SKILLS IN SPORTS BETTING AND THEIR POTENTIAL DOWNSIDE

An in-depth analysis of "Prediction skills" and "Betting skills" in Sports Betting. Examination of the psychology of skills in sports gambling and the illusion of control over bets.

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It is widely accepted among experts and gamblers that **sports betting is a game of both skill and luck**. Skills cannot influence luck itself, but the entire course of one's gambling activity and its overall value. This principle applies to games that allow such an influence and sports betting is definitely among them.

In this article, we shall see what the **kinds of skills in sports betting** are and how – paradoxically – some skills can have negative effects on the player rather than improving prediction and expected value.

SKILLS IN SPORTS BETTING VERSUS SKILLS IN CASINO GAMES

Results in sports betting ultimately depend on chance, like the results in casino games:

> *Whatever strategy is used and whatever skills are in force for the player, the final outcome of the game – whether we talk about a number, a combination of symbols, a configuration of cards, or the result of a match – is the effect of one or more* ***random processes****.*

Even though some outcomes are more probable than others, none of them are predictable with certitude, and all occur by pure chance.

Yet when it comes to skills, **sports betting differs significantly from the other games of chance**. The reason is about information:

> *When betting on a number or set of numbers in roulette, the only available information for the player is that all numbers have the same chances to occur at the spin; that's probabilistic (stochastic) information.*

On the contrary, **when betting on the result of a match, the information available is NOT theoretical**, but concerns all real-world past and present constitutions of and events related to that match; that's **deterministic information**. Skills in sports betting concern the acquisition and management of this deterministic information and its use in betting.

This comparison is a good opportunity for making the distinction between strategy and skill:

> *Whatever game is concerned, strategy is the set of choices we make in regard to the bets we made in a play or over a period of plays, while skill is the ability and capacity we have for putting into practice a certain strategy.*

For instance, playing blackjack with the high-low strategy assumes the ability to card counting, memorizing, and of course knowing about that strategy and how it works. In sports betting, this ability concerns not only the strategy of betting but also the **prediction of certain events**. This is why **skills in sports betting are of two main kinds: prediction skills and betting skills**.

PREDICTION SKILLS IN SPORTS BETTING

Every game of chance has something specific that makes it unique and desired. In sports betting this element of strength is informed prediction and the extended possibility of choice. Indeed, **searching for and analyzing information in order to make accurate predictions** for the events in a given market is a "second game" offered to bettors at no cost beyond that of placing their bets. Then, the bettor is able to choose from the wide palette of sports bets offered those that match their information and analysis. This is a feature that we won't see in casino games.

Here are the main prediction skills one can have or develop in sports betting:

Getting Organized

Getting organized is a general skill required for prediction in sports betting. Sport is a data-rich phenomenon, and the environment and management of that data assume the quality of being organized as a person and the ability to organize the data into collections, categories, and by **objective criteria** in order to have smooth access to and effective use of it.

Getting Informed

Getting informed about the events surrounding your favorite markets is the means by which you acquire useful information yourself. This includes but is not limited to **watching sports news, match chronicles and analyses**, and even tabloid media. A well-informed bettor will also consult the statistics associated with a given team or player over a past period.

Honing your Analytical skills

Analytical skills are required for extracting from the entire information acquired the precise data that you will use to make your predictions. Such skills assume **recognizing patterns**, making relevant associations, and interpreting correctly the relation between causes and effects. When statistical data are used, analytical skills revert to a more specialized form, namely statistical skills, which include mathematical analysis of data and statistical inference.

Developing a Specialty

Developing a specialty by focusing on a particular segment of the betting market is a way of saving your time and knowledge resources for acquiring information relative to a limited number of events to bet on. This focus leads to the acquisition of the largest possible information about that segment and implicitly the most relevant data to use in predictions. The chosen specialty may be further extended to other markets, when completed.

Looking for Value

Looking for value in sports betting means taking those bets for which the bookmaker's odds are better than the **"true odds"**. These latter odds are actually your more or less objective predictions made as a result of using the previously mentioned skills. In terms of game theory, it is a way of maximizing the expected value. Since it is a matter of choice, we could fairly take it as a general strategy, per our definition of strategy in the previous section. However, we can also qualify it as a skill in this particular case of sports betting, because it involves the ability to search, observe, compare, and select.

