

MATCH-FIXING: SOCIO-ECONOMIC AND PSYCHOLOGICAL FACTORS

Žilvinas Muraška, Audrius Šimkus

Vytautas Magnus University

Abstract. The topic of this article is Match-fixing: socio-economic and psychological drivers. The topic's relevance lies within the core principle of sports: fair competition between teams or individual athletes. The research problem: what are the socio-economic and psychological factors that drive individuals to engage in match-fixing? Socio-economic and psychological factors were identified as the research's object. The aim was to research and review relevant literature about cheating in sports, which would help define those driving factors. The research method used in this article is a literature review. Across the research, the most common reason for involvement in match-fixing was personal or financial gain. The second most common reason was to help others, either family, friends, or elders. Threats from gang members, peer pressure, and the commonality of such behavior in the environment were also mentioned as driving factors to get involved in match-fixing. Some scientific articles concluded that the older the athlete, the less the probability she or he has of being involved in match-fixing. On the contrary, other articles came to a different conclusion and stated that younger athletes have a higher chance of being involved. Moreover, while a certain article concluded that the athletes' skill levels and justification of match-fixing do not correlate, another drew a conclusion saying that more successful athletes are less likely to engage in match-fixing activities. Some scientific articles considered differences between genders. It was found that Lithuanian men justify illegal behaviors more than women, and Australian men are more likely to be involved in corruption than women. However, this could be viewed as a universal trend, because no evidence of gender differences was found among other countries. Scientific articles stated that there is a gap in understanding the characteristics of people involved in match-fixing activities and a lack of studies based on testimonies and interviews with athletes who were involved in match-fixing or know someone who has been involved. Studies that would use primary research data mining methods to acquire first-hand observations, emotions, and knowledge could be beneficial to further examine socio-economic and psychological factors that drive individuals to engage in match-fixing and could help to better understand their characters.

Keywords: cheating, corruption, match-fixing, psychological, socio-economic

Introduction

Cheating has always been an issue in the world of sports. Nowadays, the sports industry is booming, and revenues are increasing significantly each year. According to Statista.com, revenues in the sports industry are expected to reach 112.4 billion dollars in 2024 (Statista.com, 2024). As the revenues increase in the sports industry, there are more incentives for individuals to cheat. For example, due to the rising revenues in sports, athletes might try to win by illegal means to secure more rewarding contracts and sponsorship deals. Others may try to capture the increasing revenues and popularity of sports betting companies, engage in match-fixing, and illegally bet on the games to gain a significant amount of money in the short term. Referees may also get increasingly more rewarding proposals to engage in match-fixing and try to change the flow of the game and its outcome. Cheating in sports may suggest many different scenarios – using doping to gain an illegal advantage over opponents, using inside information to place bets, illegal betting, match-fixing, faking injuries, etc. (Zaksaitė, 2012). Reasons to engage in match-fixing might arise from socio-economic factors, including crime rates, debt, employment opportunities, homeownership, immigration status, language, and quality of life, among other factors, which are also important indicators when examining someone's social status (Spacey, 2024). Psychological factors, such as exploration traits, risk aversion, risk perception, professional and personal relationships, social norms, leadership, trust, uncertainty judgments, expertise, etc., also impact people's decisions to engage in various activities (Roberts and Flin, 2019). However, there is a gap in understanding the characteristics of people involved in match-fixing (Caneppele et al., 2020). The relevance of the topic lies within the main goal of sports, which is to compete fairly against others. Match-fixing, along with other cheating methods, creates an unfair advantage for individuals or teams involved, which goes against the core principles of sports. Therefore, defining different factors that lead individuals to engage in match-fixing may contribute to tackling this problem, which would help sports be fair and transparent.

Research problem – what are the socio-economic and psychological factors that drive individuals to engage in match-fixing?

The object of the article is the socio-economic and psychological factors that drive individuals to engage in match-fixing.

The aim of this article is to research and review the literature in the area of cheating in sports, which would help to define driving socio-economic and psychological factors in match-fixing cases.

To reach the aim of the article, the following **objectives** were set:

1. To examine how widely the research problem of this article has already been analyzed, how the research methods used are relevant to this article, and what the key ideas and findings are in these works.
2. To provide findings that could help tackle the problem of match-fixing.

