

PRESENTATION

The dynamics and urgency of structural change

Twenty years for Italy and Europe

by *Alberto Quadrio Curzio and Marco Fortis*

1. The Foundation's aims and achievements

This volume is not meant to be a self-celebratory account of twenty years of work at Foundation Edison. Rather, the book focuses on the reasons for this initiative and documents what has been done. We will leave it to others to assess the results, in the hope that they will be coherent with our aims and convictions.

The title of the book *"Fondazione Edison. Venti anni per l'economia italiana in Europa. 1999-2019"* is a replication of the book *"La Fondazione Edison. Dieci anni per l'economia italiana in Europa"*¹ referring to the period 1999-2009. Both titles outline Foundation Edison's schedule of activities during the two time periods in order to evaluate its results.

As in every institutional presentation, the starting point is the article from the Statutes that enunciates the organization's aims, and thus we reiterate article 2:

«The Foundation's aim is to support, promote and carry out initiatives in the field of culture and scientific research which enhance interaction between the values of the local community and those of innovation, specifically in terms of applying the principle of subsidiarity.

The Foundation focuses on local business systems and districts and the dynamics of their interaction between small and medium-sized companies and large companies, also in relation to the phenomenon of internationalization.

The Foundation also fosters relationships between universities, research centres, large groups and small and medium-sized enterprises, also in the local context, with specific attention to the propulsive role of applied research in innovation.

Finally, the Foundation deals with infrastructure systems, in the broad sense and including environmental aspects, connected to local business networks with a focus on the provision of utilities and business financing, as well as education and services aimed at civil society, including those that affirm the principle of subsidiarity.»²

¹ A. Quadrio Curzio and M. Fortis, *Una Fondazione per le imprese, per il liberalismo socio-economico e per lo sviluppo (A foundation for companies, socio-economic liberalism and development)*, in M. Fortis and A. Quadrio Curzio (Eds.), *La Fondazione Edison. Dieci anni per l'economia italiana in Europa* (Foundation Edison. Ten years for the Italian economy in Europe), Foundation Edison book series, no. 17, Bologna, il Mulino, 2010, pp. 11-61.

² *Statute of Foundation Edison*: <http://www.fondazioneedison.it/it/fondazione/statuto>

The implementation of this article has been fully supported by the three subsequent presidents of Foundation Edison: Enrico Bondi (1999-2002), Umberto Quadrino (2002-2016) and Marc Benayoun (2016-). Cooperation with them has been fully satisfactory, due also to our common assessment of the real economy.

Two decades on we would not change anything in this article. At the time it inspired the birth of the Foundation and guided our activities, focused on conceptual categories which then became policies and operations aimed at subsidiarity, institutions and civil society, innovation and industrial systems, investment and infrastructure, and applied research or techno-science. But we have also focussed on history and current events, including the most recent ones. The motives for this are neither traditionalism nor an obsession with current events, but the awareness of continuous change. One could say that the "motto" of the Foundation is continuity, based on a belief in constant change. Those who consider this affirmation an oxymoron or a chimera would be right, but at the same time, this belief cannot deny economic history from the industrial revolution to the present day.

The over 40-year association of the authors of this presentation began when Fortis was Quadrio Curzio's student and the latter supervised Fortis's master's thesis on the topic "Global models and economic forecasting on a global scale". This is noteworthy because the theoretical framework of the authors of this presentation is still the same one that Quadrio Curzio applied in his research from the 1960s on and that he has continued to apply to the study of political economy. Fortis, on the other hand, has concentrated on applied economics. And this is why Quadro Curzio's name is listed before Fortis's as the authors of this presentation.

The complementarity between the two competences mentioned above has been a great advantage for Foundation Edison. In this way it has been able to respond to a multitude of objectives and constituencies as can be seen in the introduction to the 10-year volume entitled "Una fondazione per le imprese, per il liberalismo socio-economico e per lo sviluppo" (A foundation dedicated to companies, socio-economic liberalism and development). In that introduction we set out four paradigms that for us are fundamental: history and principles, facts and projects. We will take them up again here with the wording of that time, apart from some abbreviations, interpolations and emphasis (which will be put in brackets and italics for easy recognition, whereas the paragraphs here will have new titles, although they will take up the above-cited paradigms in various ways as twenty years on, we reaffirm and update them).

2. History and the facts

«When [...] Foundation Edison was established there was a clear awareness of its historical roots and its purpose: create an organisation for reflection and for proposals, well-rooted in the history of two great Italian companies (Montecatini and Edison, or Montedison), with the aim of improving our economic system by applying the principle of "socio-economic liberalism" or "communitarian liberalism". This statement, which encompasses Foundation Edison's founding paradigm, should be explained. The history of the two above-mentioned companies, which then fused into Montedison, was noteworthy: a history of business and technological innovation, as illustrated in the book *Il Gruppo Edison: 1883-2003*, edited for Foundation Edison by Marco Fortis, Claudio Pavese and Alberto

Quadrio Curzio (Bologna, il Mulino, 2003). This company's experiences contributed to the growth of Italy's most industrialised area, making its place in Europe beginning in the second half of the 19th century. These companies were based on the inspiration that applied science was a fundamental component for growth. The timing and modality of Italy's industrial development from then on went through [...] various phases and many paradigms changed. Throughout these changes the strong and weak points of the Italian economic paradigm were not always clear[...] as it featured mainly small and medium-sized enterprises and industrial districts. It is true that various economists had explained the strength of this Italian industrial model, often referring to it as "made in Italy", but it is also true that scepticism towards it was widespread among laissez faire economists. Just as their unfavourable attitude towards the role and usefulness of regional and sectoral trade associations. Indeed, liberal economists were sceptical if not downright radically critical of the Italian economic system which they considered basically inefficient due both to the trade organisations, considered mainly protectors of "rent positions", as well as the SMEs in the so-called "mature sectors".

Foundation Edison (initially called Foundation Montedison) thus set itself two objectives: to thoroughly investigate Italy's industrial system based on SMEs, districts and "made in Italy" industries in order to verify its strengths and weaknesses and to improve them, and to enhance the role of trade associations as aggregators for economic progress in fields otherwise inaccessible to smaller companies.

Against the background of these goals, two other observations were clear. Over time these also translated into objectives of progress for Italy's economic system.

The first background element is that of the European Union and more precisely the euro zone. Foundation Edison's founding coincided with that of the euro. The Europeanist convictions of those who launched Foundation Edison were solid and have remained so in the past ten years, as shown by the Foundation's many initiatives.

The second element is that of larger companies: small and medium-sized ones, which some call the "fourth capitalism" and at Foundation Edison were then called "columns", and the large ones, which Foundation Edison called "pillars", of which there are still only a few in Italy, mainly consisting of manufacturers of basic means of production that then become part of all other types of manufacturing. The most obvious reference here is to energy, Edison's product, which is in turn a "continuative" nexus between the Italian industrial system and the "external", i.e. international context, but also the "internal" context, that is, the nexus between companies.»³

3. The principles: liberalism and subsidiarity

«Thus Foundation Edison was conceived of as an interface to enhance the value of SMEs and Italian districts in their relationships with institutions (the EU, Italian federal and regional governments) and social entities (associations,

³ Cfr. note 1, pp. 11-13.

universities and research organisations) to increase the competitiveness of Italian companies on the domestic and international market and promote Italy's development.

Therefore Foundation Edison can be called a foundation for interfacing or interconnecting, in contrast to grant foundations or development/research foundations. It is certainly true that Foundation Edison does economic research, but this is strictly aimed at interfacing with the above-mentioned parties with a balanced combination of analysis and its application, made comprehensible and operational, without trying to compete with organisations whose primary or exclusive aim is to do research.

[In other words,] Foundation Edison has positioned itself as one of the various interfaces, albeit of a different nature, operating in Italy to increase companies' competitiveness. The role of company associations is particularly important and appreciated by the Foundation in terms of enhancing socioeconomic liberalism. Liberalism means freedom of initiative, whereas socioeconomic in its primary connotation means the role of social aggregation and in the second connotation, economic objectives. In synthesis, socioeconomic liberalism emphasises the goal of progress and development, whereby individual companies pursue the profit motive, at the same time providing a social contribution to their sector which goes beyond profit.

