

# Accessibility and inclusive corporate governance, between disruptive innovation and artificial intelligence: the new research perspectives of the Flipped Inclusion model.

Maria Carbone <sup>1</sup>, Tonia De Giuseppe <sup>2</sup>, Alessia Sozio <sup>1</sup>

<sup>1</sup> Unipegaso University; maria.carbone@unipegaso.it;  
alessia.sozio@unipegaso.it

<sup>2</sup> Giustino Fortunato University; t.degiuseppe@unifortunato.eu

\* Correspondence: maria.carbone@unipegaso.it

**Abstract:** At the state of the art, in business activities, technological progress and, in particular, the spread of artificial intelligence, constitute an element of innovation no longer only at the level of production but also at the level of administration and control. This paper explores the potentials and risks that directors are faced with as a result of the entry of artificial intelligence into the board of directors, proposing to investigate whether in the corporate governance of small and medium-sized companies it is possible to act pedagogically to form an organizational culture devoted to inclusion through the application of cooperative learning methodologies that enable the achievement of greater inclusiveness among the stakeholders. The project proposes to apply the methodology of Flipped Inclusion and more specifically Cohen's method of complex instruction because through the creation of heterogeneous team work and the interdependence of roles, the resources of all group members, including artificial intelligence technologies, can be enhanced, with the aim of achieving that system learning according to which everyone works to achieve a single goal, each, however, performing his or her own task and fostering inclusiveness.

**Keywords:** Artificial Intelligence; Corporate Governance; Flipped Inclusion.



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## 1. Artificial intelligence (AI), corporate governance and corporate compliance: inclusive educational research in the new balances of systemic co-responsibility.

Over the past decade, the so-called "digital revolution" has profoundly transformed most aspects of individuals' daily lives. This technological revolution has overwhelmed not only the lives of individuals, but has also had (and is having) a major impact on the organization and operation of businesses. Examples include

<sup>1</sup> Paragraph assignments:

1. Introduction: Artificial intelligence (AI), corporate governance and corporate compliance: inclusive educational research in the new balances of systemic co-responsibility. – Tonia De Giuseppe
2. Genetic mutation of the farm organism: uses and limitations in the use of AI. – Alessia Sozio
3. Roles of Artificial Intelligence and Corporate Compliance, between Blockchain, social responsibility processes and disintermediation: conceptual research framework. – Maria Carbone
4. Pedagogical Research in Companies: Theoretical Frameworks and Inclusive Methodologies – Maria Carbone
5. Conclusions: Inclusive Education in Democratization and Multi-Performance Interoperability for a Well-Being Society – Tonia De Giuseppe

industrial automation, the use of e-commerce systems, the introduction of increasingly advanced management software as well as the use of robots. It is therefore fair to ask whether new technologies, and in particular forms of artificial intelligence, may also impact the corporate and governance structures of companies. Technological progress and, in particular, the spread of artificial intelligence constitute, in the sphere of business activities, an element of innovation no longer only at the level of production but also at the level of modes of administration and control. Artificial intelligence can, in fact, be employed within the board of directors to achieve leaner and more efficient strategic decisions with greater speed, reliability and a reduced margin of error. and to guide the decisions made in accordance with the company's strategic objectives and social responsibility profiles. In the face of these uses, which are likely to grow over time, artificial intelligence calls for a reinterpretation of certain aspects characterizing corporate governance in order to become a concrete resource for directors in the fulfillment of administration and control functions.

The transformation of economic activities due to artificial intelligence (AI) technologies has been underway for some time but has become particularly pronounced in recent years. This evolution has prompted experts in corporate law and business organization to globally confront the effects of this technological revolution. AI is not only opening up new opportunities but also posing unprecedented interpretative problems and innovative regulatory demands on legislators and supervisory authorities. Many believe AI is central to the "fourth industrial revolution," irrevocably changing daily life.