Research methods. A literature review methodology is employed in this study to analyze the factors involved in match-fixing.

Information sources. This article includes reviewing secondary sources available on the internet, such as books, scientific articles, and journals. This allows for gathering reliable information, which is crucial for analyzing the subject.

Psychological and Social Drivers

In 2013, Saulius Šukys conducted research called “Athletes’ justification of cheating in sport: relationship with moral disengagement in sport and personal factors”. Two hypotheses were raised for this study: 1. Moral disengagement is associated with a positive judgment of cheating in sports among sports participants. 2. Cheating in sports is related to gender, and not experience in sports. 338 athletes from Lithuanian universities were participants in this research. These athletes were from different sporting disciplines: basketball, volleyball, handball, football, track and field, and other individual sports. A purposive sampling technique was used to ensure that participants were playing sports at a higher level. The study’s participants had to answer a survey that was categorized into two parts: the first part included identifying their gender, the most recently played sport, skill level, and experience in years. The second part included participants’ explanations for cheating and moral disengagement in sports. Two scales were used to analyze the results – the justification of deception in sport scale and the moral disengagement in sport scale-short. The first scale was used by giving participants 19 cheating scenarios, who had to be evaluated from 1 to 5, whether a specific behavior is defensible or not. The second scale had 8 examples of different behaviors that needed to be rated from 1 to 7, whether a participant agreed with it or not. When analyzing results, three factors, as types of cheating, emerged, which were investigated more closely: result manipulation, rule manipulation, and opponent’s provocation. Most of the participants justified the opponent’s provocation. However, notable correlations were seen among all three factors, and the hypothesis that moral disengagement is associated with a positive judgment of cheating in sports among sports participants was accepted. It was identified that the more years of experience an athlete has, the less likely he or she is to be involved with result manipulation. However, there was a positive correlation between years of experience in sports and rule manipulation, as well as the opponent’s provocation. The study did not find evidence of participants’ skill levels correlating with any of the three types of cheating in sports. Another important finding was that males are more likely to justify and reason for illegal and unethical sports behavior. However, the athlete’s skill level and justification for cheating did not correlate (Šukys, 2013). This research is relevant to solving the research problem of this article because it identifies what kind of athletes, based on their gender, experience, and skill level, are more prone to being involved with cheating in sports. On the other hand, additional factors in the survey, such as income level, household situation, etc., could add more perspective to the research and show the bigger picture. Nevertheless, this research could act as a valuable foundation for further studies in the match-fixing area.

The article “Corruption and self-sabotage in sporting competitions – an experimental approach to match-fixing behavior and the influence of deterrence factors” was published in 2023 and written by Thomas Giel and others. The main object of this research was the relationship between bribing behavior and self-sabotage. Self-sabotage was explained as intentionally playing below one’s potential to manipulate the results in favor of external match-fixing participants. It is stated that deterrence theory has been proven to be true for other criminal activities, but in the match-fixing area, further studies are needed. There are four hypotheses raised in the study: 1. Not all participants obtain the highest financial gains. 2.1 A higher chance of detection leads to considerably fewer participants receiving bribes. 2.2 A higher financial fine leads to considerably fewer participants receiving bribes. 3. If the punishment is unchanging, growth in the chance of being caught has a greater impact on people who accept bribes than increasing the financial penalty. 4. People with greater effort-driven performance are more averse to taking bribes. The study was based on an experiment where two people had to compete in 10 rounds with one another for financial awards. One time during their competition, the contestants were offered a bribe to intentionally fail to win the round. The first hypothesis was accepted since only 75 out of 242 experiment participants took the bribe. Hypothesis 2.1 was accepted; however, hypothesis 2.2 had to be rejected. This means that a higher chance of detection has a stronger influence than potentially receiving a higher financial fine for

people not to take the bribe, which consequently confirms the third hypothesis as well. It is worth mentioning that the study concluded that being involved in criminal activity cannot be connected to risk-seeking. The last hypothesis was also confirmed by stating that the more successful an athlete is, the greater chance he or she has to win monetary prizes in the future, which reduces the likelihood of taking the bribe. One more study finding was that the bigger a person's income, the bigger the likelihood of participating in match-fixing. This was explained by stating that the more a person earns, the more relevant the money is for him or her, which leads to a bigger likelihood of accepting bribes (Giel et al., 2022). This study is highly relevant to the research problem of this article, as it covers both psychological and socio-economic factors, which lead to match-fixing or reduce the chance of being involved in it. Factors like high risk of detection, financial penalty, athletes' performance, income, etc., were important in this research and could be studied further.

