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The Phenomenon of Match-Fixing in Soccer: A Plague Without a Cure?

Nikolaos Petropoulos
The Graduate Center, City University of New York

THE PHENOMENON OF MATCH-FIXING IN SOCCER: A PLAGUE WITHOUT A CURE?

by

NIKOLAOS (NICK) PETROPOULOS

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Maria (Maki) Haberfeld, Ph.D

_____ _____

Date Chair of Examining Committee

Deborah Koetzle, Ph.D

_____ _____

Date Executive Officer

George Andreopoulos, Ph.D

Chuck Strozier, Ph.D

Serguei Cheloukhine, Ph.D.

Supervisory Committee

CITY UNIVERSITY OF NEW YORK

Abstract

THE PHENOMENON OF MATCH-FIXING IN SOCCER: A PLAGUE WITHOUT A CURE?

by

Nikolaos (Nick) Petropoulos

Advisor: Professor Maria (Maki) Haberfeld, Ph.D.

Introduction: Today, match-fixing is considered as one of the most significant threats to the integrity of soccer. Everyone seems to talk about it. However, the phenomenon itself has received relatively limited academic interest despite the media coverage that match-fixing scandals have enjoyed, mainly over the last 10-15 years. This study will seek to explore the match-fixing landscape and provide a detailed account of how extensive the phenomenon is and who are the main stakeholders.To achieve this goal, we will rely heavily on a series of INTERPOL bi-weekly reports on match-fixing cases that cover the period from 1st of January 2013 until 30th of June 2017.

Methods: The present dissertation will utilize the tools of secondary data analysis and quantification of qualitative data to pursue its objectives and test a series of hypotheses. The process of conducting a quantitative analysis of qualitative data will include three main steps: First, organize the data; second, read it and code it and third, and then present and interpret it. To conduct the analyses, the main statistical tools used include descriptive statistics, correlations, T-Test and Analysis Of Variance (ANOVA). SPSS statistical software was used to conduct the data analysis.

Theoretical framework: To better understand the phenomenon of match-fixing the present study utilized and drew from three major criminological theories, namely Differential Association, Routine Activity, and Strain theory.

Discussion and findings: Match-fixing is a significantly widespread phenomenon that could occur at –literally- every country on the planet. While various stakeholders are involved in match-fixing cases, the analyses conducted in the present study show that players are heavily involved in fixed games and are the most likely to get arrested in countries that legislation is in place. Additionally, organized crime syndicates play an important role and are involved in match-fixing cases across the globe. More importantly, it seems that corruption is a key in addressing match-fixing as countries who rank low in the corruption index are not only less willing to introduce effective anti- match-fixing criminal legislation but are also ineffective in curtailing the phenomenon.

Also, although the criminal law is an important tool against match-fixing our findings demonstrate that specialized legislation that appears to be more effective and promising than ordinary criminal law measures.However, it is not just the criminalization of match-fixing that is important; both criminalization of the phenomenon and penalty severity could prove promising regarding unveiling players' participation in match-fixing, according to our findings

Conclusion: A series of recommendations were made based on the finding of this study. The analyses show that countries across the globe with a focus on the most corrupted one should implement and effectively use specialized legislation on match-fixing to curtail the phenomenon. Unless said legislation is introduced, the majority of match-fixing plots will remain below the radar maintaining a deceiving sense of immunity from the phenomenon. Also, more attention

should be paid to the role of players in match-fixing as our statistical findings suggest that their involvement in match-fixing cases is not only significant but quite extensive as well.

Acknowledgments

The submission of the present dissertation marks the end of a long, yet extremely rewarding, academic journey that started on August 27th, 2008; on that day, I first walked into John Jay's Haaren Hall Building to begin my Masters in Criminal Justice, both wildly happy and stricken with anxiety, the latter due to the fact that I was an international student without prior experience of the American academic reality.

Fast forward to 2017, I am forever grateful to a few people who deserve special thanks for standing by me throughout this journey. First, I would like to thank my friends and family in Greece for always being there for me to support and encourage me, in both good and bad times. In particular, I want to thank Mika for her never ending support; I would have never finished my degree without you. To all my friends in New York City: You guys have always been a source of support and inspiration; I will never forget.

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Chapter 1: Introduction

Overview

The recent revelations in 2015 about the FIFA scandal that involved the organization's president Sepp Blatter himself, shocked soccer fans across the globe and questioned the integrity of the most popular sport on the planet (Conn, 2017). Although allegations of corruption in soccer is not a new phenomenon (Jennings,2006), the scandals over the last decade fueled the debate on how to protect soccer's integrity, and national and international authorities were urged to address the problem (Spapens, 2014).

Despite the fact that, from a criminological point of view, match-fixing -is just one form corruption, it represents the greatest of all the threats to the integrity and appeal of soccer, a danger that is described as "the biggest threat facing the future of the sport in Europe" (Serby, 2012). Moreover, the nature of the threat posed by fixed games has gradually changed and has now become more imminent than ever due to two main reasons:

First off, the relationship between sport and business was transformed considerably and over the last 20 years the commercialization of sport has altered the landscape; not surprisingly, sport betting has skyrocketed, and it is estimated that the global gambling industry (both legal and illegal) is worth up to a $3 trillion a year with 65% of that money coming from betting on soccer games worldwide (UNODC, 2015). Second, thanks to the Internet and the ability to bet on every possible outcome, the chances of making a massive financial profit by betting on fixed games are very high compared to the likelihood of getting caught. That said, match manipulation business becomes very appealing not only to individuals but also to international organized

crime. Moreover, organized crime syndicates could potentially target hundreds of national league games (those offered on the betting market), cup matches, international competitions and friendlies for possible match manipulation, and every country is vulnerable, regardless of its record on corruption. Inevitably, manipulation of soccer games damages players, fans and the sport itself. Also, the integrity of soccer is seriously harmed if the outcome of the game is known in advance given that the unpredictability of a game's outcome is the most appealing element of the sport.

However, some questions remain unanswered. How extensive is the phenomenon? Who is involved in match-fixing? Is it mainly about organized crime or individual actors, such as players and referees? What should be done to contain it? Therefore, the purpose of this dissertation is bi-fold:

Firstly, it will seek to identify the scope of the phenomenon over the last four years and analyze how widespread it is worldwide.

Secondly, it will attempt to evaluate the effectiveness of the current legislative approaches adopted by countries across the globe and, eventually, generate some future research directions with a specific focus on identifying patterns of match-fixing related behavior that should be addressed by all FIFA member states and law-enforcement authorities.

Additionally, an attempt will be made to address match-fixing phenomenon and the context of organized crime pattern by looking at different actors, players, referees and club owners. Finally, it will explore whether criminological theories can explain individuals' involvement in match-fixing and its prevention having as an ultimate goal the criminalization and containment of this phenomenon. To achieve the goals mentioned above, the present study

will analyze data gathered from a series of bi-weekly reports compiled by INTERPOL Sports Integrity Unit that covers the period from January 2013 until June 2017.

Finally, it should be noted that the present study does not seek to discuss and address the problem of corruption in sport in its totality. Such an analysis would be unrealistic and is beyond the scope of this dissertation. We have purposely chosen to focus on match-fixing as the most prominent form of corruption based on the literature and previous studies and, as explained above, we will attempt to dig deeper into the matter and unveil crucial elements that will offer new insight into the problem of match-fixing, as a whole.

Statement of the problem

Match manipulation is not a new problem; it has been around for a while, however, over the last decade, it is on the rise. In recent years, soccer has been under sustained attack worldwide from organized crime, with criminal groups infiltrating clubs and soccer associations to entice players, referees and officials "into manipulating the course of a soccer match – determining in advance the result or the dynamics of a game." (Haberfeld & Sheehan, 2014.) Referees and players are tempting targets for match-fixers because their decisions can significantly alter a game's outcome. The profits made in fixed games are so vast, in particular on the Asian betting market, "that organized crime recently switched from drug trafficking to match-fixing" (Hill, 2010)

That being said, match-fixing threatens the integrity of the sport, has serious political, ethical and economic implications and has been described as "the biggest threat to sport in the 21st century" (Carpenter, 2012) Additionally, match-fixing allows criminals to make huge profits. According to some estimates provided by FIFA gambling syndicates that are active in the

unregulated Asian gambling market make more than $140 billion per year betting on fixed games, compared to just $4 billion that FIFA made in the 2014 World Cup.

Although match-fixing cases today make the headlines at an unprecedented rate the phenomenon itself has been empirically limited and under-theorized (Numerato, 2016). Additionally, the lack of primary and up-to-date empirical evidence makes it hard for researchers to generalize or draw conclusions from the available studies regarding the scope of the phenomenon. Undoubtfully, match-fixing is a topical and requires more attention from researchers.

It is, thus, important to seek ways to make some significant contributions to the field. Although the majority of academic studies on match-fixing are qualitative, the proposed study will follow a more quantitative path. More specifically, the proposed research will provide an account of the current match-fixing landscape utilizing the most up-to-date available data. Previous research has not used INTERPOL reports when attempting to understand the scope of match-fixing and any available data sets were compiled before 2012. That said, most studies do not include the latest, unprecedented, developments or if they do, they provide a purely qualitative and testimonial rather than empirical analysis. That said, the current study is the first known attempt to collect, codify and analyze data that are made publicly available by INTERPOL following a methodologically solid approach.Last but not least, the available body of knowledge is limited when it comes to the role of criminal justice/law enforcement understanding and interventions in dealing with match-fixing.

Conceptualization- match-fixing in context

Despite the increased political and academic interest about match-fixing, especially over the last decade- there is no consensus among practitioners and academic on its definition (Spapens & Olfers,2015). However, governments and sports associations, including FIFA and the United European Soccer Association (UEFA), have highlighted the importance of the adoption of a universal definition of match-fixing. Although it could be argued that the definitional problem in the case of match-fixing is definitely not as problematic as, for example, in the case of a univerally accepted definition of terrorism, a clear definition of match-fixing is needed in order to help governments across the globe to introduce harmonized and effective legislation.

In the literature, various definitions of the phenomenon have been used (Haberfeld, 2014). Hill (2015) proposed a two-type definition of soccer match-fixing. He argued that a distinction should be made between "arranged match-fixing" and "gambling match-fixing." While the former occurs when "corruptors manipulate a soccer match to ensure that one team wins or draws the match." (Hill, 2015), the latter would be the case when corruptors manipulate a soccer match with the goal to maximise their profits from gambling, either on a legal or illegal gambling platform. Serby (2012), also argued that there are "gradations within match-fixing," however, at the end of the day fixed games mainly involve players "pretending to compete but actually deliberately underperforming."

For this study, the following comprehensive definition of the United Nations Office on Drugs and Crime (2013) will be used:

"*Match-fixing is defined as an arrangement or irregular alteration of the course or result of a sporting competition or any of its particular events*

(e.g., matches, races, etc.) to remove all or part of the uncertainty normally associated with competition."

It is worth noting that despite the increasing interest in match-fixing, the phenomenon has been empirically limited and under-theorized (Numerato, 2016). Additionally, primary and up-to-date empirical evidence is often missing, and generalizations cannot easily be drawn from the conducted studies. Not surprisingly, when the discussion revolves around widespread, the phenomenon is, most responses are mainly based on isolated case studies.

Moreover, it should be noted

Inclusions and exclusions

For this dissertation, only studies that approach the problem of match-fixing from a criminal justice/criminology angle will be considered. It is acknowledged that the phenomenon of match-fixing has been studied by economists as well using economy-based conceptual models. However, the presentation and review of the latter are beyond the scope of this dissertation.

Moreover, the literature suggests that "soccer is far from alone in being a target for match-fixers" (Carpenter,2012) as incidents of match-fixing have been reported around the world in tennis, cricket, basketball, horse racing, etc. (Errede,2009). However, this dissertation will be limited to soccer match-fixing cases and will not address match-fixing in other sports. This approach is mainly supported by the fact that soccer is second to none when it comes to match-fixing. For example, in Europe soccer accounted for 70% of match-fixing cases and 72.2% of betting related match-fixing (Gorse & Chadwick, 2011).

Chapter 2: Literature review

Research specific to match-fixing is relatively limited and has predominantly evolved over the last decade. Although not limited to match-fixing per se, a key reference is a study conducted by Brooks, Aleem,& Button(2013) on individual and organizational fraud and corruption in sport. It is a pioneering study that provides one of the very few sociological accounts of fraud and corruption in sport rather than usual historical one.

Due to the nature of the phenomenon, the majority of the available studies are qualitative, and the tools used include mainly interviews and ethnography. Some quantitative studies are also available utilizing statistics and fixed games databases; however, these databases are far from comprehensive, and numbers of fixed games often differ from study to study (Borrallo & Sánchez, 2012). Some studies that adopt a mixed-methods approach are present as well.

Regardless, understanding the characteristics and determinants of match-fixing is of great potential interest not only to criminologists but also to other social scientists. Firstly, these phenomena have a negative impact on the society at large, as sports events keep on reaching larger and larger audiences worldwide. For example, soccer is the professional sport that was most successful in penetrating the developing world. The South African World Cup was broadcasted in some 200 countries with a potential audience of 25 billion persons. The final match was watched by some 700 million individuals across the globe. Secondly, the study on match-fixing can provide important insights on more general criminal events as well. Indeed, some of the mechanisms behind match-fixing and betting are contiguous to other illegal activities and often involve criminal organizations operating well beyond the professional sports industry. Thirdly, match-fixing is a topic of interest also from a strictly economic point of view,

since sports activities contribute to a significant share of GDP, i.e., up to 2 % of EU GDP (Boeri & Severgnini, 2012). Several statistics also document the large negative impact of corruption on economic activity.

According to recent studies (Lambsdorff, 2007), every year corruption reduces the level of yearly productivity by about 4 % and a country net annual capital inflow by some 0.5 % of GDP. Match-rigging, in particular, has a relevant cost for the society. For example, according to Interpol Secretary General, Ronald Noble, match-fixing has a value of hundreds of billions of Euros per year, a sum which can be compared to the total revenues of Coca-Cola (Fritzpatrick, 2013).

Moreover, the literature suggests that "soccer is far from alone in being a target for match-fixers" (Carpenter,2012) as incidents of match-fixing have been reported around the world in tennis, cricket, basketball, horse racing, etc. (Errede,2009). However, this study will be limited to soccer match-fixing cases and will not address match-fixing in other sports, as in Europe for example, soccer accounted for 70% of match-fixing cases and 72.2% of betting related match-fixing (Gorse & Chadwick, 2011).

Depending on their methodology, available studies are mainly concerned with the following areas:

a) Is match-fixing a local, regional or global phenomenon?

A review of the available literature reveals that match-fixing is a global phenomenon that is not by any means restricted to certain countries of geographical areas. From Asia to Europe and from Africa to Russia, soccer match-fixing and corruptions in sports is a major issue for the criminal justice system. In May 2013, the European Police Office (EUROPOL) announced that about 680 suspicious matches including qualifying games for the World Cup and European

Championships, and the Champions League for top European club sides, have been identified in an inquiry by European police forces (Van Rompuy, 2013.) The matches in question were played between 2008 and 2011, the investigators said. About 380 of the suspicious matches were played in Europe, and a further 300 were identified in Africa, Asia, and Latin America.

In Italy, for example, where match-fixing is far from a new phenomenon (Foot, 2007) criminal organizations also seem to play an important in role in match-fixing and betting. According to media reports, some meetings and phone calls between mafia members and soccer players have been taking place. In some cases, members of Camorra apparently asked a soccer team manager to exert pressure on doctors in a local hospital to support an illegal trade of organs (Saviano 2012). The practice of rigging matches has deep cultural roots; in recent years, more precisely in 2006 and in 2011, Italian prosecutors brought to light two different scandals, known as Calciopoli and Scommessopoli that involved hundreds of individuals.

Mulema Mukasa (2013) in his study on soccer corruption in Uganda points out that match-fixing is the commonest form of corruption in Uganda and this is not specifically restricted to soccer. This involves the national Association/Federation, Referees, Coaches/Manager, Clubs officials, athletes/players, technical staff, league managers who in one way or the other abuse their positions for personal gain or the benefit of the corruptor for varied reasons. As he reveals in his study, in 2003, Uganda's top-tier soccer league, The Super League, ended with about 70 % of the games bearing the makings and trappings of match-fixing and corruption.

Additionally, he found that match-fixing is prevalent in all the five East African countries with the most business in Kenya, Uganda and Tanzania, and in the countries of Rwanda and Burundi is a nascent industry. This mainly because regulation of sports betting in all the

countries is poor and not up to speed with the contemporary sophistication to prevent abuse and most especially its effect on the integrity of the sport.

Not surprisingly, the long list of countries being affected by match-fixing includes Russia as well. As Cheloukhine (2014) points out soccer championships were accompanied by continuous accusations of the total sale of matches and the bribing of referees, club officials, and players. Russia seems to represent yet another country where soccer officials diligently delegate the responsibility for investigating fixed games to law enforcement agencies which, in turn, do not want to interfere since, historically, such investigations were plagued by lack of evidence against the perpetrators and reluctant victims.

Last but not least, there seems to be a growing consensus in the literature about the global nature of match-fixing and to the undeniable fact that Sports bodies, associations, clubs, national teams, sports officials and law enforcement agencies today are facing a growing global variety of threats and challenges ranging from match-fixing to corruption, illegal betting and use of performance and image enhancing drugs in sport. (Borrallo, & Sánchez, 2012; Errede, 2009; Feltes,2013; Misra,Anderson, & Saunders, 2013.)

B) Why and how are soccer games getting fixed?

A review of the literature suggests that the major motivations behind match manipulation include financial gain, money laundering, and future team advantage. (Rebeggiani, 2014; Misra, Anderson & Saunders, 2014) A few countries, including Italy, have seen an active involvement of the Mafia syndicates in match-fixing cases (Boeri & Severgnini,2014). The two scandals that shook the world of soccer- known as Calciopoli and Scommessopoli- involved two types of rigging; on the one hand team managers who were active in order to manipulate the outcomes of a tournament by altering results of games involving directly or indirectly (e.g., penalizing

potential competitors) their team while on the other hand match-fixing occurred in order to secure betting results- i.e. huge profits- for mafia criminal organizations that were the main fixers of the game. In Russia, a study of match-fixing shows that games could be potentially fixed either for pure profit –although it seems to be the smallest share- or between club officials and club owners, including diving or selling points that include arrangements between two or more teams. (Cheloukhine,2014)

One of the major issues in match-fixing is how corruptors are manipulating games. Hill (2009) suggested that the process of match-fixing has five distinct stages which he described as access, set-up, calling the fix, performance, and payment. Corruptors face certain difficulties and challenges when approaching the players as indicated by 220 interviews that he conducted with players and team officials, referees and law-enforcement agencies. These vulnerabilities of match-fixers could potentially be used by the law-enforcement to disrupt the process of fixing a game at an early stage. However, it should be noted that match-fixing has led to extensive corruption in a significant number of countries around the world, with Asian countries being the "usual suspects" (Maennig, 2006). As Spapens & Olfers (2015) argue, corruptors "exploit financial difficulties of clubs, players and others who can influence the outcome of a match" as well as gambling addiction among individuals.

C)Who are the key players in match-fixing?

Match-fixing seems to be an activity that involves a series of different "stakeholders." Referees, players, and team officials seem to be the main three groups of individuals that interact in the process before, during and even after fixing a game (Hill, 2009). Players and referees are often young and in the public spotlight, lacking experience and dreaming of overnight success; inevitably, this creates vulnerability. However, the chances of delivering a successful fix

increase when team officials are actively involved (Hill, 2009) although a deeper understanding of the match-fixing phenomenon requires an analysis of the dynamics and interactions between players, referees, and fixed sport association officials (Numerato,2016).

