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Corporate social responsibility and technological perspectives in healthcare: An exploratory analysis of the evolution of the anti-corruption system through multiple case studies

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Abstract

Corruption is one of the main variables to be considered in corporate social responsibility (CSR) to guarantee the well-being of society in the long term. Information technology (IT) is able to reduce this phenomenon of corruption. However, no practical studies highlight the real effect on health organisations. This study ascertains the impact of a pilot project to prevent corruption and the introduction of new dedicated technologies in the healthcare organisation. It uses the association of institutional theory, *information and communications technology* (ICT), and new technologies to cover the gap and highlight the effect of an anti-corruption pilot project of International Transparency Italia in the healthcare sector. A longitudinal approach-based interventionist approach, coding of semi-structured open interviews and corporate anti-corruption plans using AltasIT from the 13 Health Organisations that joined the pilot project over a long term reveals that a positive effect spreads by mimetic approach within organisations. The study has detected open-access databases, changes in personnel and procurement management approach, information dissemination, citizen involvement and whistleblowing support change through technologies. More specifically, it examines the evolution of the anti-corruption system and the stakeholders' perceptions in healthcare organisations as a new form of social responsibility. To the best of our knowledge, this study is the only one that applies this perspective to the analysis of the anti-corruption process through CSR currently underway in healthcare institutions worldwide.

KEYWORDS

anti-corruption, healthcare, institutional theory, pilot project, technology

1 | INTRODUCTION

For several years, corporate social responsibility (CSR) has considered the long-term effects of organisations on social, cultural and environmental spheres (Dobers & Halme, 2009; Esposito & Ricci, 2021; Esposito et al., 2021). The impact that an organisation's activity can have on the social context in the short and long terms must be considered and managed for collective well-being (Esposito & Antonucci, 2022). Therefore, CSR is increasingly oriented towards a sustainability strategy that, among the areas of interest, also places anti-corruption at the centre of policies (Naeem & Welford, 2009). While several studies analyse and propose theoretical models to prevent corruption, few

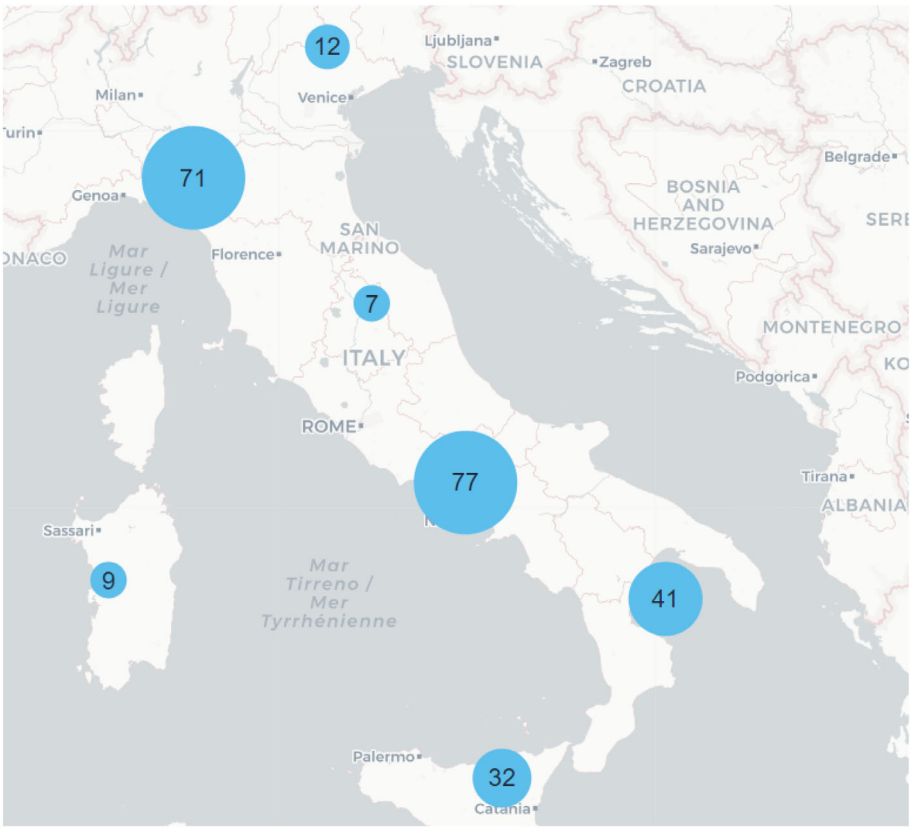

FIGURE 1 Corruption crimes recorded in the healthcare sector in Italy [Colour figure can be viewed at wileyonlinelibrary.com]

Source: https://www.transparency.it/mappa

practical analyses examine corporate variables that control corruption through the adoption of new technologies. Therefore, this study investigates the effect of anti-corruption projects on organisations and how technologies specifically impact them and are associated with the change.

The World Bank defined corruption as 'the abuse of public office to generate private income' (Ksenia, 2008). Transparency International provides a similar, generalised definition; 'the abuse of power entrusted to generate private gain', which, unlike the World Bank definition, broadens its scope beyond the public sector. Public corruption can be defined as illegal activities conducted by government officials, bureaucrats or politicians, such as the offer or receipt of financial and non-financial benefits (Cucciniello et al., 2020; Elliot, 1997; Esposito et al., 2019; Shleifer & Vishny, 1993). It is often associated with gifts, favours that flout the rules and abuse of power to receive an advantage. In studies that analyse anti-corruption policies and technologies, the adoption of e-government and associated technologies are determining factors of effective anti-corruption strategies (Everett et al., 2007; Neupane et al., 2014; Sommersguter-Reichmann et al., 2018; Zhang & Zhang, 2009). In particular, some innovative technologies support the development of policies, internal control processes and internal and external reporting of crimes to prevent corruption and generate an index of transparency, trust, efficiency, reduced red tape and real-time reporting (Adam & Fazekas, 2021; Chege & Wang, 2020; Saleem et al., 2020). E-procurement, e-service tax, forensic tools, mobile applications, big data mining control and multiagency collaboration are among the automation technologies (Chege & Wang, 2020). The public sector has the most reports of corruption; at the global level, the subsector with the most reports of corruption after the military is the health sector, which has the most significant impact on social and economic systems (Aregbeshola, 2016). Corruption affects the level of health and access to care for all in several countries of the world, making surveillance tools and political and managerial strategies a necessity (Campra et al., 2021; García, 2019; Lewis, 2016). Transparency international reports from its surveys that in Europe, according to the percentage of the population, COVID-19 has increased the lack of transparency and the adoption of corruption management tools, with an increase in bribes related to the receipt of health services more than for other public services (Transparency International, 2021). From 2019 to 2021, 1548 corruption crimes were detected in Italy, primarily in the public sector. Through close analysis, the prevalence of a determined territorial displacement of the crimes detected in the health sector, which will be considered in this study, can be identified (Figure 1). Europe's health sector has a high level of perceived corruption (Wysmułek, 2019), and Transparency International (2021) found that 29% of Europeans have used personal acquaintances to have better access to health services. There are differences among states, but on average, the problem is homogeneous and found throughout Europe. However, Italy is always above the average for European countries. The causes and practices of