All this is in line with the principle of subsidiarity aimed at development.

Following this principle, Alberto Quadrio Curzio has carried out various studies, delineating the relationships between institutions, society and the economy (the market) or the positioning of the economy between institutions and society. This paradigm has been applied to Italy in Europe, to Europe, and to the parties operating in these contexts in the institutions, society and the economy. Part of the Foundation's activities has been to illustrate this, in the book *Valorizzare un'economia forte. L'Italia e il ruolo della sussidiarietà (Enhancing the value of a strong economy. Italy and the role of subsidiarity)*, edited by Alberto Quadrio Curzio and Marco Fortis and published in 2007 in Foundation Edison's book series put out by il Mulino. The topic was also addressed at the conference *Sussidiarietà ed economia. Nuovi paradigmi di sviluppo in Italia (Subsidiarity and the economy. New development paradigms in Italy)* (Milan, 28 June 2005) and attended by *[many businesspeople and analysts] [...]*.

From the point of view of its conceptual definition, subsidiarity can be seen from many aspects, two of which should be defined simultaneously in order to avoid a partial definition⁴. *[The common conceptualisation differentiates between]* vertical and horizontal subsidiarity: on the vertical axis we find the "actors" which form the basis for a "national system" such as Italy's, and on the horizontal axis are the "functions" that each actor carries out or should carry out in "producing goods".

In its vertical version subsidiarity involves certain institutions, including first and foremost the European Union, states, regions, and municipalities. This is based on two fundamental principles: the division of public authority among different institutions governing at different levels, and the definition of spheres of sovereignty and territorial

⁴ Cfr. A. Quadrio Curzio, *Sussidiarietà e Sviluppo (Subsidiarity and development)*, Milano, Vita e Pensiero, 2003.

and functional competences. The term vertical is intended to mean autonomy of these institutions within the hierarchy.

Society includes various types of organisations including organisations, foundations, associations, and universities, none of which is (or should be) motivated by profit.

An economy's basic units are companies, enterprises, banks and all the other organisations that operate in the market, including employees and autonomous workers as well as consumers and savers. Our attention focuses here more on the side of various sized companies' production and supply, typical of the Italian situation.

Finally, there are organisations that lie somewhere between society and the market and these include districts, which are groups of companies, and cooperatives⁵.

To understand the role of subsidiarity⁶ one of the fundamental problems is the "production of goods". What must be clarified in a context of space and time is the optimal division of production of goods between institutions and social and economic entities because there are many goods that can be produced by more than one of these types of organisations.

On the border between institutions and society the problem becomes quite complex. Often institutions and social organisations that produce the same goods can coexist, just as, with the development of a subsidiary democracy, goods that were initially produced by institutions can come under the competence of social organisations. Similarly, social and economic organisations that coexist can produce similar goods, but supply them in different ways. A deeper analysis of this topic would take us far from our actual aim, which is to present Foundation Edison.»⁷

4. The structural dynamics of economic systems

4.1 The historical-theoretical basis of structural dynamics

Yet Foundation Edison also has other founding elements. These, along with what has been said so far, only appear indirectly in regard to industrial systems and in particular, the real economy.

This was and still is about a body of economic theory on structural economic dynamics, changes in production structures, technological progress, resource scarcity, and innovation processes connected to this scarcity or

⁵ Cfr. note 1, p. 16; this contains a chart, not included here, depicting the networks of subsidiarity with reference to an essay by A. Quadrio Curzio, *Riflessioni sul liberalismo comunitario per lo sviluppo italiano (Reflections on communitarian liberalism for Italian development)*, in A. Quadrio Curzio and M. Fortis (Ed.s), *Valorizzare un'economia forte. L'Italia e il ruolo della sussidiarietà (Valorizing a strong economy. Italy and the role of subsidiarity)*, Foundation Edison book series, n. 10, Bologna, il Mulino, 2007, pp. 361-387.

⁶ A. Quadrio Curzio, *Sussidiarietà e sviluppo. Paradigmi per l'Europa e per l'Italia (Subsidiarity and development. Paradigms for Europe and Italy)*, Milano, Vita e Pensiero, 2002; A. Quadrio Curzio and M. Fortis (Ed.s), *Valorizzare un'economia forte. L'Italia e il ruolo della sussidiarietà (Valorizing a strong economy. Italy and the role of subsidiarity)*, Foundation Edison book series, n. 10, Bologna, il Mulino, 2007.

⁷ Cfr. note 1, pp. 13-17.

independent of it. These are the economic theories of structural and multisectoral dynamics that Quadrio Curzio dealt with beginning in the 1960s - the well-known theories of Leontief, Sraffa and Pasinetti - with one innovation: that of building structural dynamic systems in which change and technological progress could be determined by the barriers of (natural) resource scarcity and compatibility of techniques⁸.

Fortis also started with this theoretical background, publishing after his master's thesis an article on global models from Leontief to Meadows, in which the connection between scarcity and producibility was compared in terms of resource limits with specific empirical- quantitative references.

These theoretical themes, while not explicitly or only partially covered in the Foundation's activities, formed the foundation and orientation of some of the Foundation's conferences, especially those held jointly with the National Academy of Linceans. The complementarity of Quadrio Curzio and Fortis' competences continued and strengthened, with the former concentrating on aspects of political and institutional economy, and the latter focusing on applied and institutional economics.

In other words, the real economy and the dynamics of economic systems have been at the base of all the Foundation's activities. There has been a particular focus on entrepreneurial innovativeness and investment in techno-science. The market cannot be left alone with its mechanisms that are often and inevitably short-termist and therefore unable to give the initial impulse to those innovations that then generate the big waves of structural technological change and technical progress. There is thus a need for autonomous, publicly financed "laboratories" for research and development that aim to gradually decentralise the company system, supported by adequate incentives. These dynamics have become even more complex in the 21st century due to the powerful pressure of the digital revolution on the one hand, and on the other, the limits of increasingly urgent eco-compatibility and finally geo-globalisation, which has partly globalised and partly polarised the US and China. The EU and the European monetary union (EMU) have not yet managed to emerge from the dualism of these two great powers, as a third pole not of tripolarism but of multipolarism, a concept that must not be abandoned.

Many of these topics have been dealt with in Foundation Edisons' conferences, lecture series and publications, which will be analysed in more detail below. First however, we would like to point out just a few of Foundation Edison's recent initiatives.

⁸ For a recent review please see A. Quadrio Curzio and F. Pellizzari, *Political Economy of Resources, Technologies, and Rent*, in I. Cardinale and R. Scazzieri (Eds.), *The Palgrave Handbook of Political Economy*, London, Palgrave Macmillan, 2018, pp. 657-704; M. Baranzini, C. Rotondi and R. Scazzieri (Eds.), *Resources, Production and Structural Dynamics*, Cambridge, Cambridge University Press, 2015, which also contains M. Fortis's essay *Transformation and resources in the 'new' geo-economy*, pp. 346-362. This volume was dedicated to Alberto Quadrio Curzio by his colleagues (many of whom were also his students).

4.2 Industrial structures and systemic innovation.

Strategies and sustainability

An example of what was referred to above is Foundation Edison's twenty-ninth volume from the series published by il Mulino in 2018 and entitled "*Strutture industriali e innovazione sistemica. Strategie e sostenibilità*". This rather complex title could seem cryptic to some or pretentious to others. Yet for us this encompasses the Foundation's medium-long-term paradigm in that the theoretical basis appears clear and transparent, without being dominant or exhaustive.

This book traces the origins of the two conferences held in 2016 and 2017 jointly by Foundation Edison and the National Academy of Linceans, attended by economists, technologists and entrepreneurs.

The first conference focused on economic development, technology and industry while the second concentrated on production structures, technology and the economy.

The book has a strictly economic focus and explores the "new industrial revolution", not so much in terms of the transformation of one industrial sector alongside other sectors, but in terms of the structural transformation of innovation with consequences for all sectors of the economy.

The national production systems that derive from this can be more or less powerful, depending on the available structures and strategies pursued.

