

# Εκπαίδευση, Δια Βίου Μάθηση, Έρευνα και Τεχνολογική Ανάπτυξη, Καινοτομία και Οικονομία

Τόμ. 3 (2024)

Πρακτικά του 3ου Διεθνούς Επιστημονικού Συνεδρίου "Ελλάδα – Ευρώπη 2030: Εκπαίδευση, Έρευνα, Καινοτομία, Νέες Τεχνολογίες, Θεσμοί και Βιώσιμη Ανάπτυξη"



## Opportunities for fraud in Greek Municipalities; The International Fraud Triangle framework

Anastasia Cheliatsidou , Alexandros Garefalakis ;  
Nikolaos Sariannidis

Copyright © 2024, Anastasia Cheliatsidou , Alexandros Garefalakis ;  
Nikolaos Sariannidis



Άδεια χρήσης [Creative Commons Αναφορά 4.0](https://creativecommons.org/licenses/by/4.0/).

# Opportunities for fraud in Greek Municipalities; The International Fraud Triangle framework

Cheliatsidou Anastasia <sup>1</sup>, Garefalakis Alexandros <sup>2</sup>, <sup>3</sup>,

<sup>1</sup>Department of Business Administration, University of Western Macedonia, 501 00 Kozani, Greece; aheliatsides@gmail.com; PhD candidate, <sup>2</sup>Department of Business Administration and Tourism, Hellenic Mediterranean University, 714 10 Iraklio, Greece; [agarefalakis@hmu.gr](mailto:agarefalakis@hmu.gr), Assistant Professor, <sup>3</sup>Department of Accounting and Finance, University of Western Macedonia, 501 00 Kozani, Greece, nsariannidis@uowm.gr; Professor

\* Correspondence: aheliatsides@gmail.com

## Abstract

The purpose of this paper is to identify fraud risk factors through the lenses of the International “Fraud Triangle” in Greek Municipalities and research whether opportunities exist that make the Municipal organizational environment conducive to fraud. Secondary data collected and selected from annual audit reports as an outcome of ex ante and ex post audits conducted by the Supreme Audit Institution in Greece (SAI). Empirical audit report data were examined using qualitative document analysis and the red flag approach to identify vulnerabilities and irregularities with a recurring pattern. The findings indicate serious vulnerabilities in Greek Municipalities with the epicenter in the public procurement processes, internal control as well as various administrative dysfunctions, which contribute to the creation of an organizational environment conducive to fraud. The International Fraud Triangle is also proven useful in identifying additional risks that increase the opportunity for fraud occurrence from the political, legal and cultural environment within which Municipalities operate. Valuable information is generated, thus building a useful knowledge base that can be used by academics, regulatory agencies and auditors in the fraud examination field. There are few, if any, studies in the Greek context utilizing audit reports by the Supreme Court Audit and the Fraud Triangle as research instruments.

**Keywords:** Fraud Triangle, Supreme Audit Institutions, Risks, Greek Municipalities

## Introduction

Numerous studies have examined and explored fraud, its etiology, dimensions, nature, variables (Kassem, 2021) and its negative and pernicious consequences in the private and public sector, showing that no economic entity is immune to fraud (Krambia-Kapardis & Papastergiou, 2016) and organizations are subject to a variety of fraud risks (Maulidi & Ansell, 2021). Even in times of a worldwide crisis like the Covid-19 pandemic, fraudulent activities took place with various fraud schemes (Murrar, 2021) (Levi & Smith, 2021) (Karpoff, 2021) where huge amounts of money were distributed circumventing standard procedures that resulted in corruption scandals (Bajpai & Myers, 2020). A plethora of financial scandals at an unprecedented rate and organizational deviance cases have been documented and analyzed in the “fraud examination” literature (Cooper, Dacin, & Palmer, 2013) (Lokanan M. E., 2015) (Dorminey J. , Fleming, Kranacher, & Riley, 2012) (Albrecht & Albrecht, 2004), the outcome of the “meeting of two disciplines criminology and accounting”, which was mainly built on the image of the *Fraud Triangle* (Morales, Gendron, & Guenin-Paracini, 2014) attributed to the well-known criminologist Donald Cressey.

Despite efforts by governments and other international anti-corruption institutions such as OECD, IMF, World Bank, EU GRECO, Transparency International, United Nations etc., fraud (and its typologies: corruption, embezzlement, nepotism, asset misappropriation etc.) still remain and persist either due to insufficient measures by governments (Bajpai & Myers, 2020) or due to political and institutional weaknesses. The problem seems to be even more serious in countries such as Greece, which underwent through an unprecedented economic crisis that

many attribute, beyond the classical financial causes, to corruption and in particular to political corruption (Theoharis & Van Deth, 2015), loss of trust in Institutions and the “alleged creative accounting and budgetary manipulation by the Hellenic Authorities” (Verde, 2011).

This study explores fraud and corruption through the lenses of a “Fraud Triangle” variant in Greek Municipalities, using secondary data from annual ex ante and ex post audit reports performed and conducted by the Greek Supreme Audit Institution (SAI) (Hellenic Court of Audit, Audit Reports, 2003-2017) published annually and publicly available for a period of 20 years. Utilizing qualitative data as a research instrument in a relatively unexplored area such the Greek public sector and in particular Municipalities, where huge amounts of money are spent by the Greek State and European Funds, is of outmost importance. SAI’s audit reports can serve as a fraud risk pre-assessment tool in detecting fraud risk factors in public organizations, in this study Municipalities, through the identification of “red flags”. Assessing the likelihood of fraud and corruption is essential in order to determine whether further investigation is required by the appropriate authorities since SAIs lack “a clear mandate” (Reichborn-Kjennerud, et al., 2019) to directly fight corruption and fraud. SAIs’ audit reports provide credible and timely audit results to governments, legislatures, civil society, and the general public thus combating corruption through the direct report on: 1) the management of public funds, 2) internal controls, 3) check of government accounts, 4) verification of regulatory compliance and 5) assessment of the performance of government entities (Bajpai & Myers, 2020).

Considering the high cost and the time required to completely analyze all red flags especially in environments, in our case Greek Municipalities, where sophisticated statistical techniques (Bolton & Hand, 2002) such as data mining, algorithms, etc., are utterly absent; the limited studies in the Greek context on this subject; and the fact that fraud and corruption risks cannot be easily measured (Power, 2013); the guiding research questions in this study are the following:

*RQ1: Do opportunities for occupational fraud and its forms exist in Greek Municipalities?*

*RQ2: Is the International Fraud Triangle useful in explaining opportunity for fraud to occur in Greek Municipalities?*

This paper continues with a Theoretical basis of the problem examined and drawing on the International Fraud triangle, the Greek Context is examined in terms of pressure/incentives, opportunity, and rationalization/ attitude. Next the results of the analysis are provided with the design and methodology used followed by a discussion. Finally, the conclusion highlights areas for future research, limitations of the study and recommendations.

## **Theoretical Basis**

Fraud, as a complex socio-economic phenomenon (Cooper, Dacin, & Palmer, 2013), has been examined by researchers from various scientific disciplines in order to address:

its etiology and causes (Wells, 1997) (Albrecht S. W., 2014) (Albrecht, Albrecht , & Albrecht , 2004); prevention and detection (Albrecht, Howe, & Romney, 1984); detection using data mining techniques (Al-Hashedi & Magalingam, 2021); the role of accountants (Dellaportas , 2013) and auditors (Coffee, 2002) (Apostolou & Crumbley, 2008) (Rezaee, 2005) and the skepticism around the accounting profession for ethical lapses (Verwey & Asare, 2021); the cultural dimensions of fraud (Cieslewicz, 2012) (Watson, 2003) (Yamen, Qudah, Badawi, & Mustafa-Bani, 2017) ; top management or executive fraud (Zahra, Priem, & Rasheed, 2005) (Geetha, 2015) (Albrecht, Albrecht , & Albrecht , 2004) (Choo & Tan , 2007); trends of fraud (Karpoff, 2021); government fraud (Ziegenfuss, 1996) and public sector fraud; the behavioral profile of fraudsters and personality traits (Sandhu, 2021); and, fraud as an outcome of collusion (Villaescusa, & Amat, 2021) (Dorminey J. , Fleming, Kranacher, & Riley, 2012)

(Free & Murphy, 2013).