corruption are the same throughout Europe, with the same categories identified (Gonzalez-Aquines et al., 2021). Sometimes, corruption offences are associated with corporate social and environmental irresponsibility, which is based on the absence of control among managers, politicians and financiers who agree to avoid compliance with environmental laws, leaving their image concerning responsibility towards stakeholders unchanged (Wu, 2014). These offences involve transparency, sharing of standard actions in the management of organisations, and efficiency. However, this element has been explored more in relation to local authorities (Callister, 1999; Palmer, 2001; Smith et al., 2003; Wu, 2014). These crimes are often identified when there is a high level of investment and high expected returns (Padgett & Galan, 2010). An analysis of the literature identifies a low number of publications related to corruption in healthcare, and highlight numerous studies on corruption in lower-middle-economy or ASEAN Countries (Quoc Bui et al., 2021; Sforza et al., 2021). Nonetheless, the relationship between CSR, corruption and decision-making is relevant from bibliometric analyses, which draw attention to management and decision-making studies in the health sector (Bielova et al., 2021). The absence of specific studies and new decision-making approaches in healthcare that respond to the practical and theoretical need for the analysis of the adopted anti-money laundering approaches is evident. The strands adopted to explain organisational changes are based on institutional theory, and often rely on purely theoretical approaches rather than empirical evidence (Battilana et al., 2009; Macfarlane et al., 2013; Suddaby, 2010). Furthermore, many scholars note that the completeness of the reports issued and the information provided guarantee a reduction in corruption cases (Joseph et al., 2016; Naeem & Welford, 2009). Neo-institutional criticism is overcome in these investigations and new evidence is found (Battilana et al., 2009; Suddaby, 2010). However, few studies have investigated the effects of specific projects by examining the evolution of the approaches and tools adopted in the medium to long term. Therefore, our study analyses the effects of the 'Health Care Integrity Action Project' (HIAP) on company reality by investigating its consequences on the health organisations involved in Italy using the lens of institutional theory. We observe the effect of the pilot project on 13 organisations involved in Italy since 2017, through an inductive interventionist approach, direct collection of information through semi-structured open interviews, and coding of the elements of the organisations' anti-corruption plans using Atlas software.

The literature has observed different effects of institutional theories on organisations and different actors (Greenwood, 2008). This study, therefore, answers the following research questions:

RQ1. What impact did the adoption of the pilot project have on the organisations in the medium to long term?
RQ2. What variables affect the current anti-corruption approach and what is the relationship with information technologies?

The findings may support policymakers in Europe and around the world in the adoption of pilot tools. Several pilot projects have been carried out by the European Anti-Fraud Office (OLAF), Council of Europe's Group of States against Corruption (GRECO), Transparency International and United Nations Convention against Corruption (UNCAC; Council of Europe, 1997; International Transparency, 2023; OLAF, 2022; UNDP, 2022). The four organisations at the European level devise the framework in which projects are developed, and the results are shared through websites or reports to support the adoption of good practices between countries. Although all four organisations have pilot projects, Transparency International is the only one oriented towards implementing concrete projects that can be viewed on the official website. Three pilot projects are currently active in Italy. Despite numerous projects, only three studies in Europe have tried to identify the means of measuring the outcomes (Lehtinen et al., 2022).

This study demonstrates that adopting pilot projects affects organisational change observable through institutional theory in the medium and long terms. The macro variables of organisations are impacted by the introduction of tools that are sufficient to generate diffusion of the proposed anti-corruption models. Nevertheless, different approaches and technological tools to support organisational change and prevent corruption require further investigation and development.

In the following section, we define the theoretical framework which merges institutional theory and information technology (IT) to study the impact of the project in the long term. Section 3 describes the method and sample. Section 4 introduces the project variables. Section 5 presents the results and link between institutional effects and technological variables. Finally, Section 6 discusses the results of this research.

2 | THEORETICAL FRAMEWORK AND CONTEXT

2.1 | Institutional lens and corruption

Social dynamics, institutional pressures and expectations have been analysed in healthcare organisations (Evangelinos et al., 2018; Liu et al., 2018) using the lens of institutional theory (Joseph et al., 2016). Institutional theory is divided into three strands to help understand the medium- and long-term effects of actions and relationships with stakeholders. The first strand concerns rationalised myths, which explore the variables that maximise legitimation and increase the resources and survival of an organisation. The second strand concerns isomorphism, which analyses the similarity among the structural variables of an organisation to confirm and legitimise the approach adopted. The final strand is institutional logic. The first to formalise the concept of isomorphism from society to organisation were Di Maggio and Powell (1983), who introduced the coercive concept of legislation and social pressure, to even define the organisation as a steel cage. Liang et al. (2007) introduced the variables that condition and impact the organisation: cognitive, coercive and institutional regulatory pressure.

In this framework, systems are influenced and innovated by regulatory pressures that shape institutional norms based on the collective evaluation and approval of suppliers, customers, consultants and

associations (Liang et al., 2007). Typically, such regulatory pressures have a top-down effect on the organisation. However, bottom-up processes are increasingly beginning to have a structural impact (Scott, 2008). The macrostructure supports the microstructure and individual dialogue levels between the actors. Therefore, the lens adopted in institutional theory can examine the capacity for organisational resilience across three central pillars: (1) Regulative, based on laws and contracts that define what happens; (2) normative, based on the assumption of what should happen and (3) cultural cognitive, which confirms mental scripts and takes patterns that usually happen within the organisation for granted (Di Maggio & Powell, 1983; Scott et al., 2000). By monitoring the three pillars, it is possible to obtain three different models: first, the coercive, which alters the pillars through a top-down approach; second, the normative, which alters the expectation of what is proper and reasonable; and finally, the mimetic, where the organisation copies or tries to copy what is best (Di Maggio & Powell, 1983; Scott, 1995).

The changes that organisations seek are profound and affected at multiple levels, which involve new roles for individuals and/or moving discontinuous organised forms established by new governance mechanisms or by reducing the boundaries between the actors by emphasising the relationship between cultural and social aspects. The duality of the structure leads institutional actors to be creators of institutional logic (Giddens, 1986).