The research focuses mainly on Europe and Italy, in the awareness that the economic systems of these two areas exist in an open space of continuous innovation. Both Europe and Italy host champions of innovation and competitiveness and the book focuses on these actors, but also on the structural and strategic problems they face. Indeed, the largest area, Europe, needs to plan and realize meta-structures that give an impulse to meta-strategies for national innovation systems. From another point of view this means dealing with the problem of European meta-infrastructure and how to integrate national innovation systems into it.

The nature of the book's "recent synthetic model" allows us to introduce the volume's structure with the authors' indications. The first part on "structures and strategies" contains the article on "Economia strutturale e nuova industria (Structural economy and new industry) by Patrizio Bianchi and Sandrine Labory as well as Maria Savona's article "Per un rinascimento industriale europeo" (Towards a European industrial rebirth). The second part deals with "industries and companies" with the article "L'industria manifatturiera nel contesto europeo: il ruolo dei pilastri italiani" (The manufacturing industry in the European context: the role of the Italian pillars) by Marco Fortis and Monica Carminati. In the third part the topic of "research and technology" is addressed in Maurizio Masi's article "Università, tecnologia, imprese" (Universities, technology, companies), "Tecnoscienze per Industria n. 0" (Technoscience for industry no. 0) by Fabio Beltram and "Ricerca e innovazione in Italia" (Research and innovation in Italy) by Mario Pianta. The fourth part deals with the topic of "intangible capital and social infrastructure" with the

article "Capitale intangibile e competitività internazionale nell'economia della conoscenza" (Intangible capital and international competitiveness in the knowledge economy) by Cecilia Jona-Lasinio and Valentina Meliciani, and Edoardo Reviglio's "Le infrastrutture sociali in Europa: le necessità di rilancio" (Social infrastructure in Europe: the need for a relaunch). The fifth part is entitled "Prospettive complementari. Scienza, tecnologia, economia" (Complementary perspectives. Science, technology and the economy) and includes the articles "Accumulazione qualitativa, finanziarizzazione, produttività" (Qualitative accumulation, financialization, and productivity) by Alessandro Roncaglia, "Cambiamenti strutturali e innovazioni radicali" (Structural changes and radical innovation) by Roberto Scazzieri, "Quale scienza per lo sviluppo tecnologica" (Which kind of science for technological development) by Sergio Carrà, and "Un convegno innovativo su scienza tecnologia e economia" (An innovative conference on science, technology and economics) by Renato Ugo.

Some may notice that there are no articles by company managers among the authors. But in our opinion many of the articles reflect an often continuous dialogue between the book's authors and entrepreneurs and trade association representatives. Also because at nearly all the conferences that gave origin to the books, company managers and trade association representatives were almost always in attendance. Indeed, the 2016 conference, the proceedings of which form part of the volume, was held on the topic of "Economic development, technology and industry. An Italo-European perspective" with the active participation of Farmindustria and Anima; the previous conference in 2014, which gave rise to the volume "Il ruolo strategico del Sistema metalmeccanico italiano. Dai metalli alla mecatronica" (The strategic role of Italian engineering. From metals to mechatronics) number 25 in Foundation Edison's book series, saw the active participation, with presentations recounted in the above-mentioned volume, by representatives from the trade associations Assomet, Assocomplast, Ucima-Sistemi per Produrre, Federacciai, and Acimit. Representatives of individual companies also gave presentations. Frequent attendance by the same academic presenters (in addition to the two authors who have always edited the volumes and organised the conferences) but also others including two academicians from the National Academy of Linceans (Sergio Carrà and Renato Ugo) with long and prestigious professional careers in the field of industrial chemical research, made it possible to "capitalise on" individual entrepreneurs' and association members' contributions.

5. Dynamics and structural dualism in the Italian economy

5.1 The Pillars of the Italian Economy

Moving from the structural dynamics of economic systems to those of the Italian economy could appear to be difficult in spite of the qualifying geo-economic declination. But actually it is not, and this can be concretely demonstrated by an emblematic or paradigmatic study by Foundation Edison, edited by M. Fortis in 2016 and published by Springer. This is *"The Pillars of the Italian Economy. Manufacturing, Food & Wine, and Tourism"* summarised below:

«The book offers a detailed analysis of the key sectors in the Italian economy, with the focus especially on areas in which the economy excels, such as the automatic packaging machinery sector, pharmaceutical production, the food and wine industry, and tourism. The book explains how, contrary to widespread opinion, Italy is one of the world's most competitive countries in

foreign trade, as confirmed by a new index compiled by Foundation Edison that highlights its strengths and top traded products. The main characteristics of the Italian productive system, which is primarily composed of SMEs, are documented, and a map illustrating the importance of the various industrial districts is proposed, identifying their sectors of specialization, historical roots, and development. The principal steps in Italy's industrialization over the past 150 years are then outlined, in particular for the manufacturing system – the main driver of Italian exports. In depth analyses of the mechanical industry and the machinery sector follow. In combining meticulous analysis of statistical data with a historical perspective, this book will appeal to all with an interest in the Italian economy.»⁹

This brief and clear presentation is then detailed in seven chapters: 1) Italy's top products in world trade. The Fortis-Corradini index (Marco Fortis, Stefano Corradini and Monica Carminati); 2) Production districts and their relevance in the Italian economy: A few analytical profiles (Marco Fortis); 3) Development profiles of the Italian industrial system and its exports from the unification of Italy to the present: The case of mechanical engineering (Marco Fortis and Monica Carminati); 4) The automatic packaging machinery sector in Italy and Germany (Marco Fortis and Monica Carminati); 5) Italy: A new European pharmaceutical hub (Marco Fortis and Monica Carminati); 6) Food & wine: quality, tradition and innovation (Marco Fortis and Andrea Sartori); and 7) Italian tourism in the age of globalization (Marco Fortis and Cristiana Crenna).

Based on this analysis which systematically highlights how parts of the Italian economy have clear structural strengths, it is useful to point out two aspects, in two opposite, but necessary time frames: a step back in time to chapter 3 of the above-mentioned book on the 150 years of Italian unification, and a step forward in connection with the long economic crisis that affected Italy from 2009 to 2014.

5.2 Industry in the 150 years of Italian unification. Paradigms and leaders

The step back in time takes us to the book *"L'Industria nei 150 anni dell'Unità d'Italia. Paradigmi e protagonisti"* (*Industry in the 150 years of Italian unification. Paradigms and leaders*) which was published in 2012 as the twentieth volume in Foundation Edison's series. The book addresses:

«[...] a crucial topic which was the subject of a conference organized by Foundation Edison and the National Academy of Linceans in Rome on the 24th and 25th of November, 2011. The aim of the conference was to identify the leaders and paradigms that made Italy one of the most important industrialised nations in the world. Specifically, the volume deals with the history and role of crucial economic sectors in the Italian economy such as electricity, hydrocarbons, chemicals, ferrous metallurgy, automobiles, and in general the main sectors of "made in Italy" manufacturing including engineering, food, fashion, and design. Italy has achieved international success in many of these sectors even though in some, the first phase of significant development was followed by a decline that damaged the overall competitiveness of the Italian economic system. Thus we can draw lessons from the analysis on the policies necessary to improve our competitiveness. History, economic activity and politics

⁹ Back cover of the volume: M. Fortis (Ed.), *The Pillars of the Italian Economy. Manufacturing, Food & Wine, Tourism*, Springer, 2016.

are the three perspectives of this volume that coincides neatly with the 150 year anniversary of the unification of Italy, also showing how industry has played a significant role.»¹⁰

The introduction has been translated into English, French and German in the belief that the book can be of long-lasting relevance due to the topics it covers as well as the contributing authors, cited below.

