

# Honest Answers to Embarrassing Questions Assessing the Frequency of Doping

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# Problem: Description of the subject “doping”

1. At which rate do elite athletes use „doping“ during their top-level career?
2. At which rate do elite athletes use „doping“ in the actual season?

# Problem: Description of the subject “doping”

Sources for estimation so far:

1. Speculation: „doping is an issue in every sport, at almost every level“
2. WADA-Statistics of adverse analytical findings

Year	2003	2004	2005	2006
Tests	151,210	169,187	183,337	198,143
Positive [%]	1.62	1.72	2.13	1.96

3. web-survey (Pitsch, Emrich & Klein, 2005, 2007)

# Experience the Randomized Response Technique

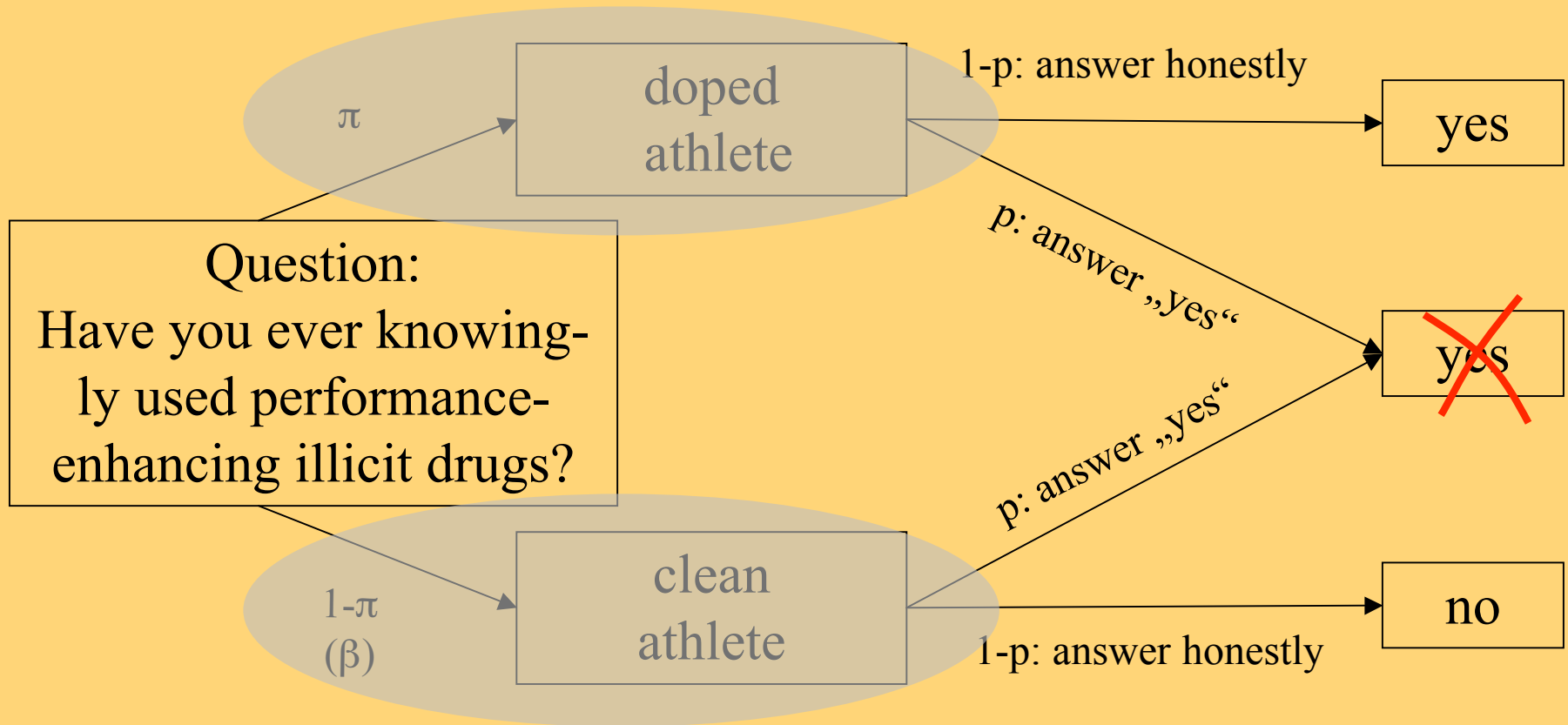
## Question:

Have You ever evaded tax?

If You were born in **January, February, March or April** please **answer “yes”** no matter if you haven't ever behaved in that way.

If You were born in **any other month** please **answer honestly**.