Interestingly enough, as Manoli & Antonopoulos (2015) found in a qualitative study, individuals who are involved in match-fixing many times act on improvisation using rather simple structures and not complex schemes. Petropoulos & Maguire (2014) also agreed that team owners seem to have a major role in match-fixing cases in Greece. However, they expressed their concern that soccer team players are extremely vulnerable to match-fixers and their role in match-fixing is more important than most people assume.

Boeri & Severgnini (2014) argued that not only team managers, referees, and soccer players are involved, but also criminal organizations play a major role when it comes to actual manipulation of soccer games and the facilitation of corruption. It also seems that the size of a country and the familiarity between soccer officials, administrators and players plays a predominant role in match-fixing; ultimately, the modest stakes involved in domestic competitions, all of which possibly render local soccer more prone to experience cases of match-fixing or other forms of corruption (Aquilina & Chetcuti, 2014.)

D) How can match-fixing be tackled?

Rompuy (2014) in his study explores existing national regulations of the European Union (EU) member states seeking to manage risks related to the manipulation of sports events and views a criminal justice approach as an effective reaction to deal with the phenomenon. Although the same approach is endorsed by UNODC (2013), it seems that the lack of uniformity of legislation at a global level and very few jurisdictions seem to address the issue of match-fixing using legal tools effectively. The lack of ad-hoc criminal offenses is one of the major

flaws that seriously hamper the efforts of both the law enforcement and the judicial authorities in some countries.

Additionally, the legal toolbox against match-fixing should include a series of other "supportive" measures of criminal justice, including but not limited to the following: jurisdiction, the liability of legal persons, protection of whistle-blowers, money- laundering, confiscation, special investigative techniques, etc. (UNODC,2013).

While legislation can play an important role in match-fixing prevention, the role of bookmakers in tackling the phenomenon is also important (Ferguson, 2014). Technology, through online betting, helped match-fixers to expand their illegal activities. However, license and legitimate betting companies could potentially benefit extensively from the use of technology-assisted sophisticated mathematical models and statistics that help them spot suspicious betting on soccer games. Haberfeld and Sheehan (2014) suggest that there are five areas involved in combating match manipulation: prevention (awareness raising, education, and revision of codes), detection (monitoring), intelligence gathering, investigation (fact-finding) and sanctions.

Last but not least, other suggestions include the use of accreditation, certification, and licensing procedures as tools to "reinforce existing compliance initiatives and form part of a more comprehensive governance strategy in efforts to help prevent match-fixing" (Jones,2013).

Most of the studies that focus on law provisions and the criminalization of match-fixing as a means of addressing the problem, often lack the theoretical basis that is essential to understand the problem of match-fixing. In other words, these studies commit a "fundamental attribution error" as they ad-hoc perceive a law-based response as adequate to tackle match-fixing.

However, it seems that a "one size fits all" approach when it comes to addressing match-fixing across the globe has a series of limitations; Moriconi (2016) in his qualitative study of match-fixing in Iberian countries that included interviews with key informants and media clipping, shows that the preventive and educational messages produced by international institutions and sport organizations- especially after the FIFA scandal was revealed in 2015- are not particularly useful in Portugal or Spain because they seem to lack awareness of specific local discursive variables and thus they don't show a holistic awareness of the problem.

Final thoughts on the literature

The literature on match-fixing as a criminal justice problem is relatively scarce. Most studies are lacking a comprehensive approach, due to the complex nature of the phenomenon. A couple of the major studies in the field view criminal law sanctions as the only way to effectively respond to the threat of match-fixing; this is an approach that promotes the role of criminal legislation as the only tool to unveil match-fixing cases that are currently below the radar due to the fact that law enforcement and judicial authorities do not have the tools to fight them. Although this is a promising approach, most countries across the globe have failed to introduce criminal provisions that address the problem of match-fixing.

One of the major issues associated with match-fixing is the fact that it is quite often covered with a veil of secrecy, so most people who are involved in it either hesitate to speak up or they do not fully disclose the truth. Thus, empirical studies are not easy to conduct, and when this has been attempted, they are far from comprehensive. As a result, the exact number of cases that occur annually across the world is extremely hard to estimate as a certain number of them will never be revealed or investigated by the law-enforcement authorities.

Also, only a handful of studies has applied criminological theory and research to explore the causes of the phenomenon. As thoughtful engagement with the sociological and criminological theory is not present, more studies suggest a series of solutions and policy implications that are not informed by theory. Interestingly enough, except one study (Voode,2013) an examination of the role of the academia in explaining and addressing the problem of match-fixing seems to be absent as well. Nevertheless, most studies agree on an alarming lack of empirical research in the field of match-fixing.

A key finding is that any initiative to address the problem of match-fixing, for example, education campaigns or training programs for soccer players to raise awareness for match-fixing, should take into consideration both the theoretical background and the findings of the studies that have been conducted so far. Failure to do so will result in the effectiveness of these programs to be compromised.

In conclusion, one could argue that although there is no consensus that an approach to match-fixing that is based solely on legislative measures can be considered effective, however, it is extremely likely that a response to the match-fixing problem that lacks a solid and coherent legislative component will be far from comprehensive.

Chapter 3: The study

Objectives of the study

The present study has a series of objectives, as listed below:

Objective 1: To identify how extensive is the involvement of players in match-fixing.

Objective 2: To identify how extensive is the involvement of referees in match-fixing.

Objective 3: To identify how extensive is the involvement of organized crime in match-fixing.

Objective 4: To identify how extensive is the involvement of club officials in match-fixing.

Objective 5: To identify how extensive is the involvement of others in match-fixing.

Objective 6: To identify and compare the scope of the phenomenon in countries where these behaviors are already criminalized vs. those that still lack the legal toolbox to address the phenomenon.

Objective 7: To establish whether there is a relationship between the existence and severity of sanction and the scope of the match-fixing related behavior.

Objective 8: Based on the research findings suggest some policy recommendations with a focus on suppression and enforcement.

Research questions

Many different questions emerging from the literature soccer match-fixing have informed and, eventually, influenced the research questions of the current study. Given the complexity of the phenomenon, the interaction between organized crime syndicates and soccer club officials, the tempting nature of illegal betting and, ultimately, the need for an effective law -enforcement response a series of questions were developed that are very important to meet the goals of the proposed dissertations.

RQ. 1: What is the scope of the match-fixing phenomenon around the world?

This question will explore whether match-fixing is as serious as it is portrayed to be by various mass media and various academic and non-academic outlets/forums. Assessing the scope of the phenomenon is critical regarding understanding match-fixing, put it in context and propose some policies to address or/and contain it,

RQ. 2: How serious is the involvement of different stakeholders in match-fixing cases?

As this is a complex phenomenon, various individuals are involved along with organized crime syndicates.

RQ.3: Is there a relationship between the existence of legal provisions and the number of cases that are unveiled by the law-enforcement authorities?

*Th*is set of research questions is important to assess who are the main actors in match-fixing cases and how they operate.

RQ. 4: Are there countries where these behaviors are already criminalized- either as misdemeanors or felonies?

Assessing which countries are more prone and susceptible to sports corruption and match-fixing will help the international community as well as the local and regional law-enforcement organization to narrow down their efforts to those countries that operate as a fertile ground for soccer corruptors. Additionally, custom-made responses will become more feasible.

RQ. 5: Is there a relationship between the severity of sanction and the scope of the behavior?

Addressing match-fixing cases and eventually securing of the integrity of soccer is directly related to the effectiveness of the sanction in place. Thus, assessing the relationship between those sanctions and the scope of the behavior is essential.

RQ.6: Is there is a relationship between high levels of corruption and occurrence of match-fixing?

In the majority of cases, high levels of corruption in a given country quite often co-exist with low socio-economic status (Maeda & Ziefeld, 2015). Inevitably, soccer players who live and

work in said conditions are subject to strain due to low salaries, low trust in other members of society and the government and, thus, susceptible to the tempting offers of match-fixers.

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Chapter four: Theoretical framework

A deeper understanding of match-fixing requires the introduction of a theoretical framework, utilizing criminological theories. Although the current research is exploratoryy its theoretical framework draws mainly from criminological theories that include Differential Association, Routine Activity, and Strain theory:

Differential Association theory

This theory of crime and delinquency developed by Edwin Sutherland is a social learning theory that holds that criminality is the result of engaging in inappropriate behaviors exhibited by those with whom we interact (Sutherland, Cressey, & Luckenbill,1995). His theory gives priority to the power of social influences and learning experiences and can be expressed regarding a series of propositions, that can be summarized as follows : (Sutherland, & Cressey, 1984)

1. *Criminal behavior is learned in interaction with other persons in the process of communication.*

2. *That learning takes place primarily in intimate personal groups and includes not only the techniques of committing a crime but the motives, rationalizations, and attitudes which accompany crime.*

3. *Differential associations may vary in frequency, duration, priority, and intensity, and a person becomes delinquent because of an excess of definitions favorable to violation of law over definitions unfavorable to violation of the law.*

4. *The learning process involves the same mechanisms whether a person is learning criminality or conformity.*

One famous application of this theory in the area of corruption in sports is the case of the renowned doper in cycling, Lance Armstrong, who would supply banned substances to his teammates who then would adopt his cheating attitude to win at no costs. If a new cyclist was to join the team, they either had to adopt the same attitude as others in the team or risk being replaced (United States Anti-Doping Agency, 2012)

In their study, Spapens& Olfers (2015) found that one of the primary factors that contribute to match-fixing is the development of social relations of persons involved in sports with criminals. This interaction is described as one of the main "risk factors" and is consistent with differential association theory main propositions.

Routine Activity theory

The routine activity theory (RAT) is an opportunity-based framework that suggests that a

Crime occurs when the following three factors exist: a motivated offender, who is the individual looking to commit a crime; the availability of a suitable target, which is the "thing" the motivated offender is aiming for; and the absence of a capable guardian, who is any person or object which acts as a crime deterrent (Cohen & Felson, 1979). According to RAT, crime occurs when a motivated offender and a suitable target come together in space and time while in the absence of a capable guardian (Cohen & Felson, 1979).

Routine Activity Theory triangle, retrieved from Australian Institute of Criminology- http://www.aic.gov.au.

Peurala (2013) examined betting-motivated corruption in sport and illegal betting from the RAT perspective. A motivated offender has a range of opportunities through online sports betting, where the risk of getting caught can increase when a match is fixed, and a noticeable bet is made using a regulated bookmaker in the same jurisdiction. However, the risk of being caught decreases when a bet is placed with an unregulated bookmaker on a fixed match (Peurala, 2013).

As Peurala (2013), points out:

> *The occasions for criminals have never been greater than today. Sports betting on the internet offers criminals various opportunities and large sums of money are involved. When matches are manipulated in different countries, and betting takes place on the internet, the risks for criminals getting caught are not great.* (Peurala, 2013,p. 273)

However, while there is literature examining RAT against a range of different crimes, there is limited discussion surrounding its application in understanding soccer match-fixing. Under such a model, the size of a bribe and a probability of a successful fix are likely to be weighed

against the likelihood of detection and the penalty if caught, as well as feelings of guilt and the potential for blame by teammates for underperformance. Such theorizing points towards the need to identify situational crime prevention measure through which to deny or reduce the opportunity for corrupt behavior. Law enforcement agencies, sporting organizations, gambling industry bodies and betting operators should, according to the propositions of routine activity theory, get actively involved in reducing the opportunity for match-fixing to occur.

Strain Theory

The cause of an individual's corrupt behavior can be explained by the classical strain theory proposed by Merton (1968), who argued that the reason behind criminal behavior is due to pressures in society; in particular, the social structure of the American culture places increased importance on achieving economic stability and that an individual can either conform to this culture or deviate from the norm and attain this goal through criminal behavior. However, Agnew (1992) introduced a broader version of the classical strain theory, the general strain theory (GST). Agnew and Brezina (2010) contend that GST is a contemporary and more general approach to the classical strain theory, proposing that a broad range of strains contribute to criminal behavior. Strains can be described as situations that are disliked by an individual.

There are three categories of strain: failing to attain positively valued goals, motivations that are positive, and the presentation of motivations that are negative (Agnew, 1992). Strains can intensify, negatively affecting an individual by causing them to feel anger and frustration. To ease these negative feelings caused by straining the individual resorts to criminal behavior because legitimate approaches fail to reinforce positive emotions. While it is evident there is an already established emphasis in the current literature on addressing adolescent criminal behavior (Baron, 2007; Ostrowsky & Messner, 2005; Paternoster & Mazerolle, 1994) there is a gap in

knowledge surrounding the application of GST within the context of sports corruption and soccer match-fixing, in particular.

Forest et al .(2008) highlight that the manipulation of sporting events is more likely to take place when athletes are poorly paid or if their salary level is regarded as unjust. A FIFPro study (2012) indicates that corruptors target players whose clubs fail to pay their salary or bonuses on time. The research found that 55 of respondents who had been approached to consider fixing a match were not paid their salary on time, while 59,2 percent of players approached were not paid their bonuses on time. The report concluded that: "*Players who do not receive their salaries are very vulnerable to becoming involved in match-fixing. The longer the salary is in arrears, the greater the risk that the player will respond to requests to participate in manipulating matches.*"

As Merton's (1968) strain theory indicates, athletes or officials who are unable to achieve their financial goals through legitimate means may innovate, with betting-related manipulation of sporting events a means through which they can achieve their goal of wealth creation. Thus, for some athletes "the risk of getting caught is outweighed by the possibility of the riches promised by the gambler" (Goodfellow, 2005,p.25). Hill (20015) also shares this view and suggested that the decision of a soccer player to accept a bribe and participate in a fixed game is explained by strain theory. Regardless of their current successful status, players are under strain in their careers as they are thinking about the near-future. When they are towards the end, or they finish their career "they may be in a situation of anomie – no career, relatively uneducated and little opportunity to maintain both the status and pay that they enjoyed as players" (Hill, 2015).

Chapter 5: Methodology

As mentioned earlier, the data used for this study include some weekly and biweekly qualitative reports published by INTERPOL. Thus, the present dissertation will utilize the tools of secondary data analysis and quantification of qualitative data to pursue its objectives and test a series of hypotheses.

Data

The data that will be analyzed in this study have been collected through INTERPOL's website and include biweekly reports of sport-related corruption cases across the globe. These reports contain information from open sources- mainly from mass media- which are categorized depending on the geographical region that the match-fixing incident was reported. The reports cover the years from 2013 until mid-2017 and access to them are free to individuals who sign up for INTERPOL's newsletter. INTERPOL's Corruption in Sports unit has the authority to decide whether access to the newsletter is granted and the organization reserves the right to reject an individual access request without prior warning.

Based on INTERPOL's strategy to prevent match-fixing, the Integrity in Sports unit delivers a wide range of information, guidance, training, services, and expertise to key partners developing their sports integrity initiatives. (Abbott & Sheehan, 2013). That said, as part of their mandate to raise awareness of contemporary issues related to match-fixing in soccer, the INTERPOL Integrity in Sports unit compiles a weekly overview of the main stories in the media related to current investigations, sanctions and sentences, illegal betting and best practices. More details about the collection methodology are not known. However, following a series of communications via email with the Unit's analysts it is assumed that the vast majority of

English-speaking media around the world are monitored, and the all match-fixing related cases are recorded effectively.

A second data set created by Husting, Iglesias,& Kern (2012), that includes the criminal law provisions in EU 27 that pertain to match-fixing will be utilized. This dataset will be used to compare the countries where these behaviors are already criminalized to those that still lack a similar legal toolbox. For countries that are included in the bi-weekly reports and are not members of the EU, a UNODC (United Nations Office on Drugs and Crime) report along open sources were used to identify the current legislative landscape with regards to match-fixing. The vast majority of the countries that are researched in this study have made their criminal legislation publicly available, so the number of "missing values"(i.e., countries for which we did not manage to collect criminal law data) is significantly law.

Finally, the Corruption Perceptions Index (CPI) published by Transparency International (TI) since 1996 will also be used.This index is used to rank countries "*by their perceived levels of corruption, as determined by expert assessments and opinion surveys*" (Lambsdorff, 2000) and will be utilized to construct the "corruption" variable.

Secondary data analysis

Secondary data analysis is usually referred to as "analysis of data collected by someone else" (Boslaugh, 2007) and "includes any data that are examined to answer a research question other than the question(s) for which the data were initially collected" (Vartanian, 2010). This approach is not new; secondary analysis of existing datasets was and remains central to criminological research - 58 percent of the studies in the fields of criminology and criminal studies used secondary data analysis according to Kleck, Tark, & Bellows (2006).

Secondary analysis involves the use of existing data, collected "*for a prior study, in order to pursue a research interest which is distinct from that of the original work; this may be a new research question or an alternative perspective on the original question*" (Hinds, Vogel and Clarke-Steffen 1997, Szabo and Strang 1997). In this respect, secondary analysis differs from systematic reviews and meta-analyses of qualitative studies which aim instead to compile and assess the evidence relating to a common concern or area of practice (Popay, Rogers and Williams,1998). Secondary analysis can involve the use of single or multiple qualitative data sets, as well as mixed qualitative and quantitative data sets. Moreover, the approach may either be employed by researchers to re-use their data or by independent analysts using previously established qualitative data sets.

One of the major advantages of secondary data analysis is that, because the data have already been collected by a third party, it requires fewer resources (e.g., time, money) than primary data collection. Also, the advent of software to aid the coding, retrieval, and analysis of qualitative data is another development which is likely to facilitate both the archiving and availability of qualitative data for secondary analysis purposes. In sum, the secondary analysis provides an opportunity to expand our understanding of the nature, consequences, and responses of corruption in soccer and, in particular, match-fixing.

However, before proceeding with using secondary data analysis, it is essential to establish that there is a compatibility of the data with secondary analysis: in other words, "*are the data amenable to secondary analysis? This will depend on the 'fit' between the purpose of the analysis and the nature and quality of the original data*" (Thorne 1994). The scope for additional in-depth analysis will vary depending on the nature of the data; in our case, the reports used for the

analysis will be quantified to secure both the compatibility of the data with the secondary data analysis as well safeguard the validity and reliability of the study.

Quantification of the data

As the reports are predominantly qualitative -secondary data can be both qualitative and quantitative- it is essential to quantify the available data to be able to analyze it and draw conclusions. In other words, as Green (2001) describes it, "to turn words and images into numbers." That said, the process of conducting a quantitative analysis of qualitative data will include three main steps: First, organize the data; second, read it and code it and third, and then present and interpret it. (Green, 2001).

One of the most common tools for quantification of qualitative data is thematic analysis, as it considered as a flexible, accessible tool that researchers use to quantify qualitative data.

In cases like the present study where the collected data are completely qualitative thematic analysis can be utilized to identify important or frequent themes from the data. In this context, a theme is something important about the data about the research question, which represents some level of meaning within the data set.

The steps that are commonly used to conduct a comprehensive thematic analysis are as follows (Braun & Clarke, 2006):

> *Familiarize yourself with the data: This requires the repeated reading of the available data. It's important to scrutinize the text to ensure that patterns or meanings are not overlooked.*

Note any patterns: After reading the data, make a list of the contents of the data and its salient features. All visible patterns or features should be taken into account.

Search for themes: Once you've noted all potential patterns, look for possible ways to group them into themes.

Review the themes: Look back at the data to check how valid your themes are. Be sure to check if sufficient data is available for each theme if the themes are varied, and if the data within each theme is homogenous. If the observations under a single theme are too varied, the theme classification is not appropriate.

Define and name themes: Now that your themes are set, define them. At this stage, the list of themes should be a proper map of the information — the themes should describe the main points contained in the reports without overlapping in meaning.

Analyze the data: Categorize individual words or phrases from the qualitative data into their appropriate themes. These themes can then be analyzed statistically.