The introduction by Marco Fortis and Alberto Quadrio Curzio on the paradigms and leaders of Italian industry is followed by five sections containing the analysis of the top experts of the history of Italy's real economy. The first part contains the articles "Risorgimento politico e Risorgimento economic" (Political risorgimento and economic risorgimento) by Carlo G. Lacaita and Andrea Silvestri's "La cultura politica e l'industria" (The polytechnical culture and industry). The second part, introduced by Sergio Carrà's foreword, is followed by the chapters "L'energia elettrica" "Electrical energy" by Claudio Pavese, and "Petrolio e gas. «Il volo del calabrone» ovvero la straordinaria storia dell'industria italiana degli idrocarburi dalla nascita dello Stato unitario" (Oil and gas. «The flight of the bumblebee» e.g. the extraordinary story of the Italian hydrocarbons industry from the birth of the unified state) by Alberto Clò. In the third part, Renato Ugo's foreword is followed by the chapter "La chimica" (The chemical industry) by Vera Negri Zamagni and "La siderurgia italiana" (The Italian ferrous metallurgy industry) by Margherita Balconi. In the fourth part, after Giovanni Zanetti's foreword comes the chapter "Il sistema dell'auto, i suoi paradigmi e i suoi protagonisti" (The automobile industry, its paradigms and leaders) by Giuseppe Berta and "Il contributo delle «4A» del made in Italy e dei distretti industriali nella storia dell'export italiano: il caso della meccanica" (The contribution of the «4Fs» of made in Italy and the industrial districts in the history of Italian exports: the case of mechanical engineering) by Marco Fortis and Monica Carminati. The fifth part consists of Alessandro Roncaglia's foreword followed by the chapter "L'industria alimentare italiana dall'Unità alla globalizzazione" (The Italian food industry from unification to globalization) by Patrizio Bianchi, "Il tessile e abbigliamento nella storia unitaria, tra preminenza e ricorsività" (The textile and clothing industry in the history of unified Italy, from pre-eminence to recursion) by Michele Tronconi and finally "Serie e fuori serie: la «Pila di Volta» del design italiano" (Series and one-offs: the «voltaic pile» of Italian design) by Andrea Branzi.

5.3 The real economy of the Mezzogiorno

The previous discussion could induce an inexpert reader to think that whoever is writing is unaware of the limits of the Italian economy. Actually we are well aware of them and throughout Foundation Edison's history we have never kept quiet about, underestimated or banalised Italy's serious limitations and dualisms, be they institutional, social or economic. But we have also always been aware that too many, including many experts, do not know about the strong points that we have clearly documented.

¹⁰ Back cover of the volume: A. Quadrio Curzio and M. Fortis (ed.'s), *L'industria nei 150 anni dell'Unità d'Italia. Paradigmi e protagonisti* (Industry in the 150 years of a unified Italy. Paradigms and leaders), Foundation Edison book series, no. 20, Bologna, il Mulino, 2012.

Let us consider one of the weakest points, and that is the dualism that remains between north and south. Indeed, whereas the north is integrated into European and international manufacturing, the south lives off of the local economy and has a high intensity of inefficient activities in the public sector that also cause extensive emigration of qualified people to the north or abroad. This loss of human capital is damaging over the long term for the Mezzogiorno. This situation has many causes and we therefore organised a conference on the Mezzogiorno, the proceedings of which is contained in number 23 of the Foundation Edison series, as follows:

«If Italy's southern regions were to adopt an industrial model, Italy could become like France or Germany. This is the strong assertion that the editors put forward to demonstrate the Italo-European nature of the Mezzogiorno in the Mediterranean. The volume focuses on two main topics. The first is that for the Mezzogiorno to develop, a strong «real economy» needs to be created in which organisational capacity and productive rationale would be applied to all sectors, avoiding the discretion of financial operations that begin and end in that culture of dependency that is so demeaning to qualified human resources in the Mezzogiorno. The second thesis is that the already existing strengths and points of excellence of the Mezzogiorno's real economy demonstrate its innovativeness, but they are not sufficient for an area of 26 million people. The real key to enabling the south to emerge is integrating agriculture, industry, tourism, logistics and infrastructure, in a Mediterranean perspective as well. These are the topics which are developed in this volume, but also theories about Italy's future development as a whole.»¹¹

This thesis was developed very carefully and in great detail. After our introduction to "La forza e la debolezza del Sud Italia" (The strengths and weakness of southern Italy), with an objective analysis that avoids the disparaging attitudes of some "northerners" as well as the self-pity of some "southerners", there are four sections to the book. The first section, entitled "Gli scenari. Passato e presente" (Possible situations. Past and present) contains the chapters "L'enigma del Mezzogiorno" (The enigma of the Mezzogiorno) by Carlo Trigilia, "L'evoluzione dell'economia reale. Miti e storia dell'industrializzazione del Mezzogiorno" (The evolution of the real economy. Myths and history of industrialisation in the Mezzogiorno) by Adriano Giannola and "Il ruolo dell'economia reale nel Mezzogiorno d'Italia" (The role of the real economy in Italy's Mezzogiorno) by Marco Fortis. The second section is dedicated to the "production sectors" with the following articles: "Perché l'industria è importante e cosa è più importante dell'industria" (Why industry is important and what is more important than industry) by Giovanni Iuzzolino, "L'agricoltura del Mezzogiorno tra vincoli strutturali e nuove funzioni" (Agriculture in the Mezzogiorno – structural limits and new functions) by Fabrizio De Filippis and Roberto Henke, and "Il turismo e il suo impatto sull'economia del Mezzogiorno" (Tourism and its impact on the economy of the Mezzogiorno) by Salvio Capasso. The third section deals with "company size" and contains the chapters "La persistenza della grande industria nell'Italia meridionale" (The persistence of large industries in southern Italy) by Federico Pirro and "Esiste una specificità dimensionale nel Mezzogiorno? Note ai margini di un dibattito" (Is there a specific company size in the Mezzogiorno? Notes on the margins of a debate) by Giulio Cainelli. The fourth part concentrates on "The geo-economy, logistics and technology" with the article "Il Mezzogiorno al centro del Mediterraneo: geo-economia e logistica come motori di sviluppo" (The Mezzogiorno at the centre of the Mediterranean: geo-economy and logistics as engines of

¹¹ Back cover of the volume: A. Quadrio Curzio and M. Fortis (ed.'s), *L'economia reale nel Mezzogiorno (The real economy of the Mezzogiorno)*, Foundation Edison book series, no. 23, Bologna, il Mulino, 2014.

development" by Massimo Deandreis as well as the title "Mezzogiorno e ricerca scientifica e tecnologica" (Mezzogiorno and scientific and technological research) by Luigi Nicolais.

Foundation Edison promoted this book on various occasions: in Naples (22 October 2014), Bari (18 March 2015) and Catania (9 April 2016), with an optimal reception, also due to the fact that many of the authors were and are directly involved in what is happening and could be a Mezzogiorno with adequate infrastructure at the centre of the Mediterranean.

6. Crisis and reform: the pitfalls of the Italian economy

6.1 Italy does not deserve another crisis

Italy not only suffers from north-south dualism, but also the congenital incapacity to carry out a thorough reform program. Such reforms would obviously have to be formulated and promoted by its institutions, in conjunction with the economy and society.

This was the case from 2009 to 2019 when the worst crisis since World War II materialised in the entire European Union as well as in the rest of the world, and especially in the developed countries.

In this period the authors of this article commented on the events of the crisis in many daily newspapers, specifically on Europe and Italy. Four volumes of collections of articles by Alberto Quadrio Curzio and Marco Fortis were published by il Mulino (numbers 21, 24, 26 and 28 of the series) as well as four collections of articles by Marco Fortis (numbers 14, 19, 27 and 30 of the series.)

In this paragraph, which follows Fortis' introduction to the volume "*L'Italia non merita una nuova crisi*" (*Italy does not deserve another crisis*) number 30 in the series, we would like to concentrate mainly on Italy, which paid a very high price in the crisis but managed to survive and recover, launching a season of reforms. These reforms, along with the strength of this country's real economy and the BCE's monetary policy, put us back on a path of growth. Unfortunately we are now regressing again due to an endemic Italian pathology whereby it seems that no one can become politically powerful enough to carry out the reforms needed to modernise a country, including reforming the process of governing.

Thus "*L'Italia non merita una nuova crisi*" (*Italy does not deserve another crisis*) is the eighth book that Foundation Edison is dedicating to the economic dynamics of the world, Europe and Italy during and after the great global financial crisis which began in 2008-2009. This time the analysis is focused mainly on Italy, which unfortunately has returned to the centre of international attention due to a combination of new factors of instability in public finances and a slowdown in economic growth since the elections of 4 March 2018.

