

Daniele Lavezzo*

* e-mail: dlave96@gmail.com

The Genoa Decree and Normative Acts Adopted after the Collapse of the Morandi Bridge in an Economic Perspective

DOI: 10.58183/pjps.04012022

Abstract

The fall of the Genoa bridge caused considerable damage to the economy of the city leading to repercussions for the north-western area of Italy. After a brief review of the costs caused by the bridge collapse, the legislation leading up to the Genoa decree, adopted immediately after the incident, has been analysed. The legal act contains an organic collection of specific norms to mitigate the economic consequences, with special regard to the manufacturing and maritime sector. The economic impact of the locally adopted provision is also the subject of analysis. Due to the exploratory nature of the work, particular attention has been paid to the role played by expectations and credibility of politicians' statements.

Keywords

Genoa Decree, economic expectations, political declarations





Introduction

The Morandi Bridge

he Morandi viaduct played a critical role in the transportation infrastructure of Genoa as it served as a vital link for an estimated 30,000 vehicles daily. One-third of these vehicles were commercial trucks coming from the Genoa harbour, while the rest were involved in transporting goods for maritime transfer through the city's infrastructure.¹ It follows that, first and foremost, the fall of the bridge caused tangible damages at the local level, as the collapse divided the city in half, provoking, for example, an increase in mobility time, reduced accessibility to the Genoa metropolitan area and a decrease in labour demand. As a consequence, the locals experienced a surge in the average time to reach their workplaces and come back home.² Cost increases were experienced also by national and international companies, as the Morandi Bridge was the juncture that allowed a quick connection between the motorways A10, A7, A26, and A12. It was exploited also by French and Spanish trucks, as it was considered a quick way to reach central and southern Italy. The significant economic importance of the Morandi viaduct prompted the state to intervene decisively and proactively. A detailed analysis of the legislation subsequently introduced, including the actions taken, is set out in detail below.

All significance for the local population, who used to refer to it affectionately as "The Brooklyn Bridge." This nickname derives from its creation in the 1960s as one of the many examples of the economic growth that was experienced by Italy and the city of Genoa. As stated by Tamburelli in one of his publications, the Morandi bridge was considered a symbol of modernity, "a dream of beauty", of a society with many aspirations, among which there was providing an internationalized image of the country. The bridge ensured the definition of this external imagery as it modelled after the one that was built in Venezuela by Rafael Urdaneta. The fall of the Morandi Bridge acquired international relevance as a result of a relevant emotional shock, so much so that both national and international media covered with scrupulous attention the hurtful event.

From the economic point of view, the fall of the Morandi Bridge can be assessed as an exogenous shock as it was an unforeseeable event that crowded out both investors and consumers. This article aims to reveal and analyse the countermeasures arising from the politicians' statements and

- 1. L. Beltrametti, A. Bottasso, et. al., *Effetti della caduta del ponte Morandi sull'economia*, "Rivista di Economia e Politica dei Trasporti", 2018, Vol. 2, pp. 1–6.
- 2. Effetti economici indotti dal crollo del viadotto Morandi, stime preliminari, https://www.confindustria.ge.it/images/Morandi_primi_risultati_def.pdf, (access 01.10.2019).
- 3. P.P. Tamburelli, *Quel ponte era bello*, https://www.ilfoglio.it/cronache/2018/08/22/news/quel-ponteera-bello-210607/, (access 01.10.2019).
- 4. Ibidem.





the policies they adopted after the collapse of the Morandi Bridge: in particular the Decree-Law 109/2018 ("Genoa Decree"), the most important normative act.

Literature Review

In the initial section, a comprehensive literature review will be presented to explore the concept of expectations and their significance in the economy. Subsequently, the relevance of public institutions will be examined through the analysis of two recent illustrative cases: the famous speech delivered by Mario Draghi, former Governor of the European Central Bank, with the iconic "Whatever it takes", which was labelled as credible by investors, and the case of instability created by the monetary policy of Federico Sturznegger, former Governor of the Argentinian Central Bank.

In the mainstream macroeconomic model, expectations have an effect on the demand for goods. For instance, an anticipated increase in inflation by economic agents may result in a decrease in the real interest rate, consequently stimulating economic activity through an increase in the demand for durable goods, such as investments, and non-durable goods, such as consumer goods. However, some scholars have argued that there is a low correlation between inflation expectations and desired consumption levels of households. This argument is contradicted by other studies that have found a higher correlation in various markets, such as the United States, Germany, and even in a cross-national study conducted in Europe. It should be noted that these studies may suffer from endogeneity issues, but, regardless, they tend to reinforce the assertions of mainstream literature regarding the relationship between expectations and the level of aggregate consumption.