For more than seven decades, academics from various disciplines as well as professional associations have showed great interest in fraud. According to Morales et al., (2014) fraud examination was mainly built on the image of the Fraud Triangle. The origin of the Fraud Triangle goes back to Cressey's (1953) work on the study of embezzlement (a type of fraud and white-collar crime). Donald Cressey (1919-1987), a leading American criminologist, stated that three conditions are present when a person becomes "trust violator" and commits a crime: 1) a *non-shareable financial pressure*, (2) a perceived *opportunity* exists, and (3) rationalization of the planned violation. Cressey (1953) laid the theoretical foundation of the triangle framework which later became the so called "Fraud Triangle". Support for the Fraud Triangle comes from professional associations and it is evident in auditing standards around the world IAASB (2009), PCAOB (2005), USA (SAS) No. 99, and (ISA 240); while the term 'fraud triangle' is not stated explicitly, it is evident that its dimensions/elements are implied.

Over the years the fraud triangle enhanced and several models emerged either by providing additional insights or as a result of criticism (Choo & Tan , 2007) (Donegan & Ganon, 2008) (Dorminey J. W., Fleming, Kranacher, & Riley, 2010) (Murphy & Dacin, 2011) Morales et al., (2014) (Huber, 2017) (Cieslewicz, 2012) (see Dorminey et al. (2012) for the evolution of the fraud triangle). Cheliatsidou et al., (2021) based on (Cressey, 1953), (Kranacher, Riley, & Wells, 2010) (Cieslewicz, 2012), propose a variation of the fraud triangle in an international environment taking into account besides the classical three elements of pressure/incentive, opportunity and rationalization other variables unique to each country or context, thus making the fraud triangle framework tailored to the needs of the examined country/context. They support that a set of additional variables should be considered when fraud (and its typologies) is examined such as: *Political; Economic; Legal and regulatory; Cultural and societal aspects*; and *Organizational environment*. Cheliatsidou et al., (2021) support that the confluence of all the above-mentioned variables, unique to each culture or country/ context examined, shape the conditions for fraud (and its typologies) occurrence.

### **The International Fraud Triangle in the Greek Context**

**Pressure/Incentives.** The pressure element of the fraud triangle initiated as "non-shareable financial pressure" later became known as the pressure /incentive/need to commit a fraudulent act due to financial problems (Free C. , 2015) (Lokanan M. , 2018). In the Greek context, the pressure variable seems to be the outcome the country's Political, and Economic situation after the well-known Greek crisis. From 2009 until 2019 Greece witnessed an "extraordinary" economic and political crisis with 3 three fiscal consolidation programs monitored by the "TROIKA" (IMF, EU, European Central Bank) country's lenders (Kaplanoglou, 2022). The causes of the Greek crisis, still a matter of debate among experts, started with the use of questionable accounting practices or "creative finance techniques" by the Government and eventually shifted to the blame of citizens as "corrupt" stigmatizing an entire country and its people (Morales et.al, (2014). What seems to increase the pressure/incentive element of the Fraud triangle in the Greek Context is mainly the Political and Economic environment. Pressure is not limited only to financial/economic problems since it may include other forms such as *political* pressure, *pressure by superiors* to meet organizational goals, performance pressure to hold the job or other situational circumstances or Motivation /Needs (Kranacher, Riley, & Wells, 2010) (Hashim, Salleh, Shuhaimi, & Ismail , 2020) (Hillison, Pacini, & Sinason, 1999).

**Opportunity.** Opportunity, one of the third components in the fraud triangle, is defined as the outcome of an assessment by the fraudster to commit fraud because of a "perceived opportunity". According to (Lokanan M. , 2015) "perceived opportunity" gradually changed to "opportunity" and certain meanings were ascribed to "opportunity" over the years by the anti-fraud community that view fraud as a problem which can be dealt with effective internal

controls. Dellaportas (2013) considers opportunity a better crime predictor compared to the elements of pressure and rationalization and supports that opportunity is enhanced when criminals believe that the crime will not be punished “the perception of leniency”. Other studies approach opportunity through social influences that either enforce or inhibit fraudulent acts (Donegan & Ganon, 2008).

**Rationalization/Attitude and Cultural Environment.** Rationalization/attitude the third variable element of the Fraud Triangle is the justification of the criminal before commitment of crime and rationalization that the act is morally accepted (Cressey, 1953). There is limited to non-existent literature on fraud Rationalization studies in Greece especially in the public sector. Some studies indicate that fraudsters stated that they did not commit embezzlement instead they obtained what the company owed them since their work was not appreciated (Tsintzas, 2012). The existing studies explore corruption and how the economic austerity measures impact on ethical practices and rule of law (Skinner, 2019) within which it seems that unethical practices may “justify” a rationalization stance for those who are trying to survive in such difficult conditions. In a similar vein, it seems that corruption, defined as the “misuse of authority for personal, sub-unit or organizational gain” (Ashforth & Anand, 2003) is an “open secret” deeply institutionalized in the Greek public sector (Fleming, Zyglidopoulos, Boura, & Lioukas, 2022).

Fleming et al., (2022) identifying 1) bribery, 2) fraud, 3) falsification of records/ documents and 4) favoritism in tendering processes, as the major types of corruption in the Greek public sector, state that witnesses of such phenomena are either apathetic (inertia) or indifferent; and they tolerate corruption because they feel *powerless*. In terms of the attitude part in rationalizing fraud, Tsoukas (2007) supports that a culture of “*anomie*” (absence of Law) has pervaded the Greek society where tax evasion, bribery, shadow economy, illegal subsidies, nepotism, and law disobedience are daily phenomena. He states that the roots of the problem lie in the leader politicians of the country who do not behave with moral standards and abuse their power and authority. Similarly, a research report conducted by Dianeosis for the period 2015-2020 on an annual basis in Greece, revealed that 51.3 % of Greeks believe that the most significant problem in Greece is corruption, followed by 24.2% who believe clientelism is a problem in the Greek political system (Dianeosis, 2015). Almost unanimously, 93.6 % of Greeks blame the inadequate and corrupt Governments for the prolonged and devastating economic crisis (Hatzis, Aristides-Dianeosis, 2017). Quite interesting in the report is the percentage of Greeks “who evade taxes whenever they can” 35.8 % in 2018 using as a justification (excuse) “that everybody does it” with an improvement in 2020 because it drops to 25.6% (Thomas Gerakis-Dianeosis, 2020). Even more worrying is the fact that a small percentage 18.9% of Greeks believe there is meritocracy in Greece (Hatzis, Aristides-Dianeosis, 2017). 59.4% of Greeks believe that Transparency in the Public Sector had deteriorated over the years (Dianeosis, 2018) and 27.4% believe that success in Greece is achieved “with political help”. The bribery rate in public sector (services) is 9% in Greece which is above average compared to other European countries while the Percentage of public service users who used personal connections to get a service in Greece is 32%. Finally, the report shows that 78% of Greeks think that corporate tax avoidance and evasion are routine.

**Political Environment.** Examining the causes of the Greek’ lack of trust in political institutions, Theoharis & Van Deth (2015) identify pathogenies in the Greek political system namely: *clientelism*; immense growth of a public sector “subservient” to the political parties; a political system overshadowed by economic *scandals*; *political corruption*; *bribery* (Fleming, Zyglidopoulos, Boura, & Lioukas, 2022); systematic governance problems (Mungiou-Pippidi, 2019); *nepotism* with a political class coming from certain names nearly “a caste” (Mungiou-Pippidi, 2019); bureaucracy; and a highly politicized public administration. The Greek political scene has been characterized by scandals with bribery allegations against politicians, which according to the OECD Report (2022), led to the resignation of the chief anticorruption

prosecutor in March 2017. *Nepotism* and favoritism were common and prevailing themes in the Greek and international media. Kydros & Boateng (2021) examining the structure of Greek Governments over a period of two centuries find that nepotism has been a prevailing situation in the Greek political arena. Similarly, Patrikios and Chatzikonstantinou (2015) pointing out main features of Greek politics, find the existence of a substantial pool of “dynastic members” of the Greek Parliament descended from established political families capitalizing on name recognition and patronage networks. The Greek State functioned for the benefit of those who had political connections and money to bribe, thus gaining another characteristic feature of a society where “particularism reigned” (Mungiou-Pippidi, 2019).

Greeks, still, do not seem to trust Political Institutions as 68% of them tend not to trust the Parliament and 72% the Government (Eurobarometer, 2022). More than 50% of Greeks do not feel that they are well informed about rule of law in their own country (Eurobarometer, 2021). Additionally, 67% of Greeks believe that their voice does not count (Eurobarometer 9, 2021). According to World Justice Project (WJP) Index, which measures how the rule of law is experienced and perceived worldwide, in 2021 Greece is ranked in the 48<sup>th</sup> place under 139 countries and 29<sup>th</sup> out of 31 countries in Europe. According to Transparency International in the 2020 Corruption Perceptions Index Greece scores 50/100 and ranks 59<sup>th</sup> globally and 16<sup>th</sup> in the European Union (Transparency International, 2020), 49/100 and 58<sup>th</sup> in 2021 (Transparency International, 2021). Greece ranks 58<sup>th</sup> of 114 countries in the world in the Index for Public Integrity (Mungiou-Pippidi & Dadašov, 2016) with a country score 6.31/10 (high values represent better performance) and 56<sup>th</sup> out of 129 countries in the Index of Transparency with a score 12.5/20. Finally, 35% of Greeks think that most people in Local governments (including Mayors) are corrupt (International, Transparency; Martinez, R; Kukutschka, B., 2021).