These recent developments risk jeopardising the progress made with the reforms and the hard-earned economic recovery. Although some have long sustained the contrary, our economy emerged from the double domestic recession of 2008-2013 with considerable momentum. While this momentum was not sufficient to bring us back to pre-crisis levels, this level of growth had not been seen for quite some time. This especially considering the fact that we are the only large European country slowed by a large demographic decline, which in turn inevitably slows GDP by progressively reducing the perimeter of domestic demand. In other words, particularly from 2014 to 2017 Italy experienced a small but significant economic rebirth, based on the combination of three winning factors: the resilience and reactivity of the country's traditionally strong industries (above all manufacturing); policies implemented to support consumption, investment and employment; and important reforms, first and foremost that of the labour market.

6.2 The strength of the real economy and recovery vs. political uncertainty and financial risk

The book's first part deals with the solid aspects of our economy and the progressive recovery of the Italian production system during 2014-2017 and into the first part of 2018. A recovery boosted by private investment and the creation of new jobs, in addition to private consumption significantly bouncing back. Manufacturing played a key role in this phase, with important growth of value-added (long under-estimated by the same official statistics, and continuously revised up) and with marked expansion of exports (especially in 2017). The industries that led that recovery included means of transport, mechanical engineering and pharmaceuticals. In addition to manufacturing, however, domestic trade and tourism also made a very significant contribution to the positive reaction of our economy. We should also point out Italy's winning industries in international trade: by analysing of a series of indicators, these industries show how our economy is in first, second and third place for the best foreign trade balance for hundreds of products. Then the moderate progress of Italian exports in the last 10 years is analysed, along with the macro-sectors in which Italy is the most competitive in international trade and northern Italy's growing contribution to national exports.

The second part of the volume deals with the brusque reversal that the so-called policies of "change" are causing in our economy. The possible outcomes of these policies are cause for concern and are very uncertain. During the electoral campaign the two parties that won the last elections made "promises" that entail clear risks which clash with the objective status of Italy's public finances. Even the partial and re-dimensioned implementation of these "promised" measures led to an increased deficit whereby most of the resources were unfortunately absorbed by welfare-type measures as opposed to high multiplying investments. It should come as no surprise that the markets reacted badly.

6.3 A snapshot of the Italian economy

In view of the financial instability and possible regression Italy is now facing, the recent economic results achieved in our country risk being nullified. While recognising that pockets of poverty and unemployment generated by the

crisis still persist, especially in the Mezzogiorno, the figures that follow, taken from the above-cited introduction to Fortis's volume, show that recovery was underway.

1) *GDP per capita.* Compared to the 16 other western countries of the European Union, whereas Italy's total GDP grew at the lowest rate after Greece in the three-year period 2015-2017 while economic reforms were in full swing, in per capita terms it grew more than seven EU countries including the UK and France, and increased at approximately the same rate as Germany's GDP per capita.

2) *Per capita consumption.* Families' total consumption grew in Italy more than in France and almost on par with the Netherlands in the period 2015-2017. Per capita consumption of Italian families grew 5.3%, more than in 11 of the 16 other western EU member countries. Germany for example registered growth of only 3.7% and France, 3.3%.

3) *Jobs and employment.* From March 2014 to August 2018 employment in Italy increased by 1,200,000 units, of which 473,000 were permanent employees, and the number of unemployed people decreased by 880,000. The total unemployment rate, after reaching 13.1% in November of 2014, dropped for the first time to under 10% (9.7%) in August, 2018. Youth unemployment decreased from 43.3% in January, 2015 to 31% in August, 2018. Employment also grew in the Mezzogiorno (by approximately 385,000 people by the end of the second quarter of 2018).

4) *Industry, investment, and competitiveness.* The Italian system of enterprises never drew as much attention as it did in the period 2014-2017, with a series of targeted political economy and industrial measures deriving from the conviction that only companies could fuel the recovery of the economy and employment. These measures included company contribution tax relief for hiring permanent workers, tax breaks for hiring youth in the Mezzogiorno, a plan to boost exports and "made in Italy" products, refinancing the Sabatini law, "super" depreciation of investment in machines and transport, and tax credits for research and industrial plans/National Industry 4.0 which organically unified the above-mentioned measures for investment into a single framework, also introducing hyper-depreciation for Industry 4.0 technologies. The practical results of all these measures were clearly visible. Italian manufacturing grew more in the three-year period 2015-17 than that of France and the UK, and in two out of the three years (2015 and 2017) more than Germany's manufacturing.

5) *Taxes and fiscal pressure.* Another dominant topic in the economic debate is that of high fiscal pressure and tax reduction. These two factors are clearly elevated in Italy, also because of the burden of financing at least 4 points of GDP in annual interest on the public debt. As a percentage of GDP the fiscal pressure lessened from its historic high of 43.6% in 2013 to 42.2% in 2017. This is a record drop of 1.4 percentage points.

6) *Public finance.* Another recurring topic is that in spite of the BCE's help in the form of quantitative easing, very little was done to reduce the deficit and the ratio of public debt/GDP. It was also forgotten that thanks to the flexibility allowed by the EU, Italy could invest resources in its economic system to relaunch GDP, mainly by increasing consumption and private investment as well as boosting employment. This was all done while at the same time reducing the budget deficit/GDP ratio from 3% in 2014 to 2.4% in 2017, while the public debt/GDP ratio,

as reported by the Italian statistical office ISTAT, steadily dropped during the three-year period 2015-17, going from 131.8% in 2014 to 131.2% in 2017. This was an initial positive sign after a long period in which the public debt/GDP ratio had been constantly increasing.

This does not mean that Italy has restructured, but it does mean that our country has all the potential to do so, as long as the next one or two legislatures are able, in political and institutional terms, to make Italy once again a co-founder of the European Union with that approach of innovative solidarity clearly set out in our constitution. This approach should not be confused, as has occurred recently, with state planning or *laissez faire*, in that socio-economic liberalism is the application of the principle of subsidiarity.

7. The European Union, the Eurozone and Italy

In all Foundation Edison's analyses that directly or indirectly refer to geo-economic contexts, the EU has never been absent or neglected. This means that its centrality was and is an essential point for the two authors of this presentation. There are many reasons for this and in brief, they include the following convictions.

7.1 Europeanism: why and which kind

The first conviction is historical and regards the construction of the European Community and the European Union, founded and developed both to overcome the past disastrous armed conflicts between European countries as well as to fully enhance the value of European civilization – its art and culture, united by a common secular sentiment deriving from its Judeo-Christian heritage and a humanitarian approach towards the participation of all citizens in the democratic life of a continent striving for progress in solidarity.

The second is typical of the transition from the 20th to the 21st century: the increasingly intense changes underway, commonly called globalisation and digitalisation, have given rise to a real revolution with which small geo-economic entities such as single European countries are not able to keep up. Within this geo-economic and techno-scientific "revolution", the dimensional scale of space and time has changed.

The third conviction is that the process of European integration has advanced well but it is not complete, also because the two previous convictions have often been underestimated out of an excessive wait-and-see policy. On the one hand this has given impetus to national governmentalism and on the other hand to "fusions" which are unsuitable for Euro-democracy. The thesis that Quadrio Curzio has recently supported¹² is that Euro-democracy is a new, hybrid form in which federalism, confederalism and functionalism complement each other, creating a more

¹²See the article "Europa e Profili di Sviluppo" (Europe and profiles of development) by Alberto Quadrio Curzio presented on the occasion of the closing lecture of the 416th academic year of the National Academy of Linceans, attended by Italy's head of state Prof. Sergio Mattarella (Rome, 20 June 2019):

https://www.lincci.it/sites/default/files/A_QuadrioCurzio_Europa_e_profili_di_sviluppo2019_06_20.pdf

complex but also more flexible European construct made up of populations and states united by a project of innovative solidarity and dynamic subsidiarity.

7.2 The decade 2009-2019

During the ten years 2009-2019 the two co-authors of this presentation have been constantly aware of these macro dynamics. However, they have also not abandoned the concrete facts of a decade in which the European construction has run extremely high risks, perhaps the worst in its 60 year institutional history which began with the Treaty of Rome in 1957. The difficult task of Foundation Edison and the two co-authors in the past 10 years has been, on the one hand, to follow the events that have gradually developed, and on the other hand, provide indications that could be translated into orientations and even operational choices on both a European and Italian level, as well as on the level of "macro" (institutions) and "meso" (trade associations and district organizations).