In 2024, Stacie Jade Gray and R. Porreca published an article, "Explaining elite athletes' corruption behaviours: a comparative analysis of doping and match fixing". The research used a descriptive phenomenological approach – media interviews, admission statements, and testimonies. It is stated in the article that other people impact match-fixing and drug-using individuals. Society is also said to be important for impacting match-fixing. Financial gains were identified as the main motivation for match-fixing. Reducing the financial burden at the beginning rather than at the final stage of their professional career seemed important. The importance of socio-cultural motivations driving individuals to match-fixing was also highlighted. A few of the athletes talked about attitudes and beliefs regarding their careers, and also about the beliefs they have about what others expect or think is acceptable behavior. Athletes identified that the second most common reason to participate in match-fixing is pressure from others, especially teammates. A couple of athletes said that they lack moral strength. Another couple identified that they were confused. It was also stated that the theory of reasoned actions could be used for examining match-fixing (Gray and Porreca, 2024). This article provides ideas and examples that are relevant to the research problem of this article. Both socio-economic factors, such as financial gains, and socio-economic factors, such as peer pressure and confusion, were discussed.

In 2020, Stef Van Der Hoeven, along with three other authors, published an article, "Match-fixing: moral challenges for those involved". The authors used a quantitative research method and a closed questionnaire. The sample included 567 adult participants, of whom 59.4% were athletes. All the participants were associated with soccer, tennis, or badminton. The results showed that 12% of the sample were familiar with someone who had been contacted to participate in match-fixing. 5.8% of the sample were familiar with someone who had been contacted and also had been contacted themselves. Three respondents revealed that they had been contacted but were not familiar with anyone else who had been in a similar situation. In total, 36 participants were contacted to participate in match-fixing. Of them, 13 participants accepted the offer. The main reason for accepting the offer was that it would help the club, while money was left in second place. When respondents were asked about who approached the person they knew with match-fixing proposals, the most common answer was the opponent. In the second place, a club, association, or federation. Teammates were left in third place (Hoeven et al., 2020). This research is applicable and relevant to this article, due to its nature and examination of moral challenges, which could indicate both psychological and socio-economic factors. It shows that match-fixing is relevant and a commonly encountered problem. This article also identified reasons why people accept offers to fix matches and who most commonly approach individuals with such offers.

The article "Individual-level explanations of corruption within an intercollegiate context", written by Lisa Kihl, delves into the National Collegiate Athletic Association (NCAA) and examines reports of corruption that happened between 2005 and 2015. The author used a multiple-case sampling technique to fully comprehend the situation. A purposive sampling technique was used to choose cases based on various criteria. In total, 126 cases were found, and 20 cases were chosen randomly for the research. The head coach and assistant coach were two positions that committed to most offenses – 24 and 16, respectively. It was stated in the research that social relationships between spouses, coaches, athletes, and their connections to the church contributed to the establishment of corrupt networks, and they aimed to support family, similar to the K-League, where players wanted to help seniors and friends. It was concluded that these social relationships were a core foundation for participating in various types of fraud. The other explanations for being involved in corrupt activities were self-interest, personal norms, abuse of power, failure of responsibilities, and rationalizing strategies. For example, rationalizing strategies include reducing the seriousness of corruption or thinking that they are doing good for others, which makes the act ethical and acceptable. However, the author outlined that the core reason to participate in corruption is a calculated decision to achieve personal gain (Kihl, 2019). This article is relevant to this article because it includes psychological factors, such as self-interest, personal norms, etc., as well as socio-economic factors like social relationships or job roles. It also provides reasons and explanations why people engage in corrupt activities, which can be valuable for further studies concerning match-fixing and psychological, as well as socio-economic drivers.