**Economic Environment.** The Greek economic crisis has been characterized as one of the toughest, most prolonged, extreme notorious case globally, comparable in magnitude to that of the Covid pandemic (Kottika E., et al., 2020) provoking severe economic, social, psychological, and mental problems on Greece’s population (Halkos & Bousinakis, 2017). The global crisis impact on Greece was huge compared to other European countries mainly due to its economically inferior position within the EU, weak institutions and the fiscal balance programs that have been previously implemented by Greek governments (Kapitsinis, 2018). The Greek crisis started in 2008 as “fiscal” crisis and became a sovereign external debt crisis (Matsaganis, 2012) that reached 127% of its GDP (Ikonomou, 2018) and finally culminated in a severe banking crisis (Avramidis, Asimakopoulos, Malliaropoulos, & Travlos, 2021). In order to survive, Greece had to take exhausting austerity measures such as a restrictive income policy, severe limitation of public expenses (Tsipouridou & Spathis, 2012), cut of salaries and allowances for public sector employees (Contiades & Foriadou, 2022). Greece had to meet economic reform as a requirement of the agreement with the European Commission, the European Central Bank, and the International Monetary Fund in 2010 (IMF, 2010) (Matsaganis, 2012) in exchange to a €110 billion loan referred to as financial rescue package widely known as the Greek bailout program (Simou & Koutsogeorgou, 2014). The repercussions of the Greek economic crisis were evident in every aspect of life in Greece with cuts in healthcare spending by 25.2% (€4 billion) between the years 2009–2012 (Kotsila & Kallis, 2019); increase in suicide trends (Papaslanis, et al., 2016); social crisis with the “at-risk-of-poverty” or social exclusion rate of Greece reaching 35.7 % in 2015 meaning that more than a third of its population was affected by *poverty* or *social exclusion* and the number of people living at risk of poverty or social exclusion increased by about 783.000 between 2008 and 2015 (Eurostat, 2017).

The above synopsis of the Greek crisis is indicative of the enormous financial pressure revealing the pressure/incentive contributory factor of the fraud triangle for Greeks, who along with the “violent reforms”, experienced a serious socioeconomic devaluation (Venieris,

2021). Research shows that there is a causal link between Fraud (and its typologies) and financial fragility (Le & Doan, 2020). Economic underdevelopment as Afzali et al., (2021) support, increases corruption effects. The Greek crisis augmented certain phenomena such as *tax evasion* and the shadow (or black economy), which reached 22.4% of GDP in 2015 (Vousinas, 2017). Even after the prolonged crisis, the advent of the Covid-19 pandemic amplified the economic uncertainty in the country and risks to all sectors of the economy (IMF, 2020). Financial problems are documented as a causal factor for fraud occurrence in many studies (Albrecht, Albrecht, & Albrecht, 2004) (Cressey, 1953) (Dellaportas, 2013). The Greek economic crisis has had considerable effects in its public sector organizations especially in Municipalities since they receive 57% of their revenues from the central government Cohen et al., (2012).

**Legal Environment.** The Legal Environment under which the Greek public sector in general and Municipalities operate has been characterized as complex with numerous laws and reforms as outcome of the Economic crisis (Kontogeorga, 2019). Kontogeorga (2017) states that weak implementation of the law in terms of weak legislative monitoring and enforcement characterizes Greece. From 2001 until 2016, 3,565 Presidential Decrees, 1,569 Laws have been issued and enacted in Greece (Sotiropoulos & Christopoulos, 2017). In an effort to improve the quality of Laws and Regulations the Greek State introduced Law 4622/2019. In the explanatory memorandum of Law 4622/2019 before its enactment by the Hellenic Parliament, “polynomia” (overregulation) and its negative repercussions such as bureaucracy, administrative dysfunctions etc., are stated, inter alia, as the most significant pathologies in the Greek regulatory environment (Hellenic Parliament, 2019). In terms of the independence of courts and judges, 37% of Greeks rate it as Fairly Bad and Very Bad whereas the majority 55% rate it as fairly good or very good and for those who rate it “Fairly bad” and bad they attribute their rating to interference from politicians 56% and other economic interests 55% (Eurobarometer, 2021) The Law about internal control which even though it was passed in 2006 it has not been implemented yet in all Municipalities (Kontogeorga, 2017).

**Municipal Organizational Environment.** Greek Municipalities offer a variety of services to its citizens such as local registry; refuse collection; development and maintenance of local infrastructure; cultural activities and events; primary and secondary education services; transportation services; health services; (Cohen, Doumpos, Neofytou, & Zopounidis, 2012). Generally speaking, Municipalities in Greece are governed by elected officials and operate under a highly “politicized” environment (Cohen & Leventis, 2013) where the influence of politics on its administration is manifested. According to the Greek Ombudsman Report Findings Municipalities and Local Governments in general are characterized by maladministration and Municipalities have the majority of complaints 84% in 2021 (Ombudsman, 2021). Massaras, Sahinidis & Polychronopoulos (2014) find that the dominant culture is “Hierarchy” which is characterized by focus “on coordination, stability and predictability achieved through complex rules and regulations”.

## Results/Findings

The methodological approach in this study is based on document analysis of audit reports conducted by the Greek SAI. The reason for selecting this qualitative approach, performed in 3 phases, is to ensure that data is official; publicly available; periodically reported (Bowen, 2009); and provides empirical data (Mills, Bonner, & Francis, 2006). Content comments and descriptive indicators are captured as well as the *qualitative indicators* that may serve as *supplementary predictors* to other detection methods of fraud such as financial ratios (Kanapickienė & Grundienė, 2015). As Amiram et al. (2018) point out not all cases of financial misconduct constitute fraud. This study does not, in any case, approach the audit reports as examples of fraud cases, instead the aim is to identify possible risks that require further investigation. The audit reports were compiled, analyzed and translated to English

since the original reports appear only in Greek.

In Phase 1, all the published audit reports 41 total, 20 annual finding audit and 21 special audits, from 2003 until 2022, were analyzed in order to review all relevant data to this study inquiry, namely: findings; procedures; facts; laws and economic data; to obtain in depth knowledge about Municipalities. In Phase 2, data findings were assessed, categorized into themes and translated to English. The basis of the classification was the red flags approach based on Statements of Auditing Standards [SAS]. In this stage irregularities, violations of law, violation of procedures and dysfunctions were identified. The focus was on repetition of violations in order to determine whether they create a pattern or not and to explore compliance issues. In Phase 3, using a fraud triangle variant the International Fraud triangle, opportunities for fraud were identified. The examined Greek SAI reports are the outcome of both ex-ante and post ante and thematic audits in public sector entities. The findings for Municipalities were isolated for each consecutive year 2003 and onwards. The indicative problematic areas are the following:

**Public procurement** processes appear to be problematic and challenging since they involve pre and post contract processes, representing according to OECD one of the top drivers of administrative costs (OECD, 2014). In the report findings, procurement contracts are the epicenter of the thematic areas examined. For instance, it is mentioned that some procurement contracts did not follow the audit control process by the Greek SAI according to the provisions of the law. Most of the problematic issues or violations of the Law identified in the annual reports are similar and they appear repeatedly. In the procurement process the findings of the reports state that there is no strategy in the design of the procuring needs in services, goods, as well as other supplies; non-compliance with publicity rules; not legal formation of the tender committees. Consequently, items purchased with the taxpayers' money remain idle and, in some cases, goods are lost since they were not registered appropriately. Additional typologies reveal that there is no process for prioritizing the needs (for goods, supplies, equipment, heavy machinery etc.) and purchases and contracts are performed with the only criterion the funds available without taking into consideration any other criteria for the effective procuring planning purchases, thus creating insufficient and incomplete procurement planning. Moreover, the personnel responsible for the receiving the goods and/or services of the procuring process do not have the appropriate knowledge to control/ assess whether the delivered products/services/goods are suitable or have the proper characteristics. Another common theme was the direct awards of public projects (works, services, supplies) to external contractors with claims of urgency not fully justified according to the provisions of the law. Furthermore, in terms of violating the competition process many public work projects were fragmented (segmentation) into smaller one in order to avoid audit control by the Greek SAI. Other procurement findings include: Insufficient control carried out by some contracting authorities on the tenders submitted; Grading of the technical offers with incomplete and inadequate justification in awards; Delays in the execution of public works; unjustified extensions in contracts of public works;

**Absence of internal control.** Lack of Internal control mechanisms appears in almost all audit reports, examined in the data. Lack of solid internal audit units in the majority of Municipalities and municipal organizations;

**Human Resources.** Various risks appear in this thematic area such as: shortage of qualified staff; unlawful recruitment of employees with a project contract for duties that they should be performed by permanent employees; lack of employee training/education; unlawful granting of benefits to employees; unlawful payments and miscalculation of allowances; Payment of compensations for overtime work not approved by joint ministerial decisions (increase the number of hours and increase rate per hour) ; *no sufficient segregation of duties* for the personnel involved in the procurement process as well as other departments in Municipalities Finance-Accounting; lack of job and responsibilities outlines.

