Conceptualizing Corruption Prevention: A Systematic Literature Review

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1| Introduction: A growing scholarly field

Corruption[1] is a trillion-dollar international financial crime. Cost estimations run up to $2.6 trillion a year, which represents 5% of the global GDP (Graycar and Sidebottom 2012). To control this problem, a multitude of policies, agencies and tools have been implemented around the world; a rising trend that has been qualified as an anticorruption industry, a regime, or a global campaign (Sampson 2010). For example, as detailed in the United Nations Convention Against Corruption (UNCAC), provisions are included for the implementation of repressive policies to criminalise, investigate and prosecute corruption; as well as preventive policies aimed at intervening proactively (UNODC 2004).

Previous literature reviews have focused on definitions of corruption, its various effects, or its various forms in specific sectors (Bardhan 1997, Kaufmann 1997, Jain 2001, Johnston 2012). Similarly, reviews on anti-corruption have focused on the different strategies and tools that have been implemented (Lange 2008, Disch, Vigeland et al. 2009). The study of corruption *prevention,* however, is found wanting. The subject is often treated in a cursory manner, such as subsection in the various anticorruption options. This eclipsing can be partially explained by two specific reasons. Firstly, much of scholarly work on corruption *repression* has dominated the literature foreground. Indeed, the highly politicised nature of this issue has focused attention on the criminalisation of offenders and the prosecutorial aspects of anticorruption policies (Mungiu-Pippidi 2015). Secondly, multiple disciplines currently study the issue of corruption such as public administration, criminology, management or political science: typically, they have developed specific sub-strands of literature such as accountability, risk management, or audits. Hence, the scope of these lines of inquiry extends farther than the issue of corruption, thus relegating prevention to a secondary consideration.

Considering these trends, two reasons motivate the need for a systematic review of the academic contributions on corruption prevention. Firstly, on a theoretical level, this method is ideal to centralise and synthesise the dispersed and variegated literature on corruption

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[1] Corruption is broadly defined as the abuse of publicly entrusted power for private gain Jain, A. K. (2001). "Corruption: A Review." Journal of Economic Survey **15**(1): 71-121. This widely-used definition focuses on corruption in the public sector and excludes 'private-private' corruption. This includes a wide-variety of crimes, such as fraud, bribes, collusion, abuse of power, cronyism etc. We will return to definitional debates in further sections.

prevention. Secondly, on a more empirical level, several scholars have recently underlined the importance of corruption prevention as a key long-term policy pillar (Graycar and Sidebottom 2012, Scott 2013, Mungiu-Pippidi 2015, Scott and Gong 2015). This prompts the need for a clarification of the conceptual foundations of corruption prevention to inform future policy instruments and tools.

Hence, two specific objectives are pursued by this systematic literature review: 1) To provide an overview and appraisal of the extent of academic and scholarly knowledge on corruption prevention. 2) To clarify the theoretical and conceptual foundations of the prevention of corruption. To this end, several research questions were established to guide this paper: 1) How is corruption prevention defined and conceptualized in the academic literature? 2) How is corruption prevention studied? (i.e. theories, methods, methodologies) 3) What empirical evidence has been accumulated in the study of corruption prevention (i.e. impacts/conditions of success)?

The article is organized as follows. Firstly, a methodological section details how the systematic literature review was conducted, including the keyword string process, the inclusion and exclusion criteria, and the coding procedures. Secondly, the analysis of the collected literature is presented. A lack of theoretical and conceptual consensus is noted which overshadows the field significantly. However, building on the progress made thus far, this paper proposes a conceptualisation of corruption prevention by synthesising the sparse definitions found in the collected literature. Herein lies a core contribution of this paper. The suggested conceptual matrix intends to encourage further debate between otherwise independently advancing social science disciplines. Finally, a discussion section provides an overview of the results presented, research caveats, and proposes future research opportunities.

2| Methodology: A keyword search strategy

The methodology employed to construct this systematic literature review is based on a keyword "string" search on multiple online academic databases, as well as secondary search strategies (Tranfield, Denyer et al. 2003, Vries, Bekkers et al. 2015). This search strategy is ideally adapted to focus on published scholarly work: amid the exponential production of anticorruption literature, we seek to appraise the 'social scientific' contributions on the issue. Thus, a key-word search will enable us to systematically navigate through databases, journals

and search engines to collect the necessary articles. Following established methodologies, four different steps were undertaken to identify, sort and sift through the relevant literature (Tranfield, Denyer et al. 2003).

The first step consisted in constructing the most productive string of keywords which could be utilized uniformly across online databases. Several strings were preliminarily tested using different synonyms and search operators in Google Scholar, and ordered according to the number and pertinence of search hits yielded. The umbrella-term of 'corruption' was used to ensure that other crimes or deviances were not erroneously inflating search results. This process produced the final and most productive string used in this systematic review**: (Corruption AND Prevention) OR (Corrupt* AND Prevent*) OR (Anti-Corruption AND Prevent*)**.

The second step, the collection process, consisted in using the selected string of keywords in the following databases: *Taylor and Francis*, *Elsevier*, *EBSCO*, *Sage*, *JSTOR*, *Proquest*, *Wiley Online Library*. This selection of most major databases is ideal to navigate between the different social science disciplines which study corruption. Indeed, querying databases was favored over other search strategies because of the cross-cutting theoretical background of the subject. Articles were selected according to an analysis of the title and abstract. To cover all bases, a "snowballing" sampling was done, which assesses potential sources from the bibliography of pertinent texts (Patton 2015). *Forward* and *backwards* citation identification strategies were also employed by searching through cited articles and bibliographies (Webster and Watson 2002).

The third step, the sorting of the literature, consisted in applying the inclusion and exclusion criteria to the primary pool of articles. A sifting was conducted according to an analysis of the titles, abstracts and a cursory reading of relevant sections (i.e. introduction, theory etc.). The primary pool consisted of 96 academic articles, to which was added 12 articles from secondary strategies. After the sorting process, the final pool of coded literature consisted of 46 articles (N=46). Inclusion and exclusion criteria are detailed below. The data collection was carried out from January 2017 to April 2017. All published articles were considered up to that date.

Finally, the fourth stage comprised of the analysis. A database was built based on our research questions and sub-questions, as well as established coding procedures (Webster and

Watson 2002)[2]. As such, the database recorded if the article: proposed a definition of corruption prevention; used a specific theory or methodology; underlined empirical effects or impacts of corruption prevention; or studied conditions of successful corruption prevention. To do justice to the varied theoretical background upon which the prevention literature sits, we employed a double-coding procedure to reflect diversity rather than parsimony. Moreover, the database recorded if the article treated the subject of corruption prevention in a systematic and exclusive fashion, and if a specific tool of corruption prevention was identified. Finally, following previous distinctions underlined by the literature, articles were coded if they treated normative and/or legalist corruption prevention (Osse 1997, Scott 2013). We will come back to this point further on. Finally, these steps enabled the generation of descriptive statistics with the software SPSS®. Figure 1 summarises the inclusion and exclusion criteria.

