

Ranking Systems Turn Winners into Quitters

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ABSTRACT

Markets, societies, and people’s lives are filled with competition. In competitive environments, individuals pursue multiple objectives. In addition to tangible stakes like prize money, people compete to gain the good reputation that comes from winning and to avoid the embarrassment that comes from losing. In many contexts, reputations are measured and reinforced by ranking systems. In particular, a reputation as a winner can be damaged by losing to an opponent with a worse ranking. Quitting provides an easy way to avoid a complete loss, and often implies extenuating circumstances for being unable to continue. Because of this, quitting could be more attractive to people who face opponents with worse rankings and wish to avoid the reputation damage that would accompany a loss. Our research shows that:

- People use rankings to form expectations about performance.
- People regard losing to an opponent with a worse ranking as more aversive than losing to an opponent with a better ranking, even when the stakes are otherwise equal.
- Quitting can be attractive because it implies an excuse for not winning.
- Quitting is more attractive to favorites than it is to underdogs.

INTRODUCTION

Rankings: Ranking systems are commonplace in a variety of contexts. Examples abound: universities, hospitals, restaurants, and firms are routinely ranked on the basis of relative quality (see for example Pope, 2009). Sports organizations routinely rank individuals. Firms also rank individuals as a performance incentive (Bandiera et al., forthcoming).

Quitting: Individuals and organizations constantly face decisions about whether or not to quit. People quit jobs, dispose of investments, resign from offices, emigrate from countries, abandon relationships, and in general make the decision to quit in a wide variety of situations throughout their lives. The causes of quitting are not fully understood.

Impression Management: Impression management is the process by which people control the impressions that others form of them (see Leary and Kowalski, 1990). There are many prominent instances of impression management: the multi-billion dollar worldwide cosmetics industry, highly-paid image consultants employed by politicians, and specialists and whole departments for managing publicity and public relations for individuals and firms.

METHODS

Study 1: We conducted interviews at a women’s collegiate tennis tournament in September 2013. Athletes from 15 universities in the northeastern United States attended the tournament. We conducted interviews (N=19) with athletes (n=16), coaches (n=2), and the tournament’s appointed trainer (n=1). We asked participants questions from a pre-selected set. We adapted questions based on responses. We also adapted questions for the coaches and trainer who were interviewed. The interviews ranged from 3 minutes to 9 minutes in length.

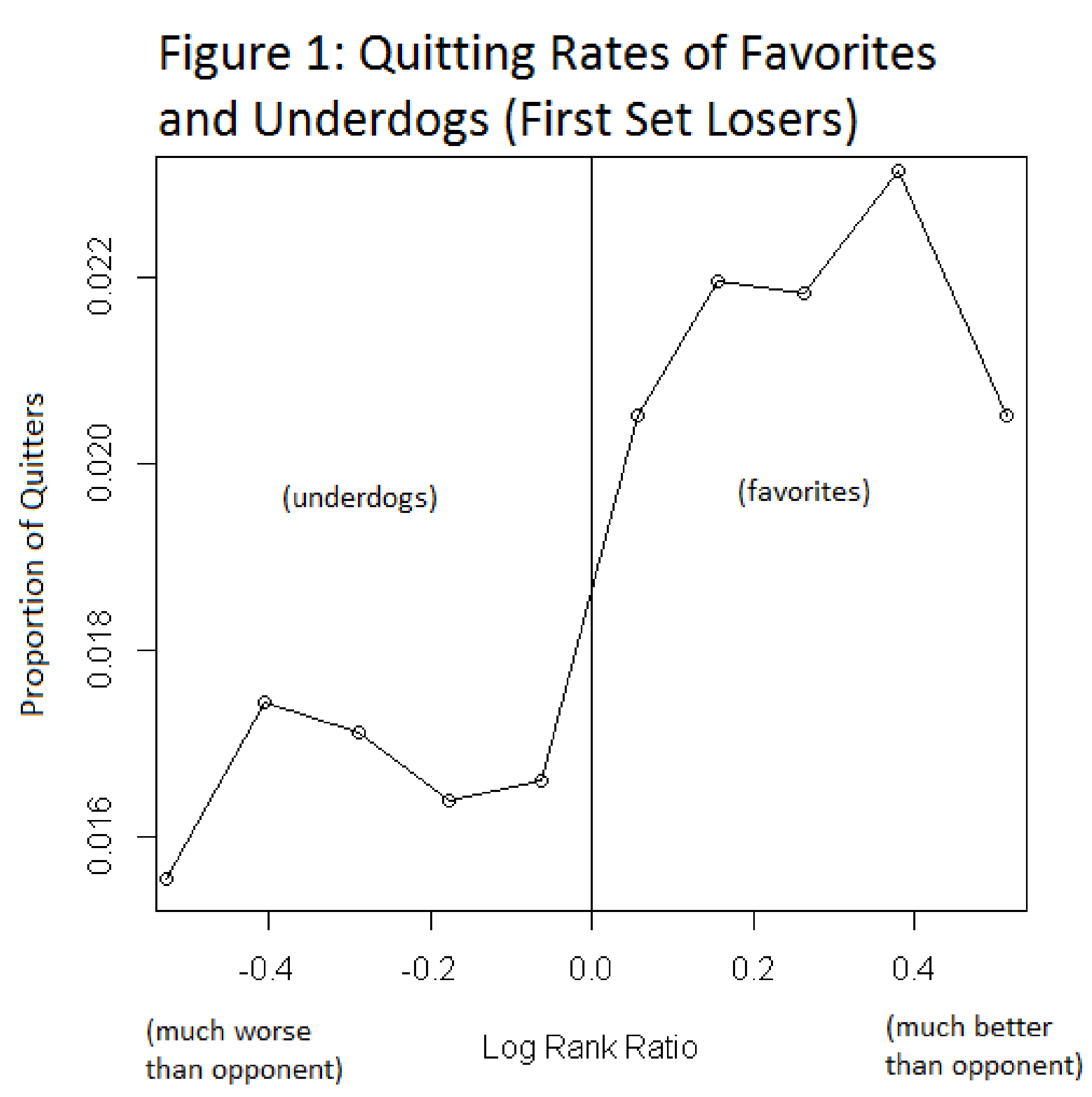
Study 2: We analyze match outcome data from professional men’s singles tennis matches over the period 1973-2011 (N=328,425 matches). We use a regression discontinuity design to show that being the favorite to win a match (having a better rank than one’s opponent) causes a significantly higher likelihood of quitting, even controlling for other factors including mid-match scores. Using match outcome data, we rule out alternative explanations based on discontinuous skill levels or self-selection.