**Illegal expenditures.** The majority of illegal expenses categorized in themes include: not legal PR expenditures; illegal payments for travel expenses (employees and elected officials); insufficient supporting documents for expenses;

**Financial Statements.** Findings indicate problems in the reporting clarity and reliability of financial statements such as: inadequate recording and monitoring of resources (property, plant, equipment) fixed assets; overdue liabilities, deficiencies and errors in the description of fixed assets; absence of measures to safeguard fixed assets; no optimal utilization of the property; fixed assets remain unutilized for a long time or are not used for their intended purpose; destroyed/ inoperative fixed assets remain in registries due to absence of decision to destroy them; inability to finance overdue liabilities; incorrect display of accounts in financial statements; Untimely approval of budgets; and consecutive budget reforms. Risks also arise from findings in collection of revenues with the absence of efficient and systematic monitoring and review procedure for revenues in a timely manner.

**General administrative dysfunctions.** Lack of assessment/evaluations on effectiveness of programs/actions; and Inefficient IT systems and absence of interconnection between Municipal departments.

## **Discussion**

The above findings, addressing the research questions, indicate that opportunities for fraud exist in Municipalities. The findings about procurement are also corroborated with Eurobarometer reports stating that 30% of companies who participated in a procurement process in Greece think that corruption has prevented them for winning the project (Flash Eurobarometer 457, 2017), 82% think that specifications tailor-made for particular companies are a widespread corrupt practice in Greece, 60% believe that to make amendments to contract terms after conclusion of the contract is a common practice, and 80% think that conflicts of interest in the evaluation of bids and collusive bidding are also widespread practices in Greece (Flash Eurobarometer 507, 2022). According to the World Bank, public procurement accounts for 10–25% of GDP on average globally and governments cumulatively spend approximately \$10 trillion on public contracts annually, whereas public procurement accounts for 12% of general government expenditures in OECD member economies (World Bank, 2020). Prior research shows that even though procurement irregularities are not considered to be causal factors of corruption, they may generate the conditions that allow causal factors of corruption to flourish (Owusu, Chan, & Wang, 2021). Violations of procurement laws that ensure transparency in the competition processes may imply favoritism, circumvention of the bidding process and corruption (bribery), thus making Municipalities vulnerable to questionable practices.

After 2016, the situation in procurement improved probably because Greece's commitment to reform procurement processes with the involvement of OECD had positive results (OECD, 2014) in the Greek public procurement environment. The Greek procurement regulatory environment was significantly complex with a labyrinth of 400 laws, national laws, presidential decrees as well as European Union Laws. Part of the reform was the implementation of new laws (4281/2014 and 4412/2016) which consolidated procurement laws and regulations into one single framework (European Commission, 2016). Despite the previous mentioned efforts findings in the annual reports such as irregularities and persistent violations of rules and regulations along with the absence of internal control in the Municipalities still create an environment for possible fraudulent and corrupt practices. The findings of this study may act as indicators for the opportunity element of the fraud triangle (Kazemian, Said, Elham, & Vakijlifard, 2019).

Opportunity in the fraud literature seems to arise due to inefficient internal controls; low quality audit function; Tone at the Top; and lack of whistleblowing mechanisms. Weak or

absent internal control mechanisms or monitoring (Rezaee, 2005) in an organization (Lokanan M. E., 2015) (Davis & Pesch, 2013) (Dellaportas, 2013) (Rae & Subramaniam, 2008) has negative consequences and provides a perfect site for fraudulent practices. Internal control is considered as one of the most critical governance controls within the worldwide ranking of fraud detection sources (Westhausen, 2017). Lack of Internal control mechanisms appears in almost all audit reports, examined in the data, explaining pathogenic and systemic problems in Municipalities. The absence of internal control in Municipalities has created a mentality of transferring the responsibility to external auditors (Kontogeorga, 2019). The value of internal audit in the public sector has been documented in the literature and most studies support that internal audit mechanisms improve the organization's performance by increasing accountability and integrity and offering adequate protection of stakeholders (Nerantzidis, Pazarskis, Drogalas, & Galanis, 2020). A recent law 4795/2021 Government Gazette (ΦΕΚ 62/A/17-4-2021) has passed and its implementation remains to be seen and examined. Greek Municipalities along with other local authorities and have not yet fully implemented the General Government Accounting Framework based on internationally accepted public sector accounting standards according with the provisions of Presidential Decree 54/12-06-2018 (Government Gazette 103A/13-06-2018). However, the deadline for the law implementation is 01-01-2023 and the results remain to be seen (Chytis, Georgopoulos, Tasios, & Vrodou, 2020).

**“Tone at the top”** (Rubasundram, 2015) and (Suh, Shim, & Button, 2018) find that investing in ethical culture is more important than monitoring controls. Municipal scandals (BBC, 2013) (Stamouli, Nektaria; Granitsas, Alkman WSJ, 2013) reported in the Greek media along with the legal framework inadequacies such as the limited ability to prosecute politicians due to the Greek statute of limitation (Athanasouli, Goujard, & Sklias, 2012), confirm the absence of “tone at the top” and a questionable ethical climate in the municipal context.

**Absence or inefficient whistleblowing lines.** Taking into consideration that most fraudulent acts are reported via whistleblowing, which according to the ACFE is more effective than other fraud detection methods (ACFE, 2020), the absence of the proper channels to report fraudulent acts represents an ideal opportunity for fraud and corruption to occur (Asare, Wright, & Zimbelman, 2015) (Kassem, 2021). In the Greek public sector, and in Municipalities as a public sector entity, the lack of whistleblowing policies or systems, reinforced a “code of silence” for corruption (Fleming, Zyglidopoulos, Boura, & Lioukas, 2022). Greece delayed to implement the European Union “Directive on Whistleblowing” 2019/1937 designed to provide protection for whistleblowers across Europe, adopted on 23 October 2019 and entered into force on 16 December 2019. European Member States had the obligation to implement provisions of the EU Directive into national law by 17 December 2021 (European Commission, 2019). Notably, Greece has recently implemented the Directive and voted Law 4990/2022 in November 2022 (Government Gazette A’/210-11.11.2022) (Hellenic Parliament, 2022).

Recurrent errors and repeated violations in the findings are partly explained by: a) the lack of ability by audits to enforce compliance with the rules (Friedberg & Lutrin, 2005) and b) Municipalities do not seem to comply with rules and regulations. Kontogeorga (2017) examining compliance with budgetary laws states that Municipalities have the lowest rate of compliance with budgetary laws / regulations when compared to other organizations in the Greek the public sector and characterizes them as “leaders” of non-compliance.

The International Fraud triangle framework was proven suitable not only in identifying opportunity risks in the municipal environment but also in explaining the confluence of additional variables such as: a) the recurred pattern of the risks identified because of the general environment within which Municipalities operate is analyzed, b) how the pressure/incentive element is augmented due to the economic situation in Greece, and c) how the rationalization element is influenced by sociocultural factors. For instance, employee

inertia one of the findings may explain why misconducts or similar phenomena continue to exist. Social and cultural norms reveal high tolerance levels of wrongdoing in Municipalities which may be explained by normalization of such phenomena (Fleming, Zyglidopoulos, Boura, & Lioukas, 2022) or the “banality of wrongdoing” (Balch & Armstrong, 2010) proving that situational and sociocultural factors must also be taken into account when fraud (and its typologies) is examined. It would be interesting to research reasons of employee inertia/apathy and tolerance of these phenomena in Greece in the future. Regarding findings related to unlawful hiring of temporal employees for duties that are supposed to be performed by permanent employees, risks for corruption practices arise suggesting that these employees may be subject to undue political influence or clientelism (Patrikios & Chatzikonstantinou, 2015).