(INSERT FIGURE 1)

This review focuses solely on academic articles published in scientific journals. As our research questions wish to assess the scholarly and social-scientific literature on the subject (i.e. definitions and theory), this paper concentrates itself solely on published peer-reviewed academic articles, thus excluding other formats. The reasons for excluding books and NGO/IO literature are twofold. Firstly, even if the quality of this literature is noteworthy, a targeted contribution of this review pertains to existing academic definitions and concepts. This need has been identified in light of the many fields which study corruption prevention, as well as the lack of consensus on the definition of corruption, and the substantial growth of academic literature. Secondly, the NGO/IO literature merits a review of its own to correctly appraise its contribution. Indeed, the staggering quantity of reports from anti-corruption agencies, non-governmental agencies and international organizations (i.e. the OECD, the World Bank or Transparency International), brings a specific vision which needs to be investigated independently. Therefore, this type of grey literature falls beyond the scope and contributions of this systematic review. We have schematized our methodological process in the following box flow diagram:

(INSERT FIGURE 2)

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[2] The database recorded classification information, such as author, date, journal name, methodology, location of study and sector. Furthermore, the database recorded journal type (i.e. Public Administration, Political Science). The journals were coded according to the "aims and scope" section of the journal's website and its SJR categorization. To consult the Scimago Journal Rank website: http://www.scimagojr.com/journalrank.php. As most journals are multi-disciplinary (i.e. a single journal will contribute to the disciplines of public administration and criminology) we employed a double-coding procedure to reflect this diversity.

3 |Results and analysis: the need for a clear conceptualization

Several key points emerge from the results. Firstly, even if theoretical propositions or frameworks that focus on corruption prevention are seldom, scholars draw upon a diverse wealth of theories from different social science branches to study this issue. As expected on the definitional front, there exists a need for further debate and conceptualisation. Secondly, on the empirical level, studies on impacts, effects or conditions of success of corruption prevention policies await more scholarly attention. Finally, these results underline the need for methodological diversity, whereby most existing studies rely on case studies or survey studies.

a) Literature characteristics: contributions and methods

Starting with the most widely studied research interests, Figure 3 details the professional sectors which were identified as the focus of the articles. As shown, the public sphere clearly dominates the attention of corruption prevention. This unique focus upon the public sector is not surprising in light of the fact that most definitions of corruption concentrate on the public sector (Jain 2001). That being said, a significant portion of articles focus on the public/private nexus.

(INSERT FIGURE 3)

Furthermore, two specific sectors are worth mentioning: the police (13.04%), and the construction industry (8.7%). In light of being considered highly corruption-prone sectors, the *law enforcement sector* (Osse 1997, Poerting and Vahlenkamp 1998, Punch 2000, Moran 2002, Quah 2006, Gutierrez-Garcia and Rodriguez 2016) and *the construction sector* (Zou 2006, Sohail and Cavill 2008, Tabish and Jha 2012, Le, Shan et al. 2014, Reeves-Latour and Morselli 2017) emerge as fertile grounds where preventive methods, theories and tools have been studied. Indeed, Figure 4 shows the articles' contributions to their respective fields. Results show that articles were submitted to the measure of 21.7% to journals of public administration, 45.7% to

political science and 56.5% to Business and Management. As such, political scientists and Management & Business scholars are leading the charge, with Public Administration, Criminology, Economics, Sociology and Law scholars following on the same foothold (around 20-24%).

(INSERT FIGURE 4)

Elsewhere, as the study of corruption is fraught with methodological hurdles and pitfalls - associated with analyzing a hidden phenomenon (Johnston 2001, Heywood 2015) - the methods employed to study corruption prevention are of a particular interest.

(INSERT FIGURE 5)

As Figure 5 shows, 56.5% of articles do not clearly state or detail a methodological approach, which constitutes a manifest weakness in the literature. Moreover, two other methods seem predominant: single case or multiple case studies (7 articles) and survey studies (8 articles). Firstly, these results indicate a lack of methodological diversity. Again, this could partially be explained with the difficulties associated with studying corruption. One could even consider the task compounded, as both sides of the corruption prevention equation are hard to measure: at the policy level and at the corruption-impact level. Secondly, the use of these methods reflects the broader field of corruption studies, where survey methods have been largely utilized to measure collective perceptions (Heywood 2015), and case studies have delved into the context-specific dimension of corruption (De Graaf and Huberts 2008). We will return to method-use subsequently.

b) Overview of prevailing conceptualisations of prevention

A specific aim of this article is to examine the definitions of corruption prevention. Figure 6 shows the definitions and conceptualisations that emerged in the scholarly literature. Clearly, Findlay and Stewart's remark in 1991 still holds true today: "corruption prevention is as much fraught with definitional complexity as the object of its endeavour" (Findlay and Stewart 1991).

(INSERT FIGURE 6 ON TWO LANDSCAPE-ORIENTED PAGES)

If understood in purely quantitative terms, only 41.3% of articles offer some form of explicit definition or conceptualisation of corruption prevention. In more substantive terms, most articles avoid a direct definition and settle for a conceptualisation of what corruption prevention entails or includes, such as related strategies or tools (Webb 2010, Ho and Lin 2012) . As noted by MacKenzie, Podsakoff et al. (2011), defining a construct solely on a list of examples invites future problems of construct validity and validation.

Furthermore, the lack of clear conceptualisation leads to different types of issues of coherence and differentiation. For example, the definition offered by Tabish and Jha reads as follows:

> "Measures for tackling the problem of corruption may be broadly classified under three heads: (1) preventive; (2) punitive; and (3) promotional. Preventive measures include administrative reforms, which render the transaction of all government business more transparent and accountable to the people. (…) Promotional measures encourage value-based politics, inculcation of moral and ethical principles in the younger generation in schools and colleges, and social ostracization of dishonest people" (Tabish and Jha 2012)

As made evident, corruption prevention is separated from education activities, even though both policies intervene before the corruption crime has happened. This definition conflicts with Ashforth and Anand (2003) definition where prevention relates to *proactive* policies: "prevention- through proactive means of forestalling corruption rather than reactive means of rooting it out". Therefore, separating prevention from education activities is conceptually misleading, as education on corruption is meant to reduce opportunities of corruption proactively, for instance by exacting change on ethical culture. Further, as shown in Figure 7, a lack of consensus and debate is made evident: only 45.7% of the articles included in this systematic review treat corruption prevention in an exclusive fashion (i.e. where prevention is the sole focus of the article). In this sense, the literature is sparse and scattered rather than systematic and focalized.