More interconnected societies will base decision-making processes on big data analysis; firms in competitive markets will access resources at lower costs, and goods and services can be purchased from anywhere through automated services. The organization and management of modern enterprises are undergoing a metamorphosis (Rossi, 2012), leading to a modified genetic code of corporate governance. This is characterized by a renewed balance between inter-organic dynamics and positioning in a globalized, digital market. Accessibility and interoperability among communication platforms support technological democratization, fostering shared value and well-being.

Corporate governance, understood as the institutional framework regulating corporate decision-making, is in flux. Questions abound regarding the impact of new AI technologies on corporate structures, particularly governance itself. AI-driven disruptive innovation benefits corporate governance in various ways (Sickle et al., 2018). Companies utilize new technologies not just for production and distribution but also for management and control, enhancing market performance and decision-making processes internally.

Entrusting "machines" with corporate compliance could refocus administrators on business while mitigating conflicts of interest inherent in human decision-makers. Terms like "roboboard," "corp-tech," and "self-driving corporations" indicate an impending dehumanization of the corporate legal person (Abriani, 2020). The risk is that corporations dominating markets through digital interaction, enabled by big data analytics, may prevail (Mancuso Hobey, 2020).

This debate is ongoing, influenced by regulatory developments and behavioral changes among governance actors, aimed at sustainable value creation. Major market players, aware of the importance of innovation and change, are reviewing business models and internal organization, redefining strategic goals, strengthening culture and engagement, and balancing recruitment with retraining. A shift from platform governance to community-driven governance is evident. The largest economic

players use AI technologies not only to facilitate economic exchanges but also to enable stakeholder participation in corporate assets. This practice, implemented through feedback (Scarchillo, 2019), involves a process where system action results impact the system itself, influencing future behavior.

## **2. Genetic mutation of the farm organism: uses and limitations in the use of AI.**

In companies, top management's needs and available tools to respond to strategic challenges are changing, along with internal organizational relationships, customer responses, and stakeholder engagement. The ongoing technological transformation creates a new balance of values. Debates on business purpose and social responsibility must consider the genetic mutation of the corporate organism and the ethical limits of AI use.

While humans may experience illness, cognitive and behavioral limitations, bias, and emotions, AI is resilient to such variables, especially in scenarios of systemic shocks. Currently, AI primarily supports directors, auditors, and investors in analyzing and controlling financial information (Montagnani & Passador, 2021). However, AI's contribution includes:

- Integration of investigative activities for more informed decisions
- Automated prediction supporting strategic direction and management choices
- Corporate reporting enhancement through efficient data analysis and report generation
- Compliance monitoring with real-time legislative updates
- Management of internal information flows, including data protection
- Board self-assessment
- Identification of the best candidates for co-option or nomination
- Management of shareholder dialogue and participation

AI applications in corporate governance are numerous, aiding but not replacing governing bodies, subject to human oversight. To continue "algo-governance" while respecting the human-centric vision, investment in AI culture, trust-building, accountability, and verifiability is essential. Automating company administration allows for managing complex situations and making optimal decisions for a variety of shareholders, protecting, and pursuing social interests.

Legally, recognizing AI in director roles relates to broader debates on granting legal subjectivity to AI tools. While direct appointment of AI to boards is challenging, indirect appointment through specialized companies is plausible. Legal entities can hold directorial positions, operating through natural representatives with AI expertise. Corporate governance rules on conflict of interest, related party transactions, and majority abuse may need adaptation to prevent distortions from algorithmic administration. Conversely, rules on corporate social responsibility and crisis prevention could be strengthened by appropriately structured algorithms.

Thus, the impact of new algorithmic technologies on corporate governance is multifaceted, requiring an assessment of which rules may be compromised and which may be enhanced by AI. Effective incorporation into technological frameworks is hindered by the often-vague content of regulatory criteria, challenging their translation into computer codes. Pursuing normative objectives via AI remains an open question, raising further issues such as the liability of AI administrators and the corporate structures using them.