## **Conclusion**

The financial viability and performance of Municipalities is of outmost importance to government officials and citizens. Identifying any vulnerabilities, risks and warning indicators that may lead to fraud and corruption, is imperative. The present study provides theoretical implications and valuable information for researchers, internal and external auditors, government officials and regulators for the implementation of anti-fraud preventive measures. Building knowledge based on actual audit reports from reliable and credible data such as data from SAIs contributes to the literature and may set the basis for further research on Municipalities in Greece.

Using the International Fraud Triangle model derivative of the original Fraud Triangle, a model which can be applied in various organizational settings across different countries, research questions about the existence of opportunities in Municipalities for fraud (and its typologies) were addressed by developing a typology of identified risks, irregularities, warning indicators and systemic flaws that create the Opportunities for fraud and corruption occurrence. In this context, the analysis revealed significant findings such as lack of internal audit control mechanisms; irregularities and violations of the procurement processes; insufficient collection of revenues; absence of effective whistleblowing processes; and absence of an ethical climate in Municipalities. Additionally, it seems that Municipalities besides the major reforms and important steps taken by the Greek State are still exposed to many risks due to administrative dysfunctions such as insufficient segregation of duties and lack of qualified personnel. These represent significant risks, which along with other variables such as the corroding political environment, the overregulated legal environment within which Municipalities operate, cultivate a culture of impunity. All the above findings repeated and persistent over a long period suggest that there is no compliance probably due to the normalization of wrongdoing.

The findings also indicate that institutions such as SAI’s play a vital role in generating valuable information and qualitative data informing the public about law violations thus promoting accountability and public integrity. Governments and regulators should strengthen these institutions to achieve higher levels of integrity and accountability. Apparently, synergies and interoperability among institutions in Greece that promote transparency such as the National Transparency Authority and the Greek Supreme Audit Institution seem to be essential for a holistic approach in developing the strategies to prevent, manage and minimize fraud and corruption risks. Targeted audits should be implemented to create perceptions of detection and minimize perceptions of impunity and perceived opportunities for fraud.

There are limitations in this study due to the examination of the Fraud Triangle elements in the Greek Context only through the analysis of the Greek SAI’s reports. This study relies on the publicly available data and as a result it may miss to identify risks of acts/ instances of fraud and corruption due to the secretive nature of such acts. However, this article can contribute to the literature relating to fraud and corruption in public sector organizations and

academic research on fraud in the Greek context as a source of reference. It would be interesting to see similar findings from Supreme Audit Institutions in other countries or contexts for comparison purposes in the future.

## References

- ACFE, A. o. (2020). *Report to the Nations*. TX: Association of Certified Fraud Examiners. Retrieved from <https://www.acfe.com/report-to-the-nations/2020/>
- Afzali, M., Çolak, G., & Fu, M. (2021). Economic uncertainty and corruption: Evidence from public and private firms. *Journal of Financial Stability*, 57. doi:<https://doi.org/10.1016/j.jfs.2021.100936>
- Albrecht, S. W. (2014, July/August ). Iconic fraud triangle endures: Metaphor diagram helps everybody understand fraud. *Fraud Magazine*. Retrieved 2021, from <http://www.dkcpas.com/content/client/7fa6b31cca001f1ab32e5d2a03a5b153/uploads/iconic-fraud-triangl.pdf>
- Albrecht, S. W., & Albrecht, C. O. (2004). *Fraud examination and prevention*. Mason Ohio: South-Western.
- Albrecht, W. S., Albrecht , C. C., & Albrecht , C. O. (2004). Fraud and corporate executives: Agency, Stewardship and Broken Trust. *Journal of Forensic Acoounting*(5), pp. 109-130.
- Albrecht, W. S., Howe, K. R., & Romney, M. M. (1984). *Deterring fraud: The internal auditor's perspective*. Altamonte Springs, FL: The Institute of Internal Auditors' Reseach Foundation.
- Al-Hashedi , K., & Magalingam, P. (2021). Financial fraud detection applying data mining techniques: A comprehensive review from 2009 to 2019. *Computer Science Review*, 40. doi:<https://doi.org/10.1016/j.cosrev.2021.100402>
- Amiram, D., Bozanic, Z., Cox, J. D., Dupont, Q., Karpoff, J. M., & Sloan, R. (2018). Financial reporting fraud and other forms of misconduct: a multidisciplinary review of the literature. *Review of Accounting Studies*, 23(2), pp. 732-783. doi:10.1007/s11142-017-9435-x
- Apostolou, N., & Crumbley, D. L. (2008). Auditors' responsibilities with respect to fraud: A possible shift? *The CPA Journal*, 78(2), pp. 32-37. Retrieved from <https://search.proquest.com/scholarly-journals/auditors-responsibilities-with-respect-fraud/docview/212279882/se-2?accountid=188309>
- Asare, S. K., Wright, A. M., & Zimbelman, M. F. (2015, July -December). Cheallenges Facing Auditors in Detecting Financial Statement Fraud: Insights from Fraud Investigations. *Journal of Forensic & Investigative Accounting*, 7(2).
- Ashforth, B. E., & Anand, V. (2003). The Normalization of Corruption in Organizations. *Research in Organizational Behavior*, 25, pp. 1-52.
- Athanasouli, D., Goujard, A., & Sklias, P. (2012). Corruption and Firm Performance: Evidence from Greek Firms . *International Journal of Economic Sciences and Applied Research* , 5.
- Avramidis, P., Asimakopoulos, I., Malliaropulos, N., & Travlos, G. (2021). Do banks appraise internal capital markets during credit shocks? Evidence from the Greek crisis. *Journal of Financial Intermediation*, 45. doi:<https://doi.org/10.1016/j.jfi.2020.100855>
- Bajpai, R., & Myers, B. C. (2020). *Enhancing Government Effectiveness and Transparency : The Fight Against Corruption*. World Bank Group. Retrieved from <http://documents.worldbank.org/curated/en/235541600116631094/Enhancing-Government-Effectiveness-and-Transparency-The-Fight-Against-Corruption>
- Balch, D., & Armstrong, R. (2010). Ethical Marginality: The Icarus Syndrome and Banality of Wrongdoing. *Journal of Business Ethics*, pp. 291-303. doi:10.1007/s10551-009-0155-4
- BBC. (2013). Greek ex-mayor jailed for life for embezzlement. *BBC*. Retrieved from [tps://www.bbc.com/news/world-europe-21608709](https://www.bbc.com/news/world-europe-21608709)