Variables used in the present study

Based on an analysis of the reports which was informed by the existing literature on match-fixing, the following variables have been identified and will be used in the present dissertation:

a) ***Countries where match-fixing cases have occurred during the years that are covered by the available data.***
b) ***Actors involved in match-fixing incident(s). The actors include the following: players, referees, club owners, organized crime groups and others.***

c) ***Presence or absence of legal definition that criminalizes the phenomenon; moreover, in countries case match-fixing is criminalized as a phenomenon, whether there is a specialized law in place or the main legal tool is generic criminal law provisions.***

d) ***The Economic and political situation of the country, based on the Transparency International Corruption index. In short, this variable will be referred to as "corruption."***

e) ***The severity of sanctions in place at a given country/region. (i.e.whether existing law provisions include imprisonment or lack thereof).***

In the ANOVA chapter that follows, the presence or absence of legislative measures along with the severity of sanction -where available-

Operationalization of Variables

Operationalization for this research project's variables is informed mainly by the existing literature on match-fixing, the theoretical framework as well as the databases used for this study. The variables that will be utilized in this study are listed below:

Country: The first variable is the country where the match-fixing case(s) has/have been recorded. The region where this country is located will be included as well; the regions include Europe, Asia, N.America, S. America, Africa, Oceania.

Corruption Index: It refers to the economic and political situation of the country; it is a categorical variable with three categories based on Transparency International Corruption Index; in line with the methodology followed by TI, countries that score between 0 and 30 will be

considered as “very corrupted”, between 31 and 50 “moderate corruption”, between 51 and 70 as “low corruption” and above 71 as “very little corruption”.

Match-fixing cases where the player(s) was/were involved: This is a discrete variable that will include the number of match-fixing cases that occur, both per country and in total and involves players.

Match-fixing cases where referee(s) was/were involved: This is a discrete variable that will include the number of match-fixing cases that occur, both per country and in total and involves referees.

Match-fixing cases where coaches(s) was/were involved: This is a discrete variable that will include the number of match-fixing cases that occur, both per country and in total and involve coaches.

Match-fixing cases where soccer club(s) was/were involved: This is a discrete variable that will include the number of match-fixing cases that occur, both per country and in total and involve soccer clubs.

Match-fixing cases where the organized crime was involved: This is a discrete variable that will include the number of match-fixing cases that occur, both per country and in total and involve organized crime. This variable will include any activity that is characterized by the country’s law enforcement officials as “organized crime” or “organized crime syndicates.”

Match-fixing cases where other(s) was/were involved: This is a discrete variable that will include the number of match-fixing cases that occur, both per country and in total and involve another actor such as bookmakers, political figures, etc.

Legislative background: This is a categorical variable that includes three categories. That is, countries that have not adopted any legislative measures against match-fixing (“none”),

those that use criminal law provisions to address the phenomenon ("criminal code") and, last but not least, countries that have introduced specialized legislation specifically for match-fixing crimes ("specialized legislation").

Penalty Severity: This variable will include two categories (categorical variable): Countries where penalties for match-fixing include imprisonment or imprisonment and monetary fines combined vs. those countries where match-fixing violators face no imprisonment or face only monetary sanctions.

Statistical tools

As outlined above, the present study includes the following variables: A variable about the country where match-fixing cases have occurred, six variables measuring the role of the actors engaged in match-fixing (that is, players, coaches, club officials, referees, organised crime networks and others) one variable measuring the presence or absence of legal definition that criminalises match-fixing as a behaviour, one variable measuring the corruption level of each country and a last one that measures the severity of the sanctions that apply to match-fixing.

Testing the relationship between the variables

As mentioned in the introduction, this study is exploratory. Thus, to explore the relationships between the variables, test a series of hypotheses and, ultimately, answer the research questions that were laid out earlier in this study we will use both descriptive and inferential statistics. First off, the use of descriptive statistics will help us describe the

relationships between the variables of our study; these tools include measures of central tendency as well as the distribution of our sample.(Pagano, 2004)

Second, inferential statistics will serve as the primary tool to test our hypotheses (Hinkle, D., Wiersma, W., & Jurs, S.,2003). In this respect, T-test and ANOVA (Analysis of Variance) will be carried out. As the use of the appropriate statistics is essential for a reliable and valid research, this study was carefully designed having in mind that "bad statistics lead to bad research 99% of the time".(Fitzgerald & Fitzgerald, 2014).

All statistical tests and subsequent analysis for this dissertation will be conducted using the SPSS Statistics version 15.0 for Windows (Green & Salkind,2010), available online through the CUNY/Graduate Center's portal.

Research hypotheses

The research hypotheses that were tested in the context of the present study are as follows:

H1: Countries where legal definitions have been adopted, and criminal sanctions are in place are more likely to effectively address the phenomenon of match-fixing and arrest the individuals involved.

H2: Countries that rank high in the corruption index will have more chances to unveil match-fixing cases only if they have adopted criminal sanctions against match-fixers.

H3: The severity of criminal sanctions has a relationship with the number of match-fixing cases that are investigated across the board.

H4: Organized crime syndicates are involved in match-fixing in countries where criminalization of the phenomenon is not in place.

H5: Players, soccer officials as well as referees are more likely to engage in match-fixing in countries that are ranked as "most corrupted."

Ethical Concerns

There are not any ethical considerations/concerns that must be acknowledged in this study. The research complies with the IRB guidelines.- According to Ms. Lynda Mules, MLA, Associate Director of Research Compliance at John Jay College of Criminal Justice:

"The research you've described does not involve interaction or intervention with research participants, or analysis of identifiable, private information about individuals; as such, the work you've described does not constitute research with human subjects, and submission to the CUNY HRPP/IRB is not required."

The data used in this study were retrieved from open sources, and no information from human subjects will be collected for this research. As the data that will be used are publicly available, there are no issues of consent and confidentiality associated with primary research. However, every possible effort will be made to handle all information used in the proposed research as well as the results of the research honestly, openly and without bias.

Chapter Six: Results from the data analysis

Overview- how extensive is match fixing?

Table 1 presents an overview of the countries where match-fixing cases occurred from 2013 until June 2017. In total, there were 313 cases recorded by INTERPOL and 81 countries investigated one or more cases with the average number of cases per country being 3,86 (mean).

The total number of both the countries involved and the match-fixing actual cases demonstrates the extent of the phenomenon and confirms the findings of the UNODC(2013) that "there is virtually no country that could claim it is immune to match-fixing."

Table 1- Match Fixing Cases 2013-2017

N	Valid	81
	Missing	0
Mean		3,86
Median		2,00
Mode		1
Std. Deviation		4,321
Variance		18,669
Minimum		1
Maximum		22
Sum		313

Graph 1 presents the distribution of match-fixing cases from 2013 until June 2017. In total, 313 cases were investigated across the globe. The distribution is skewed with the majority of countries investigating between 1 and 8 cases and significantly fewer countries reporting more than ten cases. The maximum number of cases unveiled in one country was 22 (Spain)followed by Singapore with 20 reported cases. However, both countries should be treated as an exception; it is what we call in statistics" an outlier," an observation that is distant from other cases/observations.

Graph 1-Distribution of match-fixing cases from 2013-2017

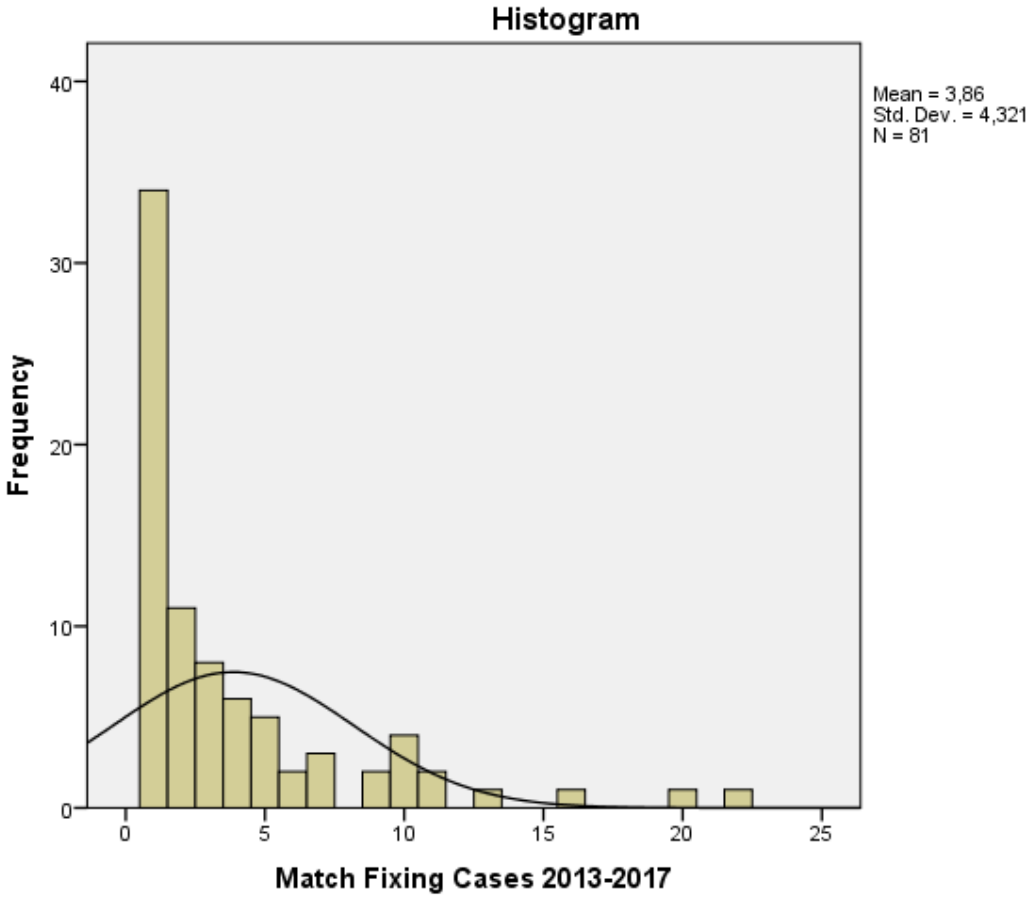


Chart 1 and Table 2 present the number of countries that have reported at least one match-fixing case per region along with the total number of cases per region. Not surprisingly, the vast majority of match-fixing cases occur in countries in Europe and Asia; both regions combined account for 66,7% of the total number of countries that are involved in the phenomenon. On the contrary, as shown in table 2, only one country from South America has dealt with match-fixing investigations despite the fact that soccer, introduced in Brazil in 1894, is the most popular sport in South America and has taken "a pivotal role in society" (Giulianotti, 2012).

Additionally, 154 cases, nearly 50% of the total number of reported cases, occurred in Europe followed by Asia with 72. Europe and Asia combined, account for nearly two-thirds of the total number of reported match-fixing cases.

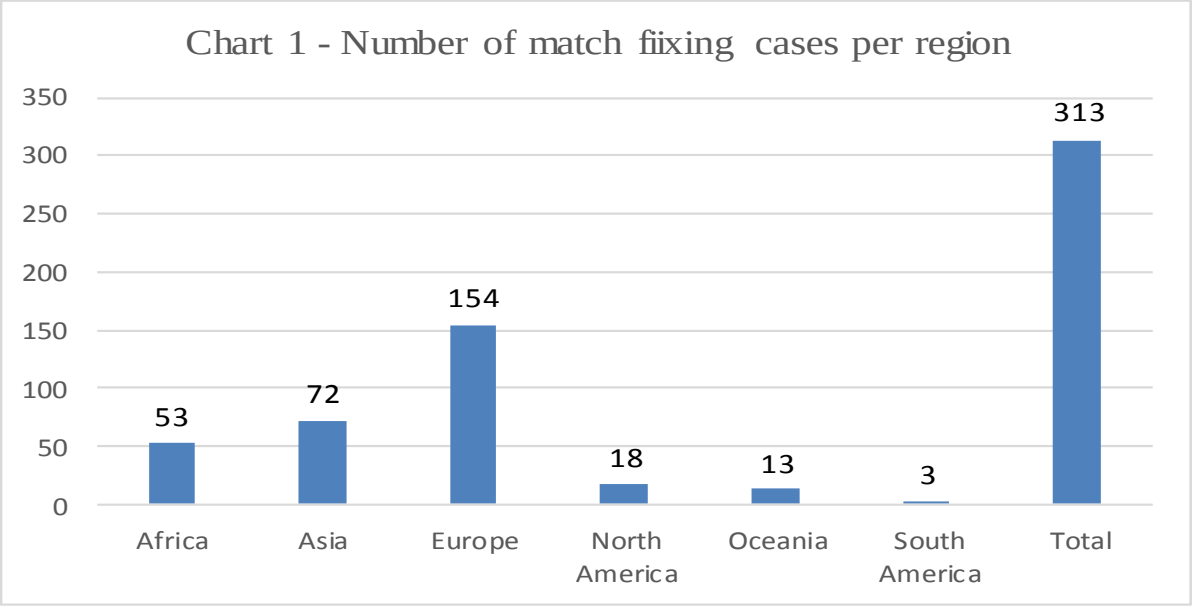


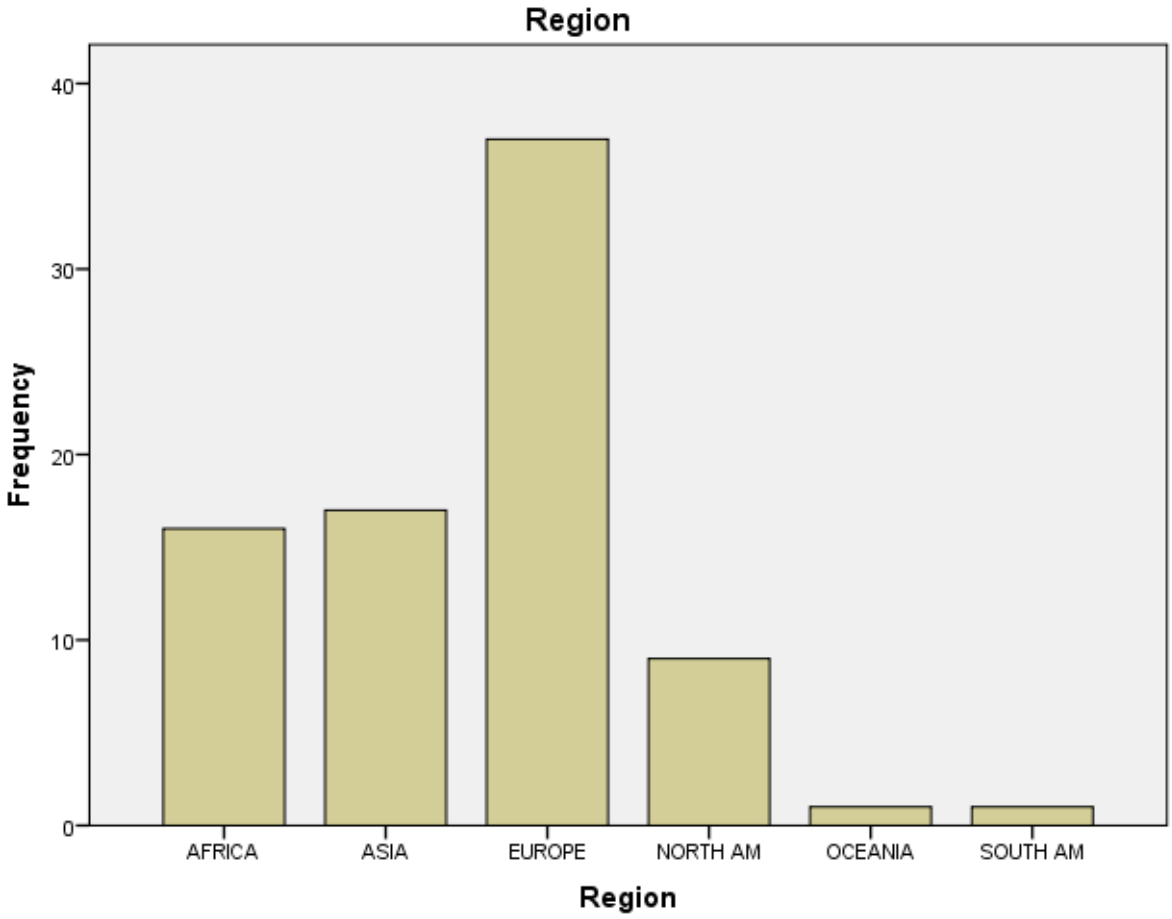
Table 2- Match-fixing cases (countries) by region

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	AFRICA	16	19,8	19,8	19,8
	ASIA	17	21,0	21,0	40,7
	EUROPE	37	45,7	45,7	86,4
	NORTH AMERICA	9	11,1	11,1	97,5
	OCEANIA	1	1,2	1,2	98,8

SOUTH AMERICA	1	1,2	1,2	100,0
Total	81	100,0	100,0	

The dominance of European and Asian countries in unveiled match-fixing cases can be seen in graph two as well.

Graph 2- Frequency of match-fixing cases by region



Who are the main actors involved in match-fixing?

As far as the involvement of different actors is concerned, tables 3-8 present some detailed descriptive statistics the involvement of coaches, players, referees, club officials, organized crime or others in match-fixing cases. Each of the tables will be analyzed separately, accompanied by a graph that visualizes the frequency of the cases per variable (actor).

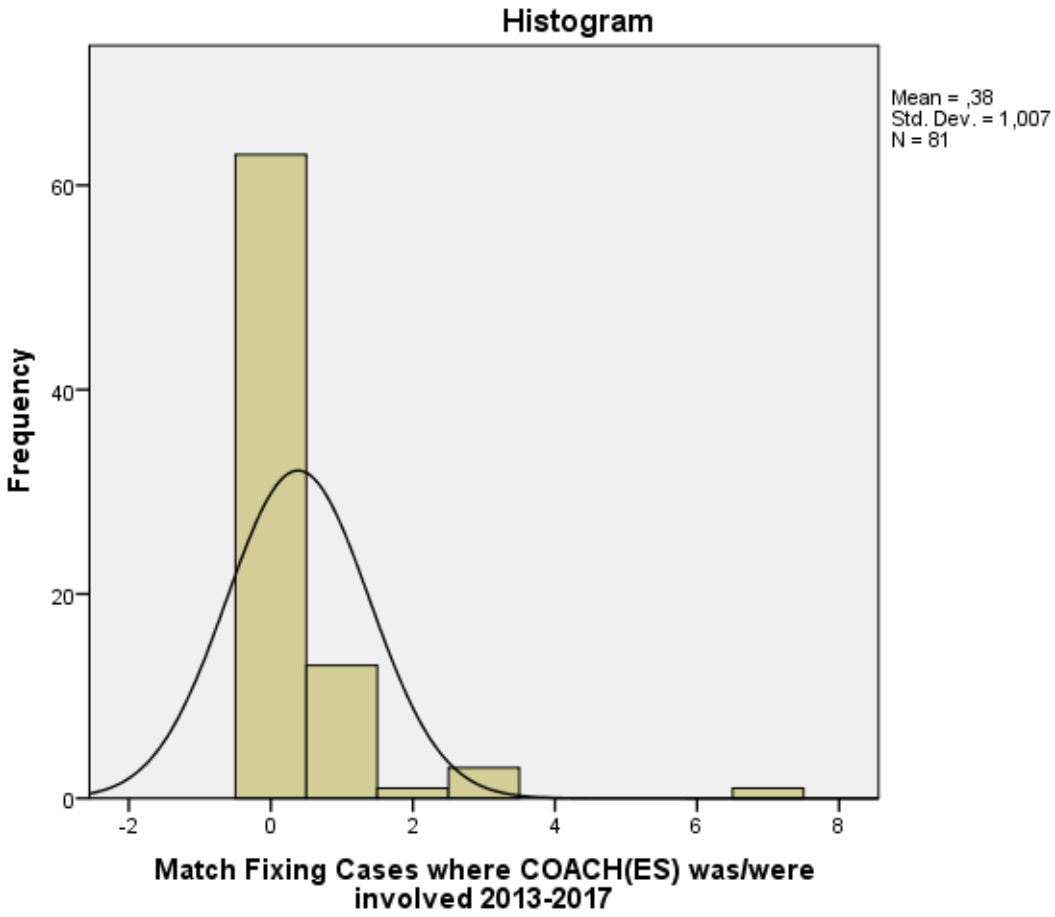
Table 3 displays the number of countries that have or have not reported match-fixing cases involving coaches. Interestingly enough, 63 out of the 81 countries that are included in our dataset have not investigated a single case involving a soccer team coach. Moreover, 13 countries reported one case, one country reported two cases, three countries reported three cases and only one country reported 7 cases of fixed games in which one or more coaches were investigated. In sum, more than three quarters (77,8%) of the countries in our database did not have any match-fixing case where a coach was involved.