(INSERT FIGURE 7)

However, even though clear and shared definitions are found wanting, common ground does emerge. In most cases, corruption prevention underscores proactive rather than reactive policies (Ashforth and Anand 2003, Hauser and Hogenacker 2014), in order to stop corruption from happening in the first place (Argandona 2007, Mevc and Pagon 2008) or to reduce the opportunities for its emergence (Gorta 1998, Graycar and Sidebottom 2012). Another common

trend consists in the reforms that corruption prevention entails, such as changes on an administrative, organisational, institutional or legal level, as conceptualized by Webb (2010) or Maxwell, Bailey et al. (2012) for example.

Another significant conceptualisation is the cleavage between normative and legalistic policies of corruption prevention (Osse 1997, Scott 2013). Simply put, preventive policies either change rules or laws, or focus on modifying opinions and perceptions. As Wal, Graycar et al. (2015) explain, this distinction is also present within the more specific literature of integrity management under the terms: compliance based (top-bottom) versus integrity based (bottom-up) approaches. Using this theoretical distinction, articles were coded if they mentioned legalistic or normative approaches, strategies or tools. Figure 8 shows that normative strategies or approaches are specified in 76.1% of articles, and inversely, 82.6% of articles specify a legalistic focus. Results underline that even if normative or value-based approaches are less studied than their legalistic counterpart, they are still significantly considered within the literature.

(INSERT FIGURE 8)

c) Theoretical and empirical state of the prevention literature

The corruption prevention literature draws upon a diverse source of theories: principal-agent theories, psychology theories (i.e. cognitive dissociation theory), criminological theories (i.e. neutralisation/justification techniques, crime prevention), ethics, organization theory (i.e. organizational learning) or management (i.e. risk management). A recent example from the field of criminology is Graycar's Situational Crime Prevention (SCP) framework, which focuses on the immediate conditions and causes of corruption to reduce corrupt opportunities (Graycar and Sidebottom 2012). Indeed, the authors explain that criminological theory has converged on the usefulness of focusing on the analysis of *opportunities* to prevent crime, instead of offender motivation, which has yet to attract sufficient attention in the corruption prevention literature (Graycar and Sidebottom 2012).

(INSERT FIGURE 9)

As depicted in Figure 9, the theories that are employed in the articles broadly mirror those used in the broader corruption literature. A substantial portion of articles mobilize theories emanating from the field of Ethics (39.1%), Management (28.3 %) and Organisational Theory

(21.7%). Theories on accountability or integrity are also significantly used (19.6%), as well as institutional and neo-institutional theory (13%)[3]. Using these results, figure 10 shows the frequency of theories that scholars rely on to inform their conceptualisations and definitions of corruption prevention. Again, ethics theories lead the pack with nine counts, followed by six for management, five for accountability and integrity theories, and four for both organization theory and criminology. Sociology (3), Psychology (2) and (Neo) institutionalism (2) are also present to a lesser extent. In sum, although theory-use is significantly influenced by management and ethics theories, articles are drawing on a varied theoretical background. We will return to theory-use.

(INSERT FIGURE 10)

Elsewhere, a quintessential theoretical inquiry line within the corruption prevention literature consists in the different tools[4] and instruments which have been implemented. As expected, a cornucopia of tools is mentioned and analyzed. As shown in Figure 11, 69.6% of articles study multiple tools, and only a few articles focus specifically on a unique tool such as codes of conduct or disclosure mechanisms. As with theory-use, diversity is the *modus operandi*. In short, a varied number of tools have been studied, of which the main are: The United Nations Convention Against Corruption (UNCAC), transparency provisions, disclosure measures, corporate social responsibility, Transparency-International's integrity pact, codes of conduct and ethics, risk management, monitoring, prevention courses, publicity campaigns, training, accountability and audit mechanisms. Harkening back to the policy instrument literature, these tools, or a combination of them, constitute the basic policy designs which, in our case, endeavour to prevent corruption around the globe (Howlett 2011).

(INSERT FIGURE 11)

Considering that anticorruption strategies have yet to live up to previous expectations (Persson, Rothstein et al. 2013), a question does arise: how have these theoretical tools fared on the ground? We now turn to the empirical contributions of the corruption prevention literature. Results show that the impacts of corruption prevention policies are seldom studied in a systematic fashion, or even reported. We present a brief overview.

(INSERT FIGURE 12)

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[3] To be coded, articles had to explicitly specify and use a theory or framework.
[4] 'A tool of public action is an identifiable method through which collective action is structured to address a public problem'. Salamon, L. M. (2002). The New Governance and the Tools of Public Action: An Introduction. The Tools of Government. A Guide to the New Governance. L. M. Salamon. Oxford, Oxford University Press**:** 1-47.

As shown in figure 12, 17.4% of the articles mention a positive effect of prevention policies, 4.3% record a negative effect, and 15.2% indicate a status quo, whereby the policy had no recorded effect. To exemplify the recorded positive effects of preventive policies, Oyamada (2015) reports a decline in collusive incidents, an increase in competition and a lowering of prices in public procurement in Japan. Elsewhere, Scott and Gong (2015) report positive changes in the perceptions and attitudes in Hong Kong: support for the famed ICAC's successes and performance increased, as well as public awareness of corruption and of related anticorruption laws. As a last example, Quah (2006) details the successes of corruption prevention among Singapore's police force (SPF) and notes many publicised cases of officers rejecting considerable bribes.

As for negative effects, Moran (2002) describes the possible drawbacks of corruption prevention: "In addition, some preventive policies may see a conflict between organisational procedures and organisational efficiency, centering on the amount of extra paperwork created, the costs of new procedures and whether they are going to be viewed as an extra burden on officers" (Ibid. 150). Similar negative effects are postulated by Boehm and Olaya (2006) while studying the subject of transparency in the bidding process of public contracting auctions. Indeed, increased delays and costs associated with the production of unused additional information are to be weighed. These findings harken back to Anechiarico and Jacob's seminal work on the drawbacks of an excessive anticorruption effort on the morale and efficiency of the public service (Anechiarico and Jacobs 1996).

Finally, a few articles record the absence of change, and report a status-quo. Even if Oyamada (2015) reported successes in the procurement sector, she also noted the null impact of whistleblower policies. Survey studies showed poor awareness and use of whistleblower protection in the local civil service. Similar provisional results are evoked by Webb (2010) for the case of South Africa, where "top-down" anti-corruption policies failed to reach the "ground-level": knowledge of said policies and training was poor, citing the example of whistleblower policies and ethics codes. Finally, the ineffectiveness of "top-down" rules and regulations was also reported by Sohail and Cavill (2008) while studying the prevention of corruption in construction projects.