In light of this historical context, the research perspective presented in broad terms in this contribution intends to present itself as a possible declination of the Flipped Inclusion model. It is anchored to the hypothesis of a transpositional experimentation of the praxis-theoretical models specific to the pedagogical-didactic disciplinary field. The objective is to promote prosocial and inclusive contexts and personalities through system learning (vision and mission of the Flipped Inclusion model) and education in the management of complexity (Cohen, 1994), to support training processes for models of inclusive governance, come on with assumptions rooted in the knowledge building community.

### **3. Roles of Artificial Intelligence and Corporate Compliance, between Blockchain, social responsibility processes and disintermediation: conceptual research framework.**

The COVID-19 pandemic has accelerated business digitization, with AI increasingly entering daily life. Since early 2023, we've seen an explosion of AI-based services, such as ChatGPT, Midjourney, Stable Diffusion, and DALL-E, prompting regulatory attention. AI technologies significantly change how enterprises approach information analytics and compliance. In the short term, AI systems assist in corporate monitoring, aiding administrative bodies in compliance and accountability processes by processing large amounts of data (Hilb, 2020).

AI technologies play a growing role in companies and boards of directors, influencing decision-making processes and outcomes. This is especially true for companies relying on platforms like Amazon, Google, Uber, YouTube, Netflix, and Facebook. AI helps achieve streamlined strategic decisions aligned with corporate goals and social responsibility. AI's role in corporate governance requires reinterpretation to become a concrete resource for directors in administration and control functions, considering AI's potential and risks.

AI can structure organizational, administrative, and accounting arrangements, constituting essential components within companies. In the medium to long term, with proper regulations (Mosco, 2019), we can envision "roboboards" entirely composed of AI entities. Advanced companies should consider enhancing IT and digital expertise in-house, potentially through specialized corp-tech committees. These committees would develop and monitor AI systems, protecting the governing body from potential liability when using AI tools in business.

A balanced approach to AI in corporate governance views it as a support for human directors, fostering interaction between intelligent machines and people. AI research distinguishes between Assisted, Augmented, and Autonomous AI based on their roles in decision-making:

- Assisted AI automates specific tasks, identifying patterns and applying solutions.
- Augmented AI supports human decision-making, approximating outcomes.
- Autonomous AI processes recommendations and makes decisions independently, acting as operational substitutes for human intelligence (Rao, 2016).

Recent corporate practices show increasing algorithm use for director selection and decision-making support. Future scenarios may include algorithms as administrative body components, even in fully AI-driven roboboards (Moslein, 2017). Research by the World Economic Forum in 2015 predicted massive robotization of

corporate governance by 2025. For example, deep knowledge ventures appointed an AI algorithm, Vital, as a board member to automate due diligence, although Vital remains an observer (Fenwick & Vermeulen, 2018).

Blockchain can facilitate corporate changes, increasing transparency and simplifying monitoring activities. It can streamline bookkeeping and decision-making processes, promoting decentralized governance where employees have a say in company strategy. AI can foster shareholder activism, help directors manage complex organizations, and provide unbiased assessments.

The legitimacy of AI as an administrator relates to recognizing AI tools' legal subjectivity (Teubner, 2019). The shift from traditional corporate governance to platform governance (Fenwick et al., 2018) highlights AI's role in decentralized, community-driven governance models. AI's involvement can improve board efficiency without compromising oversight quality or corporate transparency.

AI must be integrated into board processes, with supervision ensuring effective use. Human factors remain crucial in algorithmic design for administration, and management automation poses risks, particularly in conflict-of-interest situations. Transparency in AI-driven managerial operations is vital.

#### **4. Pedagogical research in companies: theoretical frameworks and inclusive methodologies.**

The research project at the Telematic University "Giustino Fortunato" in Benevento applies the Flipped Inclusion model (Corona & De Giuseppe, 2017) combined with Cohen's cooperative method to corporate governance. Flipped Inclusion (De Giuseppe, 2018) follows computational thinking logic to foster systemic inclusiveness in lifelong learning. Computational thinking involves problem decomposition, pattern recognition, abstraction, and algorithmic design, enhancing problem-solving, data analysis, system design, and adaptability to technological challenges.