Based on the change observable through the adopted lens, we can identify the same pillars that have defined the transformation of e-government and technologies—internal, external and relational elements—with the adoption of information communication technologies (ICT) (Ndou, 2004). Internal transformation through ICT allows for an increase in effectiveness and internal efficiency between governance functions and processes with a reduction in time, elimination of blocks, inefficiency of procedures and bureaucracy using data collection, and greater accuracy in cost control (Matteucci, 2019; Schelin, 2007). It is closely related to the myth of rationalism. External transformation takes place through the access and consultation of information (open data) by the citizens and other stakeholders (García, 2019; Mackey & Cuomo, 2020). It is also possible because of opportunities and partnerships among institutions (Dal Mas et al., 2020; Moruzzi & Lolli, 2002). This element guides the isomorphic approach by pushing through collaboration to the adoption of regulations and approaches that outwardly lead to coercion of behaviour. Finally, the relational element plays a crucial role in the horizontal and vertical integration of services that allow citizens and actors to integrate what exists without relying only on historical continuity. It is possible through the use of the internet (Zhang & Kimathi, 2022). Consequently, the relational approach involves the adoption of ICT, the result of a mimetic approach aimed at improving the organisation by copying practices identified online and through co-production tools.

The logic and pillars of institutional theory are used in this study to explain the changes implemented in the medium and long terms and the effects achieved by the organisation concerned.

2.2 | Information technology, new technologies and corruption

ICT affects the economic, political and social aspects of public organisations. Technology's impact on organisational governance is currently reflected in e-government, the use of which affects transparency, openness, citizen participation, effectiveness, efficiency and accountability (Esposito et al., 2023; Northrup & Thorson, 2003). In European countries, it also affects the level of corruption (Lupu & Lazăr, 2015). Lupu and Lazăr (2015) were among the first to highlight the relationship between the Corruption Perception Index, an indicator developed by Transparency International in 1995, and the e-government index, digital interaction between citizens and the public sector and evaluate the ability to participate in the governance and surveillance of the organisation. According to the Corruption Perception Index in 2021, Italy ranked 42nd out of 180 countries, with 34% of people believing that corruption had increased and 3% of public service users paying a bribe in the preceding 12 months. Although the e-government index for Italy is very high, some researchers assume that there has been a failure in the actual adoption, relapse and impact on the ability to detect and prevent corruption (Dada, 2006; Twizeyimana & Andersson, 2019). Chege and Wang (2020) conceptualised the main technological elements affecting corruption in developed countries. Two non-technological factors affect the automation and systemisation of certain technologies (Chege & Wang, 2020). The first is whistleblowing, which must be adequately supervised and publicised, and channels that effectively provide anonymity must be ensured; often, a dedicated telephone line is not enough (Gelmini, 2018; Rachagan & Kuppusamy, 2013). In real-time communication, dedicated ICT-based channels are needed to promote transparency, accountability and advocacy between workers and organisations (Bertot et al., 2010). Often, employees do not report incidence of corruption for fear that their names will appear in the disclosures and that legal action is not concealed due to consequent pressure from organisations (Cassematis & Wortley, 2013; Chege & Wang, 2020; Rizzotti & Lombardo, 2016). This situation, therefore, necessitates tools external to the organisation integrated into the strategies. The second is anti-corruption strategies that require software to monitor passive fraudulent events, and focus on e-procurement and the supply chain process through portals and procedures (Biancone et al., 2019; Wickberg, 2013). These factors affect the automation of processes and services, which involves the creation of software and tools suitable for detecting and fighting corruption, including intelligent mining of datasets and managerial supervision (Shim & Eom, 2009). Automation can, therefore, interact with elements such as biometrics, real-time digitised management processes, digital forensic tools, dedicated mobile applications, big data mining control and multiagency collaboration (Chege & Wang, 2020). Of the elements listed, big data is the most significant in increasing the accuracy and frequency of checks and creating transparency within an organisation (Ali & Sassi, 2017; Secinaro et al., 2021). Some examples of software based on big data show it is possible to identify and stop cases of fraud or collusion by developing better policies and

guaranteeing integrated sustainable development (Adam & Fazekas, 2021). However, using software and data without integrity and good practices spread among countries and professionals is not sufficient to fight corruption; this approach is based on synergies and appropriate organisational levers through multiagency collaboration strategies (Dassah, 2014; Egan, 2018).

2.3 | Health care integrity action project

The pilot project to analyse and introduce new corruption prevention tools within healthcare authorities was launched in 2017 in 13 participating pilot organisations in collaboration with Transparency International Italia through the 'Health Care Integrity Action Project' (HIAP). HIAP is an initiative led by the World Health Organisation (WHO) and the United States Department of Health and Human Services (HHS) launched in 2018 to fight corruption in the healthcare sector. The project acts on structural and social determinants related to the health sector and intermediate determinants in healthcare resulting in an impact on the organisation. The four priority objectives concern the prevention, detection, investigation of corruption and enforcement of advocacy activities (PAHO & WHO, 2016). The project was launched and supported by International Transparency Italia. The first phase of the project took place between 2017 and 2018, introduced new organisational approaches and processes, and associated them with prevention tools. Between 2018 and 2019 (the second phase), the project mapped the impact of the actions and the tool to evaluate effectiveness in each organisation. Each pilot organisation focuses on a pilot tool or approach. The results were then disseminated and shared among the organisations. The authors of the paper mapped successive three-year plans for the prevention of corruption between 2021 and 2023 to identify the diffusion of the tools and approaches suggested.

3 | METHODOLOGY

The sample considered in this study is based on HIAP. The analysis involved six of the 13 managers from the 13 health organisations (Nota1)[1] that joined the pilot project in the first and second phases. All healthcare organisations were considered in the third spill-over phase of the project. The sample of companies analysed is significant and represents the main geographic areas at risk of public corruption and, simultaneously, provides a heterogeneous sample that geographically covers the entire state. The companies involved are located in the northern, central, southern and island regions. The production value among the pilot healthcare companies that responded to the survey ranges from a minimum value of approximately €248 million to a maximum of €1685 million, with an average of €966 million. In the sample, the average production values are higher for Territorial Social Health Authorities and Local Health Authorities than for the hospitals. This difference is due to the radical diversity of the institutional functions and financing mechanisms. The health and macro-organisational system is common across the sample and is based on the Italian health system (Campra et al., 2021).

The empirical data were analysed using a systematic combining technique based on an abductive process (Dubois & Gadde, 2002) determined by the interaction of extensive longitudinal empirical data and literature. The longitudinal examination of a case study allows for the discovery and explanation of the same phenomenon using many techniques and approaches, and reacts to gaps in the literature provided by a single methodology. Examples of longitudinal analyses of case studies are highlighted in the literature (Aleksandrov et al., 2018; Esposito et al., 2021; Grossi et al., 2021). Three methods were adopted to analyse the project impacts and literature results.

The study adopts the interventionist approach. One of the authors directly observed the organisations during the design phases, and collected information regarding the organisational change in the three phases of participation (Jönsson & Lukka, 2006). During the entire development process of the project, one of the authors was involved in supporting the adoption of the various tools through initial training provided to all the anti-corruption representatives of the hospital structures in periodic meetings. The constructive approach does not change the intentions or impact on the actions of the various players; however, it provides implementation support in the business process (Grossi et al., 2021). The implementation of the anti-corruption plans of the organisations did not see the intervention of any of the project's promoters.