In the same empirical vein, articles were coded if they identified specific conditions for the success of corruption prevention policies. As shown in Figure 13, 43.5% of articles mention

conditions of success for corruption prevention policies which are various in their nature. We have derived two different levels of analysis: individual/organisational and system-wide.

(INSERT FIGURE 13)

On the individual and organisational level, Findlay and Stewart (1991) emphasised the need for a continually enforced policy as a condition for success. Studying codes of conduct, the authors insist on implementation being the acid test for success: the *way* in which a corruption prevention policy is implemented is instrumental in its success where communication, consultation, negotiation and management are critical (Ibid. 264). Implementation is also of central concern for (Webb 2010), who mentions the need for effective communication, management, and a proper consideration for ethical culture. Stapenhurst and Langseth (1997) also echo these findings, as they mention the lack of enforcement as a source of implementation failure.

Elsewhere, Moran (2002) underlines the need for proper means of evaluation of preventive reforms, both on a quantitative and qualitative level. In the context of the police, Punch (2000) insists on the importance of leadership for effective implementation, as well as a sufficient allocation of resources. Most importantly, organisational context must be incorporated within the strategy, with an emphasis on group dynamics and front-line supervision. Leadership is also considered an important condition by Tabish and Jha (2012) for the long-term implementation and success of anticorruption policies. These arguments are echoed by Scott (2013), as he insists that the success of a rule-based approach is conditional upon corruption prevention being considered as a principal value, which cannot be relegated behind efficiency. Furthermore, he insists on the dedication of appropriate resources (i.e. financial) and the support of central institutions as well as frontline street-level individuals.

Using a broader lens and turning to system-wide conditions of success, Gong and Wang (2013) underline the importance of a low tolerance to corruption on the part of the public at large, as their civic engagement enables the deterring of corruption and the reduction of its opportunities. Other system-wide conditions for the success of corruption prevention policies are the involvement and cooperation of the private sector, as well as the trust of civil society (Lukito 2015, Oyamada 2015, Scott and Gong 2015). Another systemic condition which has received scholarly attention is political will (Quah 2006, Oyamada 2015, Scott and Gong 2015). Reflecting the broader corruption and anti-corruption literature (Rotberg 2017), political will is

considered crucial if corruption prevention policies are to be effective. Therefore, as Quah (2006) makes clear, the SPF's successful prevention experience was conditional on the broader commitment of the People's Action Party (PAP) to fight corruption in Singapore.

In sum, the reviewed literature reflects an impressive amount of conditions for the success of preventive anticorruption policies. These results converge with the implementation difficulties that have been imputed to anti-corruption policies more generally. However, it is important to note that most articles do not systematically analyze the necessary and sufficient nature of these conditions.

d) Transversal analysis of the corruption prevention literature

The results of this systematic review have underlined several key points which merit further analysis: using pivot tables provided in the annex, we cross-analyse the pertinent results. As **Table A** in the annex shows, only 11 articles which address corruption prevention in a systematic and exclusive fashion, also provide a definition of the concept. Arguably, these articles should be the strongest theoretically and conceptually speaking. Pivoting these results with theory use in **Table B**, among these 11 articles, ethics theories are used on 6 occasions, 4 for management theories, 3 for criminological theories, and twice for each sociology, organization theory and accountability/integrity theories. As is consistent with our previous sector-specific results, **Table C** shows that these 11 articles study the public sector (6), the police (2), the construction sector (2) and the private sector (1). Indeed, these 11 articles appear to epitomize the characteristics of the reviewed literature: they call upon diverse theories to study and conceptualise corruption prevention, with a focus on the public sector, the police and the construction industry. However, 11 articles on a total of 46 represents just shy of 24%: this constitutes a meagre theoretical 'core' for the scholarly corruption prevention literature.

A self-reinforcing consequence of this theoretical weakness is the paucity of method-use as shown in **Table D**. Because theories remain weak, scholars lean on the most accessible research methods: case studies and survey studies. It is interesting to note that ethics, management and organization theory have informed both case studies and survey studies, which denotes a strong theoretical influence. However, as case studies appear versatile in their theory use - drawing on diverse fields such as sociology, criminology, and economics - they are usually confined within a few or a single theory-use. Inversely, survey studies seem to draw from

theories emanating from a few similar fields such as management, organization studies, and accountability/integrity theories, but draw upon multiple theories within one research design. Again, this symptomizes a certain 'tunnel-vision' where debate is scant: within the most frequently used methods, qualitatively-oriented scholars rely on seldom but diverse theories, whereas quantitatively-oriented scholars rely on multiple but similar theories. In sum, the theoretical shortcomings of the field are reinforcing methodological divides. These results point to a 'silo' effect: debate *between* the different branches studying corruption prevention is found wanting. In short, studies rely on a unidimensional understanding of prevention. This trend risks steering the field towards a Tower of Babel syndrome, as each discipline is confined within its own theoretically and conceptually malnourished worldview.

It is noteworthy that these trends embody key features of the literature on the prevention of corruption outside the academic umbrella: strategies and tools are proliferating from wide-ranging fields and organizations which apply different theoretical frameworks; however, a definitional ambiguity remains prevalent, and cross-discipline conversation remains scant (Klitgaard, Maclean-Abaroa et al. 2000, Gorta 2013, Mungiu-Pippidi 2015, Cerrillo-I-Martinez 2017). One could postulate reasons as to why these trends emerged: the political saliency of repressive post-scandal operations; the difficulty of measuring prevention policies; the absence of an agreed-upon definition of corruption; the long-term implications of the prevention approach (Scott and Gong 2015); or the expansion of the global anticorruption industry (Sampson 2010). Because of this broader research context, the contribution of this systematic review of published scholarly literature becomes more apparent: this paper operates as a focused research tool to identify critical issues that need academic attention. A cross-fertilizing debate to hash out definitional and methodological lines of inquiry appears essential, both for the prevention literature and for policy-making.

4 | A synthesis proposal: a way forward

Considering the weaknesses that have been identified, as well as our second research objective, it appears productive to propose a tentative definition and conceptualization of corruption prevention. This conceptualisation builds on the reviewed literature and uses the seminal works previously highlighted as a stepping stone (Osse 1997, Gorta 1998, Ashforth and Anand 2003, Lange 2008, Graycar and Sidebottom 2012, Scott 2013).

Corruption prevention is here defined as anticorruption policies, instruments, actions and tools, which are implemented to impede and otherwise stop corruption *ex ante*, by reducing the opportunities for criminal activity. Two different corruption prevention foci are delineated, normative and legalistic, each acting upon two different scope levels, holistic and individualistic. Normative prevention seeks to impact norms and values to affect change, while a legalistic focus seeks to modify rules and procedures to do so. Finally, a holistic scope focuses on change in a broad manner (i.e. systemic, societal or organizational), while an individualistic scope seeks to act on the level of the individual agent and his decisions. From this conceptualisation, Figure 14 depicts the two key elements of corruption prevention: timing and intent. Firstly, corruption prevention happens before the corrupt act to impede and stop corruption before the fact. Secondly, the intent and objective of corruption prevention is to act on opportunities that lead to corruption, quite simply because the crime has not been committed yet.