It must be said that the abovementioned research can be affected by endogeneity;¹⁰ however, they tend to strengthen the assumptions of mainstream literature about the relationship between expectations and aggregate consumption. Moreover, short-term expectations can induce an increase in unemployment,¹¹ as a consequence of exogenous shocks, or volatility¹² in markets. This instability impacts consumers, so much so that in one of his works Roger E.A. Farner demonstrates how an economic policy targeting the reduction of volatility in financial markets would result in an overall increase in welfare.¹³ Insofar as information on productivity is available, this variable may be a source of a shock on prices as they are perceived by demand.¹⁴ If the reports at the disposal of investors are relevant to predict future demand, the news is not to be considered an exogenous element for investors.¹⁵ As a consequence, these expectations will influence investments. It has been further

- 5. O. Coibion, Y. Gorodnichenko, T. Ropele, *Inflation Expectations and Firm Decisions: New Causal Evidence*, "The Quarterly Journal of Economics", 2020, Vol. 135 (1), pp. 165–219.
- 6. R. Bachmann, T.O. Berg, E.R. Sims, Inflation Expectations and Readiness to Spend: Cross-Sectional Evidence, "American Economic Journal: Economic Policy", 2015, Vol. 7 (1), pp. 1–35.
- 7. K. Crump, S. Eusepi, A. Tambalotti, et al., Subjective Intertemporal Substitution, Federal Reserve Bank of New York 2015, https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr734.pdf, (access 01.10.2019).
- 8. L. Dräger, N. Giang, *Are Consumers' Spending Decisions in Line With an Euler Equation?*, "The Review of Economics and Statistics", 2021, Vol. 103 (3), pp. 580–596.
- 9. D.A. Ioana, G. Kenny, A. Reuter, Can consumers' inflation expectations help stabilise the economy?, https://www.ecb.europa.eu/pub/economicresearch/resbull/2021/html/ecb.rb210112~f5d940bff2.en.html, (access 07.01.2022).
- 10. O. Coibion, Y. Gorodnichenko, T. Ropele, *Inflation Expectations and...*, op. cit.
- 11. G.M. Angeletos, J. La'O, *Noisy Business Cycles*, "NBER Macroeconomics Annual", 2009, Vol. 24 (1), pp. 319–378.



demonstrated how fixing future fiscal policies plays a role in creating sustainable policies;¹⁶ all these elements will be reflected in some aspects of the Genoa Decree, especially for the countermeasures introduced to ward off the expected decrease in aggregate consumption.

nother important aspect in the context of the topic discussed in this article is the question of Athe credibility of politicians' declarations. Indeed, as advocated by Francesco Giavazzi and Carlo Carraro, when agents build their expectations by asking themselves about the future, they try to predict what can stimulate the authorities to make changes to their original plans. Credibility of the authorities each day acquires more importance, turning into a variable that influences the economic policy, and when declarations of politicians cannot be trusted inefficiencies are generated.¹⁷ Furthermore, there are academic works that confirm the fact that long-term correlations are to be found between the increase of costs incurred in an economic system and the lack of trust towards the authorities.¹⁸ A quite recent example, substantiating the abovementioned relationship, can be seen in the events that took place in Argentina over the last 4 years. When Mauricio Macri was elected president, he promised a series of reforms, hiring some reliable economists to achieve them. He declared an ambitious monetary policy, adopting an inflation targets that needed a cautious fiscal policy and the autonomy of the central bank. Nevertheless, in the first years of Macri's government, the primary deficit increased, reaching a level of 5.2%. In 2017, Federico Sturznegger, President of the Argentinian Central Bank, pressed by Macri, raised the inflation target, but immediately afterwards lowered the interest rates, with the consequence that Argentina lost its credibility on global markets. This initiated a vicious circle that led to a recession and the risk of a new Argentinian default on sovereign debt.¹⁹ On the contrary, a statement, that was valued as trustworthy by the markets, was the famous sentence pronounced by the President of the European Central Bank, Mario Draghi: "Whatever it takes."20 Some academic works have noted an enhancement of the health of those banks of the Eurozone that were under the threat of recession. ²¹ Draghi's statement also triggered a positive effect on the refinancing rate of the European Central Bank, on the value of the VIX coefficient and the market volatility.²² These last two indicators decreased even when the declared provisions were introduced in March 2015, with a delay of 18 months upon the original schedule.