Table 3- Match-fixing cases where COACH(ES) was/were involved

Valid	0	63	77,8	77,8	77,8
	1	13	16,0	16,0	93,8
	2	1	1,2	1,2	95,1
	3	3	3,7	3,7	98,8
	7	1	1,2	1,2	100,0
	Total	81	100,0	100,0	

Graph 3 shows the frequency distribution of the cases where coaches were involved.

Graph 3- Distribution of cases where COACH(ES) was/were involved 2013-2017

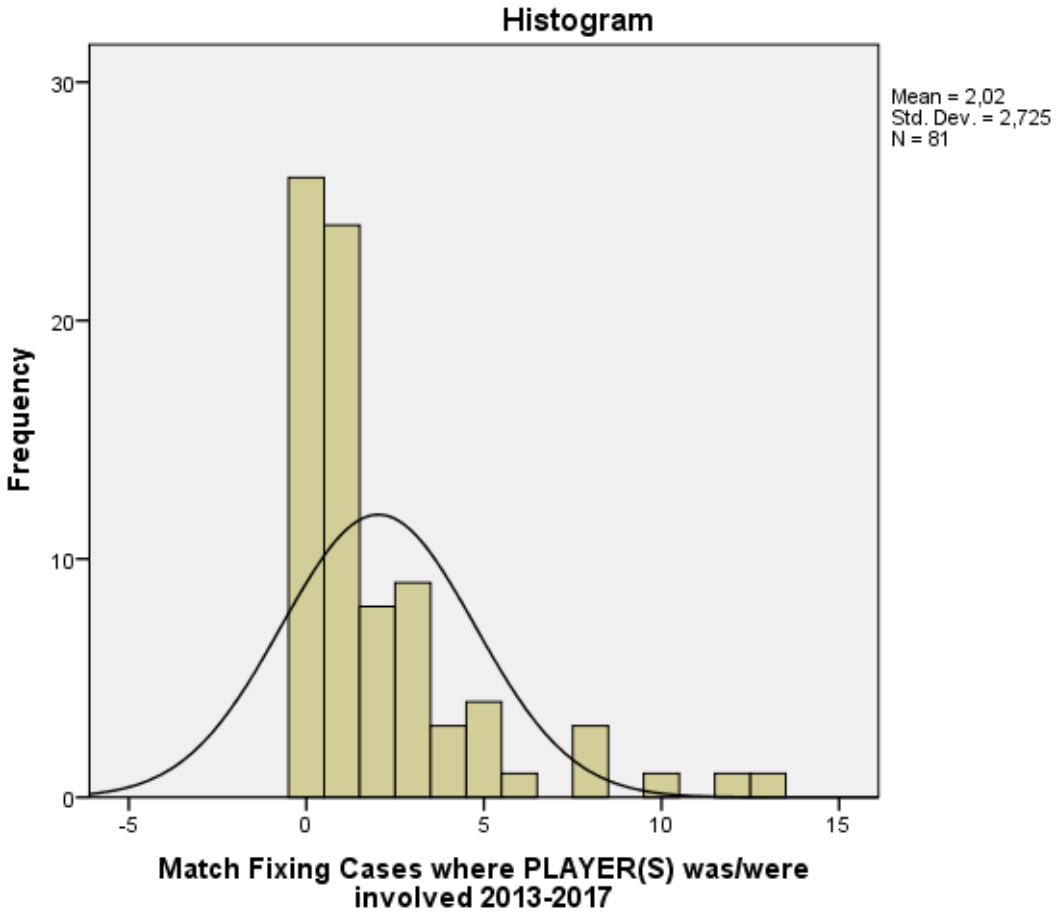


According to Table 4, from 2013 until June 2017 an average of 2,02 cases involving players was reported by each of the 81 countries that are included in our sample**.** Of course, if we take a close look at graph four we could notice that there is a relatively small number of outliers- that is, countries that have reported either a much higher or much lower number of cases that involve players. For example, one country (Spain) has reported 13 cases while 26 countries did not report any case where one or more players was/were investigated.

Table 4- Match Fixing Cases where PLAYER(S) was/were involved 2013-2017

N	Valid	81
	Missing	0
Mean		2,02
Median		1,00
Mode		0
Std. Deviation		2,725
Variance		7,424
Minimum		0
Maximum		13
Sum		164

Graph 4- Distribution of cases where PLAYER(S) was/were involved 2013-2017



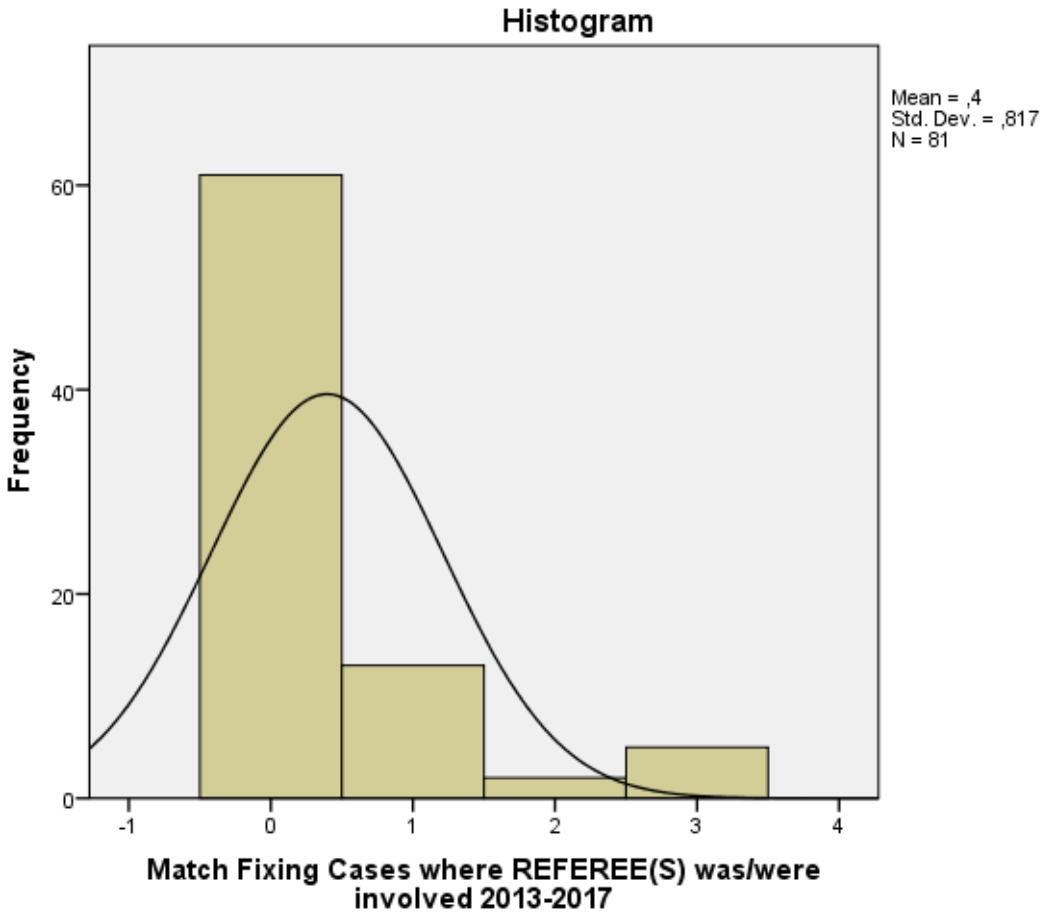
As far as the involvement of referees is concerned, Table 5 reveals that more than three-quarters of our sample have not investigated cases where one or more referees was/were involved, that is 61 out of the 81 countries. Moreover, 13 countries reported one case that involved a referee; two countries reported 2 cases and only five countries have investigated 3 cases-that is, 6,2% of the countries in our sample.

Last but not least, Graph 5 provides a depiction of this skewed distribution of cases that involve referees.

Table 5- Match Fixing Cases where REFEREE(S) was/were involved 2013-2017

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	61	75,3	75,3	75,3
	1	13	16,0	16,0	91,4
	2	2	2,5	2,5	93,8
	3	5	6,2	6,2	100,0
	Total	81	100,0	100,0	

Graph 5- Distribution of cases where REFEREE(S) was/were involved 2013-2017

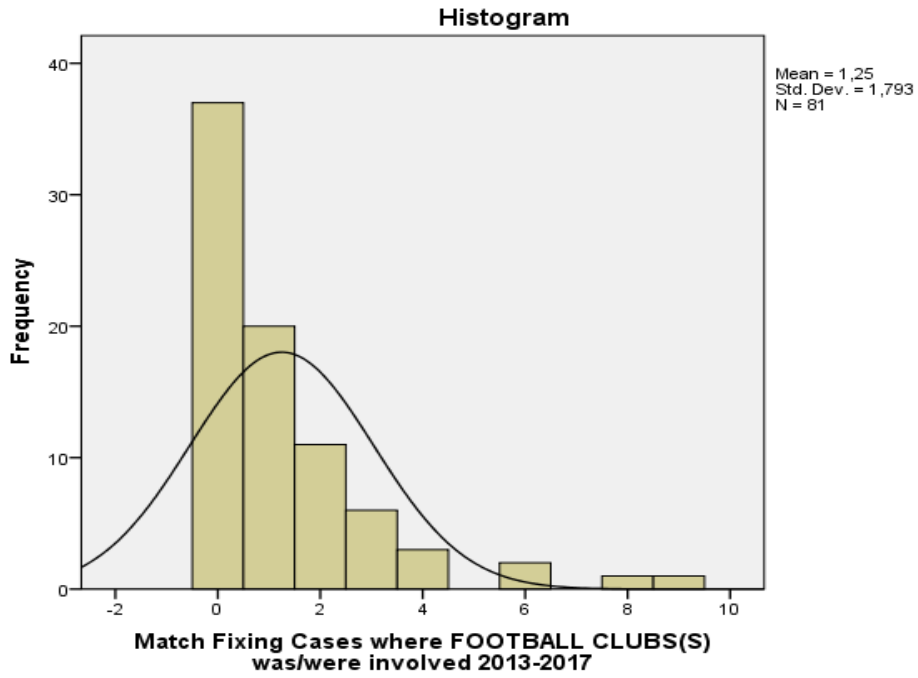


Soccer clubs seem to be more likely to appear in match-fixing compared to referees; according to the results presented in Table 6, 54,3% of the countries in our sample have reported one or more match-fixing cases where soccer clubs were under investigation. However, 38,3% of the countries have reported either one or two cases, and only 16% have reported more than two with two countries – Greece and Spain-reporting 8 and 9 cases respectively.

Table 6- Match Fixing Cases where SOCCER CLUBS(S) was/were involved 2013-2017

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	37	45,7	45,7	45,7
	1	20	24,7	24,7	70,4
	2	11	13,6	13,6	84,0
	3	6	7,4	7,4	91,4
	4	3	3,7	3,7	95,1
	6	2	2,5	2,5	97,5
	8	1	1,2	1,2	98,8
	9	1	1,2	1,2	100,0
	Total	81	100,0	100,0	

Graph 6- Distribution of cases where SOCCER CLUB(S) was/were involved 2013-2017

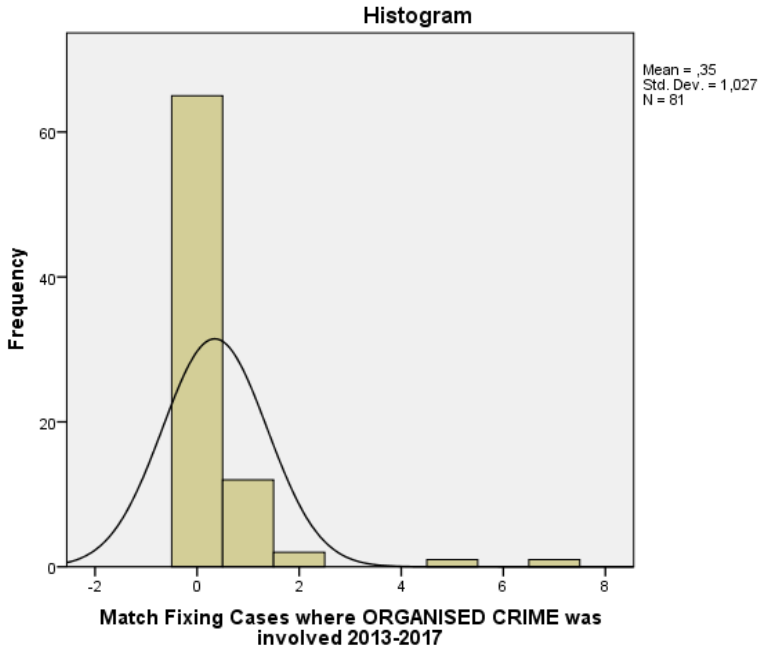


In the literature, organized crime has often been cited as a major actor in match-fixing. However, this does not seem to be the case in our sample, at least not to the extent that qualitative research has claimed. Looking at the numbers in Table 7, nearly two-thirds of the countries have not reported a single case that involves organized crime networks/syndicates.That

is, 80,2% of our sample. This skewed distribution of cases where organized crime networks were involved can be seen in Graph 7.

Table 7- Match Fixing Cases where ORGANISED CRIMEwas involved 2013-2017

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	65	80,2	80,2	80,2
	1	12	14,8	14,8	95,1
	2	2	2,5	2,5	97,5
	5	1	1,2	1,2	98,8
	7	1	1,2	1,2	100,0
	Total	81	100,0	100,0	



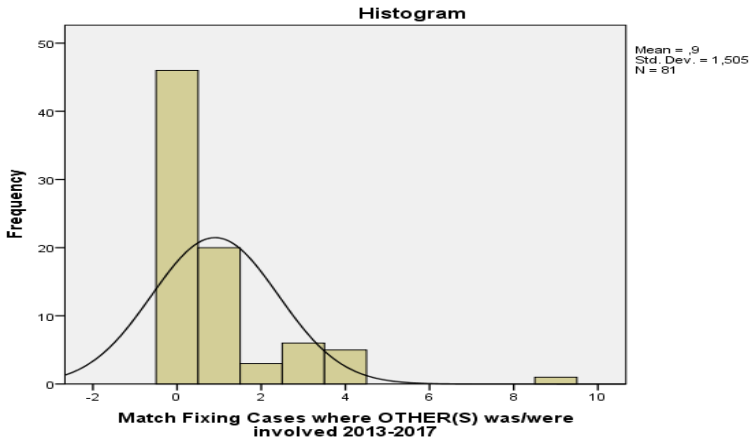
Graph 7- Distribution of cases where organized crime was involved 2013-2017

Our final table presents the statistics that pertain to the cases where other actors were involved in match-fixing. Other(s) include betting companies, bookmakers, local political figures, etc. Interestingly enough, 43,2% of the countries in our sample investigated at least one case where other(s) were involved. Last but not least, Graph 8 provides a visual representation of the distribution of the cases mentioned above.

Table 8- Match Fixing Cases where OTHER(S) was/were involved 2013-2017

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	46	56,8	56,8	56,8
	1	20	24,7	24,7	81,5
	2	3	3,7	3,7	85,2
	3	6	7,4	7,4	92,6
	4	5	6,2	6,2	98,8
	9	1	1,2	1,2	100,0
	Total	81	100,0	100,0	

Graph 8- Distribution of cases where OTHER(S was/were involved 2013-2017



Is match-fixing more prevalent in the most corrupted countries?

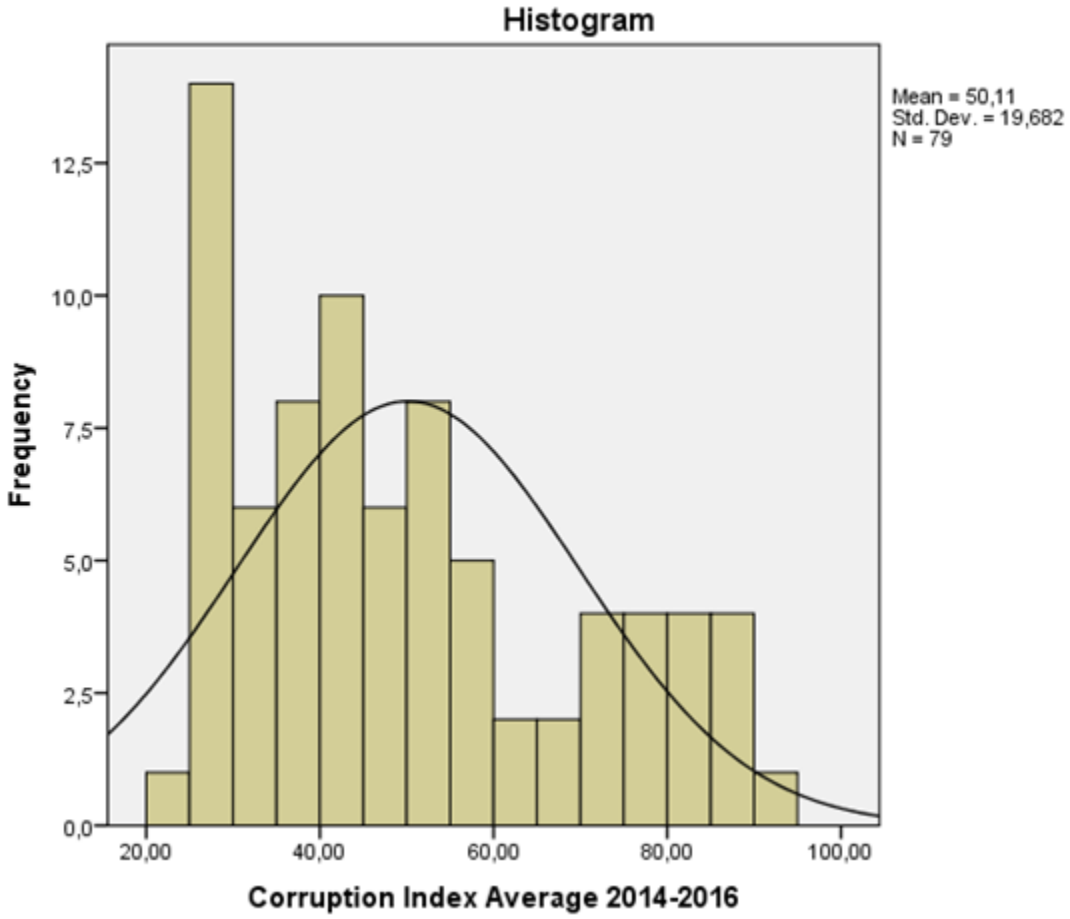
Table 9 provides us with some info regarding the level of corruption of the countries in our sample. The average of the corruption index is 50,11-which falls right in between moderate and low corruption based on the operationalization of the corruption variable. However, there is a significant variation in the corruption index among the 81 countries of our sample. The most corrupted country has a corruption index of 21,33 while the less corrupted scores a 91, which indicates a country that is almost corruption-free. To visualize the distribution of corruption levels, we should consult Graph 9 below.According to the graph, despite the fact that the median of our sample equals 50,11 the majority of the countries in our sample have achieved a score well below 50 which demonstrates levels of higher corruption with almost 30 countries scoring below 40.