(INSERT FIGURE 14)

(INSERT FIGURE 15)

As depicted in Figure 15, we categorize four ideal-typical corruption prevention policy types: *legalistic and holistic, legalistic and individualistic, normative and holistic, normative and individualistic.* This carving out serves the purpose of broadly typifying the different prevention tools that make up policy designs. However, implementation is rarely as conceptually clear-cut. From this schema, and following in the footsteps of Lange (2008), we can derive the following graph (*Figure 16*), which is meant to exemplify the types of prevention instruments, non-exhaustively, along two axes: focus and scope. The purpose of this graph is to illustrate the flexible boundaries, as well as the complex nature of corruption prevention instruments. No single policy tool is based solely on a purely normative or purely legalistic approach, and no preventive instrument has a solely holistic or individualistic scope.

(INSERT FIGURE 16)

The first quadrant describes prevention instruments as having a holistic scope and a legalistic focus. Here, the objective is to affect systemic change by enacting or modifying rules.

For example, audit mechanisms seek to scrutinize the system as a whole, by adding different rules of inspection and monitoring. The second quadrant describes corruption prevention tools which are of a legalistic focus and individualistic scope. In this vein, accountability mechanisms add more rules and seek to change individual behavior by complying with different safeguards and procedures, thus altering behavior and decisions. The third quadrant describes corruption prevention tools which engage on a normative focus and a holistic scope. An example of such instruments is the publicity campaign, where the goal is to change norms and values in a broad fashion by informing citizens. Finally, the fourth quadrant includes tools which also seek a normative change, but on an individual level: for example, specific training sessions impact values to prevent corruption and seek to change individual behavior.

Evidently, situating prevention tools on these axes is susceptible to vociferous debate. For instance, placing ethics codes in a single quadrant is disputable: change is sought both on an individual and systemic level, by enacting rules which seek to change norms and values. Furthermore, each tool could be implemented and designed in a different manner, according to context, which would alter its position on the graph. Put simply, the devil is in the details. As such, the proposed categorization should be understood in a flexible way. Further refinement is needed: these graphs should be debated, amended and redrawn.

5 |Discussion and conclusion: opportunities for the study of corruption

Over ten years ago, the globalization of the fight against corruption ascended to the global agenda and implanted an international normative framework (Garzon 2006). Ten years later, this systematic review sought to examine the academic knowledge produced so far on the prevention of corruption. The results paint the picture of a dynamic stream of literature, which draws upon a varied wealth of theoretical backgrounds. An important contribution of the prevention literature consists in the different tools and policies that have been explored to prevent corruption. However, we have also noted the need for theoretical propositions that solely focus on corruption prevention, as well as the necessity for more debate between theoretical disciplines. This paper finds that this trend self-reinforces a lack of methodological diversity, which percolates on the study of impacts, effects and necessary/sufficient conditions of policy success. Most notably, the necessity of a clear definitional debate cannot be understated. To that end, we have proposed a tentative conceptualisation of corruption prevention, articulated around

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a two by two matrix, of legalistic and normative foci, as well as of individualistic and holistic scope.

Caveats are to be considered. A limit of this study is the exclusion of books and grey literature, such as NGO or IO reports. This type of literature is certainly rigorous and contributed immensely to the study of corruption and anticorruption policies. However, a key aim of this article was to reach within the dispersed academic fields which conceptualise corruption prevention, independently from the broader and abundant anticorruption discussion. To achieve this contribution, the exclusive study of peer-reviewed scholarly articles was necessary. A second limit to consider is the never-ending debate on the definition of corruption (Jain 2001, Johnston 2001). Indeed, in order to prevent corruption, it is essential to understand what *corruption actually is*. This debate has been central to the field, and a consensus is not in the offing anytime soon. Part of the definitional problem is the unequivocal complications of studying corruption. As the phenomenon remains hidden and constantly evolving, measurement difficulties, instrument validity, indicator reliability or perception biases are omnipresent. These invariable facts affect any attempt to conceptualise corruption prevention, as well as any manner of policy formulation. Indeed, the effective implementation of prevention policies depends in no small amount on the socio-historical and contextual understanding of corruption (Mungiu-Pippidi 2015).

What remains certain is the fast-growing implementation of prevention policies, rules, regulations and agencies. To this end, several research opportunities become clear. Firstly, further studies are needed to flesh out the conceptual and definitional debate that, it is hoped, has been sparked in this article. For example, the conceptualization we have put forward in this paper prompts several interrogations: What are the specific mixes of prevention instruments that are found in practice? How were these combinations diffused internationally? In other words, we need a more empirically-grounded examination of prevention instruments, as well as instrument choices and decisions. Even more important, these analyses should investigate, as Howlett mentions, "whether and to what extent the instruments that comprise a mix are counterproductive or complementary" (Howlett 2005).

Secondly, a value-added of systematic reviews lies in their ability to locate emerging research opportunities. As stated earlier, the need for inter-disciplinary dialogue is essential. An example of such an approach is argued by Cerrillo-I-Martinez, who underlined the benefits of a

transdisciplinary approach to corruption prevention within administrative law (Cerrillo-I-Martinez 2017). Elsewhere, Tunley, Button et al. (2018) have recently used the Situational Corruption Framework which originated from criminology, in conjunction with organization theory, to study the enhancement of organizational resilience. On the methodological forefront, Zhu *et al.* have deftly developed a social network web scraping tool to exploit big-data, to investigate public support for anticorruption campaigns (Zhu, Huang et al. forthcoming). Finally, D'onza, Brotini et al. (forthcoming) have paired qualitative content analysis with quantitative statistical tests and regressions, to study the disclosures of anticorruption measures of 120 Italian local governments. These emergent trends, methods, and cross-cutting areas of study are of vital importance for the future study of corruption prevention.

In conclusion, circling back to the research questions and objectives stated earlier, we have explored the extent of the scholarly literature on corruption prevention, to understand how the issue is conceptualised, studied and understood on the theoretical, empirical and methodological front. It is hoped that the idiosyncrasies underlined in this review will spark a debate, as scholars endeavor to keep up with an ever-evolving global criminal phenomenon.

18

Annex

1) Pivot Tables: *n.b.:* we have used double-coding procedures for several variables (i.e. use of theory).