Data were collected through a questionnaire consisting of open-ended questions to verify the profile and professional path of the compiler, the role of the Head of Corruption Prevention (RPC) within the organisation, and activities carried out by those responsible for the prevention of corruption. The questionnaire also asked about the degree of interaction between the audit and control systems, criticalities, success factors, replicability and impacts of the activities, procedures and anti-corruption tools started, implemented and developed, and any obstacles detected. In the second phase, the RPCs, the General and Administrative Managers who participated and collaborated in the pilot project were subsequently interviewed for further collection and verification of data (interview analysis included coding the responses).

The three-year corruption plans underwent content analysis to identify the variables and determinants of change based on the pilot project developed and disseminated in the first and second project phases. Atlas TI software was used to verify the results (Saenz, 2019).

The approaches are functional to triangulate the information collected and presented and confirm the organisational overview of the anti-corruption approaches, tools and processes adopted through the institutional theory lens.

[1]Nota1: The organisations involved are: AO Brotzu Cagliari, AOU San Giovanni di Dio e Ruggi d'Aragona Scuola Medica Salernitana, ASL Siracusa, ASL Trento, ATS Sardegna, Azienda Sanitaria dell'Alto Adige, AOU 'Gaspare Rodolico—San Marco' Catania, AOU San Luigi Gonzaga di Orbassano, ASP Catanzaro, USL Toscana Sud Est, ASST Melegnano e Mortesana, ASP Ragusa, ASST Pavia, CATANIA.

4 | INTRODUCTION OF PROJECT VARIABLES

The analysis of the first phase identified the need to introduce specific improvements such as the identification and formalisation of anti-corruption instruments within the strategic organisational guidelines; the construction of standardizable and shared anti-corruption tools; the sharing of approaches to defining objectives associated with the approval of financial statements; reporting and feedback activities on anti-corruption instruments with periodic meetings; and the introduction of the culture of public integrity with interim verification and adequate instruments for all stakeholders. There is a high lack of transparency in the second pilot phase regarding the activities adopted for the initial monitoring and their effects. It is likely due to the slow adoption of change within organisations. On the contrary, organisations that give feedback on the adoption of suggested anti-corruption activities and tools, and allow direct observation, still require numerous implementation activities, and effective adoption is only declared. Only two organisations in this phase fully adopted and confirmed the tools and pilot activities, with full adoption and overcoming of the gaps observed in these organisations. They were able to adopt corruption prevention tools and activities thanks to the cultural dissemination of good practices through extensive internal training carried out by top managers, interaction between planning and control, and other administrative structures. Furthermore, they introduced an integrated system with data sharing collected by an anti-corruption system that is compliant with the strategic plan.

The elements representing the experimentation conducted in hospitals and healthcare organisations are described in the following sections.

4.1 | Whistleblowing

All pilot organisations are supported in developing more effective procedures to protect those who report corruption. They have the opportunity to use a whistleblowing platform developed with the free Globaleaks software that provides anonymity and the possibility to interact with the RPC. The RPCs employed one of the researchers to draft an article with analysis of the reports and decisions on how best to act. Among the various tools made available and adopted by pilots project, it revealed certain problems in the initial assessment by the authorities, including:

1. a limited number of reports.
2. poor average quality and limited relevance of the reports.
3. limited knowledge of the instrument by both recipients and potential reporting persons
4. limited employee confidence in internal channels.

The solution proposed in the first phase was to create an IT reporting platform that would provide access to reports to the RPC of the entity and Transparency International in their role as guarantor of the system.

4.2 | Open data

The pilot project offered companies their expertise in 'data creation, management, and reuse', thanks to a partnership with Opensensors-data. Four activities were carried out: (1) identification of the datasets in the pilot structures, (2) analyses of the creation, management and reuse of valid data, (3) determining specific areas of intervention and minimum objectives for the first year of experimentation regarding the management and internal reuse of data and (4) supporting competent pilot offices in developing processes and organisational models capable of improving the flow of data within the facilities. The actions suggested concern the identification of formalised tools within the strategic guidelines of the organisations, construction of shared anti-corruption tools, tools for sharing the anti-corruption objectives associated with financial statements, reporting and feedback activities on the tools adopted, and introduction of a culture of public integrity among all stakeholders.

4.3 | Access to information

Collaboration with the pilot organisations involved a review of the information access procedures, thanks to the partnership with the Right-to-Know Association. The organisations carried out an analysis of the procedures for civic access already included in the anti-corruption plans. The pilot project defined improvements with respect to civic access procedures with those responsible for the prevention of corruption and those responsible for the transparency of the pilot healthcare facilities, to apply the recent Freedom of Information Act (FOIA) (Pozen, 2016).

4.4 | Integrity agreements

The healthcare procurement sector is particularly at risk of corruption. A new tool was introduced to prevent irregularities in all the contract phases. Integrity pacts—documents signed by the contracting authority, all companies participating in the tender, and a monitoring body—were applied for the first time in the healthcare sector after their adoption in other public sectors, with cross-checking and penalties issued to companies that try to evade them. They are applied immediately from the preliminary phase of needs analysis to the end of the execution and do not complicate the bureaucratic process or involve any cost. The European Commission launched the first initiatives throughout the Union with an experimental project titled Integrity pacts: Civil Control Mechanism for Safeguarding EU Funds (Transparency International, 2023).

4.5 | Update of 3-year corruption prevention plans—Purchasing sector

The pilot project provided the necessary support to update the 3-Year Corruption Prevention Plans, mandatory plan to prevent corruption