That said, we could argue that the majority of the countries in our sample demonstrate relatively high levels of corruption.However, this is just an observation based on descriptive statistics. Whether this is a statistically significant finding will be tested when we run inferential statistics.

Table 9- Corruption Index Average 2014-2016

N	Valid	79
	Missing	2
Mean		50,1148
Median		45,2500
Mode		25,33[a]
Std. Deviation		19,68193
Variance		387,378
Minimum		21,33
Maximum		91,00
Sum		3959,07

Graph 9- Distribution of corruption Index Average 2013-2016



Legislative background

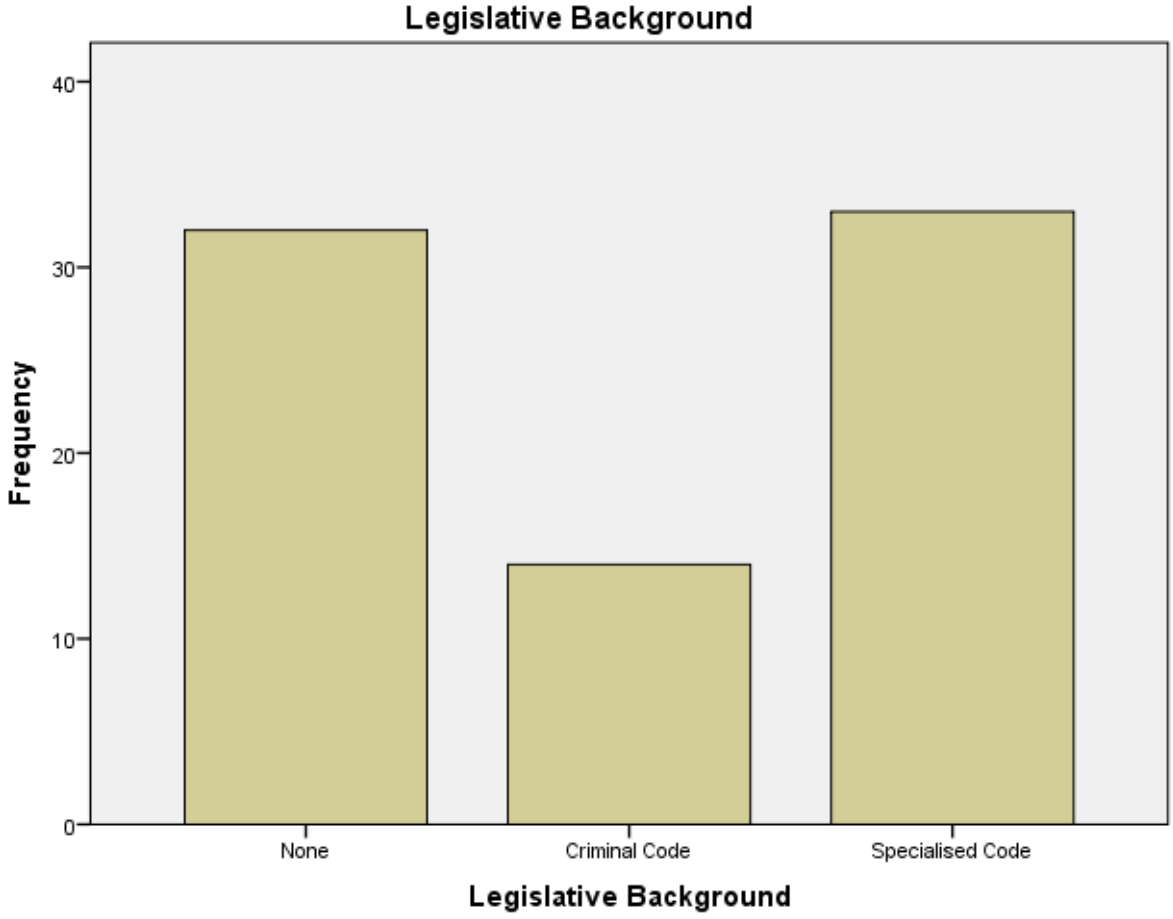
Table 10 along with graph ten below show that almost 4 in 10 countries in our sample have not implemented any legislative measures to address the problem of match-fixing.This

observation is consistent with the findings of several reports in the literature that emphasize on the lack of legislation as a loophole that fixers take advantage of (UNODC, 2013). Moreover, 41,8% of the countries have passed specialized legislation to fight match-fixing while 17,7% of the countries rely on criminal law provisions as a tool against the phenomenon.

Table 10-Legislative Background

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	32	39,5	40,5	40,5
	Criminal Code	14	17,3	17,7	58,2
	Specialised Code	33	40,7	41,8	100,0
	Total	79	97,5	100,0	
Missing	999	2	2,5		
Total		81	100,0		

Graph 10- Legislative Background



Penalty severity among the countries

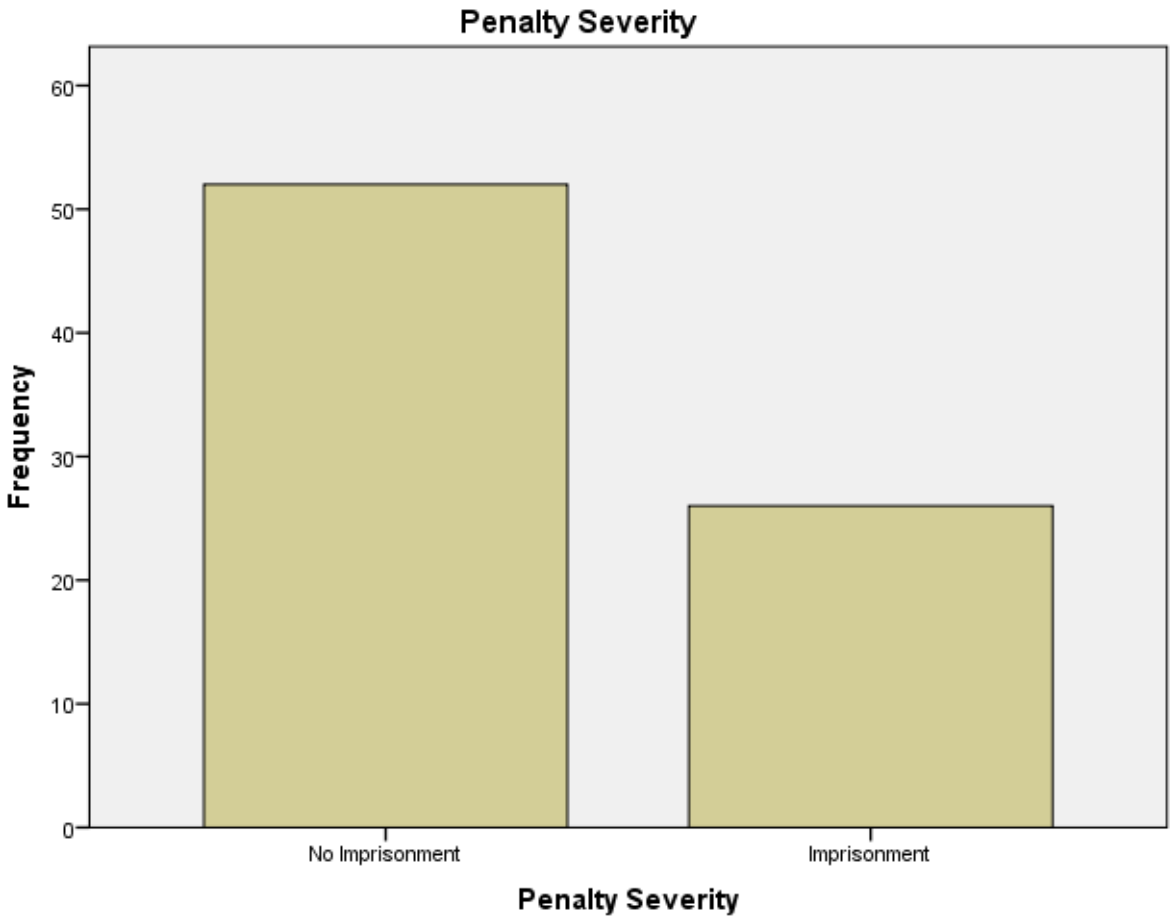
Table 11-Penalty Severity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No Imprisonment	52	64,2	66,7	66,7
	Imprisonment	26	32,1	33,3	100,0
	Total	78	96,3	100,0	

	Miss ing	999	3	3,7		
	Total		81	100,0		

Table 11 and Graph 11 shows an interesting finding that has been pointed out by some studies in the literature; the fact that in the majority of the countries across the globe- two-thirds of the countries in our sample- the penalties for match-fixing perpetrators do not include imprisonment. Only 32,1% of the countries have opted in for imprisonment as a way of punishment for match-fixing plots.

Graph 11- Frequency of Penalty Severity



Do countries with anti-match-fixing legislation have more cases unveiled?

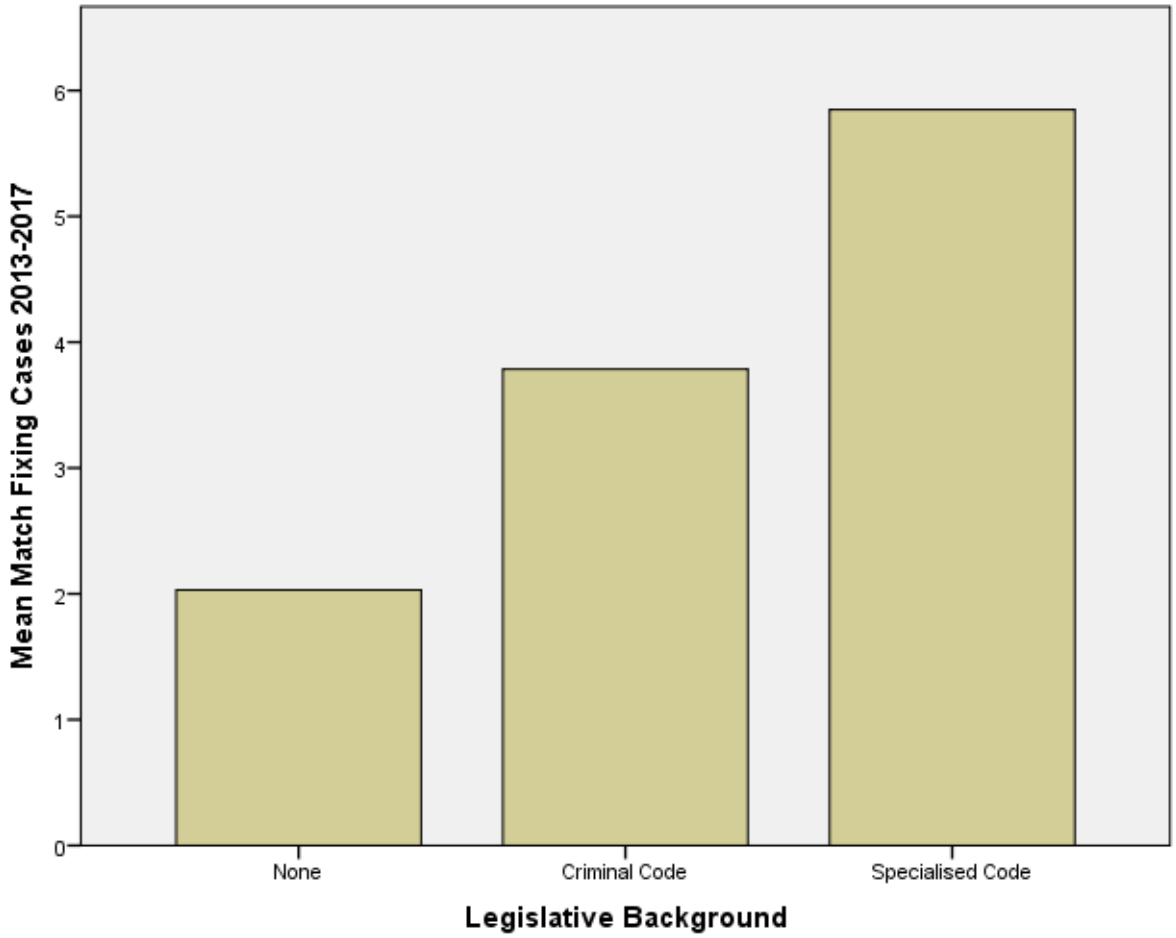
Table 12 and graph show the difference in the average number of cases investigated by countries, based on the absence or presence of legislative measures. In particular, it seems that countries with specialized legislation have investigated an average of 6 cases from 2013 until June 2017, compared to 4 investigated by countries that use only the criminal code. Countries that have no legislation in place whatsoever have unveiled only two cases on average. Interestingly enough, those countries seem to score low on the corruption index as well; in other words, more corrupted countries seem to lack the legal tools and subsequently investigate fewer match-fixing cases. The latter is a hypothesis that will be tested later on when T-test and ANOVA will be conducted.

Table 12- Number of cases depending on Legislative Background

	Legislative Background		
	None	Criminal Code	Specialised Code
	Mean	Mean	Mean
Match Fixing Cases 2013-2017	2	4	6
Match Fixing Cases where COACH(ES) was/were involved 2013-2017	0	0	1
Match Fixing Cases where PLAYER(S) was/were involved 2013-2017	1	2	3
Match Fixing Cases where REFEREE(S) was/were involved 2013-2017	0	0	1
Match Fixing Cases where SOCCER CLUBS(S) was/were involved 2013-2017	1	1	2
Match Fixing Cases where ORGANISED CRIME was involved 2013-2017	0	0	1
Match Fixing Cases where OTHER(S) was/were involved 2013-2017	0	1	1

Corrupttion Index Average 2014-2016	42,90	59,21	52,13

Graph 12- Mean of match-fixing cases depending on Legislative Background



Do countries with tougher legislation have more match-fixing cases unveiled?

The statistics in table 13 and Graph 13 support the hypothesis that countries that use imprisonment as a form of punishment for match-fixing have more cases unveiled. More specifically, the average number of cases per country that enforces imprisonment is five

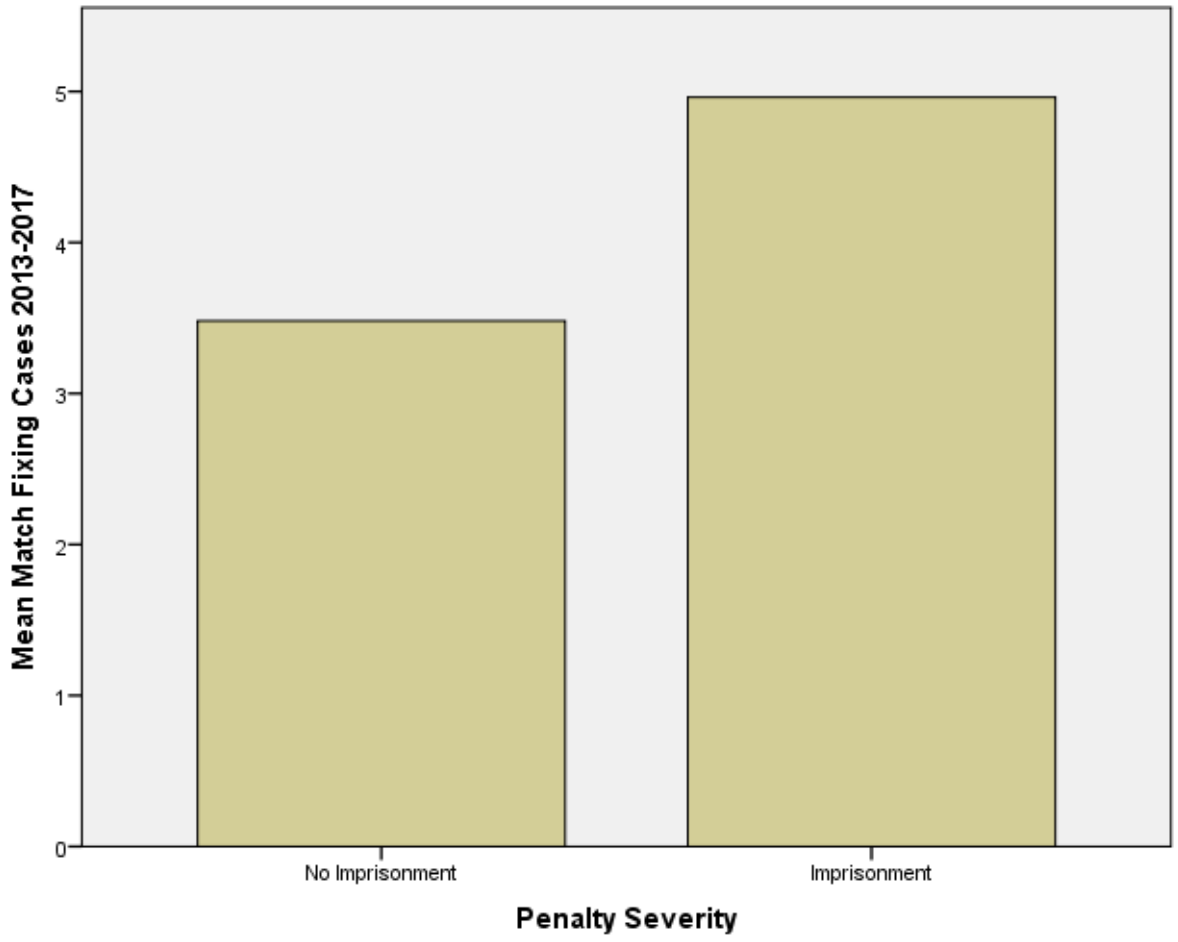
compared to 3 cases in countries that do not do so. However, this is just an initial observation based on descriptive statistics and will be tested later on.

Table 13- Number of cases depending on Penalty Severity

	Penalty Severity	
	No Imprisonment	Imprisonment
	Mean	Mean
Match Fixing Cases 2013-2017	3	5
Match Fixing Cases where COACH(ES) was/were involved 2013-2017	0	1
Match Fixing Cases where PLAYER(S) was/were involved 2013-2017	2	3
Match Fixing Cases where REFEREE(S) was/were involved 2013-2017	0	0
Match Fixing Cases where SOCCER CLUBS(S) was/were involved 2013-2017	1	2
Match Fixing Cases where ORGANISED CRIME was involved 2013-2017	0	1

Match Fixing Cases where OTHER(S) was/were involved 2013-2017	1	1
Corruption Index Average 2014-2016	43,34	63,22

Graph 13- Mean of match-fixing cases depending on Penalty Severity



What kind of relationships exists between our variables?

To establish whether there are any relationships between the variables in our sample, we will use correlations- a tool that will help us to prepare the ground for testing our hypotheses using inferential statistics. However, it should be noted that this tool will only allow us to establish whether there is a correlational relationship between the variables that we will test; the existence of a correlation between two variables, however, does not mean that the one causes the other. Correlation does not necessarily mean causation; this is a topic for a different type of analysis.

Table 14 presents the existing associations between our study's variables and whether said correlations are significant. The main tool that will be used to establish the existence or not of a correlation between the different pairs of variables is the Pearson correlation coefficient. As a rule of thumb, the stronger the association of our two variables the closer this value will be either to -1 (if the correlation is negative) or to 1 (if the correlation is positive). Last but not least, it is extremely important to test whether our correlation is statistically significant and that it did not occur by chance; a statistically significant correlation coefficient will help us reject the null hypothesis – that there is no relationship-and accept the alternative hypothesis that there is indeed a relationship.