- Bolton, R. J., & Hand, D. J. (2002). Statistical Fraud Detection: A Review. *Statistical Science*, 17(3), pp. 235-255. Retrieved from [//doi.org/10.1214/ss/1042727940](https://doi.org/10.1214/ss/1042727940)
- Bowen, G. A. (2009). Document Analysis as a Qualitative Research Method. (E. G. Limited, Ed.) *Qualitative Research Journal*, 9(2), pp. 27-40. doi:10.3316/QRJ0902027
- Cheliatsidou, A., Sariannidis, N., Garefalakis, A., Azibi, J., & Kagias, P. (2021). The International Fraud Triangle. (E. Publishing, Ed.) *Journal of Money Laundering Control*, ahead-of-print(ahead-of-print). doi:10.1108/JMLC-09-2021-0103
- Choo, F., & Tan, K. (2007). An "American Dream" theory of corporate executive fraud. *Accounting Forum*, 31(2), pp. 203-215.
- Chytis, E., Georgopoulos, I., Tasios, S., & Vrodou, I. (2020). Accounting Reform and IPSAS Adoption in Greece. *European Research Studies Journal*, XXIII(4), pp. 165-184.
- Cieslewicz, J. K. (2012). The fraud model in international contexts: a call to include societal-level influences in the model. *Journal of Forensic and Investigative Accounting*, 4(1), pp. 214-254.
- Coffee, J. C. (2002). Understanding Enron-it's about the gatekeeper, stupid. *Business. The Lawyer*, pp. 1403-1420.
- Cohen, S., & Leventis, S. (2013). Effects of municipal, auditing and political factors on audit delay. (Routledge, Ed.) *Accounting Forum*, 37(1), pp. 40-53. Retrieved from <https://doi.org/10.1016/j.accfor.2012.04.002>
- Cohen, S., Doumpos, M., Neofytou, E., & Zopounidis, C. (2012). Assessing financial distress where bankruptcy is not an option: An alternative approach for local municipalities. *European Journal of Operational Research*, pp. 270-279.
- Contiades, X., & Foriadou, A. (2022). Facing the Financial crisis: The Greek constitutional experience Have Domestic courts become key players in economic governance ? *e-Politeia*. Retrieved from <https://www.epoliteia.gr/wp-content/uploads/2022/01/28-39.pdf>
- Cooper, D., Dacin, T., & Palmer, D. (2013). Fraud in accounting, organizations and society: Extending the boundaries of research. *Accounting, Organization and Society*, 38(6-7), pp. 440-457.
- Cressey, D. (1953). *Other people's money: A study in the social psychology of embezzlement*. Wadsworth, California.
- Davis, J. L., & Pesch, H. L. (2013). Fraud dynamics and controls in organizations. *Accounting, Organization and Society*, 38(6-7), pp. 469-483.
- Dellaportas, S. (2013). Conversations with inmate accountants: Motivation, opportunity and the fraud triangle. *Accounting Forum*, 37(1), pp. 29-39.
- Dianeosis. (2015). *What Greeks believe The State, the institutions, Political System*. Athens: Dianeosis Organization for research and analysis. Retrieved from [https://www.dianeosis.org/wp-content/uploads/2016/02/ti\\_pistevoun\\_oi\\_ellines\\_spreads\\_D.pdf](https://www.dianeosis.org/wp-content/uploads/2016/02/ti_pistevoun_oi_ellines_spreads_D.pdf)
- Dianeosis. (2018). *What Greeks believe*. Athens: Dianeosis. Retrieved from [https://www.dianeosis.org/wp-content/uploads/2019/09/tpe\\_2018\\_AB\\_v7-4.9.2019.pdf](https://www.dianeosis.org/wp-content/uploads/2019/09/tpe_2018_AB_v7-4.9.2019.pdf)
- Donegan, J. J., & Ganon, M. W. (2008). Strain, differential association, and coercion: Insights from the criminology literature on causes of accountant's misconduct. *Accounting and the Public Interest*, 8(1), pp. 1-20.
- Dorminey, J. W., Fleming, A. S., Kranacher, M., & Riley, R. A. (2010). Beyond the fraud triangle: Certified public accountant. *The CPA Journal*(80 (7)). Retrieved January 2021, from <https://search.proquest.com/scholarly-journals/beyond-fraud-triangle/docview/637276283/se-2?accountid=188309>
- Dorminey, J., Fleming, S. A., Kranacher, M.-J., & Riley, R. A. (2012). The Evolution of Fraud Theory. *Issues in Accounting Education*, pp. 555-579. doi:10.2308/iace-50131
- Eurobarometer. (2021). *Perceived independence of the national justice Flash Eurobarometer 489 Greece*. Brussels : European Commission.

- Eurobarometer. (2021). *Justice Rights and Values Special Eurobarometer 514*. Brussels : European Commission .
- Eurobarometer. (2022). *Winter Eurobarometer 2021-2022 Standard Eurobarometer 96.3*. Brussels : European Commission . Retrieved from <https://europa.eu/eurobarometer/surveys/detail/2553>
- Eurobarometer, 9. (2021). *Parlemeter 2021*. Brussels: European Parliament.
- European Commission. (2016). Public procurement – a study on administrative capacity in the EU. Retrieved from [https://ec.europa.eu/regional\\_policy/en/newsroom/news/2016/04/14-04-2016-public-procurement-a-study-on-administrative-capacity-in-the-eu](https://ec.europa.eu/regional_policy/en/newsroom/news/2016/04/14-04-2016-public-procurement-a-study-on-administrative-capacity-in-the-eu)
- European Commission. (2019, December ). *Press Corner* . Retrieved from European Union : [https://commission.europa.eu/aid-development-cooperation-fundamental-rights/your-rights-eu/protection-whistleblowers\\_en](https://commission.europa.eu/aid-development-cooperation-fundamental-rights/your-rights-eu/protection-whistleblowers_en)
- Eurostat. (2017). *Smarter, Greener, More Inclusive? Indicators to Support the Europe 2020 Strategy*. Luxembourg: Publications Office of the European Union, 2017: Eurostat Statistical Books.
- Flash Eurobarometer 457. (2017). *Businesses' attitudes towards corruption in the EU*. Retrieved from [https://data.europa.eu/data/datasets/s2177\\_457\\_eng?locale=en](https://data.europa.eu/data/datasets/s2177_457_eng?locale=en).
- Flash Eurobarometer 507. (2022). *Businesses' attitudes towards corruption in the EU*. European Commission.
- Fleming, P., Zyglidopoulos, S., Boura, M., & Lioukas, S. (2022). How Corruption is Tolerated in the Greek Public Sector: Toward a Second-Order Theory of Normalization. (S. Publications, Ed.) *Business and Society* , 61(1), pp. 191-224. doi:10.1177/0007650320954860
- Free, C. (2015). Looking through the fraud triangle: a review and call for new directions. *Meditari Accountancy Research*, 23(2), pp. 175-196.
- Free, C., & Murphy, P. (2013). The ties that bind: The decision to co-offend in fraud. *Contemporary Accounting Research* .
- Friedberg, A., & Lutrin , C. (2005). State audits in the United States. (E. P. Limited, Ed.) *Journal of Public Budgeting, Accounting & Financial Management*, 17(1), pp. 1-32. doi:10.1108/JPBAFM-17-01-2005-B001
- Geetha, A. R. (2015). Perceived "Tone from the Top" during a fraud risk assessment. *Procedia Economics and Finance*, 28, pp. 102-106. doi:[https://doi.org/10.1016/S2212-5671\(15\)01087-4](https://doi.org/10.1016/S2212-5671(15)01087-4)
- Halkos, G., & Bousinakis, D. (2017). The effect of stress and dissatisfaction on employees during crisis. *Economic Analysis and Policy*, 55, pp. 25-34. doi:<https://doi.org/10.1016/j.eap.2017.04.002>
- Hashim, H., Salleh, Z., Shuhaimi, I., & Ismail , N. (2020). The risk of financial fraud: a management perspective. *Journal of Financial Crime*, 27(4). Retrieved from <https://doi.org/10.1108/JFC-04-2020-0062>
- Hatzis, Aristides-Dianeosis. (2017). *What the Crisis taught us*. Athens: Dianeosis. Retrieved from [https://www.dianeosis.org/wp-content/uploads/2017/10/TPE\\_2017\\_Hantzis.pdf](https://www.dianeosis.org/wp-content/uploads/2017/10/TPE_2017_Hantzis.pdf)
- Hellenic Court of Audit. (2003-2017). *Audit Reports*. Hellenic Court of Audit. Retrieved from <https://www.elsyn.gr/en>
- Hellenic Parliament. (2019). Explanatory memorandum. Athens: Hellenic Parliament.
- Hellenic Parliament. (2022). “Protection of persons reporting breached of EU law – Implementation of Directive (EU) 2019/1937 of the European Parliament and of the Council of 23 October 2019 and other urgent regulations”. *Plenary Session*. Athens: Hellenic Parliament. Retrieved from [https://www.hellenicparliament.gr/Nomothetiko-Ergo/Anazitisi-Nomothetikou-Ergou?law\\_id=a680c93e-3ada-45d0-a33e-af3f013776c5](https://www.hellenicparliament.gr/Nomothetiko-Ergo/Anazitisi-Nomothetikou-Ergou?law_id=a680c93e-3ada-45d0-a33e-af3f013776c5)
- Hillison, W., Pacini, C., & Sinason, D. (1999). The Internal auditor as fraud-buster. *Managerial Auditing Journal*, 17(7), pp. 351-363.