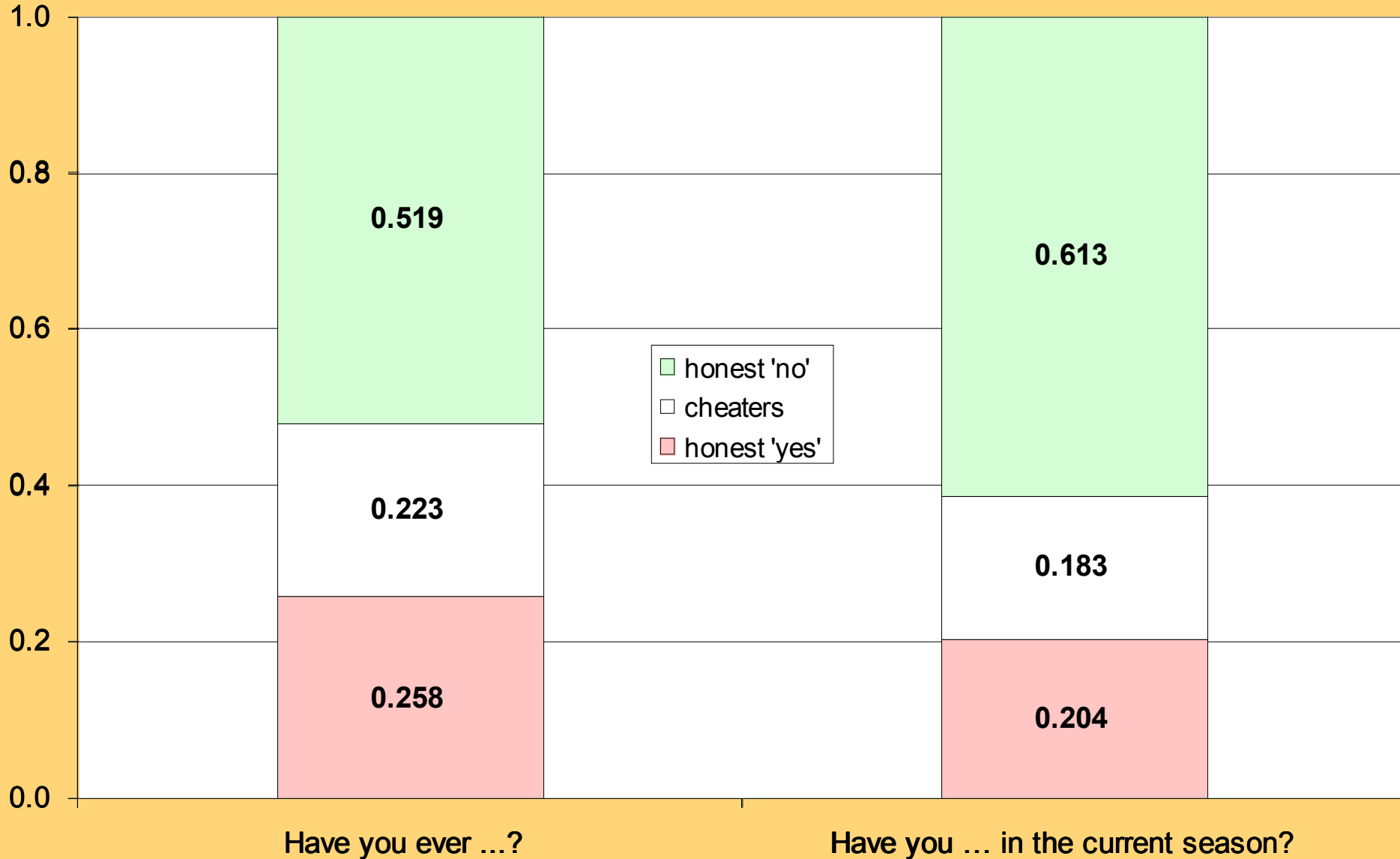
# Method: Randomized Response Technique



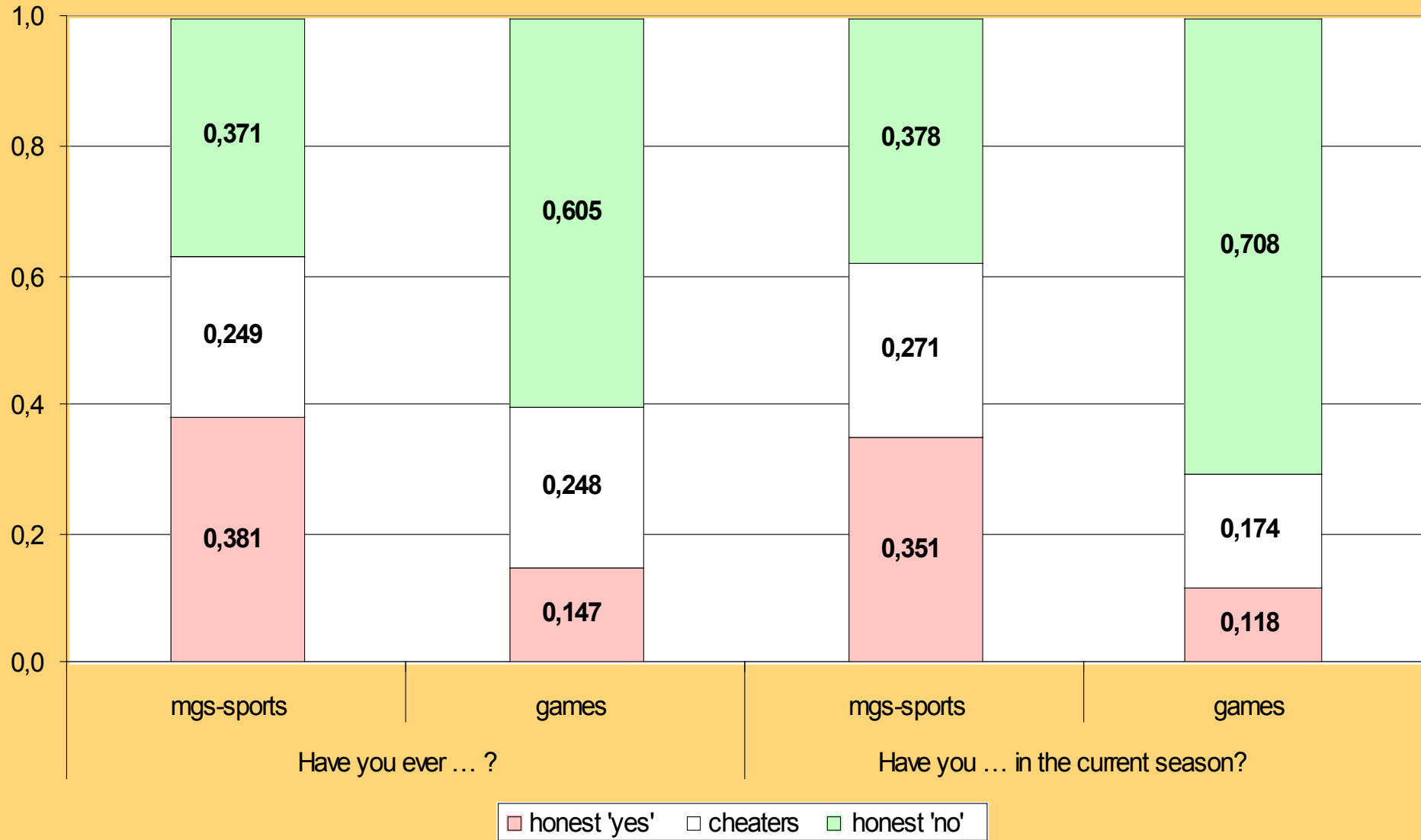
# Survey: doping Frequencies in elite Sports in Germany

- Web-Survey
- Randomized Response technique with “cheater detection” (Clarke & Desharnais, 1998)
- Pyramid (or: snowball, respondent-driven) e-mail sampling, starting from the Speakers in Athletes Commissions in Olympic Sports
- Records: 586
- Exploitable records: 448