Table 14- Correlations between different variables

		Match Fixing Cases 2013-2017	Match Fixing Cases where COACH(ES) was/were involved 2013-2017	Match Fixing Cases where PLAYER(S) was/were involved 2013-2017	Match Fixing Cases where REFEREE(S) was/were involved 2013-2017	Match Fixing Cases where FOOTBALL CLUBS(S) was/were involved 2013-2017	Match Fixing Cases where ORGANISED CRIME was involved 2013-2017	Match Fixing Cases where OTHER(S) was/were involved 2013-2017	Corruption Index Average 2014-2016	Legislative Background	Penalty Severity
Match Fixing Cases 2013-2017	Pearson Correlation	1	,472**	,809**	,433**	,695**	,538**	,636**	,199	,400**	,161
	Sig. (2-tailed)		,000	,000	,000	,000	,000	,000	,079	,000	,159
	N	81	81	81	81	81	81	81	79	79	78
Match Fixing Cases where COACH(ES) was/were involved 2013-2017	Pearson Correlation	,472**	1	,539**	-,095	,439**	,402**	-,098	,105	,243*	,258*
	Sig. (2-tailed)	,000		,000	,399	,000	,000	,382	,358	,031	,022
	N	81	81	81	81	81	81	81	79	79	78
Match Fixing Cases where PLAYER(S) was/were involved 2013-2017	Pearson Correlation	,809**	,539**	1	,085	,516**	,216	,229*	,226*	,394**	,295**
	Sig. (2-tailed)	,000	,000		,448	,000	,053	,040	,045	,000	,009
	N	81	81	81	81	81	81	81	79	79	78
Match Fixing Cases where REFEREE(S) was/were involved 2013-2017	Pearson Correlation	,433**	-,095	,085	1	,308**	,282*	,551**	-,020	,129	,011
	Sig. (2-tailed)	,000	,399	,448		,005	,011	,000	,862	,256	,924
	N	81	81	81	81	81	81	81	79	79	78
Match Fixing Cases where FOOTBALL CLUBS(S) was/were involved 2013-2017	Pearson Correlation	,695**	,439**	,516**	,308**	1	,191	,301**	,027	,208	,085
	Sig. (2-tailed)	,000	,000	,000	,005		,088	,006	,815	,067	,457
	N	81	81	81	81	81	81	81	79	79	78
Match Fixing Cases where ORGANISED CRIME was involved 2013-2017	Pearson Correlation	,538**	,402**	,216	,282*	,191	1	,427**	,099	,158	,096
	Sig. (2-tailed)	,000	,000	,053	,011	,088		,000	,384	,166	,403
	N	81	81	81	81	81	81	81	79	79	78
Match Fixing Cases where OTHER(S) was/were involved 2013-2017	Pearson Correlation	,636**	-,098	,229*	,551**	,301**	,427**	1	,156	,259*	-,072
	Sig. (2-tailed)	,000	,382	,040	,000	,006	,000		,171	,021	,533
	N	81	81	81	81	81	81	81	79	79	78
Corruption Index Average 2014-2016	Pearson Correlation	,199	,105	,226*	-,020	,027	,099	,156	1	,212	,487**
	Sig. (2-tailed)	,079	,358	,045	,862	,815	,384	,171		,062	,000
	N	79	79	79	79	79	79	79	79	78	77
Legislative Background	Pearson Correlation	,400**	,243*	,394**	,129	,208	,158	,259*	,212	1	,480**
	Sig. (2-tailed)	,000	,031	,000	,256	,067	,166	,021	,062		,000
	N	79	79	79	79	79	79	79	78	79	78
Penalty Severity	Pearson Correlation	,161	,258*	,295**	,011	,085	,096	-,072	,487**	,480**	1
	Sig. (2-tailed)	,159	,022	,009	,924	,457	,403	,533	,000	,000	
	N	78	78	78	78	78	78	78	77	78	78

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Based on table 14, we will attempt to explore the relationship between the following variables. This analysis is particularly important as it will be our main tool in the effort to answer our research questions and test our hypotheses:

Number of match-fixing cases and number of cases where players were involved

The null hypothesis here is that there is no relationship between the two variables. The Pearson correlation for this relationship has a value of .809 which show a strong positive strength of association. Moreover, according to the significance value results the correlation is statistically significant and, thus, we can reject the null hypothesis and accept the alternative hypothesis that there is indeed a strong relationship; in particular, as the number of match-fixing cases increases, there is a strong increase in the number of cases where players were involved.

Number of match-fixing cases and number of cases where referees were involved.

In this case, the null hypothesis states that there is no relationship between the two variables. The Pearson correlation for this relationship has a value of .433 which shows a moderate positive strength of association. Moreover, according to the table, the correlation is statistically significant and, thus, we can reject the null hypothesis and accept the alternative hypothesis that there is indeed a relationship; however, the strength of this relationship is medium. We could conclude that as the number of match-fixing cases increases, there is a moderate increase in the number of cases where referees were involved.

Number of match-fixing cases and number of cases where coaches were involved.

Again, the null hypothesis states that there is no relationship between the two variables. The Pearson correlation for this relationship has a value of .472 which shows a medium positive strength of association. Moreover, per the table results the correlation is statistically significant and, thus, we can reject the null hypothesis and accept the alternative hypothesis that there is

indeed a relationship; however, the strength of this relationship is moderate. That said, we accept that as the number of match-fixing cases increases, there is a moderate increase in the number of cases where coaches were involved.

Number of match-fixing cases and number of cases where soccer clubs were involved

Following the same approach as above, the null hypothesis here is that there is no relationship between the two variables. The Pearson correlation for this relationship has a value of .695 which show a strong positive strength of association. Moreover, according to the significance results the correlation is statistically significant and, thus, we can reject the null hypothesis and accept the alternative hypothesis that there is indeed a strong relationship; in particular, as the number of match-fixing cases increases, there is a strong increase in the number of cases where soccer clubs were involved

Number of match-fixing cases and number of cases where the organised crime was involved.

Likewise, the null hypothesis here is that there is no relationship between the two variables. The Pearson correlation for this relationship has a value of .538 which show a strong positive strength of association. Moreover, according to the significance results the correlation is statistically significant and, thus, we can reject the null hypothesis and accept the alternative hypothesis that there is indeed a relationship; in particular, as the number of match-fixing cases increases, there is a strong increase in the number of cases where organised crime was involved. This finding is consistent with the argument that organised crime is heavily involved in match-fixing despite the low number of organised number cases that were reported in the countries of our sample, as we discussed in the descriptive statistics part of our analysis.

Number of match-fixing cases and number of cases where others were involved

Similarly, the relationship between these two variables has a Pearson Correlation value of .636 which indicates a strong relationship/association and the correlation is statistically significant. That said, as the number of match-fixing cases increases there is a strong increase in the number of cases where others were involved.

Number of match-fixing cases and legislative background.

Interestingly enough, there seems to be a statistically significant correlation between legislation and the number of match-fixing cases. The correlation coefficient value of .400 indicates that this is a moderate relationship, but due to its significant, it did not occur by chance. In a nutshell, as the legislative background moves towards higher values that indicate either criminal law provisions (2) or specialized legislation (3), there is a moderate increase in the number of match-fixing cases that are unveiled.

Number of match-fixing cases and penalty severity.

Unlike the descriptives statistics analysis, the results in table 14 show that there is no statistically significant correlation between penalty severity and the number of match-fixing cases that were investigated.

Penalty severity and cases where players were involved.

The correlation between the two variables is a positive, yet weak, one and it is statistically significant. So, we can reject the null hypothesis and accept that as the penalty severity value increases (moving from 1=no imprisonment towards 2=imprisonemnt) there is a small increase in the number of cases where players are involved.

Corruption index and cases where players were involved.

The same applies to this relationship. Given that it is a statistically significant, yet weak correlation (,226) we accept that, as the corruption index increases-that is, the country is less corrupted- there is a small increase in the number of cases that involve players. It is worth pointing out that from all 8 actors involved in match-fixing, players was the only variable that had a significant positive correlation with corruption index. This could help us support the idea that in less corrupted countries it is likely to identify cases where players are involved.

Legislative background and cases where players were involved.

In this pair of variables there is a statistically significant, moderate association that shows that as the value of the legislative background increases, that is, as it moves closer to 2=criminal code or 3=specialised legislation, there is a moderate increase in the number of cases where players are involved.

Using T-test as a tool to test our hypotheses

So far, we have used descriptive statistics and correlations in order to describe the relationship between the variables in our sample; however, although this approach has been very helpful in our effort to provide an account of the current match-fixing landscape and its scope across the world, it is not enough to help us test our hypotheses and answer our research questions. It is for this reason that certain inferential statistics will be used to allow us to generalize our findings or make inferences in the larger collection of the population.

First off, we will conduct a T-test that will help us test a series of hypotheses regarding the relationship between penalty severity and the other variables. Table 15 presents some basic descriptive statistics: we notice that in case a country uses imprisonment as a punishment for

match-fixing the average number of match-fixing cases from 2013 until 2017 is 4,96 while it is only 3,48 cases when imprisonment is not used. That said, the difference is almost 1,5 cases.Similarly, there are differences on the average of the other variables depending on the presence or absence of imprisonment. In particular, the average number of cases where players, coaches, referees, soccer clubs, organized crime or others are involved is different in countries where imprisonment is used vs. when those that do not use it.Moreover, it seems that countries that use imprisonment have a higher average corruption index (63,21) compared to those that do not use imprisonment (43,33).

Table 15- Descriptive statistics

Group Statistics

Penalty Severity		N	Mean	Std. Deviation	Std. Error Mean
Match Fixing Cases 2013-2017	No Imprisonment	52	3,48	4,395	,609
	Imprisonment	26	4,96	4,219	,827
Match Fixing Cases where COACH(ES) was/were involved 2013-2017	No Imprisonment	52	,21	,637	,088
	Imprisonment	26	,77	1,478	,290
Match Fixing Cases where PLAYER(S) was/were involved 2013-2017	No Imprisonment	52	1,52	2,437	,338
	Imprisonment	26	3,23	3,037	,596
Match Fixing Cases where REFEREE(S) was/were involved 2013-2017	No Imprisonment	52	,40	,748	,104
	Imprisonment	26	,42	,987	,194
Match Fixing Cases where FOOTBALL CLUBS(S) was/were involved 2013-2017	No Imprisonment	52	1,17	1,630	,226
	Imprisonment	26	1,50	2,159	,423
Match Fixing Cases where ORGANISED CRIME was involved 2013-2017	No Imprisonment	52	,29	1,035	,144
	Imprisonment	26	,50	1,068	,209
Match Fixing Cases where OTHER(S) was/were involved 2013-2017	No Imprisonment	52	1,00	1,680	,233
	Imprisonment	26	,77	1,177	,231
Corruption Index Average 2014-2016	No Imprisonment	51	43,3398	16,19693	2,26802
	Imprisonment	26	63,2177	18,76292	3,67971
Legislative Background	No Imprisonment	52	1,69	,919	,127
	Imprisonment	26	2,62	,496	,097

The results of the T-test are presented in table 16.An analysis of the findings follows below:

In the case of the total number of countries where match-fixing cases were investigated from 2013-2017, the null hypothesis states that “there is no difference in the number of reported match-fixing cases in countries that use imprisonment vs. those that do not” As the sig. equals .547>.05 we will use the first line of T-test results. We notice that the sig. (2-tailed) has a value of .159 (p= .159>0.05) which shows that it is not significant. Thus, we will accept the null hypothesis and conclude that on average the number of match-fixing cases in countries that use imprisonment does not differ from the number of match-fixing cases in countries that do not use imprisonment.

We repeat the steps described above for the other variables as well. In the case of match-fixing cases where Coaches were involved, p=,076> .05 which means that we cannot reject the null hypothesis. That said, we accept that on average the number of match-fixing cases that involved coaches in countries that use imprisonment does not differ from the number of the same cases in countries that do not use imprisonment.

Moreover, regarding match-fixing cases where players were involved, we notice that p=,006<.05 and subsequently we reject the null hypothesis. That said, we accept that on average the number of match-fixing cases that involve players is higher in countries that imprisonment is used vs. countries that imprisonment is not used as a punishment for match-fixing.

The p-value in cases that involve any of the other four variables (referees, soccer clubs, organised crime and others) is greater than .05 so in all four cases we will accept the null hypothesis that there is no difference in the number of cases that involve referees (or soccer clubs or organised crime or others, respectively) in countries that use imprisonment when compared to those that do not use it.

Interestingly enough, however, there is seems to be a significant relationship between the corruption index and the use of imprisonment. As the p-value equals, 00<,05 we will accept the alternative hypothesis that the corruption index rate is higher in countries that use imprisonment; in other words, countries that use imprisonment to address match-fixing are less corrupted than those who do not.

Last but not least, we can reject the null hypothesis in the case of the legislative background given that p=,00<,05. That said, we accept that on average the legislative background in countries that use imprisonment is different; if we look at the mean value (2,62),

we can assume that this legislative background is closer to specialized legislation (represented with a value of 3).

Table 16- Independent Samples Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Match Fixing Cases 2013-2017	Equal variances assumed	,366	,547	-1,421	76	,159	-1,481	1,042	-3,556	,594
	Equal variances not assumed			-1,441	51,986	,156	-1,481	1,028	-3,543	,581
Match Fixing Cases where COACH(ES) was/were involved 2013-2017	Equal variances assumed	7,488	,008	-2,333	76	,022	-,558	,239	-1,034	-,082
	Equal variances not assumed			-1,840	29,728	,076	-,558	,303	-1,177	,061
Match Fixing Cases where PLAYER(S) was/were involved 2013-2017	Equal variances assumed	2,552	,114	-2,689	76	,009	-1,712	,636	-2,979	-,444
	Equal variances not assumed			-2,499	41,579	,016	-1,712	,685	-3,094	-,329
Match Fixing Cases where REFEREE(S) was/were involved 2013-2017	Equal variances assumed	,661	,419	-,096	76	,924	-,019	,200	-,418	,380
	Equal variances not assumed			-,088	39,808	,931	-,019	,220	-,463	,425
Match Fixing Cases where FOOTBALL CLUBS(S) was/were involved 2013-2017	Equal variances assumed	2,170	,145	-,748	76	,457	-,327	,437	-1,198	,544
	Equal variances not assumed			-,681	39,697	,500	-,327	,480	-1,297	,643
Match Fixing Cases where ORGANISED CRIME was involved 2013-2017	Equal variances assumed	,941	,335	-,842	76	,403	-,212	,251	-,712	,289
	Equal variances not assumed			-,833	48,753	,409	-,212	,254	-,722	,299
Match Fixing Cases where OTHER(S) was/were involved 2013-2017	Equal variances assumed	,732	,395	,627	76	,533	,231	,368	-,503	,964
	Equal variances not assumed			,704	67,548	,484	,231	,328	-,424	,885
Corruption Index Average 2014-2016	Equal variances assumed	2,104	,151	-4,825	75	,000	-19,87789	4,11951	-28,08437	-11,67141
	Equal variances not assumed			-4,599	44,399	,000	-19,87789	4,32252	-28,58715	-11,16863
Legislative Background	Equal variances assumed	33,430	,000	-4,775	76	,000	-,923	,193	-1,308	-,538
	Equal variances not assumed			-5,757	75,472	,000	-,923	,160	-1,242	-,604

One-way ANOVA analysis- test of our hypotheses

To test our hypotheses, a One-way Analysis Of Variance (ANOVA) was used.Tables 17, 18 and 19 were used for this analysis.

a) The number of recorded match-fixing cases depends on the legislative background of the country.

The independent variable represents the three different levels of the legislative background that pertains to match-fixing: 1)no legislation 2)criminal code and 3)specialized legislation.

The dependent variable is the number of recorded match-fixing cases.

An alpha level of .05 was used for all analyses.

Since the sig. Level at Table 17 is less than .05 we have to consult table 18 which shows that there is a significant difference between the different legislative approaches. To identify the difference between the different categories of the independent variable, we need to consult Table 19- Post Hoc Test. The Post Hoc comparisons using Tukey procedures indicate that there is a significant difference between countries who do not have anti-match-fixing legislation and countries that have specialized legislation. Table 20 shows that the countries with no legislation investigated 2,03 match-fixing cases from 2013 until June 2017 while countries with specialized legislation investigated an average of 5,85 cases. In a nutshell, countries with specialized legislation investigate more match-fixing cases.

b) The number of the recorded match-fixing cases that include players depends on the legislative background of the country. In this case, the dependent variable is the number of cases that include players. Following the same procedure as above, the sig. Level at Table 17 is less than .05; that said, we have to consult table 18 which shows that there is a significant difference

between the different legislative approaches. To identify the difference between the different categories of the independent variable, we need to consult Table 19- Post Hoc Test. The Post Hoc comparisons using Tukey procedures indicate that there is a significant difference between countries who do not have anti-match-fixing legislation and countries that have specialized legislation.

Table 20 shows that the countries with no legislation investigated 1,6 match-fixing cases that involved players from 2013 until June 2017 while countries with specialized legislation investigated an average of 3,49 cases. In a nutshell countries with specialized legislation investigate more match-fixing cases where players are involved.

c) The number of the recorded match-fixing cases that include referees depends on the legislative background of the country. In this case, the dependent variable is the number of cases that include referees. Looking at table 17, the sig. is again less than .05; that said, we have to consult table 18 which, in this case, shows that there is not a significant difference between the different legislative approaches when it comes to cases that include referees.

d) The number of the recorded match-fixing cases that include organized crime depends on the legislative background of the country. In this case, the dependent variable is the number of cases that include organized crime syndicates. Following the same procedure as above, the sig. Level at Table 17 is less than .05; that said, we have to consult table 18 which shows that there is not a significant difference between the different legislative approaches (no legislation, criminal code, and specialized legislation) with regards to cases that included organized crime networks.

e) The number of the recorded match-fixing cases that include soccer clubs depends on the legislative background of the country. The dependent variable in this hypothesis is the number of

cases that include soccer clubs. Again, the sig. level at Table 17 is less than .05; table 18 revealed that shows that there is not a significant difference between the three legislative approaches (no legislation, criminal code, and specialized legislation) with regards to cases that included soccer clubs.

f) The number of the recorded match-fixing cases that include coaches depends on the legislative background of the country.The dependent variable in this hypothesis is the number of cases that include coaches. The sig. level for cases that involve coaches in Table 17 is less than .05; we then swift to table 18 which shows that there is not a significant difference between the different legislative approaches. That said, we accept the null hypothesis that states that there is no relationship between the number of the recorded match-fixing cases that include coaches depend on the legislative background of the country.

g) The number of the recorded match-fixing cases that include others depends on the legislative background of the country. The dependent variable in our hypothesis is the number of cases that include others (bookmakers, politicians, etc.). Following the same procedure as above, the sig. Level at Table 17 is less than .05; that said, we have to consult table 18 which shows that there is no significant difference between the different legislative approaches (using Brown-Forsythe procedures). Then, we accept the null hypothesis that the number of recorded cases that include others has no relationship with the legislative background of the country.

h)There is a significant relationship between the corruption index of the country and the legislative background that pertains to match-fixing.Since the test for homogeneity of variance is not significant sig=.212 >.05, the assumption underlying the application of Analysis Of Variance has been met. Tha ANOVA table (table 21) revealed a score of,020 that shows a significant difference between the three distinct categories of legislative approach.

Moreover, to identify the difference between the three categories of the independent variable, we need to consult Table 19- Post Hoc Test. The Post Hoc comparisons using Tukey procedures indicate that there is a significant difference between countries who do not have anti-match-fixing legislation and countries that use criminal law. Table 20 shows that the countries with no legislation score much lower in the corruption index (an average score of 42,9) while those who use criminal law to address match-fixing cases have an average corruption index of 59,2. In a nutshell, countries with no match-fixing legislation tend to be more corrupted compared to countries that use criminal law in match-fixing cases.