- Huber, D. (2017). Forensic Accounting, Fraud Theory, and the End of the Fraud Triangle. *Journal of Theoretical Accounting Research*, 12(2), pp. 28-48.
- Ikonomidou, C. (2018). 1-The great Greek crisis. Academic Press. doi:<https://doi.org/10.1016/B978-0-12-814566-1.00001-X>.
- IMF. (2010). Greece: Staff Report on Request for Stand-by Arrangement, Country Report, No. 10/110. Washington DC: International Monetary Fund.
- IMF. (2020). *SECOND POST-PROGRAM MONITORING DISCUSSIONS—PRESS RELEASE; STAFF REPORT; GREECE*. European Dpt. Washington D,C: International Monetary Fund. Retrieved from <https://www.imf.org/en/Publications/CR/Issues/2020/11/30/Greece-Second-Post-Program-Monitoring-Discussions-Press-Release-Staff-Report-Staff-Statement-49922>
- International Auditing and Assurance Standards Board (IAASB). (2009). The Auditor's Responsibilities Relating to Fraud in an Audit of Financial statements. New York: IAASB.
- International, Transparency; Martinez, R; Kukutschka, B. (2021). *Global Corruption Barometer European Union 2021 Citizens' views and experiences of corruption*. Transparency International. Retrieved 2022, from <https://www.transparency.org/en/gcb/eu/european-union-2021>
- Kanapickienė, R., & Grundienė, Ž. (2015). The Model of Fraud Detection in Financial Statements by Means of Financial Ratios. *Procedia-Social and Behavioral Sciences*, 213, pp. 321-327. doi:<https://doi.org/10.1016/j.sbspro.2015.11.545>
- Kapitsinis, N. (2018). Interpreting business mobility through socio-economic differentiation. Greek firm relocation to Bulgaria before and after the 2007 global economic crisis. *Geoforum*, 96, pp. 119-128. doi:<https://doi.org/10.1016/j.geoforum.2018.08.002>
- Kaplanoglou, G. (2022). Consumption inequality and poverty in Greece: Evidence and lessons from a decade-long crisis. *Economic Analysis and Policy*, 75, pp. 244-261. doi:<https://doi.org/10.1016/j.eap.2022.05.003>
- Karpoff, J. M. (2021). The future of financial fraud. *Journal of Corporate Finance*, 66. doi:<https://doi.org/10.1016/j.jcorpfin.2020.101694>
- Kassem, R. (2021). "How could external auditors assess the rationalization of fraud?". *Journal of Financial Crime, ahead-of-print*. doi:<https://doi.org/10.1108/JFC-08-2021-0184>
- Kazemian, S., Said, J., Elham, H. N., & Vakijlifard, H. (2019). Examining fraud risk factors on asset misappropriation: Evidence from the Iranian banking industry. *Journal of Financial Crime*, 26(2), pp. 447-463. doi:<http://dx.doi.org/10.1108/JFC-01-2018-0008>
- Kontogeorga, G. (2017). The introduction of “ex-ante” audit in Greek municipalities: Leaders of non-compliance? *Corporate Ownership and Control*, 14(4), pp. 85-92. Retrieved from <https://doi.org/10.22495/COCV14I4ART7>
- Kontogeorga, G. (2019). Juggling between ex-ante and ex-post audit in Greece: A difficult transition to a new era. (L. John Wiley & Sons, Ed.) *International Journal of Auditing*, pp. 86-94. Retrieved from <https://doi.org/10.1111/ijau.12147>
- Kontogeorga, G. N. (2017). Does (better) regulation really matter? Examining public financial management legislation in Greece. *European Journal of Law and Economics*, 43(1), pp. 153-166. Retrieved from <https://doi.org/10.1007/s10657-016-9534-3>
- Kotsila, P., & Kallis, G. (2019). Biopolitics of public health and immigration in times of crisis: The malaria epidemic in Greece (2009–2014). *Geoforum*, 106, pp. 223-233. doi:<https://doi.org/10.1016/j.geoforum.2019.08.019>
- Kottika, E., Özsoy, A., Ryden, P., Theodorakis, I. G., Kaminakis, K., Kottikas, G., & Stathakopoulos, V. (2020). We survived this! What managers could learn from SMEs who successfully navigated the Greek economic crisis,. *Industrial Marketing Management*, 88, pp. 352-365. doi:<https://doi.org/10.1016/j.indmarman.2020.05.021>.

- Krambia-Kapardis, M., & Papastergiou, K. (2016). Fraud victimization in Greece: Room for improvement in prevention and detection. *Journal of Financial Crime*, 23(2), pp. 481-500. doi:<http://dx.doi.org/10.1108/JFC-02-2015-0010>
- Kranacher, M., Riley, R., & Wells, J. (2010). *Forensic accounting and fraud examination*. Rosewood: John Wiley & Sons.
- Kydros, D., & Boateng, J. (2021). Two Centuries of Greek Governments from social network analysis perspective. *Cogent Social Sciences*, 7(1). doi:10.1080/23311886.2021.1951463
- Le, A.-T., & Doan, A.-T. (2020). Corruption and financial fragility of small and medium enterprises: International evidence. *Journal of Multinational Financial Management*, 57-58. doi:<https://doi.org/10.1016/j.mulfin.2020.100660>
- Levi, M., & Smith, R. G. (2021). Fraud and pandemics. (E. P. Limited, Ed.) *Journal of Financial Crime, ahead-of-print*(ahead-of-print). Retrieved from <https://doi.org/10.1108/JFC-06-2021-0137>
- Lokanan, M. (2015). Challenges to the fraud triangle: Questions on its usefulness. *Accounting Forum*.
- Lokanan, M. (2018). INFORMING THE FRAUD TRIANGLE: INSIGHTS FROM DIFFERENTIAL ASSOCIATION THEORY. *The Journal of Theoretical Accounting Research*, 14(1), pp. 55-98. Retrieved from <https://search.proquest.com/scholarly-journals/informing-fraud-triangle-insights-differential/docview/2129410727/se-2?accountid=188309>
- Lokanan, M. E. (2015). Challenges to the Fraud Triangle: Questions on its Usefulness. *Accounting Forum* , 39(3), pp. 201-224.
- Massaras, P., Sahinidis, A., & Polychronopoulos, G. (2014). Organizational Culture and Motivation in the Public Sector. Tha Case of the City of Zografou. (I. 2. International Conference on Applied Economics, Ed.) *Procedia Economics and Finance*, pp. 415-424. Retrieved from [https://doi.org/10.1016/S2212-5671\(14\)00730-8](https://doi.org/10.1016/S2212-5671(14)00730-8)
- Matsaganis, M. (2012). Social Policy in hard times: The case of Greece. *Critical Social Policy*, pp. 406-421. doi:10.1177/0261018312444417
- Maulidi, A., & Ansell, J. (2021). Corruption as distinct crime: the need to reconceptualise internal control on controlling bureaucratic occupational fraud. (E. P. Limited, Ed.) *Journal of Financial Crime, ahead-of-print*(ahead-of-print ). doi:10.1108/JFC-04-2021-0100
- Mills, J., Bonner, A., & Francis, K. (2006). The Development of Constructivist Grounded Theory. *International Journal of Qulitative Methods*, pp. 25-35. doi:10.1177/160940690600500103
- Morales, J., Gendron, Y., & Guenin-Paracini. (2014). The construction of the risky individual and vigilant organization: A genealogy of the fraud triangle. *Accounting, Organizations and Society*. Retrieved January 2021, from <https://doi.org/10.1016/j.aos.2014.01.006>
- Morales, J., Gendron, Y., & Guenin-Paracini, H. (2014). State privatization and the unrelenting expansion of neoliberalism: The case of the Greek financial crisis. *Critical Perspectives of Accounting*, 25(6), pp. 423-445. doi:<https://doi.org/10.1016/j.cpa.2013.08.007>
- Mungiu-Pippidi, A. (2019). *Building Good Governance in Greece , a European Missed Opportunity?* ERCAS WORKING PAPERS COLLECTION 2 . Berlin: European Research Centre for Anti-Corruption and State-Building Hertie School of Governance. Retrieved from [www.againstcorruption.eu](http://www.againstcorruption.eu)
- Mungiu-Pippidi, A., & Dadašov, R. (2016). Measuring Control of Corruption by a New Index of Public Integrity. *European Journal of Criminal Policy Research*, pp. 415-438. Retrieved from <https://doi.org/10.1007/s10610-016-9324-z>
- Murphy, P., & Dacin, T. (2011). Psychological pathways to fraud: Understanding and preventing fraud in organizations. *Journal of Business Ethics*, 101(4), pp. 601-618.
- Murrar, F. (2021). (E. P. Limited, Ed.) *Journal of Financial Crime, ahead-of-print*(ahead-of-print). doi:10.1108/JFC-09-2021-0203