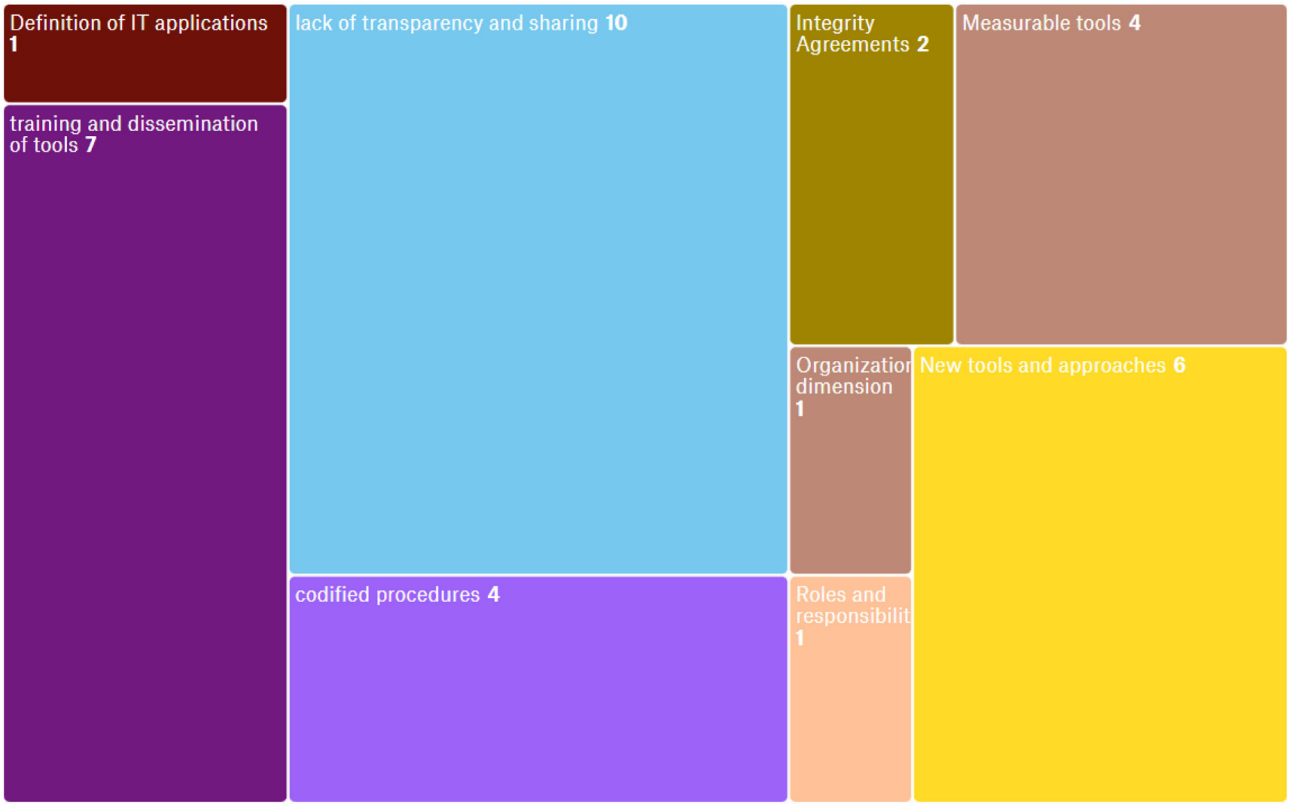

FIGURE 2 Variable coding first and second pilot phase. [Colour figure can be viewed at wileyonlinelibrary.com]

inside an organisation, particularly for the purchasing area, based on the results of the analysis and research conducted by project partners. The RPCs of the pilot structures were able to participate in a working group coordinated by accountants, thus promoting the exchange of good practices and resolution of specific problems.

4.6 | Conflict of interest

The pilot companies involved have developed a tool to identify possible conflicts of interest of doctors with the partner 'Research centre on security and crime' RiSSC. The system is based on mapping and crosschecking different databases (conferences, publications, purchases, holidays, permits, requests for reimbursements and mission allowances), which allow corruption prevention managers to promptly activate risk alerts, thus effectively exceeding the compulsory self-declaration system that is considered ineffective.

4.7 | Training and awareness

Training and coaching courses were provided to both staff and managers in health facilities, organised by the partner ISPE-Sanità. The project coordinator organised public awareness events in collaboration with project partners.

5 | RESULTS AND DISCUSSION

The results and fallout observation analysis support the medium- and long-term analysis by identifying which elements have impacted the organisations.

The coding of the variables adopted in the project identified several elements, as shown in Figure 2, which, between the first and second phases, determine approaches, tools and organisational gaps. In particular, it is evident that different realities have problems related to transparency and representation of external results; the interviews confirm the absence of sharing adopting tools among actors due to the slowness of public organisations in adopting the rational approach.

The significant variables adopted in the organisational change introduced mainly concern the formation and dissemination of anti-corruption tools, and focus on the introduction of policy statements and good practices. The tools introduced predominantly refer to increasing anti-corruption tools compared to the current system and mapping the behaviour of medical personnel. The other significant variable concerns the adoption of codified procedures and precise timing related to the internal corruption-prevention manager's actions. There is also a need to build standard protocols and procedures that organisations can adopt to identify straightforward anti-corruption tools. The training and dissemination of tools are mainly correlated with integrated agreements and mapping of the behaviour of physicians concerning anti-corruption obligations. Therefore, an approach

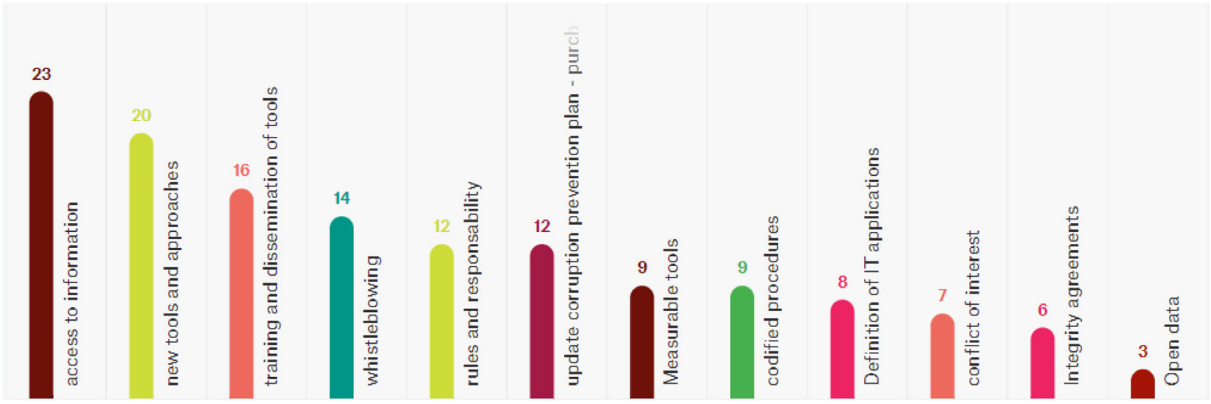

FIGURE 3 Diffusion of observable variables in organisations in the third phase [Colour figure can be viewed at wileyonlinelibrary.com]

that conditions the governance mechanisms of the organisation on the one hand, and the behaviour and relationship between organisational management and the doctor on the other, is identified. Significant elements were highlighted among the variables by interviewing the actors and analysing the identified variables to confirm the relationships. The second report concerns the adoption of integrated IT tools and ingress agreements to assist management in verifying corruption. There are no specific courses or data mining skills involved in the organisation.

The third phase helps to understand how the problems detected and the tools introduced can, in the medium–long term, change the orientation of organisations to a mimetic approach, which also leads to a change in the existing coercive elements. Figure 3 illustrates how the variables associated with the results of the interviews and the interventionist approach represent the main elements applied and observed within the anti-corruption plans of the healthcare organisation between 2021 and 2023.