Promoting knowledge-building communities with technology partners enables authentic social-communicative interactions, fostering prosocial inclusive behaviors. The Flipped Inclusion model supports systemic inclusivity through:

1. Explore: Identify challenges through inquiry learning (Kuhn et al., 2000).
2. Ideate: Discover aspects for hypothesis generation (Bruner, 1960).
3. Planning: Master tools and resources for goal achievement (Bloom, 1994).
4. Experiment: Collect feedback to implement inclusivity models (Kolb, 2014).

In companies, flipped learning also reverses the traditional order of training because workers are asked to learn the training content in eLearning mode and apply the knowledge in the office, in the presence of the trainer and colleagues.

Through this flipped organization, flipped inclusion brings several benefits to corporate training:

- increase employee engagement and reduce stress: if you have time before training to learn basic concepts, you come to the meeting with the trainer with some knowledge, and this reduces the stress of having to learn content or close a gap in your skills alone;
- focus the training on skills: training (in-person) will not be about theoretical information, learned at home in asynchronous mode; instead, it will focus on

workers' questions, to clarify doubts, and above all, on the practical application of what has been learned with workshops, simulations and role-plays;

- personalizing the learning process: workers always have the opportunity to review the material in their own time and according to their own needs. In addition, the opportunity to review the material after practice develops critical thinking.

Flipped Inclusion and Cohen's Complex Instruction (Cohen, 1994) aim to create inclusive corporate governance through cooperative learning. AI technologies in corporate governance, supported by these methodologies, foster an inclusive organizational culture.

The research questions include:

1. Can corporate governance foster a participatory environment with AI tools?
2. Can cooperative learning models (Complex Instruction and Flipped Inclusion) develop an inclusive corporate culture?

The hypothesis is that integrating these methods promotes an inclusive organizational climate, forming corporate governance marked by participatory styles and highly inclusive cultures.

## **5. Conclusions: Inclusive education in democratization and corporate interoperability for a well-being society.**

AI's influence on corporate information and management is increasing, raising questions about information requirements and specific regulations. The digital revolution introduces unexplored content and reflections in corporate structures. The legitimacy of IT tools for administrative purposes must be scrutinized legally and ethically, with potential guidelines like those from the European Commission for the Efficiency of Justice (CEPEJ, 2018).

Computational thinking in education is essential for understanding innovative events, detecting critical elements, and enhancing individual and contextual specialties from a prosocial perspective. Teaching computational thinking fosters personal growth, social participation, and skills to navigate technological challenges. Training activities should integrate emotional-affective-motivational skills for socio-relational management and cognitive-metacognitive reworking of inclusive prosocial skills.

Corporate governance's approach to AI should initially be experimental, benefiting from corporate governance codes' flexibility. This allows progressive adaptation to technological support, fostering structural standardization. Human sensitivity will focus on high corporate strategy, addressing major issues and fundamental aspects of the enterprise. Highlighting interdependencies between digitization and corporate sustainability, digital technologies present risks and opportunities. Proper management and risk mitigation of digital tools are essential for sustainable success. Furthermore, corporate digital responsibility ensures good governance of algorithmic codes, balancing the technological and human dimensions of corporate purposes.