(INSERT TABLE A; B; C and D)

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Figure 1: Inclusion and exclusion criteria

Inclusion	Exclusion
Topic: Relates to the prevention of corruption in all its forms (i.e. legalistic or normative). Practiced by any and all actors (public, private or civil society).	*Topic*: -Prevention of crimes other than corruption (Must have "Corruption" keyword) -Must include the keyword "prevention" and treat it as a subject in itself:
Methodology: Quantitative/Qualitative/Mixed Methods	1) this excludes articles which mention the word prevention in a passing manner 2) this excludes texts which use the word prevention only to cite an anti-corruption law (i.e. Prevention of Corruption Act)
Nature of articles: Theoretical, Methodological and Empirical	3) Must include a "public" component. "Private-Private" corruption is excluded
Language: English	
Included formats: Scientific Articles	*Excluded Formats*: Theses, conference proceedings, essays, reviews, unpublished papers, NGO/IO Grey Literature, Official Reports, Books and book chapters
Databases: Elsevier, Google Scholar, Sage, Proquest, EBSCO, Taylor and Francis, Wiley Online Library	

Figure 2: Research design schema
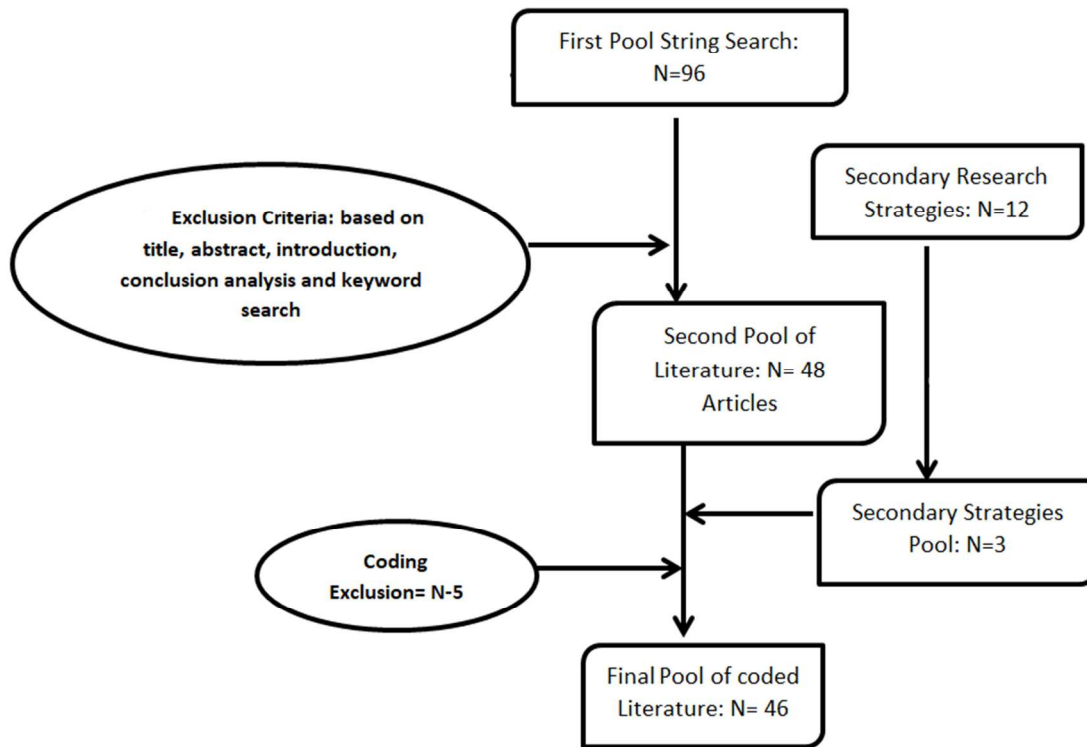
Figure 3: Sectors of interest
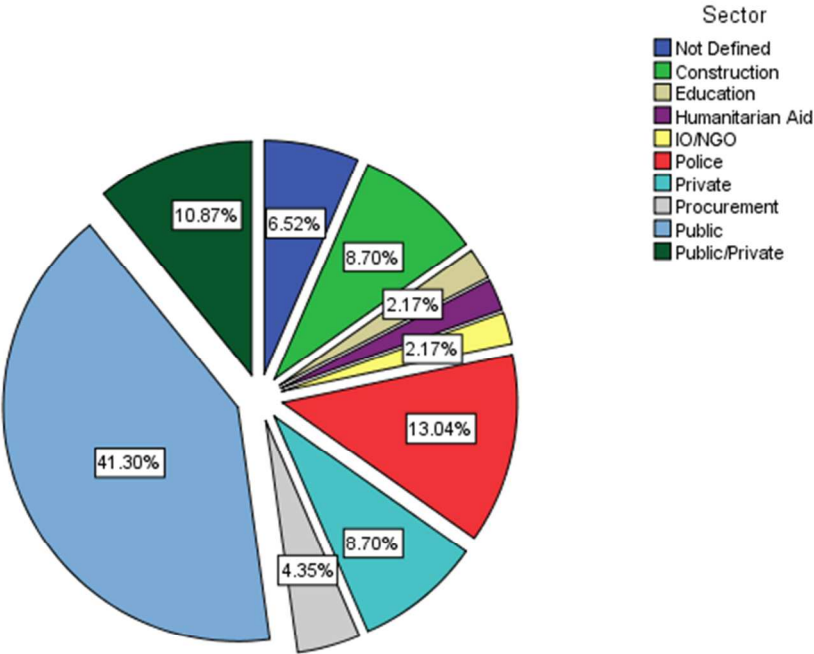
Figure 4: Contributions to social science disciplines

Discipline	Frequency	Percent
Public Administration	10	21.7%
Political Science	21	45.7%
Economics	10	21.7%
Criminology	11	23.9%
Sociology	11	23.9%
Ethics	3	6.5%
Law	11	23.9%
Business/Management	26	56.5%

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Figure 5: Methodological overview of the corruption prevention literature

Methodology	Frequency	Percent
Case Study	4	8.7
Content Analysis	1	2.2
Interviews	1	2.2
Interviews/Focus Group	1	2.2
Multiple Case Study	3	6.5
Methodology Not Defined	26	56.5
Regression	1	2.2
Survey	7	15.2
Survey and Interviews	1	2.2
Systematic Literature Review	1	2.2
Total	46	100.0

Figure 6 Conceptualisations and definitions of corruption prevention

Nbr	Title	Author-Date	Journal Name	Definition
9	Strategies for Minimizing Corruption in the Construction Industry in China	Zou, P. X. W. (2006)	Journal of Construction in Developing Countries	To prevent corruption, three strategies are suggested namely: (1) development of honest and ethical construction culture, (2) institution of random and regular checks, and (3) supervision of processes and work over project life cycle. The first strategy is a long-term strategy while the other two are short term actions