- Nerantzidis, M., Pazarskis, M., Drogalas, G., & Galanis, S. (2020). Internal auditing in the public sector: a systematic literature review and future research agenda. *Journal of Public Budgeting, Accounting & Financial Management*. doi:10.1108/JPBAFM-02-2020-0015
- OECD. (2014). *Measurement and Reduction of Administrative Burdens in Greece*. OECD Publishing. Retrieved from [https://read.oecd-ilibrary.org/governance/measurement-and-reduction-of-administrative-burdens-in-greece\\_9789264213524-en#page4](https://read.oecd-ilibrary.org/governance/measurement-and-reduction-of-administrative-burdens-in-greece_9789264213524-en#page4)
- OECD. (2022). *IMPLEMENTING THE OECD ANTI-BRIBERY CONVENTION IN GREECE: PHASE 4 REPORT*. OECD. Retrieved from <https://www.oecd.org/greece/greece-oecdanti-briberyconvention.htm>
- Ombudsman, G. (2021). *Annual Report 2021*. Athens: Greek Ombudsman. Retrieved from <https://www.synigoros.gr/?i=stp.el.annreports.945511>
- Owusu, E., Chan, A. P., & Wang, T. (2021). Tackling corruption in urban infrastructure procurement: Dynamic evaluation of the critical constructs and the anti-corruption measures. *Cities*, 119. doi:<https://doi.org/10.1016/j.cities.2021.103379>
- Papaslanis, T., Kontaxakis, V., Christodoulou, C., Konstantakopoulos, G., Kontaxaki M, & Papadimitriou, G. (2016). Suicide in Greece 1992–2012: A time-series analysis. *International Journal of Social Psychiatry*, 62(5), pp. 471-476. Retrieved from <https://doi.org/10.1177/0020764016647753>
- Patrikios, S., & Chatzikonstantinou, M. (2015). Dynastic Politics: Family Ties in the Greek Parliament, 2000-12. (Routledge, Ed.) *South European Society and Politics*. Retrieved from <https://doi.org/10.1080/13608746.2014.942989>
- Power, M. (2013). The apparatus of fraud risk. *Accounting, Organizations and Society*, 38, pp. 535-543. Retrieved from <https://doi.org/10.1016/j.aos.2012.07.004>
- Public Company Accounting Oversight Board (PCAOB). (2005). *Consideration of Fraud in a Financial Statement Audit AU Section 316*. Retrieved from [www.pcaobus.org](http://www.pcaobus.org).
- Rae, K., & Subramaniam, N. (2008). Quality of internal control procedures: Antecedents and moderating effect on organizational justice and employee fraud. *Managerial Auditing Journal*, 23(2), pp. 104-124.
- Reichborn-Kjennerud, K., Gonzalez-Diaz, B., Bracci, E., Carrington, T., Hathaway, J., Jeppesen, K.-K., & Steccolini, I. (2019). Sais work against corruption in Scandinavian, South-European and African countries: An institutional analysis. *The British Accounting Review*, 51(5). doi:<https://doi.org/10.1016/j.bar.2019.100842>
- Rezaee, z. (2005). Causes, Consequences, and Deterrence of Financial Statement Fraud. *Critical Perspectives on Accounting* , pp. 277-298.
- Rubasundram, G. A. (2015). Perceived “Tone From the Top” During A Fraud Risk Assessment. *Procedia Economics and Finance*, 28, pp. 102-106. doi:[https://doi.org/10.1016/S2212-5671\(15\)01087-4](https://doi.org/10.1016/S2212-5671(15)01087-4).
- Sandhu, N. (2021, 11 12). Red flag behaviors in financial services frauds: a mixed-methods study. (E. P. Limited, Ed.) *Journal of Financial Regulation and Compliance*, ahead-of-print(ahead-of-print). Retrieved from <https://doi.org/10.1108/JFRC-01-2021-0005>
- Simou, E., & Koutsogeorgou, E. (2014). Effects of the economic crisis on health and healthcare in Greece in the literature from 2009 to 2013: A systematic review. *Health Policy*, 115(2-3), pp. 111-119. doi:<https://doi.org/10.1016/j.healthpol.2014.02.002>
- Skinner, H. (2019). The impact of cultural values and economic constraints on tourism businesses’ ethical practices. (E. P. Limited, Ed.) *International Journal of Tourism Cities*, pp. 169-187. doi:10.1108/IJTC-12-2017-0087
- Sotiropoulos, & Christopoulos. (2017). *Polynomia and Kakonomia in Greece*. Dianeosis. Athens: Dianeosis.

- Stamouli, Nektaria; Granitsas, Alkman WSJ. (2013). Greek Ex-Mayor Gets Life Term for Embezzlement. (<https://www.dowjones.com/>, Ed.) *The Wall Street Journal*. Retrieved from <https://www.wsj.com/articles/SB10001424127887324662404578330371069759476>
- Suh, J., Shim, H., & Button, M. (2018). Exploring the impact of organizational investment on occupational fraud: Mediating effects of ethical culture and monitoring control. *International Journal of Law, Crime and Justice*, 53. doi:<https://doi.org/10.1016/j.ijlcj.2018.02.003>
- Theoharis, Y., & Van Deth, J. W. (2015). A MODERN TRAGEDY? INSTITUTIONAL CAUSES AND DEMOCRATIC CONSEQUENCES OF THE GREEK CRISIS. (Routledge, Ed.) *Representation*, 51(1), pp. 63-79. doi:<https://doi.org/10.1080/00344893.2015.1011464>
- Thomas Gerakis-Dianeosis. (2020). *What Greeks Believe*. Athens: Dianeosis. Retrieved from [https://www.dianeosis.org/wp-content/uploads/2020/03/Arthro\\_Gerakis\\_tpe\\_2020\\_version100320.pdf](https://www.dianeosis.org/wp-content/uploads/2020/03/Arthro_Gerakis_tpe_2020_version100320.pdf)
- Transparency International . (2020). Corruption Perceptions Index. Retrieved from <https://www.transparency.org/en/countries/greece>
- Transparency International . (2021). *Corruption Perceptions Index*.
- Tsintzas, E. (2012, February). Fraud and economic turmoil in Greece: lax internal control structures and diminished audit resources may have played a role in the Greek financial crisis. *Internal Auditor*, 69(1). Retrieved from <https://link.gale.com/apps/doc/A281683695/AONE?u=googlescholar&sid=googleScholar&xid=ae1e6d99>
- Tsipouridou, M., & Spathis , C. (2012). Earnings management and the role of auditors in an unusual IFRS context: The case of Greece. *Journal of International Accounting Auditing and Taxation*, 21(1), pp. 62-78. doi:<https://doi.org/10.1016/j.intaccaudtax.2012.01.005>.
- Tsoukas, H. (2007). The culture of anomia. *KATHIMERINI*. Retrieved from <https://www.kathimerini.gr/opinion/707309/i-koyltoyra-tis-anomias/>
- Venieris, D. (2021). Social Policy in Dribs and Drabs for the Greek Crisis. (E. P. Limited, Ed.) *Modeling Economic Growth in Contemporary Greece*, pp. 119-130. doi:10.1108/978-1-80071-122-820211009
- Verde, A. (2011). The Greek Debt Crisis: Causes, Policy Responses and Consequences. In P. Della Posta, & L. Talani (Eds.), *Europe and Financial Crisis* (pp. 143-164). London: Palgrave Macmillan UK. Retrieved from [https://doi.org/10.1057/9780230305007\\_9](https://doi.org/10.1057/9780230305007_9)
- Verwey, I., & Asare, S. (2021). The Joint Effect of Ethical Idealism and Trait Skepticism on Auditors' Fraud Detection. *Journal of Business Ethics*. Retrieved from <https://doi.org/10.1007/s10551-020-04718-8>
- Villaescusa, , N., & Amat, O. (2021). When collusion meets the fraud triangle: a case study approach. (E. P. Limited, Ed.) *Journal of Financial Crime, ahead-of -print(ahead-of-print)*. doi:10.1108/JFC-05-2021-0111
- Vousinas, G. L. (2017). Shadow economy and tax evasion. The Achilles heel of Greek economy. Determinants, effects and policy proposals. (E. P. Limited, Ed.) *Journal of Money Laundering Control*, 20(4), pp. 386-404. doi:10.1108/JMLC-11-2016-0047
- Watson, D. (2003). Cultural dynamics of corporate fraud. *Cross Cultural Management: An International Journal*, 10(1), pp. 40-54.
- Wells, J. T. (1997). *Occupational fraud and abuse: How to prevent and detect asset misappropriation, corruption and fraudulent statements*. . Texas: Obsidian Publishing Company .
- Westhausen, H.-U. (2017). The escalating relevance of internal auditing as anti-fraud control. (E. P. Limited, Ed.) *Journal of Financial Crime*, 24(2). Retrieved from <https://doi.org/10.1108/JFC-06-2016-0041>
- World Bank. (2020). *Doing Business 2020*. Washington D.C: The World Bank . Retrieved from <https://www.doingbusiness.org/en/reports/global-reports/doing-business-2020>

- Yamen, A., Qudah, A. A., Badawi, A., & Mustafa-Bani, A. (2017). The Impact of National Culture on Financial Crime: A cross country analysis. *The 40th Annual Congress of the European Accounting Association University of Valencia on May 10-12*.
- Zahra, S. A., Priem, R. L., & Rasheed, A. A. (2005). The antecedents and consequences of top management fraud. *Journal of Management*, 31(6), pp. 803-828.
- Ziegenfuss, D. E. (1996). State and local government fraud survey for 1995. *Managerial Auditing Journal*, 11(9), pp. 50-55. doi:10.1108/02686909610150395