Eight books have been published on these topics, deriving not only from the two co-authors' continuous publishing activities but also from conferences and participation in debates, producing requests from those confronted with urgent and difficult decisions. In what in the last decade has essentially been a continuous emergency, we have tried without presumptions to pursue a three-pronged strategy: to remember that European economic and institutional foundations were solid and therefore any hypothesis of dismantling Europe to create governmental micro-entities was wrong; that of helping to identify positive solutions to reinforce the foundations and reduce the impact of the 2009-2015 crises, taking into account the economic differences between European states and therefore the difficulty of mechanically applying iron-clad rules to all countries; and that of looking beyond, i.e. to the post-crisis period to come, for which it was necessary to be prepared with long-term projects, which for us (the co-authors and Foundation Edison) are measured in two five-year periods or one decade.

The need to be truthful to ourselves and to our readers is the reason for summarising the four volumes published on these topics, to which we will add a final comment.

7.3 Inside the crisis: 2009-2013

In the 2011 volume (no. 19) of Foundation Edison's series Marco Fortis wrote:

«Economic recovery, which began timidly in the second half of 2009 and continued into 2010, was mainly experienced by emerging economies. On the contrary, the developed world is coming out of the crisis more slowly, with unresolved problems including household indebtedness and the unhealthy conditions of the real estate sector and employment, with the risk of a possible relapse into recession. In 2010, adding to the crisis in the banking sector and industry, the sovereign debt crisis of European countries has arisen. This crisis extended to Italy and Spain in the summer of 2011, alongside the worsening, on the other side of the Atlantic, of the US public debt. In this rapidly evolving scenario, what is the future of the rich world, which has suddenly found itself poorer and more vulnerable?»¹³.

¹³ Back cover of volume: M. Fortis, *Dentro la crisi: 2009-2011. America, Europa, Italia (Inside the crisis: 2009-2011. America, Europe and Italy)*, Foundation Edison book series, no. 19, Bologna, il Mulino, 2011.

The two co-authors then turned to the discussion in 2013 of *"Debito e crescita. L'equazione della crisi"* (*Debt and growth. The equation of the crisis*) (n. 21):

«[...] The global economic situation is still serious, with an overall slowdown [...]. The feared risk of a double-dip recession in many developed countries has materialised. The crisis has extended from the private financial sphere to the real economy and on to a sovereign debt crisis mainly in Europe's "peripheral" states. On the one hand the EU and the EMU, which have chosen tough policies with positive and negative aspects, have not at the same time put in place measures to encourage growth. On the other hand, the BCE has played a fundamental role in regaining investors' trust in the future of the euro. Against this background Italy, which has also regained much credibility in Europe and internationally, has further tightened its public expenditures with positive results, but austerity has had a strong recessionary impact. Without European choices to boost growth however, Italy cannot reduce its public debt/GDP ratio and at the same time relaunch economic growth. Indeed, the equation between healthy budget balances and growth policies can only be resolved on a European scale.»¹⁴

The analysis of the crisis and its continuation in Europe led the two authors to conclude that the crisis could not be overcome solely by the term graphically defined by them as "rigour-recession". Thus it was hoped that the country would not have a lax policy regarding the country's public debt with its very vulnerable budget and public debt situation, but rather a policy of boosting growth.

7.4 Europe between recovery and imbalances

In the three volumes by Marco Fortis and Alberto Quadrio Curzio *"L'Europa tra ripresa e squilibri. Eurozona, Germania e Italia"* (*Europe between recovery and imbalances. The Eurozone, Germany and Italy*) no. 24 of 2014, *"Riforme, Ripresa, Rilancio. Europa e Italia"* (*Reforms, recovery, relaunch. Europe and Italy*) no. 26 of 2016 and *"Riforme e investimenti. Europa e Italia"* (*Reforms and investment. Europe and Italy*) no. 28 of 2017 we offer a comparison of alternatives that should be reconciled and not accentuated.

The starting point is that the crisis is beginning to be overcome, but that it has left a lot of debris that can only be cleaned up with expansionist policies and structural changes that do not violate the rigour of public spending in the countries most at risk. But these policies and changes must be propelled by those countries that emerged from the crisis stronger, as well as by EU initiatives.

In reference to the vulnerable countries such as Italy we believe that reform policies and control of public finances must continue alongside initiatives that push as much as possible for growth. We give a vote of confidence to the Renzi government which over time has been appreciated for its choices, particularly as carried out by its minister of economy and finance Padoan. We note, as pointed out above in paragraph 6, that Italy's recovery has begun, albeit at too slow of a pace to reduce the gap with other Eurozone countries.

¹⁴ Back cover of volume: M. Fortis and A. Quadrio Curzio, *Debito e crescita. L'equazione della crisi (Debt and growth. The equation of the crisis)*, Foundation Edison book series, no. 21, Bologna, il Mulino, 2013.

In regard to the most dominant country in the Eurozone and the EU, Germany, while we recognise the strength of its real economy we also point out that Germany has had advantages from the sovereign debt crisis due to the reduced cost of indebtedness. It is also noted that this country, with its budget surpluses, violated EU rules requesting an expansionist policy. If this had been enacted, the recovery of the EU including the peripheral countries would have benefitted enormously from a strengthened EMU.

Referring to the EU and the EMU, there were important innovations but all this was not sufficient due to the need to

«[...] resume and deepen the reforms, especially to relaunch investment, in that the EU cannot and must not be satisfied with its current level of growth. If it wants to truly reinforce its creative solidarity, the EU must take a qualitative leap and bring to completion two broad reforms that have only recently been drafted: the “variable geometry” reform which would be based on the Eurozone completed by various reinforcements (a common minister of the economy, budget and finance, etc.); and that of investment in tangible and intangible infrastructure. There are already initiatives that aim in this direction (the European Stability Mechanism, the Juncker plan, etc.), but we are still only at the outset. [...]»¹⁵

In any case if we were to determine who has done the most to maintain the Eurozone and therefore the European Union, we would not hesitate to mention Mario Draghi. He has supported European construction by enabling it to emerge from a very critical situation: on the one hand he demonstrated to representatives of institutions and the markets that the European Central bank is an important global actor, and on the other hand he was able to strengthen the EU's and the Eurozone's agency without damaging the institutions.

In the volumes mentioned in this paragraph we have summarised our careful observation of events from 2009 to 2019. Regarding Europe we have always focused on structural issues, not only as mentioned elsewhere in this essay and in the many volumes written on these aspects¹⁶, but also because we have dealt with these topics on numerous other occasions.

8. The Political Economy of the Eurozone

At this point we would like to mention an initiative that is separate from the Foundation Edison that deserves special attention. This is a book edited by Cardinale, Coffman and Scazzieri entitled “*The Political Economy of the Eurozone*” and published in 2017 by the prestigious Cambridge University Press.

¹⁵ Back cover of the volume: M. Fortis and A. Quadrio Curzio, *Riforme e investimenti. Europa e Italia (Reforms and investment. Europe and Italy)*, Foundation Edison book series, no. 28, Bologna, il Mulino, 2017.

¹⁶ For example: M. Fortis and C. Poli, *Le grandi infrastrutture di rete. L'Europa dell'energia: Francia e Italia (The large infrastructure networks. Europe and energy: France and Italy)*, Foundation Edison book series, no. 6, Bologna, il Mulino, 2004; M. Fortis and A. Quadrio Curzio (eds.), *L'Europa allargata, l'Est, l'Italia. Le politiche, l'economia, le imprese, (Enlarged Europe, the east, Italy. Policies, the economy, companies)*, Foundation Edison book series, no. 11, Bologna, il Mulino, 2007; P. Fariselli, M. Fortis and A. Quadrio Curzio, *Fondazioni, enti e reti nello spazio europeo della ricerca. La sussidiarietà in atto (Foundations, organisations and networks in the European research space. Subsidiarity in action)*, Foundation Edison book series, no. 13, Bologna, il Mulino, 2009; National Academy of Linceans, *Distretti Pilastrici Reti. Italia ed Europa (Networks of pillar districts. Italy and Europe)*, Proceedings of Lincean conferences, no. 203, Rome, Bardi Edizioni, 2004; A. Quadrio Curzio and M. Fortis (Eds.), *Research and Technological Innovation: the challenge for a new Europe*, Heidelberg, Physica-Verlag, 2005; A. Quadrio Curzio and M. Fortis (Eds.), *The EU and the Economies of the Eastern European Enlargement*, Heidelberg, Physica-Verlag, 2008.