The above context is important for the content and organisation of this article. Firstly, the estimated damage resulting from the collapse of the Morandi Bridge is carefully analysed, providing a basis for the subsequent examination of the remedial measures implemented by local and national authorities. The next section deals with an in-depth analysis of the Genoa Decree, with particular

- 12. N. Jaimovich, S. Rebelo, *Behavioral Theories of the Business Cycle*, "Journal of the European Economic Association", 2007, Vol. 5, No. 2/3, pp. 361–368.
- 13. R.E.A. Farmer, Animal Spirit, Animal Crises and Persistent Unemployement, Working Paper 17137, NATIONAL BUREAU OF ECONOMIC RESEARCH 2011, https://www.nber.org/system/files/working_papers/w17137/w17137.pdf, (access 07.01.2020).
- 14. G. Lorenzoni, *A Theory of Demand Shocks*, "American Economic Review", 2009, Vol. 99, No. 5, pp. 2050–2084.
- 15. N. Gennaioli, Y. Ma, A. Shleifer, *Expectation and Investment*, "NBER Macroeconomics Annual", 2015, Vol. 30, pp. 379–431.
- 16. T. Davig, E.M. Leeper, T.B. Walker, "Unfunded liabilities" and uncertain fiscal financing, "Journal of Monetary Economics", 2010, Vol. 57 (5), pp. 600–619.
- 17. F. Giavazzi, C. Carraro, *Teoria dei giochi e teoria della politica economica*, Dipartimento di Scienze economiche DSE 1989, pp. 1–55. DOI: 10.6092/unibo/amsacta/5340
- 18. M.D. Bordo, P.L. Siklos, Central Bank Credibility: An Historical and Quantitative Exploration, Working Paper 20824, NATIONAL BUREAU OF ECONOMIC RESEARCH 2015, https://www.nber.org/system/files/working_papers/w20824/w20824.pdf, (access 01.10.2019); G. Haberler, Notes on Rational and Ir-



reference to its economic implications and legislative objectives. Finally, concluding remarks are presented to summarise the key findings and insights presented in the article.

Estimation of the economic damage

The amount of the damage suffered following the fall of the Morandi Bridge²³ is hardly assessable, due to the presence of a relevant intangible component (such as a possible decrease in investments due to the loss of attractiveness of the Genoa city harbour due to heavy traffic in the city or a drop in economic activities due to inaccessibility of some areas), which five years later is not yet allowing for an accurate quantification of the damage. For this work, the estimate that Confindustria, in collaboration with the Chamber of Commerce and the University of Genoa, calculated a few months after the event is considered worth mentioning. It includes an attempt to determine the total amount of damage. In addition, a study carried out by some professors from the University of Genoa was considered, where the consequences of the collapse of the Morandi Bridge on port operations and tourism were assessed.

It is worth pointing out that, when assessing the Confindustria Genoa study, the premise of a possible underestimation of the damage should be taken into account, given that:

- The economic consequences to be borne by those who did not suffer direct damage, as a result of the fall of the viaduct, to movable or immovable property and/or did not receive an eviction order have been omitted.
- The direct and indirect damage, as well as the negative economic consequences to be borne by the companies that did not participate in the survey carried out by the Ligurian Chambers of Commerce within the required deadline, have not been taken into account.
- The indirect damage, as well as the negative economic impact suffered and to be suffered by regional and extra-regional agricultural enterprises, have not been taken into account.²⁴

However, this study allows for a partial account of the damages associated with the fall of the Morandi Bridge, which helps to understand how much money was brought upfront to face this emergency. Regarding the methodology used to assess the economic repercussions resulting from the collapse of the Morandi Bridge, there are two key components that have been taken into account.

rational Expectations (Reprint No. 111), American Enterprise Institute 1980; W. Fellner, Towards a Reconstruction of Macroeconomics: Problems of Theory and Policy, American Enterprise Institute for Public Policy Research 1976.