Table 17- Test of Homogeneity of Variances

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
Match Fixing Cases 2013-2017	12,127	2	76	,000
Match Fixing Cases where COACH(ES) was/were involved 2013-2017	5,573	2	76	,006
Match Fixing Cases where PLAYER(S) was/were involved 2013-2017	9,212	2	76	,000
Match Fixing Cases where REFEREE(S) was/were involved 2013-2017	3,217	2	76	,046
Match Fixing Cases where FOOTBALL CLUBS(S) was/were involved 2013-2017	5,735	2	76	,005
Match Fixing Cases where ORGANISED CRIME was involved 2013-2017	3,141	2	76	,049
Match Fixing Cases where OTHER(S) was/were involved 2013-2017	6,467	2	76	,003
Corruption Index Average 2014-2016	1,582	2	75	,212
Penalty Severity	306,368	2	75	,000

Table 18- Robust Test of Equality of Means

Robust Tests of Equality of Means[b]

		Statistic[a]	df1	df2	Sig.
Match Fixing Cases 2013-2017	Welch	7,812	2	31,975	,002
	Brown-Forsythe	8,519	2	52,920	,001
Match Fixing Cases where COACH(ES) was/were involved 2013-2017	Welch	2,070	2	43,628	,138
	Brown-Forsythe	3,548	2	50,555	,036
Match Fixing Cases where PLAYER(S) was/were involved 2013-2017	Welch	7,588	2	40,620	,002
	Brown-Forsythe	8,926	2	56,530	,000
Match Fixing Cases where REFEREE(S) was/were involved 2013-2017	Welch	,751	2	31,094	,480
	Brown-Forsythe	,610	2	41,817	,548
Match Fixing Cases where FOOTBALL CLUBS(S) was/were involved 2013-2017	Welch	2,297	2	28,797	,119
	Brown-Forsythe	1,476	2	32,110	,244
Match Fixing Cases where ORGANISED CRIME was involved 2013-2017	Welch	,918	2	33,597	,409
	Brown-Forsythe	1,260	2	50,107	,293
Match Fixing Cases where OTHER(S) was/were involved 2013-2017	Welch	4,051	2	28,686	,028
	Brown-Forsythe	2,880	2	38,856	,068
Corruption Index Average 2014-2016	Welch	4,030	2	34,534	,027
	Brown-Forsythe	3,898	2	46,799	,027
Penalty Severity	Welch				
	Brown-Forsythe				

a. Asymptotically F distributed.

b. Robust tests of equality of means cannot be performed for Penalty Severity because at least one group has 0 variance.

Table 19 - Post Hoc Tests

Multiple Comparisons

Dependent Variable				Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Match Fixing Cases 2013-2017	Tukey HSD	None	Criminal Code	-1,754	1,294	,369	-4,85	1,34
			Specialised Code	-3,817*	1,002	,001	-6,21	-1,42
		Criminal Code	None	1,754	1,294	,369	-1,34	4,85
			Specialised Code	-2,063	1,288	,251	-5,14	1,02
		Specialised Code	None	3,817*	1,002	,001	1,42	6,21
			Criminal Code	2,063	1,288	,251	-1,02	5,14
	Games-Howell	None	Criminal Code	-1,754	,866	,134	-3,96	,45
			Specialised Code	-3,817*	1,036	,002	-6,34	-1,30
		Criminal Code	None	1,754	,866	,134	-,45	3,96
			Specialised Code	-2,063	1,257	,240	-5,11	,99
		Specialised Code	None	3,817*	1,036	,002	1,30	6,34
			Criminal Code	2,063	1,257	,240	-,99	5,11
Match Fixing Cases where COACH(ES) was/were involved 2013-2017	Tukey HSD	None	Criminal Code	-,058	,319	,982	-,82	,71
			Specialised Code	-,541	,247	,080	-1,13	,05
		Criminal Code	None	,058	,319	,982	-,71	,82
			Specialised Code	-,483	,318	,288	-1,24	,28
		Specialised Code	None	,541	,247	,080	-,05	1,13
			Criminal Code	,483	,318	,288	-,28	1,24
	Games-Howell	None	Criminal Code	-,058	,152	,923	-,43	,32
			Specialised Code	-,541	,264	,114	-1,18	,10
		Criminal Code	None	,058	,152	,923	-,32	,43

			Specialised Code	-,483	,269	,185	-1,14	,17
		Specialised Code	None	,541	,264	,114	-,10	1,18
			Criminal Code	,483	,269	,185	-,17	1,14
Match Fixing Cases where PLAYER(S) was/were involved 2013-2017	Tukey HSD	None	Criminal Code	-1,196	,817	,314	-3,15	,76
			Specialised Code	-2,367*	,633	,001	-3,88	-,85
		Criminal Code	None	1,196	,817	,314	-,76	3,15
			Specialised Code	-1,171	,814	,326	-3,12	,77
		Specialised Code	None	2,367*	,633	,001	,85	3,88
			Criminal Code	1,171	,814	,326	-,77	3,12
	Games-Howell	None	Criminal Code	-1,196*	,466	,040	-2,35	-,04
			Specialised Code	-2,367*	,670	,003	-3,99	-,74
		Criminal Code	None	1,196*	,466	,040	,04	2,35
			Specialised Code	-1,171	,712	,237	-2,90	,55
		Specialised Code	None	2,367*	,670	,003	,74	3,99
			Criminal Code	1,171	,712	,237	-,55	2,90
Match Fixing Cases where REFEREE(S) was/were involved 2013-2017	Tukey HSD	None	Criminal Code	-,147	,265	,844	-,78	,49
			Specialised Code	-,234	,205	,494	-,73	,26
		Criminal Code	None	,147	,265	,844	-,49	,78
			Specialised Code	-,087	,264	,943	-,72	,54
		Specialised Code	None	,234	,205	,494	-,26	,73
			Criminal Code	,087	,264	,943	-,54	,72
	Games-Howell	None	Criminal Code	-,147	,267	,847	-,83	,54
			Specialised Code	-,234	,198	,469	-,71	,24
		Criminal Code	None	,147	,267	,847	-,54	,83
			Specialised	-,087	,305	,957	-,85	,67

			Code					
		Specialised Code	None	,234	,198	,469	-,24	,71
			Criminal Code	,087	,305	,957	-,67	,85
Match Fixing Cases where FOOTBALL CLUBS(S) was/were involved 2013-2017	Tukey HSD	None	Criminal Code	-,616	,574	,534	-1,99	,76
			Specialised Code	-,824	,444	,159	-1,89	,24
		Criminal Code	None	,616	,574	,534	-,76	1,99
			Specialised Code	-,208	,571	,930	-1,57	1,16
		Specialised Code	None	,824	,444	,159	-,24	1,89
			Criminal Code	,208	,571	,930	-1,16	1,57
	Games-Howell	None	Criminal Code	-,616	,656	,625	-2,32	1,09
			Specialised Code	-,824	,404	,115	-1,80	,16
		Criminal Code	None	,616	,656	,625	-1,09	2,32
			Specialised Code	-,208	,734	,957	-2,05	1,64
		Specialised Code	None	,824	,404	,115	-,16	1,80
			Criminal Code	,208	,734	,957	-1,64	2,05
Match Fixing Cases where ORGANISED CRIME was involved 2013-2017	Tukey HSD	None	Criminal Code	-,098	,333	,953	-,89	,70
			Specialised Code	-,358	,258	,351	-,97	,26
		Criminal Code	None	,098	,333	,953	-,70	,89
			Specialised Code	-,260	,331	,714	-1,05	,53
		Specialised Code	None	,358	,258	,351	-,26	,97
			Criminal Code	,260	,331	,714	-,53	1,05
	Games-Howell	None	Criminal Code	-,098	,183	,855	-,56	,37
			Specialised Code	-,358	,271	,392	-1,02	,30
		Criminal	None	,098	,183	,855	-,37	,56

		Code						
			Specialised Code	-,260	,305	,674	-1,00	,48
		Specialised Code	None	,358	,271	,392	-,30	1,02
			Criminal Code	,260	,305	,674	-,48	1,00
Match Fixing Cases where OTHER(S) was/were involved 2013-2017	Tukey HSD	None	Criminal Code	-,808	,474	,211	-1,94	,33
			Specialised Code	-,866	,367	,054	-1,74	,01
		Criminal Code	None	,808	,474	,211	-,33	1,94
			Specialised Code	-,058	,472	,992	-1,19	1,07
		Specialised Code	None	,866	,367	,054	-,01	1,74
			Criminal Code	,058	,472	,992	-1,07	1,19
	Games-Howell	None	Criminal Code	-,808	,476	,238	-2,04	,43
			Specialised Code	-,866*	,350	,045	-1,72	-,02
		Criminal Code	None	,808	,476	,238	-,43	2,04
			Specialised Code	-,058	,563	,994	-1,46	1,34
		Specialised Code	None	,866*	,350	,045	,02	1,72
			Criminal Code	,058	,563	,994	-1,34	1,46
Corruption Index Average 2014-2016	Tukey HSD	None	Criminal Code	-16,30567*	6,04507	,023	-30,7601	-1,8512
			Specialised Code	-9,23073	4,69561	,128	-20,4585	1,9970
		Criminal Code	None	16,30567*	6,04507	,023	1,8512	30,7601
			Specialised Code	7,07494	5,98780	,468	-7,2426	21,3925
		Specialised Code	None	9,23073	4,69561	,128	-1,9970	20,4585
			Criminal Code	-7,07494	5,98780	,468	-21,3925	7,2426
	Games-Howell	None	Criminal Code	-16,30567*	6,29872	,043	-32,1511	-,4602
			Specialised Code	-9,23073	4,57909	,117	-20,2273	1,7658
		Criminal Code	None	16,30567*	6,29872	,043	,4602	32,1511
			Specialised Code	7,07494	6,45091	,525	-9,0626	23,2124
		Specialised Code	None	9,23073	4,57909	,117	-1,7658	20,2273

			Criminal Code	-7,07494	6,45091	,525	-23,2124	9,0626
Penalty Severity	Tukey HSD	None	Criminal Code	-,714*	,122	,000	-1,01	-,42
			Specialised Code	-,500*	,095	,000	-,73	-,27
		Criminal Code	None	,714*	,122	,000	,42	1,01
			Specialised Code	,214	,122	,191	-,08	,51
		Specialised Code	None	,500*	,095	,000	,27	,73
			Criminal Code	-,214	,122	,191	-,51	,08
	Games-Howell	None	Criminal Code	-,714*	,125	,000	-1,05	-,38
			Specialised Code	-,500*	,090	,000	-,72	-,28
		Criminal Code	None	,714*	,125	,000	,38	1,05
			Specialised Code	,214	,154	,360	-,17	,60
		Specialised Code	None	,500*	,090	,000	,28	,72
			Criminal Code	-,214	,154	,360	-,60	,17

*. The mean difference is significant at the 0.05 level.

Table 20- Descriptives

			N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
							Lower Bound	Upper Bound			
Match Fixing Cases 2013-2017	None		32	2,03	1,975	,349	1,32	2,74	1	10	
	Criminal Code		14	3,79	2,966	,793	2,07	5,50	1	10	
	Specialised Code		33	5,85	5,602	,975	3,86	7,83	1	22	
	Total		79	3,94	4,351	,490	2,96	4,91	1	22	
	Model	Fixed Effects			4,039	,454	3,03	4,84			
		Random Effects				1,314	-1,72	9,59			4,109
Match Fixing Cases where COACH(ES) was/were involved 2013-2017	None		32	,16	,574	,101	-,05	,36	0	3	
	Criminal Code		14	,21	,426	,114	-,03	,46	0	1	
	Specialised Code		33	,70	1,403	,244	,20	1,19	0	7	
	Total		79	,39	1,018	,115	,16	,62	0	7	
	Model	Fixed Effects			,997	,112	,17	,62			
		Random Effects				,193	-,44	1,22			,066
Match Fixing Cases where PLAYER(S) was/were involved 2013-2017	None		32	,88	1,601	,283	,30	1,45	0	8	
	Criminal Code		14	2,07	1,385	,370	1,27	2,87	0	5	
	Specialised Code		33	3,24	3,491	,608	2,00	4,48	0	13	

	Total		79	2,08	2,740	,308	1,46	2,69	0	13	
	Model	Fixed Effects			2,551	,287	1,50	2,65			
		Random Effects				,814	-1,43	5,58			1,568
Match Fixing Cases where REFEREE(S) was/were involved 2013-2017	None		32	,28	,523	,092	,09	,47	0	2	
	Criminal Code		14	,43	,938	,251	-,11	,97	0	3	
	Specialised Code		33	,52	1,004	,175	,16	,87	0	3	
	Total		79	,41	,825	,093	,22	,59	0	3	
	Model	Fixed Effects			,828	,093	,22	,59			
		Random Effects				,093[a]	,00[a]	,81[a]			-,010
Match Fixing Cases where FOOTBALL CLUBS(S) was/were involved 2013-2017	None		32	,81	,931	,165	,48	1,15	0	3	
	Criminal Code		14	1,43	2,377	,635	,06	2,80	0	8	
	Specialised Code		33	1,64	2,119	,369	,89	2,39	0	9	
	Total		79	1,27	1,810	,204	,86	1,67	0	9	
	Model	Fixed Effects			1,792	,202	,86	1,67			
		Random Effects				,280	,06	2,47			,102
Match Fixing Cases where ORGANISED CRIME was involved 2013-2017	None		32	,19	,471	,083	,02	,36	0	2	
	Criminal Code		14	,29	,611	,163	-,07	,64	0	2	
	Specialised Code		33	,55	1,481	,258	,02	1,07	0	7	
	Total		79	,35	1,038	,117	,12	,59	0	7	

	Model	Fixed Effects			1,038	,117	,12	,59			
		Random Effects				,117	-,15	,86			,000
Match Fixing Cases where OTHER(S) was/were involved 2013-2017	None		32	,41	,712	,126	,15	,66	0	3	
	Criminal Code		14	1,21	1,718	,459	,22	2,21	0	4	
	Specialised Code		33	1,27	1,875	,326	,61	1,94	0	9	
	Total		79	,91	1,521	,171	,57	1,25	0	9	
	Model	Fixed Effects			1,481	,167	,58	1,24			
		Random Effects				,312	-,43	2,25			,188
Corruption Index Average 2014-2016	None		31	42,9029	17,17353	3,08446	36,6036	49,2022	25,33	86,00	
	Criminal Code		14	59,2086	20,54848	5,49181	47,3442	71,0729	28,25	89,25	
	Specialised Code		33	52,1336	19,44192	3,38440	45,2398	59,0274	21,33	91,00	
	Total		78	49,7349	19,51556	2,20970	45,3348	54,1350	21,33	91,00	
	Model	Fixed Effects			18,77326	2,12565	45,5004	53,9694			
		Random Effects				4,57576	30,0470	69,4228			44,47661
Penalty Severity	None		32	1,00	0,000	0,000	1,00	1,00	1	1	
	Criminal Code		14	1,71	,469	,125	1,44	1,98	1	2	
	Specialised Code		32	1,50	,508	,090	1,32	1,68	1	2	
	Total		78	1,33	,474	,054	1,23	1,44	1	2	
	Model	Fixed Effects			,380	,043	1,25	1,42			
		Random Effects				,220	,39	2,28			,126

a. Warning: Between-component variance is negative. It was replaced by 0.0 in computing this random effects measure.

Tabe 21- Analysis Of Variance ANOVA

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Match Fixing Cases 2013-2017	Between Groups	237,115	2	118,558	7,269	,001
	Within Groups	1239,568	76	16,310		
	Total	1476,684	78			
Match Fixing Cases where COACH(ES) was/were involved 2013-2017	Between Groups	5,290	2	2,645	2,661	,076
	Within Groups	75,546	76	,994		
	Total	80,835	78			
Match Fixing Cases where PLAYER(S) was/were involved 2013-2017	Between Groups	91,055	2	45,528	6,997	,002
	Within Groups	494,489	76	6,506		
	Total	585,544	78			
Match Fixing Cases where REFEREE(S) was/were involved 2013-2017	Between Groups	,898	2	,449	,655	,523
	Within Groups	52,140	76	,686		
	Total	53,038	78			
Match Fixing Cases where FOOTBALL CLUBS(S) was/were involved 2013-2017	Between Groups	11,478	2	5,739	1,788	,174
	Within Groups	243,940	76	3,210		
	Total	255,418	78			
Match Fixing Cases where ORGANISED CRIME was involved 2013-2017	Between Groups	2,162	2	1,081	1,003	,372
	Within Groups	81,914	76	1,078		

	Total	84,076	78			
Match Fixing Cases where OTHER(S) was/were involved 2013-2017	Between Groups	13,758	2	6,879	3,138	,049
	Within Groups	166,621	76	2,192		
	Total	180,380	78			
Corruption Index Average 2014-2016	Between Groups	2893,348	2	1446,674	4,105	,020
	Within Groups	26432,646	75	352,435		
	Total	29325,994	77			
Penalty Severity	Between Groups	6,476	2	3,238	22,368	,000
	Within Groups	10,857	75	,145		
	Total	17,333	77			

Chapter Seven: Discussion, implication of findings and limitations

This chapter first provides a discussion of how the findings from chapters four, five, and six, addressed the current study's research questions (see chapter one). Furthermore, the remainder of this chapter presents implications of these findings for research and theory, as well as for policy and practice

Discussion

RQ. 1: The scope of the match-fixing phenomenon.

To address the study's first research question, chapter four examined the distribution of match-fixing cases across the globe based on the available data. We need to acknowledge that it was rather difficult to determine whether these findings confirmed to or contradicted expectations that were based on previous literature and research. Still, chapter's four findings indicate that 81 countries investigated one or more cases with the average number of cases per country being 3,86 (mean). That said, roughly 4 out of 10 countries across the globe reported an average of 3,86 cases over the course of four years- 2013 to 2017, with the majority of them located either in Europe or Asia. Thus, the analysis in chapter four demonstrated that the statement "there is virtually no country that could claim it is immune to match-fixing" is more accurate than not.

RQ. 2: The involvement of different stakeholders in match-fixing cases.

The findings presented in chapter four helped us address the present study's second research question. More specifically, the results of the analysis showed that in the vast majority of countries football players are almost always present in match-fixing cases, followed by

coaches, referees, club officials and organized crime. An interesting finding of this study is that, based on the descriptive analysis of our dataset, organized crime syndicates do not represent the lion's share, as often argued in the literature as only 20% of the countries in our sample have reported match-fixing investigations with links to an or more organized crime network(s). However, when we ran inferential statistics, it became clear that as the number of match-fixing cases increases, there is a strong increase in the number of cases where the organised crime was involved. That said, the argument that organized crime is heavily involved in match-fixing holds true in our sample despite the low number of organized number cases that were reported in the 81 countries.

RQ.3: The relationship between the existence of legal provisions and the number of match-fixing cases.

There has been very little research on the relationship between the criminalization of match-fixing and the number of the cases that eventually are unveiled/investigated by the law-enforcement and judicial authorities. The findings in chapter 4 indicate that countries that have no legislation in place whatsoever have investigated only two cases on average over the last four years. Also, those countries seem to score low on the corruption index as well; in other words, more corrupted countries seem to lack the legal tools and subsequently investigate fewer match-fixing cases as the authorities cannot legally prosecute the match fixers.

RQ. 4: Criminalization of the phenomenon.