RESULTS

Study 1: interviews with varsity collegiate athletes yielded support for our theoretical argument. The table below shows some highlights from the quotations we collected.

Table 1: Quotations from Varsity Collegiate Tennis Players	
Topic	Example Quotations
Retiring to Avoid Loss	There was one girl in my section – no names – that would, anytime she would start to lose, she would physically get sick on the court, and retire. It would happen every single tournament. [Interviewer: you mean she would throw up?] She would throw up. [Interviewer: she would induce herself to throw up?] Pretty much. She wouldn’t stick her fingers down her throat or anything, but she would get either so worked up to the point where she would get sick and pull out, or, I don’t really know. That was definitely crazy. (Athlete 12)
The Importance of Rankings	[Rankings are] something that a lot of people think about... I definitely knew my ranking, just from my parents, or other people, they would tell me... Even if I didn’t check, I would still know, it’s one of those things that everybody knows. (Athlete 6)
Using Rankings to Form Expectations	[Before a match] you would look up your opponent, you could see their recent record, what their national and state rankings were. I would usually check that out to get a sense... (Athlete 12)
Being a Favorite vs. Being an Underdog	If the person is worse than you, you definitely have a little more pressure on you, because you “need” to beat them, but then when they’re better than you, you can just go out there and play your game and play however you want to play, because you don’t have the pressure on you, the other person does. (Athlete 9)
Reputation Damage after Losing to a Worse Opponent	Friends of mine, they’re like “oh my gosh, this girl lost to this girl, I can’t believe she beat her”... it’s a big deal. Tennis is such a small community that word spreads. If you have a big win it’s a big deal, a big loss is a big deal. Everyone wants to know what’s going on with you, and what other people are doing. (Athlete 5)
Retiring as an Excuse for Not Winning	[Retiring] is kind of a way out because you can say “oh I lost because.” It’s not “I lost because the girl was better than me,” it’s “I lost because I’m hurt,” or “I lost because I couldn’t play anymore.” (Athlete 11)
The Whole Story	If [players are] losing to someone that they don’t think they should be losing to, they’d rather make it seem like they’re injured and they can’t keep playing or they’re sick and they can’t keep playing, almost as an excuse as to why they were even down in the match, rather than just losing completely and making it look like the other person is better than them. (Athlete 12)