- 19. A. Velasco, *Argentina's Recurring Nightmare*, https://www.projectsyndicate.org/commentary/argentinarecurring-nightmare-by-andres-velas-co-2019-09, (access 07.01.2020).
- 20. Speech by Mario Draghi, President of the European Central Bankat the Global Investment Conference in London 26 July 2012, https://www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html, (access 07.01.2020).
- 21. V.V. Acharya, T. Eisert, et. al., Whatever It Takes: The Real Effects of Unconventional Monetary Policy, "The Review of Financial Studies", 2019, Vol. 32 (9), pp. 3366–3411.
- 22. M. Van Der Heijden, R. Beetsma, W. Romp, 'Whatever it takes' and the role of Eurozone news, "Applied Economics Letters", 2018, Vol. 25 (16), pp. 1166–1169. DOI: 10.1080/13504851.2017.1403555
- 23. See more: N. Cusumano, M. Siemiatycki, V. Vecchi, *The politicization of public-private partnerships following a mega-project disaster: the case of the Morandi Bridge Collapse*, "Journal of Economic Policy Reform", 2022, Vol. 25 (2), pp. 173–189. DOI: 10.1080/17487870.2020.1760101;



The first component focuses on the immediate consequences of the event itself, which had an impact on:

- enterprises located in the areas in the proximity of the bridge, called the "red zone" and the "orange zone" II,
- sealing off of the roads in Valpolcevera, the valley in which the Morandi bridge was located,
- temporary closure of the "Campasso" railway line connecting Genoa with Milan.²⁵

Secondly, the assessment also considers the implications of the lack of a bridge, resulting in:

- increased mobility times and costs for businesses and families,
- reduced accessibility of the Genoa metropolitan area,
- impacts on a wide geographical area.²⁶

As regards enterprises, it should be considered that of a total of more than two thousand enterprises (precisely 2018) reported direct or indirect damage 20.7% are located in either the red or orange zones, 69% are located in the Genoa metropolitan area, and the remaining ones are located in other areas of the province and of the country. Based on the available data, total damage was estimated at €422 million, with the commerce sector being the hardest hit at €121 million, followed by industry at €117 million, while shipping and transport at €95 million. These assessments substantiate the fact that longer travel time and decreased accessibility to the Genoa metropolitan area resulted in escalated costs for businesses. Notably, the industrial sector incurred significant losses, particularly in the orange/red zones, where damage was estimated at €95 million out of the overall assessment of €117 million. This observation underscores the adverse impact on the industrial sector in those specific areas. On the national scale, the sector that suffered high costs as a consequence of these events was the transport and shipping sector, with losses amounting to more than €97 million in total damage. It is worth noting that these estimates confirm the significant value of the motorway branch not only for the Genoa region, but also for the whole of northern Italy.

- F. Leccis, Public-Private Partnership: Lessons from Italy's Morandi Bridge Collapse, in: Handbook on Public Private Partnerships in Transportation, Vol II., eds. S. Hakim, R.M. Clark, E.A. Blackstone, Springer 2022, pp. 139–156.
- 24. Effetti economici indotti..., op. cit.
- 25. Ibidem.
- 26. Ibidem.
- 27. Ibidem.
- 28. Ibidem.
- 29. Ibidem.





In October 2018, a survey was launched by ensemble group of companies associated with Confindustria in Liguria. 109 companies took part in the inquiry (with a percentage of the sample calculated on the number of employees equal to 12%), 59 of which operated within the boundaries of the metropolitan area of Genoa, for which that percentage equalled 10%. The sample in the manufacturing sector, in turn, was calculated on several employees amounting to 15.5%. Comparing the situation to the most recent ISTAT data of 2015, Genoa registered a negative variation of total turnover by 1.3%, with exports decreasing by 0.6%. Furthermore, an increase in manpower costs and other accessory costs was identified, contributing to a decrease of added value by 2.2%. Considering the GDP of Genoa, the annual loss amounted to €53.5 million.³0 Besides the smaller volume of transactions, the reduction of the activities related to the port could have had an impact on the local GDP. Indeed, a study carried out by some Genoese scholars, based on the OCSE data relating to the 1998-2009 period and using a spatial econometrics model, showed that, ceteris paribus, GDP elasticity related to average port activity amounted to 0.022%. Therefore, the growth of port activity by 10% was associated with the overall GDP growth of 0.22%.³1