An interesting finding of the current study is that nearly 4 out of 10 countries have not introduced any anti-match-fixing legislation whatsoever. That said, match-fixing is not a criminal offense and, thus, the authorities do not have the legal tools that are essential to suppress the phenomenon and prosecute the perpetrators. Also, only 3 out of 10 countries have opted in for imprisonment to curtail the phenomenon and punish match-fixing perpetrators. The findings in chapters 4 and 5 found a statistically significant relationship between countries that use imprisonment to address match-fixing and levels of corruption. According to the analyses, countries who have introduced imprisonment in their legal toolbox against match-fixing are less corrupted than those who do not. In other words, countries who rank low in the corruption index are those who predominantly have failed to use imprisonment as a punishment for fixers.

Moreover, countries who use imprisonment are also more likely to introduce specialized legislation to address match-fixing; in other words, they won't rely solely on the generic criminal code provisions. Our ANOVA analyses showed that countries with specialized legislation investigate more match-fixing cases.This finding is particularly important as the current debate on addressing match-fixing quite often revolves around the need to introduce specific anti-match-fixing legislation that, according to our findings appear to be more effective and promising.

Last but not least, the analysis in chapter 5 highlighted that countries with no match-fixing legislation tend to be more corrupted compared to countries that use criminal law in match-fixing cases. Again, this demonstrates the need to provide both technical and logistic support to more corrupted countries to help them introduce sustainable and effective anti-match-fixing tools.

RQ. 5: Relationship between the severity of sanction and the scope of the behavior.

The analyses in chapter 5 and 6 address the present study's sixth research question. The findings of the descriptive statistics show that countries that use imprisonment as a form of punishment for match-fixing have more cases unveiled and investigated. Descriptive statistics show that the average number of cases per country that enforces imprisonment is five compared to 3 cases in countries that do not do use imprisonment as a criminal justice approach. However, this finding was not confirmed by our inferential stats, and it appears that there is no statistically significant relationship between the penalty severity and the number of match-fixing cases that were investigated. There is the only exception: It seems to exist a weak- yet significant-correlation between the penalty severity and the number of cases where players are involved. This is particularly interesting when it comes to future policy implications as it could be argued that both criminalization of the phenomenon and penalty severity could prove promising regarding unveiling players' participation in match-fixing.

RQ6: Relationship between high levels of corruption and occurrence of match-fixing.

High levels of corruption are often combined with an unwillingness to talk to the authorities and a subsequent veil of secrecy that covers the illegal activities that are associated with match-fixing. That said, it does not come as a surprise that, according to the analyses in chapter 5 and 6, countries who are less corrupted are more likely to investigate match-fixing cases and arrest the players involved. The most important finding, however, seems to be that out of all 8 actors involved in match-fixing, players were the only variable that had a significant positive correlation with corruption index. This could help us support the idea that in less

corrupted countries it is more likely to identify cases where players are involved as there is more transparency and more effectiveness.

Implications for Theory

There are several theoretical implications of this study. One of the goals of the present dissertation was to explore how three of the major criminological theories (i.e. differential association, routine activity and strain theory) could be used to explain the scope of the phenomenon of match-fixing as well as the involvement of the different stakeholders. The findings presented and discussed in the previous chapter provide some support for the differential association theory that holds that "criminality is the result of engaging in inappropriate behaviors exhibited by those with whom we interact" (Sutherland, Cressey, & Luckenbill,1995). In the current study, players involvement in match-fixing had a significant positive relationship with the number of match-fixing cases that were unveiled and investigated by the authorities. Thus. it appears that players involvement in match-fixing is significant and their role in fixing games is central, especially in cases where they are the only stakeholders involved. Additionally, unlike all the other stakeholders, players relationship with the number of fixed games is the strongest one. However, it should be acknowledged that this theory was not well-tested in the current research despite the findings mentioned above. Future research should continue to examine the nature of the players involvement, in particular to what extent they act in partnership with other stakeholders as well.

As indicated by the discussions of the current study's findings presented earlier in this chapter, theories that take into account both opportunity and motivation appear to be the best for

explaining when match-fixing cases occur. In particular, routine activities theory maintains that crime is most likely to occur when three elements—motivated offenders, suitable targets, and a lack of capable guardianship— converge in time and space. In line with this theoretical framework, the findings of the current study demonstrated that players and other stakeholders- especially organized crime networks- are motivated to engage in match-fixing cases and stay below the radar in environments where corruption is high, and the government has demonstrated an unwillingness to introduce legislative measures. Those legislative efforts would provide more "capably guardianship" as they would introduce a series of initiatives to criminalize match-fixing and, thus, preventing more crimes related to rigging.

Strain theory is also well-suited in explaining players involvement in match-fixing cases. The central tenet of the theory is that a broad range of strains contribute to criminal behavior. Strains can be described as situations that are disliked by an individual. There are three categories of strain: failing to attain positively valued goals, motivations that are positive, and the presentation of motivations that are negative (Agnew, 1992). Strains can intensify, negatively affecting an individual by causing them to feel anger and frustration. To ease these negative feelings caused by straining the individual resorts to criminal behavior because legitimate approaches fail to reinforce positive emotions. These propositions are particularly important with regards to the findings of the present study; the findings presented here strongly support the notion that players are more susceptible to participating to match-fixing especially in countries where corruption levels are high, and the central government is unwilling to take steps towards the criminalization of the phenomenon. Thus, players who are poorly paid -this is usually the case in under-developed and corrupted countries- are prone to feeling anger and frustration and,

eventually, resort to criminal behavior as they fail to achieve their goals through legitimate means.

The following table summarizes the key findings of the present study:

Scope of the phenomenon of match-fixing	**Involvement in match-fixing**	**Legal provisions and match-fixing cases**
"there is virtually no country that could claim it is immune to match-fixing"	Soccer players and organized group networks are the two groups that are largely involved in match-fixing illegal activities.	More corrupted countries seem to lack the legal tools and subsequently investigate fewer match-fixing cases
Criminalization of the phenomenon of match-fixing	**Specific anti-match fixing legislation**	**Prevention of players participation in match-fixing**
Countries who rank low in the corruption index –that is, the ones more corrupted- are those who predominantly have failed to use imprisonment as a	Countries with designated anti-match-fixing legislation are more effective in unveiling and addressing match-fixing cases.	The findings of the study indicate that both criminalization of the phenomenon and penalty severity could prove promising regarding unveiling players' participation in

punishment for fixers.		match-fixing
Corruption and match-fixing	**Dealing with match-fixing effectively**	**Preventing match-fixing**
Countries who are less corrupted are more likely to investigate match-fixing cases and arrest the players involved. Additionally, in less corrupted countries it is more likely to identify cases where players are involved as there is more transparency and more effectiveness	In line with "routine activity" theory propositions, any effective legislative efforts would provide more "capably guardianship" as they would introduce a series of initiatives to criminalize match-fixing and, thus, preventing more crimes related to rigging.	In countries where player are poorly paid -this is usually the case in under-developed and corrupted countries- are prone to feeling anger and frustration and, eventually, resort to criminal behavior as they fail to achieve their goals through legitimate means. Strain theory provides a theoretical explanation and potential solutions to this issue.

Limitations

It is acknowledged that the present dissertation has a series of limitations that should be identified:

First off, the data analyzed were available only for years 2013 until mid-2017. Thus it covers only a limited period.This does not allow us to compare different periods and potentially identify differences in the scope of the phenomenon after a certain event (for example before and after the implementation of a piece of legislation. Additionally, the reports were compiled by the INTERPOL. Thus it is not known if all match-fixing cases were included nor do we know what search strategy was used. Also, due to the lack of a universally accepted definition of match-fixing some cases might not have been included in the reports as well.

As INTERPOL's biweekly newsletter is based on mass media reports, countries, where the press is manipulated or suppressed by the government, might be less likely to report match-fixing cases, especially if the government or state officials are involved. Also, in some countries, possible coercion by organized crime syndicates inevitably limits the dissemination of information to the press. Furthermore, in a number of countries match-fixing is a widely underreported phenomenon either for cultural reasons or just to avoid embarrassment as soccer plays a major role in the country's social and political life (for example, in Brazil). Last but not least, match-fixing has not been empirically analysed thus there is no comparative context for this research.

Additionally, it should be noted that a more comprehensive approach should also take into account the Freedom House Index that provides a measurement of the degree of political liberties and political rights in every nation across the globe. This is particularly important when it comes to the degree of internet freedom in different countries given that the data used in this

study was collected predominantly through websites. Also, it could be reasonably assumed that in countries that rank low on the freedom index the extensive censorship, intimidation and violence against journalists would prevent them from publishing stories on match-fixing if governments officials and/or organized crime groups are involved.

Last but not least, although it is important to have in place a comprehensive legislation that criminalizes match-fixing related behaviors and provides the legal tools to the law enforcement agencies to deal with the phenomenon, this is not a panacea nor can it serve as a "one-size-fits-all" approach. It should be acknowledged that other variables that are not easy to conceptualize and measure in a quantitative study could play a crucial role as well. For example, it is known that the local context and the cultural background and the interaction between the two shapes people's bahavior; this could provide an explanation why anti-match fixing legislative measures in certain cultural environments are not as promising and effective as elsewhere. Also, even in cases where criminal legislation is passed by the legislature this is not always followed by a succesful implementation process for a series of reasons, including but not limited to, individual and institutional corruption.

Chapter Eight: Conclusion

Both the descriptive and the inferential statistics that we used for our analysis helped us achieve the aims and objectives of this project, respond to research questions and test our hypotheses. More specifically, our analysis indicated that the extent of the phenomenon of match-fixing around the world is quite serious; despite the inherently secretive nature of match-fixing that prevent individuals from coming forward and co-operate with the authorities, more than 300 cases have been investigated by the law-enforcement agencies across the world over the last four years.

Things appear to be quite serious in Europe as almost 50% of all recorded match-fixing cases occurred there. Moreover, players seem to be the most likely group to get involved in match-fixing cases followed by soccer clubs, coaches, others, referees and organized crime. It was established in our study that as the number of match-fixing cases increases, there is a strong increase in the number of cases where players were involved. This is a finding that demonstrates the major role that players play in the match-fixing process, particularly as no other variable had such a strong positive association with fixed games.

Interestingly enough, the majority of the countries in our sample rank low in the Corruption Index, although we have not been able to establish a causal relationship between the number of match-fixing cases and corruption levels. To explore this relationship, we would need to run a linear regression which is beyond the scope of this research, mainly due to its limited space (15.000 words long). However, we were able to establish in the present study that more corrupted countries seem to lack the legal tools and subsequently investigate fewer match-fixing case Additionally, nearly 40% of the countries in our sample do not treat match-fixing as a

crime; moreover, almost 60% of the 81 countries do not use imprisonment as a method of punishment for fixers. Our statistical results also showed that countries with specialized legislation are more likely to detect and investigate a bigger number of match-fixing cases compared to those who do not have any legislative measures in place. In particular, countries with specialized legislation investigate more match-fixing cases where players are involved.

This finding is particularly important as there is a growing number of voices in the academic world calling for the implementation of specialized and effective legislative measures to suppress the phenomenon. Our findings confirm the validity of this approach. However, it should be noted that our T-Test confirmed that the number of match-fixing cases that are revealed in countries that use imprisonment does not differ from the number of match-fixing cases in countries that do not use imprisonment. This is not the case though when players are involved; in this case, the number of match-fixing cases that involve players is higher in countries that imprisonment is used vs. countries that imprisonment is not used as a punishment for match-fixing. Nevertheless, it seems that it is the presence of a legal toolbox that matters more than the severity of its legal provisions. It is also worth pointing out that, our analysis showed that countries that use imprisonment to address match-fixing are less corrupted than those who do not. This finding applies to countries with no match-fixing legislation vs. those with criminal law legislation; the former score much lower on the corruption index -an average score of 42,9- while the latter has an average corruption index of 59,2.

The present dissertation sought to shed light into a complex and contemporary yet under-researched phenomenon; match-fixing was presented from a criminal justice perspective to assess its extent and identify the various variables that either promote or could potentially obstruct or curtail the occurrence of match-fixing cases. It goes without saying that this study

does not claim to be comprehensive; rather, it serves as the stimulant for further and more in-depth quantitative research of the phenomenon. However, the latter is not easy to achieve given the nature and the limitations of the available data as well the limited opportunities to collect quantitative data.

However, a series of suggestions was made based on the findings of the study. For starters, countries across the globe- especially the ones who are prone to corruption- should implement and effectively use specialized legislation on match-fixing. Unless said legislation is introduced, the majority of match-fixing plots will remain below the radar maintaining a deceiving sense of immunity from the phenomenon. Second and most important, more attention should be paid to the role of players in match-fixing as our statistical findings suggest that their involvement in match-fixing cases is not only significant but quite extensive as well. The complexity and the secretive nature of the phenomenon make it hard to detect and difficult to address. However, a multidisciplinary approach that will involve soccer stakeholders and criminal justices officials could produce promising results in the long term.

APPENDICES

APPENDIX 1 – Dissertation timeline

2016	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Building literature review						X	X	X	X	X	X	X
Solicit dissertation chairperson, committee members & external readers	X	X	X	X	X							
IRB application and approval				X	X	X						
Collect Data (INTERPOL etc.)						X	X	X	X	X	X	X
Code and begin data analysis								X	X	X	X	X
Compose the proposal									X	X	X	X
2017	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Au**	**Sep**	**Oct**	**Nov**	**Dec**
Proposal finalized	X	X										
Finalize data coding and quantification	X	X	X	X								
Proposal defense						X						
Continue to write dissertation						X	X	X	X	X	X	
Continue submitting chapters/sections to committee &						X	X	X	X	X		

readers for review & feedback												
Finalize edits									x	x		
File for defense										x	x	
Defend dissertation											x	x

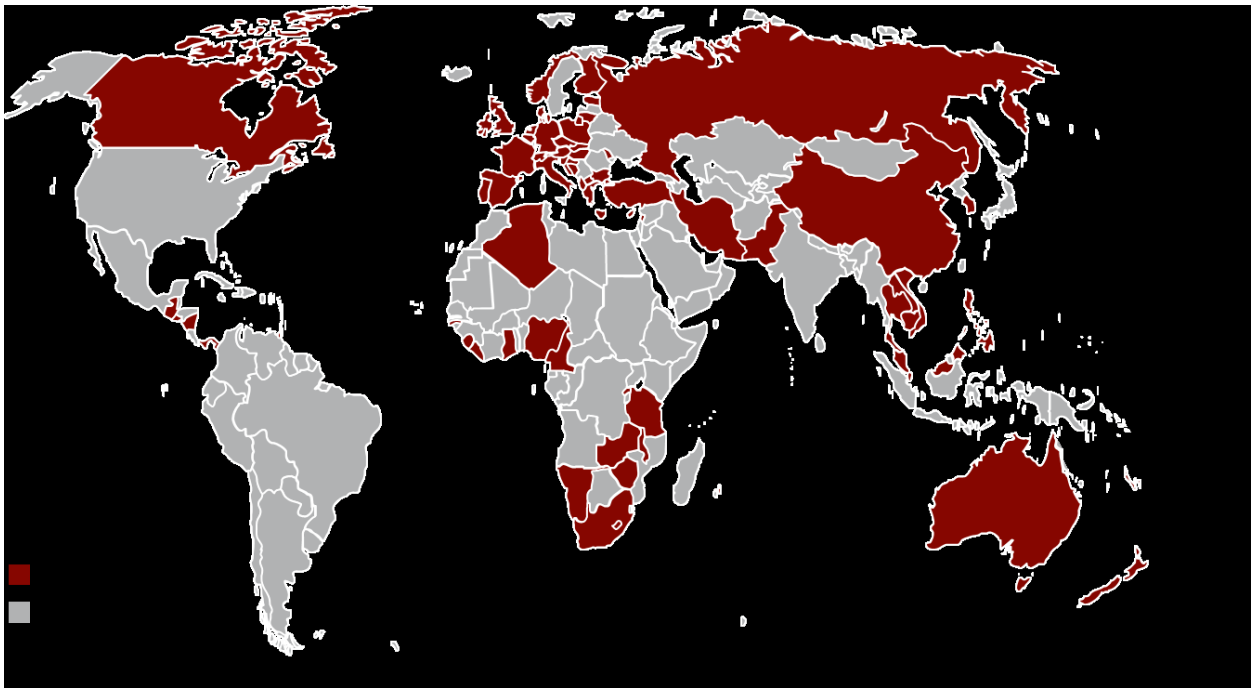
APPENDIX 2 –Projected Dissertation Budget

Item	Quantity	Item Cost	Cost
Access to the Internet, electronic books and academic journals databases and library for academic sources.	-	-	-
SPSS software will be downloaded from the university website to conduct statistical analysis.	-	-	-
Use of a pre-owned laptop computer to type the dissertation.[1]	-	-	-
Printing and photocopying of material (articles etc.)	25	$2	$50
Dissertation binding	3	$50	$150
TOTAL PROJECTED COST			**$200**

[1] All electronic dissertation- related materials are stored on a password-protected computer used only by this researcher.

Appendix 3 – Map of Match-fixing cases reported in 2013

The map shows displays the countries where match-fixing cases were reported in 2013 alone (in red).



Source: Interpol (2013) as reference.

Appendix 4- Sample Interpol Report

INTERPOL INTEGRITY IN SPORT WEEKLY MEDIA RECAP

15-21 June 2015

CURRENT INVESTIGATION

France

The match-fixing trial of handball star Nikola Karabatic opened on Monday in the southern French town of Montpellier. The 31-year-old Barcelona player is accused of being involved in a betting racket for a French championship match in May 2012. Karabatic, who was born in the former Yugoslavia, is appearing with 15 other people. They include his partner Géraldine Pillet, his brother Luka and his partner, Jennifer Priez. Six ex-players from Karabatic's former team Montpellier are also in the dock. Primoz Prost, Dragan Gajic, Samuel Honrubia, Mladen Bojinovic, Mickael Robin and Issam Tej. They deny charges of cheating or plotting to cheat which could lead to five years in jail and a 375,000-euro fine. Prosecutors say bets of more than 100,000 euros were made on the half-time scoreline of a game on 12 May 2012 between Montpellier and Cesson.

Source: "Handball star Karabatic faces judges over match", 15 June 2015, rfi-English news
http://www.english.rfi.fr/sports/20150615-handball-star-karabatic-faces-judges-over-match-fixing

Greece

Olympiakos owner Evangelos Marinakis was banned from participating in football related activities Thursday after his seven-hour testimony before a corruption investigating judge who is looking into a major match-fixing scandal. Judge Giorgos Andreadis with a joint decision from prosecutors on the case also ordered Marinakis to place a 200,000 euros guarantee and informed him that he must report to a local police station every 15 days until a trial. The ship-owner and businessman faces felony charges for his alleged involvement in the establishment of a criminal gang which fixed matches. The investigation is centred on alleged fixing of matches between 2011 and 2013 with relevance to relegation and promotion battles. Marinakis was previously implicated in another match-fixing scandal in 2010-11 which is still the subject of investigation. . On Wednesday former football federation president Giorgos Sarris was banned from leaving the country, ordered to place a 50,000 euros guarantee and prohibited from getting involved in football activities of any kind until a trial. Sarris had resigned as president of the federation last December under pressure generated by the match-fixing scandal. He faces felony charges for his alleged involvement in the establishment of a criminal gang which fixed Greek matches.

Source: AFP, "Olympiakos owner Marinakis banned from football activities", 19 June 2015, The Peninsula & AFP
http://thepeninsulaqatar.com/sports/football/344598/olympiakos-owner-marinakis-banned-from-football-activities

Spain

A Spanish judge suspects Osasuna paid at least €900 000 to fix matches at the end of the 2013-14 La Liga season, a court said on Wednesday. The judge is investigating what happened to at least €2.3 million that went missing from the Pamplona-based club's accounts, a court in the northern region of Navarra where the club is based said in a statement. "The judge considers that there are signs that €900 000 were used to fix, at least, three matches of the last season," the statement said. Osasuna were battling

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