## References

- Abriani, N. (2020). Corporate governance in the age of the algorithm. Prolegomena to a study on the impact of artificial intelligence on corporate governance. The New Corporate Law. Giappichelli.
- Bloom, B. S. (1994). Bloom's taxonomy: A forty-year retrospective. Chicago.
- Bruner, J. (1960). The process of education. Harvard University Press.
- Buemi, M., Conte, M., & Guazzo, G. (2015). Diversity management for inclusive growth: Strategies and tools. Franco Angeli.
- CEPEJ. (2018). European ethical charter on the use of artificial intelligence in justice systems and related fields. European Commission for the Efficiency of Justice.
- Cohen, E. (1994). Restructuring the classroom: Conditions for productive small groups. *Review of Educational Research*, 64(1), 1-35.
- Corona, F., & De Giuseppe, T. (2017). Flipped methodology between systemic inclusion and didactic-assertive perspectives. Pensa Multimedia.
- De Giuseppe, T. (2016). Special educational needs: Empowerment and divergent didactics to deconstruct their complexity. Avellino: Il Papavero.
- De Giuseppe T. (2016). Flipped teaching in inclusive-transformative science research. T. De Giuseppe F. Corona. Flipped Inclusion for transformative teaching. In *The professionalism of teachers. Research and practices*. Bari: Pensa Multimedia.
- De Giuseppe, T. (2016). Well-being between prosocial vicariousness, subjective perceptions and situated values. In F. Corona & T. De Giuseppe (Eds.), *Prosociality, inclusive technologies, and universal design in specific learning disorders* (pp. 108-119). Avellino: Il Papavero.
- De Giuseppe, T., & Corona, F. (2017). Flipped teaching for inclusion. In P. Limone & D. Parmigiani (Eds.), *Pedagogical models and teaching practices for initial and in-service teacher education* (pp. 409-420). Bari: Progedit.
- De Giuseppe T. (2018). Designing ecological learning places for social-inclusive management. In F. CORONA, F. *The Fragile x and Inclusive Educational Management*; 9. Roma: Aracne.
- De Giuseppe T. (2019). "La formazione permanente d'aula aumentata della flipped inclusion per una organizzazione strutturata del talento". De Giuseppe T., & Corona, F. Giftedness e talenti nell'era digitale, tra piattaforme mediali e modelli inclusivi di sviluppo sistemico in flipped learning. In S. Pinnelli (a

cura di) Plusdotazione e scuola inclusiva. Modelli, percorsi e strategie di intervento. Collana Radici e futuro. Lecce: Pensa.

De Giuseppe T., Ianniello, Podovsovnik E., & Corona F. (2020). "The educational research flipped inclusion between social metamorphosis and technocratic hybridizations". In E. Podovsovnik (a cura di) Examining the Roles of Teachers and Students in Mastering New Technologies. Hershey PA: (USA): IGI Global Publication.

De Giuseppe T. Ianniello A., & Corona F. (2020). "The Trans-Formativity of the Flipped Inclusion Model, between Anthropocentric Ergonomics of Social Capital, and Ecological-Systemic Empowerment", Information 2020, [www.mdpi.com/journal/information](http://www.mdpi.com/journal/information)

De Giuseppe T. Ianniello A., Corona F. (2020). "Flipped Inclusion: a systemic-inclusive model of Education for Sustainable Development (ESD)". Book of Abstract Second International Workshop on Higher Education Learning Methodologies and Technologies Online International Conference HELMeTO 2020. Bridges and mediation. Edited by G. Casalino, R. Pecori, University of Bari "A. Moro"- Italy.

De Giuseppe T. (2021). "Flipped Inclusion: un modello sistemico-longitudinale d'inclusività prosociale", in Il modello Flipped Inclusion, tra postmodernità e valorialità prosociali", Corona, A. Ianniello, T. De Giuseppe (pp.335-344). PEDAGOGIA, DIDATTICA E FUTURO. Studi in onore di Michele Corsi (ed.) M. Stramaglia. Lecce: Pensa MultiMedia.

Enriques, L., & Zetzsche, D. (2019). Corporate technologies and the tech nirvana fallacy. European Corporate Governance Institute, Law Working Paper No. 457/2019.

Fenwick, M., McCahery, J. A., & Vermeulen, P. M. (2018). The end of corporate governance (Hello "platform governance"). European Business Organization Law Review, 19(1), 57-77.

Fenwick, M., & Vermeulen, P. M. (2018). Technology and corporate governance: Blockchain, crypto, and artificial intelligence. ECGI Law Working Paper, No. 424/2018.