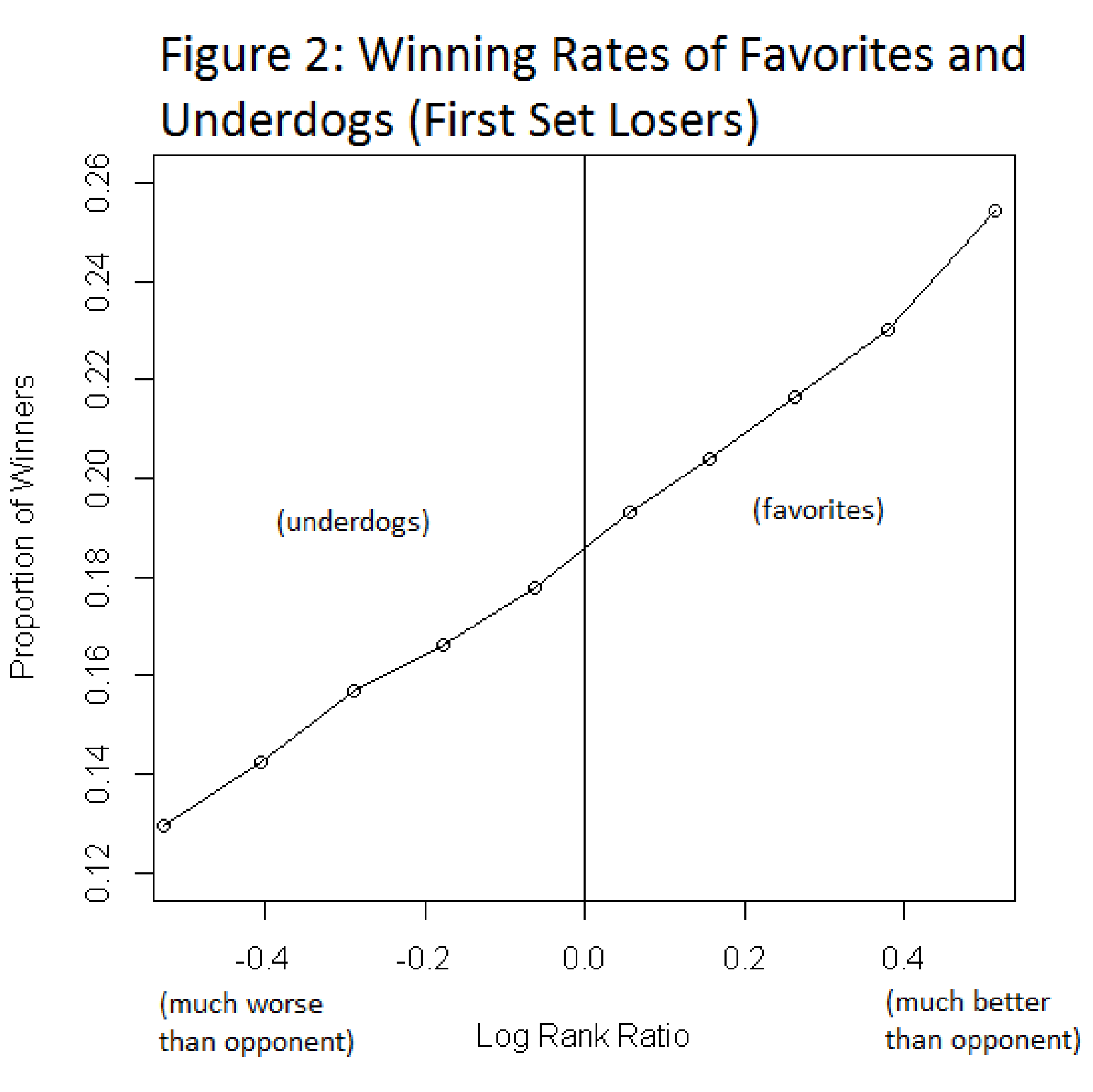
Study 2: Analysis of match outcome data from men’s professional singles tennis matches showed that among first set losers, favorites quit significantly more often than underdogs.



A linear probability model confirmed the existence of a discontinuity in quitting rates between favorites and underdogs ($p < .01$). The discontinuity exists when considering only first set losers, as well as when considering all matches.

ROBUSTNESS CHECKS

The discontinuous difference in quitting rates between favorites and underdogs is not driven by a discontinuous difference in skill levels. As the following figure shows, probability of winning changes smoothly between underdogs and favorites:



We found no evidence for discontinuities in quitting rates at other thresholds. We also found no evidence for self-selection.

DISCUSSION

This research highlights an important downside of ranking systems: that by creating favorites and underdogs, they make quitting more attractive for favorites who want to avoid the reputation damage associated with losing to a worse opponent. In other words, we found that ranking systems can turn favorites (the usual winners) into quitters. In contrast to previous research, we found a downside of ranking systems that affects favorites rather than underdogs.

Another outcome of this research is a demonstration of a novel cause of quitting. We found that high expectations can lead to quitting because favorites are more motivated to avoid complete losses.

This research has implications for firms designing performance incentives – ranking systems can cause favorites to quit and so should only be implemented with caution. This research also has implications for competitors who are favored to win – they should avoid putting undue weight on impression management concerns.

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