Nbr	Title	Author-Date	Journal Name	Definition
1	Implementing Corruption Prevention Strategies Through Codes of Conduct	Findlay, M. and Stewart, A. (1991)	Current Issues in Criminal Justice	Corruption prevention is as much fraught with definitional complexity as the object of its endeavour. (p.250) // Prevention through compliance, through consensus, through solicitation, are central to corruption prevention persuasion (p.253)
2	Public Awareness of Corruption and Prevention	Reed, A. (1992)	Police Studies: The International Review of Police Development	It deals not with individual acts but with systems and culture. (p.192)
3	The role of the public administration in fighting corruption	Stapenhurst, F. and Langseth, P. (1997)	International Journal of Public Sector Management	The ultimate goal of establishing a national integrity system is to make corruption a high-risk and low-return undertaking. As such, it is designed to prevent corruption from occurring in the first place (p.318)
4	Corruption prevention: A course for police officers fighting organised crime	Osse, Anneke (1997)	Crime, Law & Social Change	Basically one can give two means through which one can prevent corruption; the one has to do with regulations, the other with values (p.54)
5	Police Corruption and its Prevention	Punch, M. (2000)	European Journal on Criminal Policy and Research	the other is that the organisation will invest strongly in motivating the honest and clean officers to comply with the law and with professional standards of conduct (p.318)
6	The Normalization of Corruption in Organizations	Ashforth, B. E. and V. Anand (2003)	Research in Organizational Behavior	Prevention - through proactive means of forestalling corruption rather than reactive means of rooting it out. (p.39)
7	The NSW Independent Commission Against Corruption's Experience in Minimising Corruption	Gorta, A. (2003)	Asian Journal of Political Science	corruption prevention — reducing opportunities for corruption by advising and working with public sector agencies to improve procedures, policies, work systems and ethical culture (p.3)
8	Introduction: Subverting Corruption	Klitgaard, R (2006)	Global Crime	A second stage of reacting to HIV/AIDS or corruption emphasizes prevention: keep healthy bodies free of contagion. The anticorruption measures described above, from selecting better agents to raising the economic and social costs of corruption, are derived from this approach. (p.303)
				organization or by specific training, which will enable them to arrive at appropriate, morally-acceptable decisions. (p77)
18	Do Firms Proactively Take Measures to Prevent Corruption in Their International Operations	Hauser, C. and J. Hogenacker (2014)	European Management Review	Proactive behavior aims to take preventative actions against potential endangerments and threats before they become real, whereas reactive behavior focuses on mitigating endangerments and threats after they have emerged (p.227-228)

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Figure 7: Corruption Prevention Studied in an Exclusive Fashion

	Frequency	Percent
Non-exclusive	25	54.3
Exclusive	21	45.7
Total	46	100.0

Figure 8: Tools and strategies

Articles specifying normative strategies, approaches or tools

	Frequency	Percent
No mention of normative strategies	11	23.9
Mention of normative strategies	35	76.1
Total	46	100.0

Articles specifying legalistic strategies, approaches or tools

	Frequency	Percent
No mention of legalistic strategies	8	17.4
Mention of legalistic strategies	38	82.6
Total	46	100.0

Figure 9: Theory-use to study corruption prevention

Theory	Frequency	Percentage
Economics	2	4.3%
Principal-Agent	3	6.5%
Sociology	4	8.7%
Criminology	4	8.7%
Institutional / Neo institutional theory	6	13.0%
Organization theory	10	21.7%
Management	13	28.3%
Psychology	3	6.5%
Ethics	18	39.1%
Accountability / Integrity	9	19.6%
Other	8	17.4%

Figure 10: Theories and definitions

Theory		Definitions	
		Prevention not defined	Prevention defined
		Frequency	Frequency
Economics	Theory not used	25	19
	Theory used	2	0
Principal-Agent	Theory not used	25	18
	Theory used	2	1
Sociology	Theory not used	25	16
	Theory used	1	3
Criminology	Theory not used	25	15
	Theory used	0	4
Institutional and Neo-institutional theory	Theory not used	25	17
	Theory used	4	2
Organization theory	Theory not used	25	15
	Theory used	6	4
Management	Theory not used	25	13
	Theory used	7	6
Psychology	Theory not used	25	17
	Theory used	1	2
Ethics	Theory not used	25	10
	Theory used	9	9
Accountability / Integrity	Theory not used	25	14
	Theory used	4	5
Other	Theory not used	25	16
	Theory used	5	3

Figure 11: Policy tools

Tool	Frequency	Percent
No tool mentioned	7	15.2
Anti-Corruption Agency	1	2.2
Code of Conduct	1	2.2
Corporate Social Responsibility	1	2.2
Disclosure Mechanism	1	2.2
Multiple Tools	32	69.6
Public Awareness	1	2.2
TI-Pact	1	2.2
UNCAC	1	2.2
Total	46	100.0

Figure 12: Recorded and studied impacts and effects of corruption prevention

	Frequency	Percent
Positive Impact	8	17.4%
Negative Impact	2	4.3%
Status Quo	7	15.2%

Figure 13: Conditions for the success of corruption prevention policies

	Frequency	Percent
Does not mention conditions	26	56.5
Mentions conditions	20	43.5
Total	46	100.0