Hilb, M. (2020). Toward artificial governance? The role of artificial intelligence in shaping the future of corporate governance. Journal of Management and Governance, 24(2), 265-286.

Ianniello A., De Giuseppe T. & Corona F. (2023). "Improving Well-Being. The Value Of Flipped Inclusion Model". IN Gulzar IBRAHIMOVA (ed.) Merve KIDIRYUZ, International Euroasia Congress on Scientific Researches and Recent Trends-X p. 194 Baku, Azerbaijan. Turkey: IKSAD Publications. <https://www.euroasiasummit.org/books>

- Kolb, D. A. (2014). *Experiential learning: Experience as the source of learning and development*. FT Press.
- Kuhn, D., Cheney, R., & Weinstock, M. (2000). The development of epistemological understanding. *Cognitive Development*, 15(3), 309-328.
- Mancuso Hobey, E. (2020). Interview: Finch Capital Co-Founder/Partner Radboud Vlaar discusses disruptive and enabling financial technology post-COVID-19. EKMH Innovators Interview Series.  
<https://ekmhinnovators.com/interview-finch-capital-co-founder-partner-radboud-vlaar-discusses-disruptive-and-enabling-financial-technology-post-covid-19/>
- Montagnani, M. L. (2020). Artificial intelligence and governance of the 'new' large shareholder firm: Potential and endoconsiliar issues. *Journal of Corporations*, 29(3), 234-251.
- Montagnani, M. L., & Passador, M. L. (2021). The board of directors in the age of artificial intelligence: Between corporate reporting, composition, and accountability. *Journal of Corporations*, 30(2), 312-329.
- Mosco, G. D. (2019). Roboboard. Artificial intelligence in boards of directors. *Legal Analysis of Economics*, 8(1), 45-67.
- Moslein, P. (2017). Robots in the boardroom: Artificial intelligence and corporate law. *Columbia Business Law Review*, 3, 435-474.
- Nicotra, M. (2023). Artificial intelligence: What it is, how it works, and applications in Italy and Europe.  
<https://www.agendadigitale.eu/sicurezza/privacy/intelligenza-artificiale-la-via-delleuropa-su-regole-e-investimenti/>
- Nuzzo, A., & Olivieri, G. (2019). Algorithms. If you know them, you regulate them. *Legal Analysis of Economics*, 9(2), 78-91.
- Pellegrini, M. (2019). Technological innovation and economic law. *Quarterly Journal of Economic Law*, 31(1), 12-29.
- Petrin, M. (2019). Corporate management in the age of AI. UCL Working Paper Series Corporate Management in the Age of AI, No. 3/2019.
- Rao, A. (2016). AI everywhere/nowhere. Insurance Thought Leadership.  
<https://www.insurancethoughtleadership.com/ai-everywherenowhere/>
- Rossi, G. (2012). The metamorphosis of the corporation. *Journal of Corporations*, 24(4), 67-89.

- Sacco Ginevri, A. (2022). Artificial intelligence and corporate governance. *Journal of Business Law*, 33(2), 201-219.
- Scarchillo, G. (2019). Corporate governance and artificial intelligence. *The New Annotated Civil Jurisprudence*, 9(3), 289-302.
- Schneider, G. (2022). Artificial intelligence, corporate governance, and corporate social responsibility: Risks and opportunities. *The New Annotated Civil Jurisprudence*, 10(1), 112-130.
- Solenne, V. (2020, April 28). The impact of AI on corporate aspects of corporate governance.  
<https://www.pandslegal.it/business/intelligenza-artificiale-e-corporate-governance/>
- Teubner, G. (2019). Digital legal subjects? On the private status of autonomous software agents. Naples: ESI.
- Weill, P., Woerner, T., Stephanie, L., & Banner, J. (2019). Assessing the impact of digital savvy boards on company performance. MIT Sloan CISR Working Paper, 433. Cambridge: MIT Sloan.
- Zoppini, A. (2021). The firm as an organization and the system of controls. *Metamorphosis of Company Law*. Naples: ESI.