This volume outlines an evaluation of the Eurozone that can also be connected to a structural perspective focused on the interrelations between institutions, society and the economy, the latter from a typical political economy viewpoint that takes history into account in order to investigate innovation in the broader sense of the term.

This book is the result of important interdisciplinary research on the Eurozone, and it proposes a new approach. The presentation of the book on the back cover clearly explains this:

«The Eurozone is not a mere currency area. It is also a unique polity whose actors span multiple levels (supranational, national, regional, sectoral) and pursue overlapping economic and political objectives. Current thinking on the Eurozone relies on received categories that struggle to capture these constitutive features. This book addresses this analytical deficit by proposing a new approach to the political economy of the Eurozone, which captures economic and political interdependencies across different levels of decision making and sheds light on largely unexplored problems. The book explores the opportunities afforded by the structure of the Eurozone, and lays the foundations of a political economy that poses new questions and requires new answers. It provides categories that are firmly grounded in the existing configuration of the Eurozone, but are a precondition for overcoming the status quo in analysis and policy».¹⁷

In the editors' excellent introduction, entitled "The Eurozone as a Political Economy Field"¹⁸, they summarise the 16 essays written by 16 scholars in a concise and balanced way.

Marco Fortis and Alberto Quadrio Curzio very much appreciate this work and they consider it a reference point, even though they may have different perspectives regarding the various essays. Our appreciation does not depend on the fact that the volume contains essays by Fortis and Quadrio Curzio, who take different approaches but are clearly complementary. The essay by Fortis provides a quantitative-qualitative analysis focusing on events in the manufacturing sector, that is, a large part of Europe's real economy. While the author avoids complex quantitative analysis, his results are still convincing. Quadrio Curzio's article is more oriented towards the institutional economic side with proposals that could be seen as provocative, but take into account both history and the need for a functional construction of the European Union that must provide itself with sources of EU financing for infrastructure investment.

On Marco Fortis's essay "The Impact of the Economic Crisis on European Manufacturing" the editors write:

«The recent Eurozone crisis had consequences on the structure of European industry with important effects on the political economy of the Eurozone. In his chapter on 'The Impact of the Economic Crisis on European Manufacturing', Marco Fortis addresses the state of Euro zone manufacturing from the perspective of the global economy. This point of view leads him to emphasize that the European Union and China are currently 'the two giants of world manufacturing', and that according to UNCTAD and WTO data, 'European Union countries are by far the most competitive in world trade'. In particular, Fortis notes

¹⁷ Back cover of the volume: I. Cardinale, D. Coffman and R. Scazzieri (Eds.), *The Political Economy of the Eurozone*, Cambridge, Cambridge University Press, 2017.

¹⁸ I. Cardinale, D. Coffman and R. Scazzieri, *The Eurozone as a Political Economy Field*, in I. Cardinale, D. Coffman and R. Scazzieri (Eds.), *The Political Economy of the Eurozone*, Cambridge, Cambridge University Press, 2017, pp. 1-34.

that, if one considers twelve key manufacturing sectors and for each of these sectors the three most competitive economies, 'in 2013 EU countries occupied 27 of the 36 best positions: Germany had the top nine positions, Italy eight, while France, Sweden, Finland, the Netherlands and Belgium had the remaining ten best positions'. This evidence is consistent with the strong extra-EU manufacturing trade surplus of EU countries, mostly due to the trade surpluses of Germany, Italy and France. EU manufacturing is thus a strongly competitive player in the global economy, and it cannot be argued that there is a serious competitiveness problem affecting European industry. However, EU manufacturing has suffered from declining activity levels in the 2008-2013 period due to contracting internal demand. A similar contraction has affected the EU construction sector. In Fortis's view, at the root of this dynamics is the complementarity between internal and external demand for manufactures, which makes 'a strong and dynamic European domestic market' a necessary condition for longterm sustainability of a competitive position in the global economy. In fact, macroeconomic policies leading to declining internal demand within the Eurozone have led to a contraction of intra-EU trade and could trigger a 'dangerous regression' of the large single market created within the Eurozone. The contrasting dynamics of extra-Eurozone trade and intra-Eurozone trade is revealing, as it is responsible for major losses incurred by the two most important manufacturing countries within the Eurozone (Germany and Italy). In fact, Eurozone's imports from Germany had been about 30 billion euros less in 2013 relative to 2008 and Eurozone's imports from Italy about 13 billion euros less in 2013 relative to 2008. At the root of the problem is, in Fortis's view, the 'big conceptual error' of lost European competitiveness. In fact, evidence provided by international agencies shows unquestionably the strong competitive position of many Euro zone countries, even if competitiveness of the manufacturing sector does not necessarily translate into competitiveness of the corresponding national economy. For this reason, micro-industrial data on industrial competitiveness, such as those provided by UNIDO's Competitive Industrial Performance Index and by the International Trade Centre (a joint agency of the World Trade Organization and the United Nations), should be used in lieu of interviews-based qualitative competitiveness indices such as those provided by the World Economic Forum (WEF) and the Lausanne-based IMD. The contraction of domestic Eurozone demand has triggered a dynamics of the Eurozone manufacturing sector that is unrelated to manufacturing competitiveness but has had a profound impact on the internal structure of the Eurozone economy. For instance, the composition of the value added of Eurozone manufacturing has dramatically changed, as the value added of German manufacturing industry exceeds in 2014 the combined value added of the manufacturing industries of Italy, Spain, and France. This situation is strikingly different from the one in 2007, when the value added of German manufacturing was 86 billion euros less than the combined value added of Italian, French, and Spanish manufacturing industries. Fortis's contribution concludes with an in-depth overview of the impact of the Eurozone's crisis on Italian manufacturing and with a final set of remarks concerning the growing, and ultimately self-damaging, imbalances that European macro policies have created within the real economy of the Eurozone.»¹⁹

On Alberto Quadrio Curzio's essay "Eurobonds for EMU Stability and Structural Growth" the editors comment:

«The [...] chapter by Alberto Quadrio Curzio ('Eurobonds for EMU Stability and Structural Growth') tackles the resilience and growth problems of the Eurozone by highlighting the interdependence between real and financial phenomena under conditions of structural change. A central theme of this contribution is the role that funds of accumulated wealth may have in channelling resources towards investment projects aimed at reinforcing the structural coherence of interdependent activities. This point of view leads Quadrio Curzio to examine Eurobonds as a strategic policy tool that one should assess by combining a political-institutional perspective with the analysis of conditions for a structurally integrated system at the European level. [...] The [...] proposal of a Euro-Gold-Development Fund issuing Gold Eurobonds, outlined by Quadrio Curzio between 2004 and

¹⁹ I. Cardinale, D. Coffman and R. Scazzieri, *The Eurozone as a Political Economy Field*, in I. Cardinale, D. Coffman and R. Scazzieri (Eds.), *The Political Economy of the Eurozone*, Cambridge, Cambridge University Press, 2017, pp. 22-23.