What all these skills have in common is actually their ultimate goal, that of **coming to accurate predictions** regarding the events to bet on. But such predictions cannot be certain, as otherwise, the betting game would no longer exist. In fact, they are not predictions, but allegedly objective measurements for the likelihood of an outcome or another. When a bettor's estimations based on personal analysis differ by a certain amount from the bookmaker's odds and the bettor is confident in their estimation, that event is considered worth betting on. It is the principle of maximizing expectation, which stands as an objective strategy in any game of chance.

BETTING SKILLS IN SPORTS

Betting skills concern the act of betting itself but are still related to prediction. They amount to one's ability to **set up their own bets by using expert knowledge**. This ability includes:

- computing odds for multiple bets, potential profits, and losses, comparing odds between several variants of multiple bets
- interpreting the odds in terms of the likelihood
- distribution of the selected events on the bets according to a personal strategy (including setting-up limits for the number of events in multiple bets)
- setting up strategies for medium- or long-term betting with respect to the stated goals
- management of the bankroll such that to meet the criteria of the chosen strategy and not enter a risky phase of going bankrupt or with a high overall loss

Such betting skills assume a good grasp of the basic mathematics of betting, computational skills, and in general analytical skills, which are also listed in the category of prediction skills.

It is important to note that in sports betting either prediction skills or betting skills or both **do not guarantee success by themselves**. First, as in any game of chance, the luck factor is decisive. Second, as we saw, the skills serve as a strategy for betting, and in sports betting such strategies are all subjective, relative to the bettor's personal goals and funds. In sports betting there is no mathematically optimal strategy, such as in blackjack for instance, but even in this latter game optimal strategy does not ensure absolute success:

> *It is just the best possible strategy to minimize loss and maximize skills over the long run.*[1]

And yet skills in sports betting differentiate the average bettor from the professional bettor. They say **professional bettors are those who get 55-60% returns of the time**. It's a fair threshold for putting that label on them, and skills seem to be responsible for what exceeds 50% or less.

Skills themselves are a prerequisite for professional betting in sports, but you will be surprised to find that they are also a risk factor. One may fairly ask how it's that skills account for objective strategies, which minimize loss and maximize profit, but yet can carry a risk.

The risk does not lie in the skills themselves, but in the cognition of the skilled bettor relative to their skills.

THE PSYCHOLOGY OF SKILLS IN SPORTS BETTING

Psychology deals with gambling in a field called problem gambling, having connections with several areas of psychology – **cognitive, addiction, and behavioral psychology** – and also psychiatry. In problem gambling, all games of chances – including sports betting – are investigated in various aspects, and the main object of investigation is some **cognitive distortions that gamblers have or develop with respect to the perception and understanding of their gambling activity**. Such distortions are recognized by psychologists as risk factors for developing problematic or pathological gambling behavior.

Skills in sports betting are as well something that problem gambling researchers have investigated, and the first question they posed is whether these skills are real or illusory. An extensive empirical study was carried out in 2004 by researchers at the University of Laval (Canada) on a population of expert hockey bettors[2].

> *The results showed that expert bettors have a greater accuracy rate when picking the results of the games according to their skills than by chance.*

However, expert bettors did not achieve significantly higher monetary gains when relying on various bits of information than by chance. A past study on horse betting came to similar results and other future studies confirmed them.[3]

The results of all these experiments suggested that there are good chances that the so-called "skills" of the sports bettors are cognitive distortions. As such, psychologists related the skills in sports betting with a frequent cognitive distortion specific to gambling, namely the illusion of control.

In problem gambling, **the illusion of control is defined as one's expectancy of a personal influence on the outcome of a bet** (including choosing a bet) by means of a kind of skills or specific actions, despite the random character of the outcomes.

The illusion of control can manifest in almost every game of chance or skill & chance. Even in slots, there are machines having a stop button, which, when pressed, gives players the sensation that they could stop the reels in a certain favorable position, although the outcome is generated by the RNG (random number generator) even before the spin ends. By hitting that button at a certain moment, slot players may have the illusion that they have control over the outcomes of the machine.

In sports betting, the illusion of control of a bettor is equated with the bettor's over-confidence in their skills. Let's see what this overconfidence means and what it may entail.

ILLUSION OF CONTROL IN SPORTS BETTING

When using their prediction skills, bettors try to input the information they acquire by their own research into the "equation" of the likelihood of a sports event happening. With this personal assessment, they may either come to different odds than the bookmaker's for a certain event or confirm those odds. In the former case, the information is used to bet for higher odds in the bookmaker's line, while in the latter case to stay with the lower odds or perhaps change the selection.