The analysis of the various health organisations in the third phase through the 3-year anti-corruption plans and interviews denotes the dissemination of access to information as a priority. The model is based on civic access; that is, all of them request accessibility to information, including that which the administration has failed to publish. Furthermore, certain documents must be compulsorily published in Italy in the transparency section of the organisation's institutional website, but generalised access allows those who request them to access additional data that does not necessarily have to be published. Some organisations also directly involve trade associations to disseminate the tools implemented by the anti-corruption plan and provide information on it. Offices that deal with the public involve citizens and associations (Anti-corruption Plan ASST Melegnano e Mortesana, 2021–2023, n.d., p. 23; Anti-corruption Plan AO Brotzu Cagliari, n.d., p. 30; Anti-corruption Plan AOU San Giovanni di Dio e Ruggi d'Aragona Scuola Medica Salernitana 2020–2022, n.d., pp. 3–45; Anti-corruption Plan AOU San Luigi Gonzaga di Orbassano 2021–2023, n.d., pp. 59, 60; Anti-corruption Plan ASL Siracusa 2021–2023, n.d., pp. 18, 19; Anti-corruption Plan ASL Trento 2021–2023, n.d., pp. 18–33; Anti-corruption Plan ASP Catanzaro 2021–2023, n.d., pp. 48, 49; Anti-corruption Plan ASP Ragusa 2021–2023, n.d., pp. 58, 65; Anti-corruption Plan ASST Pavia 2020–2022, n.d., pp. 28, 31; Anti-corruption Plan Azienda Sanitaria dell'Alto Adige 2021–2023, n.d., p. 74; Anti-corruption Plan "Gaspare Rodolico – San Marco" Catania 2021–2023 AOU, n.d., pp. 63–67; Anti-corruption Plan USL Toscana Sud Est 2021–2023, n.d., pp. 34, 37, 95). The process of accessing information is often associated with a plan of indicators disseminated at the time of budget release (Anti-corruption Plan AO Brotzu Cagliari, n.d., p. 10; Anti-corruption Plan AOU San Giovanni di Dio e Ruggi d'Aragona Scuola Medica Salernitana 2020–2022, n.d., p. 38, addendum 23; Anti-corruption Plan ASL Trento 2021–2023, n.d., p. 22; Anti-corruption Plan ATS Sardegna 2019–2021, n.d., pp. 31, 48; Anti-corruption Plan Azienda Sanitaria dell'Alto Adige 2021–2023, n.d., pp. 31, 44; USL Toscana Sud Est, n.d., p. 107), which acknowledges customer satisfaction and the access to information, and the capacity of the organisation both through the macrostructure and individual offices to respond immediately to the information needs of the citizen as required by the literature (Bertot et al., 2010; García, 2019; Mackey & Cuomo, 2020). Almost all companies have held various conferences for International Anti-Corruption Day aimed at the population and associations to disseminate anti-corruption tools (es. Anti-corruption Plan ASL Trento 2021–2023, n.d., p. 6; Anti-corruption Plan ASP Ragusa 2021–2023, n.d., p. 58). Only in one case is accessibility associated with the mission report, a social instrument of transparency and sharing of the results and objectives achieved, also associated with corruption, thus allowing an overview of company reality. Declined accessibility is mainly associated with users and is implemented through direct communication between offices and e-mails. Therefore, long-term adoption requires partial attention to the issue of transparency associated with CSR. However, the development of tools and approaches has improved compared with the initial phase, in which it was completely absent (Callister, 1999; Palmer, 2001; Smith et al., 2003; Wu, 2014).

Another priority introduced by the project and spread within healthcare organisations is the adoption of new shared approaches and tools. In most organisations, there are criteria for accessing patient waiting lists that manage conflict of interest so that doctors (intramoenia) who carry out public and private activities at the facility can prioritise access to care (Anti-corruption Plan AOU San Giovanni

di Dio e Ruggi d'Aragona Scuola Medica Salernitana 2020–2022, n.d., p. 113; Anti-corruption Plan AOU San Luigi Gonzaga di Orbassano 2021–2023, n.d., pp. 23, 24, 35; Anti-corruption Plan ASL Trento 2021–2023, n.d., p. 45; Anti-corruption Plan ATS Sardegna 2019–2021, n.d., p. 27; Anti-corruption Plan Azienda Sanitaria dell'Alto Adige 2021–2023, n.d., pp. 41–52). Another widespread element is personnel rotation in areas at risk of corruption, which has been compulsorily introduced by law in all health organisations. The organisational tool includes functional activities such as coaching between figures in the areas at risk of corruption, teamwork and the segregation of functions to reduce risk. All the figures are mandatory to develop the anti-corruption plan. The new approaches also incorporate surveillance of the behaviour of accredited and private structures that became part of the public health system during the COVID-19 emergency (Anti-corruption Plan ASL Trento 2021–2023, n.d., pp. 89–91; Anti-corruption Plan Azienda Sanitaria dell'Alto Adige 2021–2023, n.d., pp. 61–66; Anti-corruption Plan USL Toscana Sud Est 2021–2023, n.d., pp. 12–17, 91). The new needs and scarce access to care limited the operational activities of public health services to emergencies and cancer treatment only. The conversion of departments into dedicated COVID-19 treatment departments led users to private and accredited structures. The COVID-19 crisis also led to a more significant influx of resources such as donations and bequests to health organisations to meet new spending needs, which was immediately inserted into the corruption surveillance systems. Direct observation of the cases showed that the tools available to combat offences related to donations and money transfers were already active and widespread before the emergency and there was a new need for supervision. The last innovation introduced by regulatory directives was the establishment of independent committees to supervise access to clinical trials to avoid corrupt behaviours involving improper access. The highlighted elements refer to the managerial change required by CSR to generate codified approaches and standards for continuous observation of the context (Callister, 1999; Palmer, 2001; Smith et al., 2003; Wu, 2014) using an integrated system (Adam & Fazekas, 2021). Staff behaviour management has the greatest influence on the care process and affects the ability to maintain accountability at all levels of the organisation (Wu, 2014). These elements also affect the decision-making capacity of the organisation, although there are no integrated systems between managerial approaches and information systems (Bielova et al., 2021; Shim & Eom, 2009).

The tool of whistleblowing is not placed between organisational and internal process innovations but in the effective adoption of new approaches that are useful and appreciated by users and employees. In fact, 80% of organisations involved adopted the open-access platform, effectively increasing the number of reports detected compared to the previous 3 years. However, all other organisations have activated new reporting tools for new integrated applications such as 'Kleopatra' and 'Globaleaks'; the rest still use e-mail.

