

INTRODUCTION

As part of the European response to the post-COVID-19 emergency, the NextGenerationEU emerges as an important tool to mitigate socio-economic impacts. With an unprecedented investment of EUR 750 billion, the initiative aims to ensure a sustainable recovery for all European Union (EU) Member States.

In this context, Italy stands out for the presentation of its National Recovery and Resilience Plan (PNRR), outlining strategies and objectives to effectively use NextGenerationEU funds to promote a fair, green, resilient, and digital recovery. This initiative will be further explored in this paper, which will analyse the Italian case in detail, examining the challenges, opportunities, and implications of its implementation.

The PNRR is a great opportunity for the revitalisation of the country, providing a clear direction in the Italian landscape. The actual success of the PNRR lies in its diligent implementation and compliance with the fundamental rules governing its implementation. In this scenario, artificial intelligence (AI) emerges as a key element, promising to radically transform the Italian public administration (PA) through a complete overhaul of its organisational processes and service delivery methods. The introduction of AI represents an epoch-making moment: highly qualified platforms now enable accurate monitoring of the PNRR's control and reporting systems. This monitoring is essential to ensure that reforms and allocated resources are used effectively to resolve, rather than worsen, the shortcomings that have emerged during the crises of recent years.

The contribution aims to analyse, from a business economics perspective, the position of the PNRR and the role that AI can play in its success. Through a reconstruction of the Plan's implementation phases, from the drafting to the allocation of funds to the achievement of objectives, it will explore how AI can be used to ensure effective monitoring of results in the PNRR's Control and Reporting Systems.

It is essential to pay attention to the profound transformations that the integration of AI entails, as well as its criticalities. The recent concerns expressed by the European Public Prosecutor's Office regarding the use of Recovery funds in Italy underline the importance of an effective control system, in which AI can play a key role.

Through a detailed analysis of the regulatory environment, recent innovations, and empirical analyses illustrating practical applications and challenges encountered, the book examines how AI is providing support for PNRR control and reporting systems to improve public administration governance. Analysing the strategies adopted and how AI is being implemented, various methodologies and best practices are explored to ensure effective and efficient integration.

The technological, regulatory, and organisational challenges that may emerge during this process are also explored, along with the opportunities arising from the adoption of AI. Finally, the possible impacts of AI implementation on decision-making processes, resource optimization, and the quality of public services offered are assessed.

The first chapter provides a comprehensive overview of the PNRR, beginning with its genesis as a response to the impacts of the COVID-19 pandemic and continuing with an exploration of its main purposes. The structure of the plan is discussed, which is divided into different components and missions aimed at promoting ecological transition, digitisation, and social inclusion. In addition, this chapter discusses the latest regulatory interventions influencing the implementation of the plan, analysing how they will shape future public policy and investment directions in Italy.

The second chapter focuses on the use of AI in monitoring and reporting processes within the PNRR. The role of AI in improving the effectiveness and efficiency of public control systems is introduced, examining how intelligent technologies can be used to analyse large volumes of data, identify patterns and provide valuable insights for resource management. This chapter also explores the different applications of AI in the context of PNRR, discussing the benefits and challenges of integrating these technologies into administrative processes.

In the third chapter, the European landscape is explored through a comparative analysis of the strategies adopted by different governments regarding the distribution of funds and the implementation of the PNRR. Then, in the fourth chapter, the phenomenon of fraud in the use of the Plan's funds is explored, with particular reference to Ecobonus. Both the potential for effective support offered by AI-based control systems in the fight against fraud and the implementation challenges they present are highlighted.

During the development of the work, the complexity and dynamism of the PNRR and the rapid progress of AI became clear. The new measures and changes introduced testify to the challenge of keeping up with the updates of the PNRR and the evolution of AI.

PNRR and AI represent a powerful combination for the future of public administration, however, to fully exploit its potential, it is essential to keep a flexible mindset ready to adapt to the challenges and opportunities that will arise.

It is hoped that this work will stimulate continued exploration and innovation, tackling challenges with determination and taking full advantage of the opportunities offered by the PNRR and AI. The thread of this book centred on fund management and AI aims to guide future research and practical applications in the field, promoting constant exploration and innovation to maximise the potential of the PNRR by harnessing the tool of AI.