For instance, in a soccer match with a line of 1.55 for 1 (hosts win), 3.20 for X (draw), and 7.50 for 2 (visitors win), if the bettor finds information that they think is relevant in predicting the outcome (let's say the two most valuable strikers of the hosts have flu and no many people know that), the bettor might believe in a draw and bet accordingly.

Bettor's confidence in their own skills manifests at two moments:

> *First when acquiring and using that particular information and second when betting.*

But why we talked about **over-confidence**? The confidence may turn into over-confidence in two situations following the two moments mentioned before. One is the happy event that the bettor's prediction fulfills. In this situation, the bettor may come to be sure that the information and skills they used were determinants for the outcome, and using them again is the best strategy.

The other is quite surprising.

> *The situation in which bettor's prediction fails, but the course of the match was such that the predicted result was nearly to happen, but it actually did not due to minor circumstances.*

Such a situation can also lead to bettor's over-confidence in their prediction skills and the belief in their effectiveness in future betting. In problem gambling, such a situation is called the near-miss effect and is the player's erroneous belief that the outcome was a near miss rather than a loss, making them continue gambling to chase returns.

Both the illusion of control and the near-miss effect lead to reinforcing the over-confidence in skills, even though no one is convinced that such skills rule over the luck factor.

But why does over-confidence in skills occur?

Any person reflexively tries to find a **cause-and-effect relationship in every situation**; we always look for an explanation for feeling our reasoning "safe". It is an evolutionary feature strongly embedded in our inner biological structure. Moreover, people always love to have some sort of control over things they do, and betting on sports is not an exception. People have that inborn natural feature of desperately trying to find a correlation where there is none, especially when the personal choice is involved. The personal choice itself tricks our brain into the irrational belief of having a sense of control by it.

Sports betting is more predisposed to over-confidence in skills than casino games, due to the nature of the game.

SO, ARE SKILLS SOMETHING BAD IN SPORTS BETTING?

Not at all. Skills in themselves are not something bad.

> *There is nothing wrong in collecting and using information, as well as nothing wrong in knowing the math of the betting game.*

It would be worse not to have these skills, as one having them is more protected against several other cognitive distortions and misconceptions specific to betting. Besides, skills and using them are what makes this game enjoyable.

The problematic side of skills occurs when we get over-confident in our prediction skills.

A sports event is governed by many physical factors that cannot be even accounted for, nor measured in their effects. Information cannot be used to reason deterministically about the outcome, but at most to assess chances in terms of likelihoods. When we bet on a certain outcome, and it occurs we have no evidence that it is the way it is as a result of our prediction or that is just a coincidence.

Statistical reasoning – part of the prediction skills – is not an absolute, nor infallible method of prediction. Although used as a scientific method in sciences, statistics can only measure, and suggest hypotheses, but it cannot make deterministic predictions. And if someone makes such predictions, they cannot be validated even when they are fulfilled.

For instance, if you have observed and recorded in the history of two teams that when two certain players of a team played together in a certain system that team always won against the other, you will perhaps use this information to bet on the victory of that team when those conditions are met again. It is called **extrapolation**. If you win the bet, you will never know if that happened because of your statistical skills or just, say, because it was a rainy day and the loser team does not play well on wet ground. Hence confidence in your skill cannot be validated and implicitly over-confidence is an error. It is not just a theoretical error, but it can have negative monetary effects reflected in further losses or overall loss.

The world seen as a "**statistical world**" is different than the real deterministic world and both statistics and probability theory can be "tricky" for those unfamiliar with their concepts.[4] We must rely on skills in sports betting with precaution and resist the impulse of growing our confidence in them, just because the effectiveness of such skills cannot be assessed in either successes or failures, even though our brain might have another "opinion".

REFERENCES

- 1. Barboianu, C. (2022). Understanding Your Game: A Mathematician's Advice for Rational and Safe Gambling. Targu Jiu: PhilScience Press.
- 2. Cantinotti, M., Ladouceur, R. & Jacques, C. (2004). Sports Betting: Can Gamblers Beat Randomness? Psychology of Addictive Behaviors, 18(2), 143–147.
- 3. Mallios, W. S. (2006). Modeling concepts. In The analysis of sports forecasting: Modeling parallels between sports gambling and financial markets (pp. 25–52). Boston: Kluwer Academic.