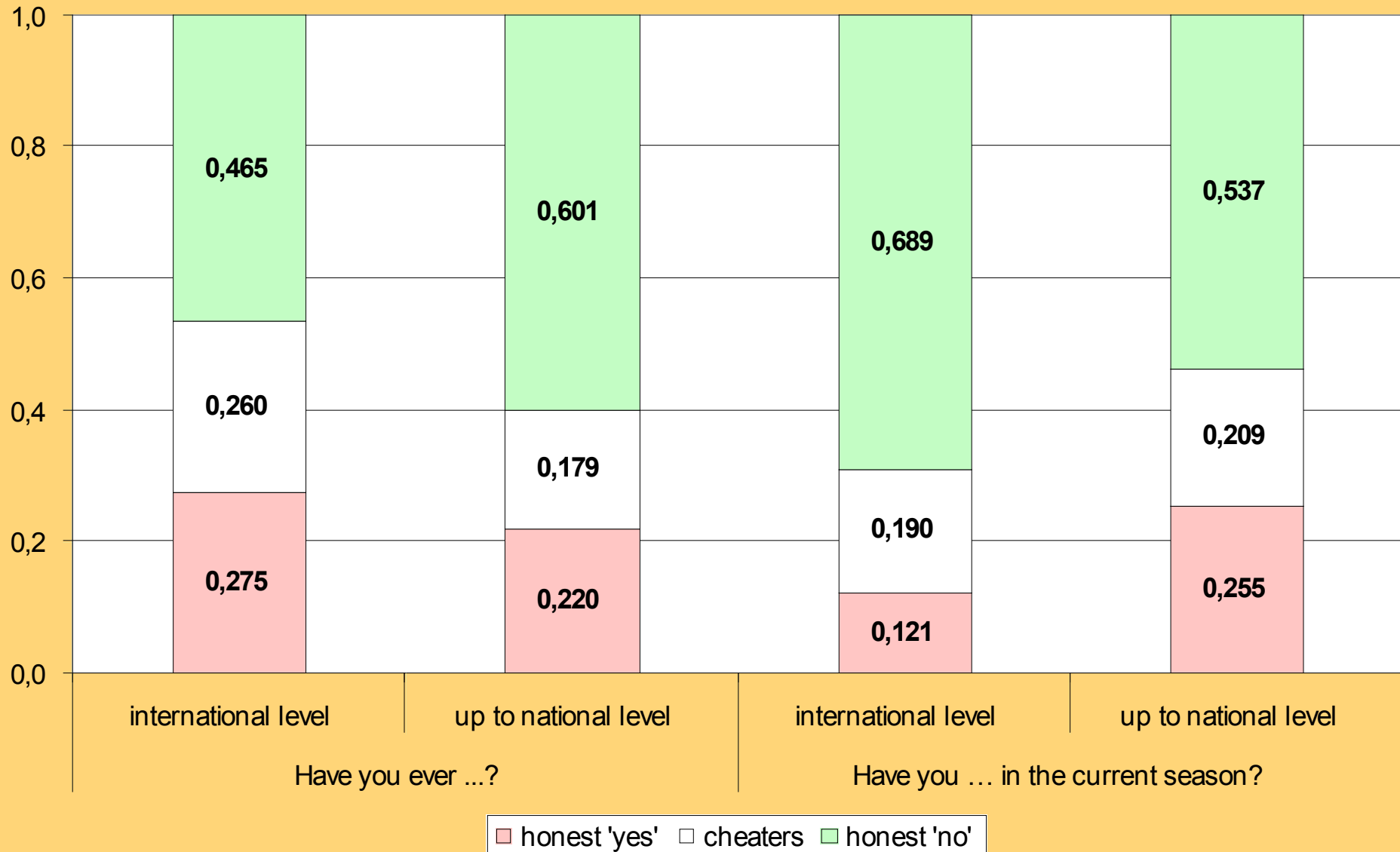
# Results



# Results broken down by kind of sport



# Results broken down by level of competition



# How to serve anti-doping with RRT-surveys?

Yet Anti-Doping Programs lack ...

- ... a proof of effectiveness, especially concerning doping in elite sports,
- ... a measure of efficiency.

# Assessing the frequency of doping to serve Anti-doping

RRT-based Internet-surveys may serve anti-doping ..

- by providing a baseline estimation from which effectiveness and efficiency can be estimated,
- by providing evidence of effects of anti-doping programs in the future, and
- by helping to prevent from a (possibly economically driven) legitimacy crisis.

# Work in progres

- Assessing the frequency of doping among different national collectives of elite athletes in Europe.
- Providing the methodology for better estimations in “doping subcultures”.
- Assessing the frequency of drug abuse in recreational sports.

Thank you very much for your  
attention

# References

- Clark, St. J. & Desharnais, R. A. (1998). Honest Answers to Embarrassing Questions: Detecting Cheating in the Randomized Response Model. *Psychological Methods*, 3, 160-168.
- Pitsch, W., Emrich, E. & Klein, M. (2005). Zur Häufigkeit des Dopings im Leistungssport: Ergebnisse eines www-surveys. *Leipziger Sportwissenschaftliche Beiträge*, 46 (2), 63-77.
- Pitsch, W., Emrich, E. & Klein, M. (2007). Doping in elite sports in Germany: results of a www survey. *European Journal for Sport and Society.*, 4 (2), to appear.

# Sample

Sport	Number	mgs-sports	
Cycling	117	Number	249
Weightlifting	61	Percentage	57,9
Baseball	40	games	
Hockey	33	Number	149
Softball	33	Percentage	35,7
Track and Field	20	artistic sports	
Basketball	18	Number	13
Swimming	17	Percentage	3,1
Sailing	12	martial arts	
Handball	10	Number	6
Others (n<=5)	57	Percentage	1,4