In 2009, Vivi Alatas, along with four other authors, published an article, “Gender, culture, and corruption insights from an experimental analysis”. The authors seek to explore how men and women behave when facing bribery. They used economic experiments in Australia, India, Indonesia, and Singapore to investigate people’s views on corruption. This experiment was designed as a game, where two players could participate in corrupt behavior to increase their personal gain in a way that harms the third player. It was discovered that Australian men are more likely to participate in corruption than women. However, there was no such difference in the other three countries. Therefore, it might be a case that corruption is not defined by gender, but rather by culture. One more important finding was that men’s behavior stays mainly consistent across different countries. However, women showed a different pattern, and their behavior varied significantly across these countries (Alatas et al., 2009). This article shows that studies on corruption, which include match-fixing as well, need to consider cultures to fully understand why someone acts in a specific way. This falls under socio-economic factors, which are under investigation in this article.

Systematic Structures and Contexts

On January 27, 2017, Christian Deutscher, along with two other authors, published research called “Match fixing and sports betting in football: empirical evidence from the German Bundesliga”. The main idea of this research was to analyze the gambling and betting company Betfair’s data to look for unusual trends in bets, which could lead to evident match-fixing cases. While many actors, such as players, general managers, and other staff, could be involved in illegal betting, this research was focused on referees, since they are the main subjects of corruption, due to their powerful impact on the results of sports events and modest remuneration. Another reason for focusing on referees was that there were accidents in the past, in which people in this profession were involved in match-fixing incidents. It is also worth noting that this study focuses on a specific betting event – total goals in football games. This type of betting and manipulation does not need many participants, and therefore, it is more beneficial for each one involved. Betting data was collected from football games from 2010 to 2015. In total, 1251 games. Researchers not only used betting data but also referees’ evaluations (grades from 1 to 6) produced by a German magazine. The authors used regression models, whose results showed that betting activity for over or under 2.5 goals outcomes in matches officiated by four specific referees was higher. This result allowed the authors to accept the hypothesis that bribery may have impacted the results of certain Bundesliga football games (Deutscher et al., 2017). While this research on whether referees are involved in match-fixing is not directly related to the research problem of this article, due to its nature of analyzing betting companies’ data, it provides a few interesting thoughts that should be kept in mind while analyzing psychological and socio-economic factors of individuals involved in match-fixing. It was noted in the research that referees are the main suspects in match-fixing incidents. It was also mentioned that they have relatively low incomes and do get involved in match-fixing despite the risk of losing their careers. Additionally, evidence of potential match-fixing incidents in the Bundesliga was presented in the research. It gives a reason to examine sports referees’ psychological and socio-economic factors further, to identify who, when, and why they engage in match-fixing.

On February 6, 2020, Seungbaek Han published an article, “Match-fixing under the state monopoly sports betting system: a case study of the 2011 K-League scandal”. Based on its magnitude, the South Korean K-League scandal was groundbreaking globally. Between 2010 and 2011, 21 games were manipulated and involving 9% of the league’s players. 59 players were found guilty. The author investigated the traits of this match-fixing incident that arose within the state monopoly regime. There were also interviews conducted with one of the players who was found guilty of match-fixing and a former worker of a betting company. The state monopoly regime is known for control and monitoring, including betting companies. Therefore, people had a great chance of being caught if placing bets for fixed matches through the authorized betting company, but there was no other option since companies in the black market were unreliable and often did not pay out the winnings. As the convicted football player said in the interview, they did not have any concrete tactics on how to successfully fix the game; he tried to play passively and let the opponents have an easy way to score the goals. They were also acting in a group since it would be close to impossible for one person to change the outcome of a football game. Respondent revealed that footballers were also threatened with being killed by gang members, which was the reason to manipulate the result again, even though they were not sure if they wanted to do it after the first time. It is explained in the article that the main reason for match-fixing is financial gains, and older players who are close to the end of their careers are the most prone to participate. However, almost half of the players involved in the scandal were younger than 25 years old. Another player, who was the 2nd best-earning athlete on his team, stated that he participated in match-fixing for financial reasons, but rather because of the commonality of these manipulations in the league. It is identified in the article that in the South Korean league, match-fixing happened because of cultural reasons as well, providing help to seniors and helping friends (Han, 2020). This article is also

relevant to this article because it reveals what psychological and socio-economic factors take place in the decision-making process. Even though all the same things could not be applied to European or American society, it is worth noticing how people act in other parts of the world, in this case, Asia, and how factors such as helping seniors and friends, facing danger, or being in the environment where something is widely spread, can affect individual's decision to participate in criminal and unethical activity. The interview respondent also talked about being passive on the football field, which raises questions about professionalism and views on sports in general.

