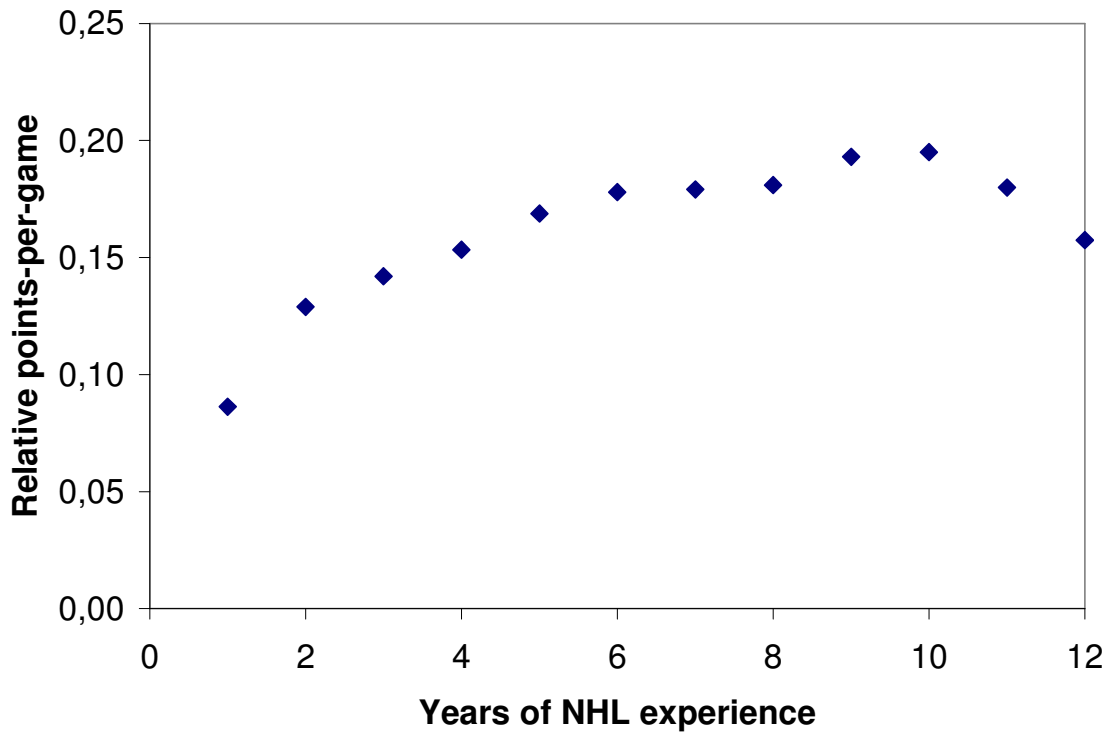


Figure 2: Forward production per years of NHL experience



A clear trend is observed, but it's clearer than it's logical. The rookie years (1 to 3) are due to several possible reasons. Rookies tend to play on the 3rd and 4th lines of the team. They need adjustment to the quick, hard level of the NHL. By the 4th to 8th years of experience, the players clearly made the team and will have more ice time and powerplay time. Eventually, the more years of experience, the older the player gets and a decline can be observed. Notice the peak is around the 9-10 years mark.

Points per game may not be the only important factor to some, however. Remember that in a fantasy pool, it's usually better to have a player that plays 80 games with 0.5 points per game than one that plays only 30 games but reaps 30 pts. In our calculation, since players who played different number of games count equally, injury-prone and older players can make the PPG average higher.

Quick conclusion

We have shown that the peak for production in forwards is around 9-10 years, and that forwards with 4 years of experience should be on the radar of hockey pool managers. According to this, Sidney Crosby would reach his full potential in the 2012-13 NHL season. The older players get, the more that it's important to take in account the number of game played. These older players would be best for pools where managers can choose if a player can play or can be benched.