Figure 14: Intent and timing
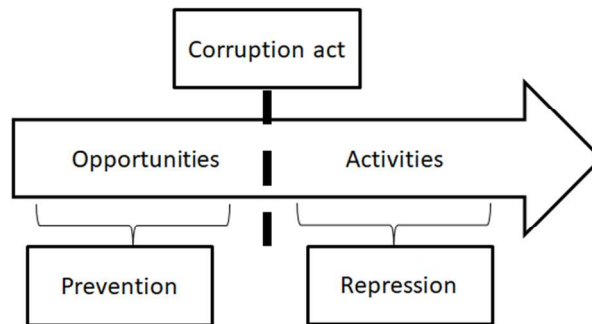
Figure 15: Prevention categorization
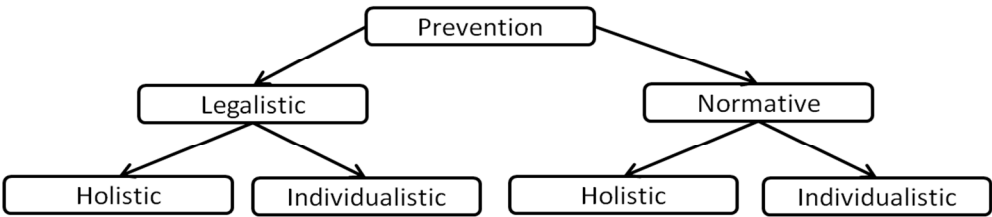
Figure 16: Prevention Instruments Quadrants
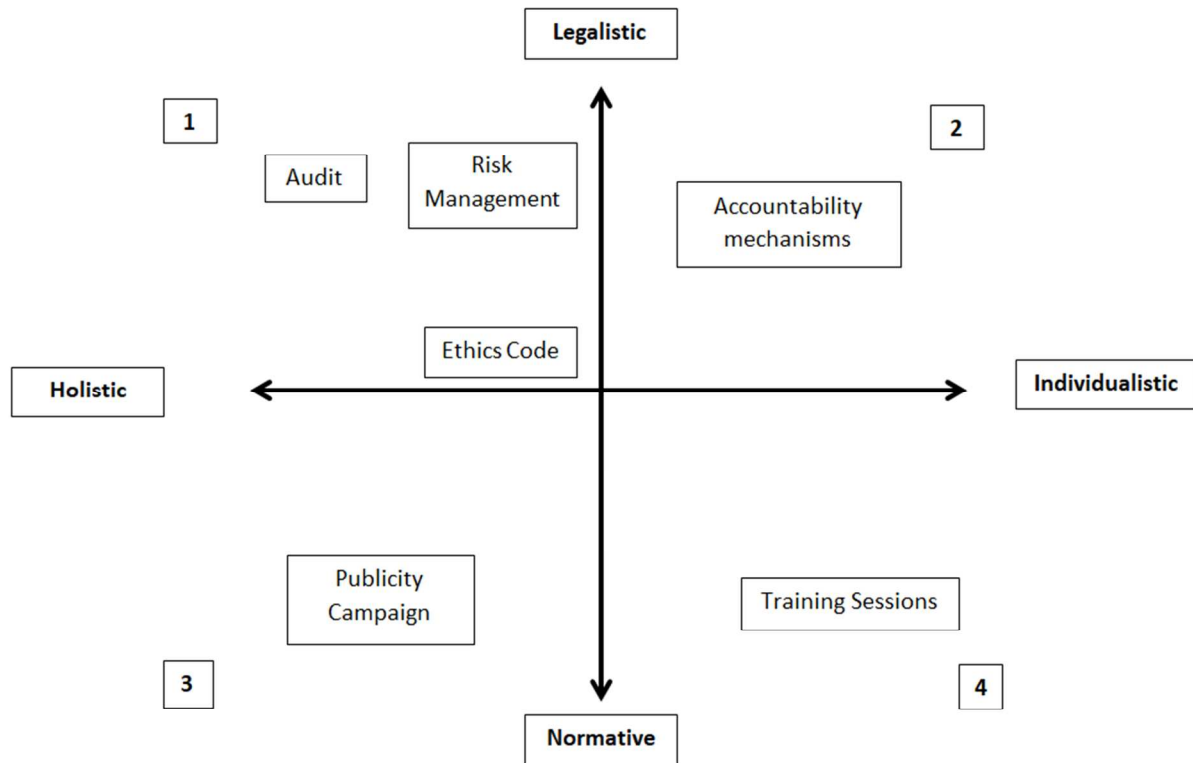
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Table A: Definitions and exclusive analysis of corruption prevention

	No exclusive analysis of prevention	Exclusive analysis of prevention
No definition	17	10
Definition proposed	8	11

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Table B: Theory Use and Conceptualization

| | | No exclusive analysis of prevention | | Exclusive analysis of prevention | |
| | | | | Definition | |
		No definition	Definition proposed	No definition	Definition proposed
Economics	Theory not used	15	8	10	11
	Theory used	2	0	0	0
Principal-Agent	Theory not used	15	7	10	11
	Theory used	2	1	0	0
Sociology	Theory not used	17	7	9	9
	Theory used	0	1	1	2
Criminology	Theory not used	17	7	10	8
	Theory used	0	1	0	3
Institutional / Neo-institutional theory	Theory not used	14	6	9	11
	Theory used	3	2	1	0
Organisation theory	Theory not used	12	6	9	9
	Theory used	5	2	1	2
Management	Theory not used	13	6	7	7
	Theory used	4	2	3	4
Psychology	Theory not used	16	7	10	10
	Theory used	1	1	0	1
Ethics	Theory not used	13	5	5	5
	Theory used	4	3	5	6
Accountability/Integrity	Theory not used	14	5	9	9
	Theory used	3	3	1	2
Other	Theory not used	14	7	8	9
	Theory used	3	1	2	2

Table C: Sector of Interest and Strength of Conceptualization

		Definition			
		No definition		Definition proposed	
		No exclusive analysis of prevention	Exclusive analysis of prevention	No exclusive analysis of prevention	Exclusive analysis of prevention
No sector	Frequency	2	1	0	0
Construction	Frequency	1	1	0	2
Education	Frequency	1	0	0	0
Humanitarian Aid	Frequency	0	0	1	0
IO/NGO	Frequency	0	0	1	0
Police	Frequency	2	2	0	2
Private	Frequency	1	1	1	1
Procurement	Frequency	1	1	0	0
Public	Frequency	5	4	4	6
Public/Private	Frequency	4	0	1	0

Table D: Theory use and methodology use

		Methodology									
		Case Study	Content Analysis	Interviews	Interviews/ Focus Group	Multiple Case Study	No specified methodology	Regression	Survey	Survey and Interviews	Systematic Literature Review
		Frequency	Frequency	Frequency	Frequency	Frequency	Frequency	Frequency	Frequency	Frequency	Frequency
Economics	Theory not used	4	1	1	1	2	25	1	7	1	1
	Theory used	0	0	0	0	1	1	0	0	0	0
Principal-Agent	Theory not used	4	1	1	1	2	24	1	7	1	1
	Theory used	0	0	0	0	1	2	0	0	0	0
Sociology	Theory not used	3	1	1	1	3	23	1	7	1	1
	Theory used	1	0	0	0	0	3	0	0	0	0
Criminology	Theory not used	4	1	1	1	2	23	1	7	1	1
	Theory used	0	0	0	0	1	3	0	0	0	0
Institutional theory	Theory not used	4	1	1	1	3	23	0	5	1	1
	Theory used	0	0	0	0	0	3	1	2	0	0
Organisation theory	Theory not used	4	0	1	1	2	22	1	4	0	1
	Theory used	0	1	0	0	1	4	0	3	1	0
Management	Theory not used	3	1	1	0	3	20	1	3	0	1
	Theory used	1	0	0	1	0	6	0	4	1	0
Psychology	Theory not used	4	1	1	1	3	23	1	7	1	1
	Theory used	0	0	0	0	0	3	0	0	0	0
Ethics	Theory not used	2	1	1	0	3	16	1	3	0	1
	Theory used	2	0	0	1	0	10	0	4	1	0
Accountability and Integrity	Theory not used	4	1	1	1	3	20	1	4	1	1
	Theory used	0	0	0	0	0	6	0	3	0	0
Other	Theory not used	4	1	1	1	3	19	1	6	1	1
	Theory used	0	0	0	0	0	7	0	1	0	0