"Those who counter match-fixing fraudsters: voices from a multistakeholder ecosystem" is an article published on February 5, 2020, by Stefano Caneppele and others. This research aimed to examine how individuals who are involved in match-fixing are seen by those who are opposed to this kind of activity, their findings on football match-fixing practices, and the efforts to cooperate in opposing match-fixing. A qualitative research method was used in the study, and the data were gathered through interviews. In total, 11 interviews were conducted with people from regulatory and law enforcement agencies, betting industries, and sports federations. Interview results showed that there is a gap in understanding the characteristics of people involved in match-fixing and that they have diverse profiles. However, respondents agreed that there is a significant role of intermediaries who influence actors who directly execute match-fixing. When talking about the match-fixing process, it was discovered that due to the rise of the internet, match-fixing became easier because now it is convenient to place bets and diversify them across different betting and gambling companies. It was also stated that cooperation between the three actors mentioned above, interview participants, has been growing steadily because of the challenges posed by inspecting international match-fixing cases (Caneppele et al., 2020). While this research mostly focused on the processes of how individuals perform match-fixing and what is the cooperation between different entities to fight against this activity, there are a few thoughts relevant to this article. First, it was stated that there is no universal understanding of the characteristics of those who are involved in match-fixing activities. Therefore, it shows that further studies need to be done on characteristics to better understand what drives individuals to do these activities, which could help prevent match-fixing. Second, the role of intermediaries was highlighted, and therefore, it should also be looked at these invisible actors, their motivations, and drivers.

The article "Conditional pension funds to combat cheating in sporting contests: theory and experimental evidence" was published in 2020 and written by Qin Wu and two other authors. The study revolves around athletes who use performance-enhancing drugs. It is stated that existing anti-doping regulations have two main downsides. First, performance-enhancing substances are usually more advanced than test technology, which gives athletes an advantage – they could use them at the end of their careers, not get caught in the meantime, and keep their prize money. The second downside is that athletes are not incentivized for not using banned drugs. As a solution, the authors suggest establishing conditional pension funds. Athletes would put a part of their sports income into the fund, and if they had not been involved with performance-enhancing drugs during their whole career, they would get the money after their retirement. A laboratory experiment was conducted to see how conditional pension funds change their behavior. It was found that due to the conditional pension funds, less doping was used, and it was successfully deterring doping (Wu et al., 2020). While this study does not directly relate to psychological or socio-economic factors influencing match-fixing behavior, it shows what could be done to prevent cheating and explains why it could work. The longer the career continues, the larger the sum of money would be in a fund. Consequently, it could help prevent athletes from participating in illegal activities since, psychologically, athletes would be less inclined to do so.

Conclusions

1. Scientific literature analyzed in this research used various research methods, including surveys, empirical data analysis, experiments, interviews, and case study analysis, to investigate the match-fixing phenomenon. Multiple international contexts and sports disciplines were included in this research. Findings provide valuable insights into the socio-economic and psychological drivers that drive individuals to engage in match-fixing.
2. Some scientific articles concluded that the older the athlete, the less probability she or he has of being involved in match-fixing. On the contrary, other articles came to a different conclusion and said that younger athletes have a higher chance of being involved. It was concluded that athletes' skill levels and justification of match-fixing do not correlate. However, another research disagreed and stated that the more successful the athlete, the less likely he or she is to participate in match-fixing. Scientific articles considered gender and how it correlates with corruption. It was concluded that Lithuanian men justify illegal behaviors more than women. Moreover, it was stated that Australian men are more likely to be involved in corruption than women. However, there was no evidence found of gender differences among other countries – India, Indonesia, and Singapore, which indicates that it might be a cultural phenomenon, rather than a universal

trend. Across the research, the most common reason for involvement in match-fixing appeared to be personal or financial gain. The second most common reason was to help others, either family, friends, or elders. Threats from gang members, peer pressure, and the commonality of such behavior in the environment were also mentioned as driving factors to get involved in match-fixing. While many literature sources examine match-fixing and other illegal behaviors such as corruption, there is a lack of studies based on testimonies and interviews with athletes who were involved in match-fixing or know someone who has been involved. It was stated in the article that there is a gap in understanding the characteristics of people involved in match-fixing activities. Studies that would use primary research data mining methods to acquire first-hand observations, emotions, and knowledge could be beneficial to further examine socio-economic and psychological factors that drive individuals to engage in match-fixing, and could help to better understand their characters.