2008, was rooted in the interdependence between Eurobonds and real guaranties (the official gold reserves of EMU's States). This proposal aimed at achieving the triple objective of lowering the cost of sovereign debts of Eurozone member states, financing merger operations within the Eurozone banking and industrial system and strengthening the internal cohesion of the Eurozone through the funding of cross-national infrastructural projects. The 2010-2015 Eurozone sovereign bond crisis triggered a shift of emphasis to Stability bonds and Rescue bonds. [...] The European Stability Mechanism (ESM) established in 2012 has been so far the most important institutional development in the field of Eurozone sovereign debt crisis management. In fact, the success of its bond issues highlights the potential of a true European Financial Fund, which could undertake the function of a European sovereign fund aimed at both sovereign debt stabilization and the promotion of economic growth through funding of infrastructural projects aimed at reinforcing interdependence between the different components of the European economy. [...] Quadrio Curzio outlines in detail the prospects of Euro Union Bonds, [moving] from the belief that internal market and financial stabilization cannot by themselves achieve convergence between Eurozone member states, and that only a high-growth trajectory supported by interdependence-enhancing measures may be effective in making the structural dynamics of the Eurozone compatible with its internal cohesion. The chapter describes what could be the structure of a European Financial Fund, whose capital should consist partly of official gold reserves owned by Eurozone member states and partly of shares in companies active in the industrial and infrastructural sectors [...] conferred by Eurozone member states or by private entities in which the state is the majority shareholder [...]. The proceeds from the EFF's bond issues should be used partly as a redemption fund purchasing the member states' sovereign debt according to proportions coinciding with member states' quota in the EFF. The remaining proceeds from EFF's bond issues should be used to fund industrial and infrastructural projects deemed to be of strategic importance to the overall competitiveness and cohesion of the EU economy. [...] EFF's purchases of sovereign debt bonds could attract significant investment from outside the Eurozone and would likely lower the interest costs member states have to pay on sovereign debt. In the presence of convergence of debt to GDP ratios of all Eurozone member states to an agreed average ratio (not necessarily at 60 per cent level), the EFF's operations would add flexibility to the macro policy-making of member states, making it possible to balance restrictive policies in some member states with expansionary policies in others.»²⁰

9. Concluding remarks

We will not comment on current events because the time periods we have chosen are decades and within them, five-year period which coincide with both the Italian and EU legislatures. But also because in the economics of entrepreneurship as well as infrastructure, five-year periods are always considered a reasonable division of time.

The Italian legislature which began in 2018 has so far caused concern both in EU institutions and among international observers. Italy is undeniably experiencing a new period of uncertainty that we hope does not lead to a new recession or a worsening of the markets' view of our public debt that would cause a financial crisis, exposing us to new painful adjustments. In any case this would be catastrophic for the economy and for families' savings. Obviously no one desires this outcome because every Italian hopes that their country can maintain and increase its solid role in the European context.

²⁰ I. Cardinale, D. Coffman and R. Scazzieri, *The Eurozone as a Political Economy Field*, in I. Cardinale, D. Coffman and R. Scazzieri (Eds.), *The Political Economy of the Eurozone*, Cambridge, Cambridge University Press, 2017, pp. 25-27.

We do not wish to express a conclusive assessment of the government in office because Foundation Edison does not criticise if not constructively the brief period of a government, but it looks at the facts and often invites political and institutional representatives with no regard for party affiliation, as long as invitees discuss substance and not propaganda. An example is the presentation on April 8, 2019 of the volume mentioned in paragraph 6, in which Brunetta, Padoan and Tremonti participated, expressing a wide variety of political positions, also based on their own personal background and history. Just by skimming over the lists of active participants in our conferences one can see politicians from every alliance, although so far no one from the current government has attended even though we have optimal relations with some in the government.

Naturally Foundation Edison has many constituencies, some nearer and others farther away, but no less important. Nearly all have expressed not only appreciation but also trust in Foundation Edison's contribution to civil progress. We have chosen the qualification "civil progress" because it seems to encompass all other ideas of progress.

One of the Foundation's main constituencies is companies and trade associations. Edison was joined by numerous trade and regional commercial associations representing the traditions, innovation, and sectors in which Italian industry excels. Specifically, over time a growing number of members have joined from the top "made in Italy" sectors, i.e. the preeminent macro-sectors of our manufacturing system that Foundation Edison identifies with the paradigm "the 4As": Food-wine, clothing-fashion, home furnishings-interior design, and automation-mechanical engineering-rubber-plastic. These sectors represent the foundation of Italian manufacturing; they are the most specialised industries in the country and those that produce the most significant trade surplus abroad, which in 2018 in those specific sectors reached 137 billion euros. Furthermore, there is the very important involvement of regional commercial associations where the most important Italian manufacturing districts are located. These districts are the real engines of our economy; take for example the important districts producing taps, fittings and valves; plastic materials and machines for processing them, packaging machinery, textiles and clothing, shoes, and furniture. Thus special attention has been paid to these special sectors of the Italian economy, with monitoring of the index of export of the major industrial districts analysed by Foundation Edison.

Another constituency is that of academic economists. In this regard Foundation Edison sponsors the journal "Economia Politica. Journal of Analytical and Institutional Economics", founded in 1984 by Alberto Quadrio Curzio, who has always been its editor-in-chief. One of the objectives of the journal is to contribute to and restore a proper and productive relationship between economic theory, and institutional and applied economics, also paying attention to historical patterns. Since 2015 the journal has been co-published by Mulino and Springer with the intention of maintaining its roots and reinforcing the Italian scientific community's presence in the European and international economic debate. The journal is supported by its co-editors, associate editors and an advisory board whose prestigious members are internationally well known. The fact that il Mulino and Springer also publish the Foundation's books lends credence to the same among the most qualified national and international audience.

A third constituency is the National Academy of Linceans. Having set out an agreement that over 15 years has led to 12 conferences, is extraordinary because it has also re-established that historical connection with the techno-

science that the Linceans had with Giuseppe Colombo, one of the great protagonists of Italy's industrial history. For 15 years Quadrio Curzio had a leading role in this institution, whereby he drew on the historical roots of the Risorgimento and the republic of Italy²¹ in an effort to create a modern state in which all forms of science are important. Here we must also cite two industrial chemists, Sergio Carrà (author of the notable volume in our series entitled *"Ricerca scientifica e tecnologia. L'incerta alleanza"* (*Scientific research and technology. An uncertain alliance*) among other publications, and Renato Ugo (head of research and development at Montedison and president of the Donegani Institute). Both have supported our work with great intelligence and competence. But there are also other Lincean economists such as Sandro Roncaglia and Roberto Scazzieri.

Finally, there are foreign Lincean members or members who are active on a high level in international organisations. These include Amartya Sen (Nobel prize winner for economics), Bina Agarwal (Balzan prize winner for gender studies), Joel Mokyr (Balzan prize winner for economic history), and Paul David (Professor Emeritus and Senior Fellow at Stanford University). And finally the most famous Italian woman in the field of science: Fabiola Gianotti, the first woman to be director general of CERN. These four scientists are also members of the board of Economia Politica and Bina Agarwal is co-editor.

All these people have also participated in the cycle of conferences on *"Innovation, Institutions and Economy"* promoted and organised by Foundation Edison on the occasion of Expo 2015, also attended by two other economists and members of the board of Economia Politica, Michael Landesmann (also a Lincean member) and Jackie Krafft.

The last constituency is public opinion in the broad sense and industrial sectors in the narrower sense. Marco Fortis's efforts, attending dozens of meetings and trade association conferences, and his articles in the press, have been aimed at informing, not predicating. Just as this aim has motivated the preparation of statistical handbooks (booklets in Italian and English that can be downloaded from Foundation Edison's website) available since 2019, on the twentieth anniversary of the founding of Foundation Edison. The purpose is to create an easy and clear tool with which to consult topics on the Italian economy to bring to light an Italy (not always commonly recognised) that functions, has numerous strengths and thanks to the excellence of its production system is a worldwide leader in many areas. This knowledge has resulted in 3 handbooks so far: *"The Italian economy in figures"*, *"10 false myths about the Italian economy"* and *"Italy's strengths in agriculture"*.

All this is due to the full awareness of how important it is for Foundation Edison to spread knowledge, also with respect for those with different opinions, but always defending its own opinions, open to debate and when necessary, changing minds.

²¹ A. Quadrio Curzio, *The Genius Loci of the Linceans at Palazzo Corsini, Modena*, Franco Cosimo Panini Editore, 2018.

We conclude by recalling one of Einaudi's famous aphorisms²² which we have sought to follow in our work, and hopefully, at least in part, we have succeeded:

«First become informed, then discuss, then decide»

²² L. Einaudi, *Prediche inutili (Useless preaching)*, Torino, Einaudi, pp. 3-14, 1964