Many health organisations have updated their three-year plans in anticipation of the change associated with new tools and approaches to access to information, new regulations and the needs related to COVID-19. Many structures have varied the approaches related to the anti-money laundering plan to respond to external pressures related to new accreditations, such as those of the Joint Commission (Campra et al., 2022), the new ISO 9001:2015 on the quality system of processes, and the ISO 45001:2018 on the corporate security system, workers, and accreditation of laboratories. Organisational innovations and pressures also come from within, associated with re-engineering the administrative and logistical processes connected to the pharmaceutical system (Anti-corruption Plan ASL Siracusa 2021–2023, n.d., p. 62; Anti-corruption Plan ASL Trento 2021–2023, n.d., pp. 60, 61; Anti-corruption Plan ASST Pavia 2020–2022, n.d., pp. 45, 48; Anti-corruption Plan Azienda Sanitaria dell'Alto Adige 2021–2023, n.d., pp. 60, 61). COVID-19 also affected anti-corruption plans, and created extensions for urgent procurement activities. This approach improved the supply chain approach associated with technologies with a fallout on responsibility, transparency and immediate control (Biancone et al., 2019; Wickberg, 2013).

The plan's update effectively anticipates the standardisation of measurable elements associated with corruption. In particular, most organisations have introduced a performance plan that provides the incoming resources, available inputs, resources associated with each activity and system outputs for each process (Anti-corruption Plan AO Brotzu Cagliari, n.d., pp. 35–52; Anti-corruption Plan AOU San Giovanni di Dio e Ruggi d'Aragona Scuola Medica Salernitana 2020–2022, n.d., pp. 27, 28, 90–194; Anti-corruption Plan AOU San Luigi Gonzaga di Orbassano 2021–2023, n.d., pp. 61, 62; Anti-corruption Plan ASL Trento 2021–2023, n.d., pp. 19–23; Anti-corruption Plan ATS Sardegna 2019–2021, n.d., pp. 52–54; Anti-corruption Plan "Gaspare Rodolico – San Marco" Catania 2021–2023 AOU, n.d., pp. 42–47). The coding of activities is carried out by referring to company procedures, protocols and regulations that clarify each decision maker's actions, shared responsibilities and tasks.

The organisations aim to eliminate conflict of interest among the subjects by identifying tools to raise the levels of access to information within the healthcare organisations by publicising any relationships that may exist between those who work in the administration and the company, industry, producers, suppliers of drugs, devices, other technologies and other non-medical goods (Anti-corruption Plan AO Brotzu Cagliari, n.d., pp. 25, 26; Anti-corruption Plan AOU San Giovanni di Dio e Ruggi d'Aragona Scuola Medica Salernitana 2020–2022, n.d., pp. 45–47; Anti-corruption Plan ASL Trento 2021–2023, n.d., p. 74; Anti-corruption Plan "Gaspare Rodolico – San Marco" Catania 2021–2023 AOU, n.d., pp. 54–56). The obligation to eliminate conflicts of interest is widespread among the subjects and is coordinated by working groups within the respective regions. The activities promoted and adopted by the pilot project involve promoting the widest participation and sharing of the 'public declaration of interests' tool through dialogue with stakeholders. The tool clarifies the multiplicity of relationships between the professionals within the healthcare organisation and all other stakeholders by increasing internal and external communication.

Many organisations have introduced digitalisation systems for electronic patient records, even if the trials are not yet homogeneous among all organisations (Anti-corruption Plan AOU San Giovanni di Dio e Ruggi d'Aragona Scuola Medica Salernitana 2020–2022, n.d.,

p. 47; Anti-corruption Plan AOU San Luigi Gonzaga di Orbassano 2021–2023, n.d., pp. 24, 25; Anti-corruption Plan ASL Trento 2021–2023, n.d., pp. 55–57, 87). The process has facilitated the mapping system of patients' conditions even during the pandemic and has increased the surveillance of the medical and administrative information system of the workers within the organisation. Despite the computerisation of the processes, a large volume of data are not made public and the information collected on possible corruption crimes is not often reported in the periodic reports published. The interviews and observations of organisations suggest that too much information collected is not valued or usable because the subjects do not yet understand the usefulness of open data.

Only half of the organisations have signed an integrity agreement with a set of rules of conduct and prevention and suppression of corruption. It enhances the behavioural ethics of all those involved in various ways in the procedures for awarding goods, services and work (from competitors to company personnel). In addition to commitments of a behavioural nature to protect legality and transparency, these agreements provide a sanctioning regime that can be applied by the contracting authorities in case of violation of the provisions contained in the act.

Training is recognised by all organisations as a promoter of corruption prevention approaches and tools. It is usually organised on two levels: one aimed at intervening in the entire organisation by involving all employees and training them based on roles and tools that can be adopted to prevent corrupt behaviour. In addition, specific training is carried out by all those responsible for the organisation and the system of prevention and adoption of anti-corruption interventions. The most widespread issues regarding the continuous education system made available by the organisations concerned matters such as the anti-corruption system (maladministration) and transparency, code of conduct and whistleblowing, ethics of public choices, risk management in healthcare companies, transparency, right of access to its different categories and conflict of interest in healthcare (Anti-corruption Plan AO Brotzu Cagliari, n.d., pp. 31–35; Anti-corruption Plan AOU San Giovanni di Dio e Ruggi d'Aragona Scuola Medica Salernitana 2020–2022, n.d., pp. 55, 56; Anti-corruption Plan AOU San Luigi Gonzaga di Orbassano 2021–2023, n.d., pp. 58–61; Anti-corruption Plan ASP Catanzaro 2021–2023, n.d., p. 41; Anti-corruption Plan ASP Ragusa 2021–2023, n.d., pp. 55–59; Anti-corruption Plan ASST Pavia 2020–2022, n.d., p. 31; Anti-corruption Plan Azienda Sanitaria dell'Alto Adige 2021–2023, n.d., pp. 79–82; Anti-corruption Plan "Gaspare Rodolico – San Marco" Catania 2021–2023 AOU, n.d., pp. 49, 50; Anti-corruption Plan USL Toscana Sud Est 2021–2023, n.d., pp. 71–73).

The variables observed in the first and second phases determine the macroelements applied in individual organisations. In the following period, we found diffusion within the various organisations due to the interventionist approach and widespread mimicry, which leads to the

TABLE 1 Variables and theoretical fallout associated with institutional theory.

Variables of second stage of project	Variables of third stage project	Theoretical analysis and model applied	E-government transformation
Lack of transparency and sharing	Access to information through: - Civic access and web - Generalised civic access - Processes and indicators for customer satisfaction - Social report	Social pressure, coercive and normative pillars	External and relational
Training and dissemination of tools	General and particular training dedicated to anti-corruption	Coercive pillar	Internal and external
New tools and approaches	New tools such as supervision of accredited and private structures, verification of the behaviour of doctors and attestation lists, criteria for access to care, staff rotation in areas at risk of corruption, independent committees for access to medical care. Whistleblowing	Coercive and normative pillars Social pressure, coercive and normative pillars	Internal and external
Measurable tools	Performance plan	Normative pillar	Internal
Codified procedures	Procedures, protocols and regulations	Coercive pillar	Internal, external and relational
Integrity agreements	Integrity agreements	Normative and coercive pillars	External
Definition of IT applications	Integrated IT systems and digital electronic file	Coercive pillar	Internal, external
Organisation dimension	Update of the anti-corruption plan based on ISO accreditations and certifications with change of processes and administrative re-energisation	Coercive and normative pillars	Internal and relational
Roles and responsibilities	Roles and responsibilities and relationship between internal and external actors	Coercive pillar	Relational

diffusion of various elements in most organisations. Table 1 demonstrates the relationship between the variables and the gaps detected in the first and second phases of the project, and the isomorphic impact that organisations have had with the adoption of specific recurring tools and approaches.