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VARŽYBŲ REZULTATŲ KLASTOJIMAS: SOCIOEKONOMINIAI IR PSICHOLOGINIAI VEIKSNIAI

Santrauka

Straipsnio tema – varžybų rezultatų klastojimas: socioekonominiai ir psichologiniai veiksniai. Temos aktualumas slypi esminiame sporto principo – sąžiningame varžymesi tarp komandų ar individualių sportininkų. Tyrimo problema – kokie socioekonominiai ir psichologiniai veiksniai lemia asmenų įsitraukimą į varžybų rezultatų klastojimą? Socioekonominiai ir psichologiniai veiksniai buvo identifikuoti kaip tyrimo objektas. Tyrimo tikslas – išanalizuoti ir apžvelgti mokslinę literatūrą apie sukčiavimą sporte, siekiant nustatyti dalyvavimą varžybų rezultatų klastojime lemiančius veiksniai. Tyrimo metodas – literatūros apžvalga. Remiantis išnagrinėta literatūra, dažniausios priežastys, dėl kurių žmonės įsitraukia į varžybų rezultatų klastojimą, yra asmeninė ir finansinė nauda. Antroji, dažniausiai minima priežastis buvo pagalba kitiems – šeimai, draugams ir vyresniesiems. Gaujos narių grasinimai, aplinkinių spaudimas bei tokio elgesio paplitimas aplinkoje taip pat įvardinami kaip veiksniai, skatinantys įsitraukti į varžybų rezultatų klastojimą. Vieni moksliniai šaltiniai padarė išvadą, kad kuo sportininkas vyresnis, tuo mažesnė tikimybė, kad jis įsitrauks į rungtynių klastojimą. Tuo tarpu kituose straipsniuose teigiama priešingai – jaunesni sportininkai turi didesnę tikimybę įsitraukti. Be to, moksliniame straipsnyje pateikta išvada, jog sportininkų įgūdžių lygis ir rungtynių klastojimo pateisinimas nekoreliuoja, tačiau kitame straipsnyje teigiama, kad sėkmingesni sportininkai yra mažiau linkę dalyvauti varžybų rezultatų klastojime. Kai kurie moksliniai straipsniai nagrinėjo lyčių skirtumus. Buvo nustatyta, kad lietuviai vyrai yra labiau linkę pateisinti neteisėtus veiksmus nei moterys, o australai vyrai yra labiau linkę į korpuciją nei moterys. Vis dėlto tai negalėtų būti vertinama kaip globali tendencija, kadangi kitose šalyse skirtumų tarp lyčių nebuvo nustatyta. Moksliniai straipsniai pažymi, kad egzistuoja informacijos spraga, susijusi su asmenų, dalyvaujančių tokiose veiklose, charakteristikos supratimu. Taip pat trūksta tyrimų, paremtų sportininkų, kurie dalyvavo varžybų rezultatų klastojime ar pažįsta žmones, kurie buvo įsitraukę į šią veiklą, liudijimais bei interviu. Tyrimai, kuriuose būtų naudojami pirminiai duomenų rinkimo metodai, leidžiantys gauti pastebėjimus, emocijas ir žinias, galėtų būti naudingi toliau nagrinėjant socioekonominius ir psichologinius veiksniai, lemiančius įsitraukimą į varžybų rezultatų klastojimą, ir padėtų geriau suprasti tokių asmenų charakteristiką.

Reikšminiai žodžiai: sukčiavimas, korupcija, varžybų rezultatų klastojimas, psichologiniai veiksniai, socioekonominiai veiksniai

Information about the authors

Žilvinas Muraška. Vytautas Magnus University, Faculty of Economics and Management, graduate student. Research field: sports management.

Email address: zilvinas.muraska@vdu.lt

dr. Audrius Šimkus. Vytautas Magnus University, Faculty of Economics and Management, Assoc. prof. dr. Research fields: mediation, real estate law, environmental law, sports law, and governance.

Email address: audrius.simkus@vdu.lt