The analysis allows us to answer the second research question by identifying the general and technological variables that have the greatest influence on the organisational system.

In light of the actions undertaken by organisations over time, the major impacts of the project can be highlighted. Training is an essential element for impacting on a large scale and changing the system. The objectivity of the information in the standardisation of processes and parameters for evaluating activities and behaviours affects mental scripts, thus changing the models that the user expects to find in the health system. The actors' conflicts of interest and behaviour, the responsibilities in the process, and the relationships between the actors are kept under control, and public institutions support the formalisation. Resilience to the COVID-19 pandemic has led to the introduction of accessible and integrated information systems. The integrity agreement and new practices push for a regulatory and coercive change in the organisation; despite this, several elements should be improved. Among these, it should be noted that access to information is incomplete through open-access data. Only in one circumstance is there a mission report that summarises actions and the company's reality, favouring transparency and targeted accessibility of associations and users. The organisations observed following the introduction of project variables have undergone a profound multilevel change that involves the role of individuals and introduces new governance mechanisms. The information required by law is provided in the transparency section of the institutional website of the organisations, but it is often still a fulfilment and not a change in approach. The evidence can be explored in other health systems. Although the relational process, access to data and citizen involvement have increased, there is often a lack of final reporting that provides external transparency to the results. The training provided to employees involves all organisations but is poorly oriented to data mining and the development of effective big data. In very few cases, the procedures and information flows are cohesive and connected to the information technology system, which makes it difficult to integrate information and actions. Only ASL USL Toscana Sud Est integrates the strategic plan with the information system, digitisation and service access. System engineering is almost completely absent among process managers, even though digital purchasing platforms are increasingly being used and managed. However, the purchasing procedures have at least been codified in nine organisations. Complete adoption is identified in whistleblowing processes, where the indications provided on digitisation and compliance with key parameters for possible and complete adoption are respected.

6 | CONCLUSION

The effect of corruption on organisations has been a long-debated issue in the health sector, which requires new thrusts and approaches to solve problems in the development and well-being of users and society (Borgonovi & Esposito, 2017). To this end, experimental projects such as the HIAP can be a stimulus for public and private organisations. Few studies address the issue of anti-corruption, and there is not much evidence to investigate the fallout of anti-corruption processes in healthcare through institutional theory in Italy and Europe based on technologies and tools to increase CSR. This study considers neo-institutional criticisms in purely theoretical approaches and bases the analysis on an empirical approach (Macfarlane et al., 2013; Suddaby, 2010). It demonstrates how experimental adoption in the medium to long term leads to mimetic adoption among organisations. Therefore, the tools and approaches that are usually coercive and regulatory, as shown in Table 1, lead to changes in organisations that seek to mimic those considered virtuous. Simultaneously, the project has introduced various elements of e-government and new technologies that are decisive in the internal, external and relational areas (Everett et al., 2007; Neupane et al., 2014; Zhang & Zhang, 2009) to support the responsibility, transparency and action of management based on CSR literature. Currently, the anti-corruption approach adopted by the European project observed in Italian organisations highlights how the new accessibility approaches overcome the problems identified in the initial period and have increased reports after an effective exchange of information. In general, the actions and tools to be adopted in the long run to avoid a relapse are:

- employee training
- identification of objective indicators and parameters to prevent corruption associated with rewards for employees
- the adoption of integrity agreements, and
- changes in procurement processes and rotation of responsible personnel in identified corruption-risk areas in organisations.

These variables confirm the evidence associated with transparency, standard actions of management, efficiency and responsibility regarding CSR in healthcare corruption prevention systems (Callister, 1999; Palmer, 2001; Smith et al., 2003; Wu, 2014).

Academics and practitioners should support the adoption of the following variables that have not been completely adopted and shared:

- changes in the information-based management approach
- the adoption of open-access databases
- the adoption of mission reports that guarantee information transparency to users and user associations and
- the immediate and clear dissemination of information on institutional websites of the actions and results.

Mimetic change highlights how the relationship between actors and social subjects has undergone a new orientation towards experimental elements. Organisations themselves become promoters of new institutional logic thanks to the initial thrust they undergo (Giddens, 1986). This study has shown that political decision-makers whose experimental projects are widespread in a few realities can change and redefine health organisations in the medium and long term, orienting them towards a better approach to the fight against

corruption. However, as Dada (2006) argued, technological development in public organisations has not entirely occurred. This study reveals that the full adoption of an e-government health system is still limited. The variables related to e-governance that have had the greatest impact on change, and that practitioners should adopt are:

- access to data through citizen involvement activities
- computerisation of anonymous reporting systems for cases of corruption or possible corruption (whistleblowing) integrated with company processes and
- the adoption of platforms and systems for automatic monitoring of digital procurement processes.

The variables highlight the adoption of CSR technological tools that prevent corruption, such as access to information in real time, use of the internet to disseminate data and results and changes in supply chain processes through digital platforms (Adam & Fazekas, 2021; Bertot et al., 2010; García, 2019; Zhang & Kimathi, 2022).

Further, scholars and academics should focus on and develop other e-governance variables such as:

- monitoring processes based on data mining and big data (Ali & Sassi, 2017; Secinaro et al., 2021) and
- integrated information systems that guarantee a complete real-time dashboard of information and clear dissemination of information on the actions and results on the institutional websites.

The study highlights how the successful dissemination of good practices has changed the entire system from the first experiment to the current adoption. Nevertheless, numerous key elements are still missing that can guarantee a potential reduction in corruption with technologies and detection of crimes in real time. The study has some limitations: the absence of comparisons with similar projects in the European context; the absence of studies on the effect of the behaviour of the employees of organisations and the users; and the inability, in the short term, to determine the effective reduction of cases of corruption compared to the period prior to the introduction, further affected by the organisational difficulties introduced by COVID-19.

Therefore, evidence and project impact could be observed in the future in a setting with a health system similar to that of Italy. In fact, studies highlighting how the main variables of the health system—such as the volume of resources made available to finance primary care needs, the high level of regulation of access to care and the lack of discretion of users, together with the absence of formalised costs of access to care, and the performance and quality of average services—could find more outstanding similarities between healthcare systems in countries such as Canada, Germany, Spain, the United Kingdom and the Netherlands (Reibling et al., 2019).

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