Indoubtedly, the main problem with the model is the data collection period. However, it is interesting to see how the decomposition of the effect can be seen within the model. At the local level, given that Genoa's provincial GDP amounted to €29.3 billion, a contraction in port activity would consequently determine a contraction in the GDP by €8.6 million, assuming elasticity of the local GDP with respect to traffic at the level of 0.003. The most consequential ripple effect of the events that took place in Genoa would affect the north-western area of Italy, where, calculated with an elasticity of 0.019, a decrease in maritime traffic in Genoa would result in a reduction of the GDP in the north-western area of Italy (excluding Genoa) by €980 million. The authors of the study emphasise, however, that the calculations might have been limited by such factors as heterogeneity within local areas and the possibility that there was only a correlation between port activity and local economic activity. The hypotheses of the shrinkage of port activity were confirmed by a 6.2% decrease in the number of containers deboarded in the port in the period between August and December. The string of the string activity and December. The number of containers deboarded in the port in the period between August and December.

The last relevant domain for this article is relative to scenarios of impact on consumption and trade models. As regards the commuting time from home to work, 69.5% of the sample, consisting of the data collected from 1561 workers employed by companies associated with Confindustria Genova, reported an increase in transit time, with a weighted average of 64 minutes per person per day. Assuming a monetary value for each hour spent in traffic jams of ≤ 10 , it can be estimated that

30. Ibidem.

31. L. Beltrametti, A. Bottasso, et. al., *Effetti della caduta...*, op. cit.

32. Ibidem.

33. Statistiche Autorità di Sistema Portuale del Mar Ligure Occidentale, https://www.portsofgenoa.com/components/com_publiccompetitions/includes/download.php?id=607:n%20otatraffici-2018.pdf, (access 02.10.2019).





the negative impact amounted to ≤ 64 million +/- 20%.³⁴ Also, the estimate relative to weighted consumption propensity is negative, and more precisely it is assumed to have been reduced by 0.3 %. The latter, considering ISTAT data relative to families in the municipality of Genoa (293 thousand) and the average yearly expenditure for a family ($\le 30,732$), would trigger a reduction in consumption that could be appraised at ≤ 27 million, with the same oscillation as was mentioned previously.³⁵ It is necessary to underline that although the sample was evaluated as extremely small (1561 responses), the share of answers from the enterprises associated with Confindustria Genova was considered sufficient. As a result of the abovementioned, a great discriminant is placed on data, which is provided with a consistent span of variability, yet provides a useful picture of the situation.

Ultimately, also the labour market was struck by the fall of the Morandi Bridge. although in the first half of 2018 it registered a significant increase in hiring, signalling a consistent recovery of the demand for labour. In total, there was a decrease of 2% in signings by employers in 2018 as compared with 2017. Such a situation was verified as a result of an average contraction of the demand for labour by 22.5%, with the peak of this descent registered in August, when the decrease in hiring was estimated at 42.5%.³⁶

Immediate counter-measures

In the following section of the article, a selection of relevant statements made by local and national authorities are analysed, together with the measures they introduced before the 'Genoa Decree'. The author of this paper is convinced that the response to the bridge collapse was immediate and concrete. In this context, worth noting is the statement of the Mayor of Genoa, Marco Bucci, in which he eloquently stated that "Genoa is not on its knees, it must follow with the growth process that was started before this day." In the aftermath of the bridge collapse, these words, spoken shortly afterwards, served as a statement to reassure investors and stakeholders in port activity. This was a necessary step, as the port of Genoa was facing stiff competition from Marseille and Livorno, and there were concerns about the potential contraction of local port activity due to increased costs resulting from congestion following the bridge collapse. These words were intended to mitigate such possibilities and address the immediate challenges brought about by the event.

Pollowing the bridge collapse, Prime Minister Giuseppe Conte arrived in Genoa with his deputies Interior Minister Matteo Salvini and Labour and Growth Minister Luigi di Maio. On the evening of 14 August, they held a meeting in the prefecture of Genoa to assess the situation, including meas-

- 34. Effetti economici indotti..., op. cit.
- 35. Ibidem.
- 36. Ponte Morandi: 422 milioni di danni alle imprese, crollano le assunzioni (-22,5%), https://www.consulentidellavoro.it/home/storico-articoli/10864-ponte-morandi-422-milioni-di-danni-alle-imprese-crollano-leassunzioni-22-5, (access 03.10.2020).
- 37. Genova, crolla ponte Morandi. Il sindaco Bucci: "Le colpe? Non spetta a noi", https://www.youtube.com/watch?v=Y7Ff_D9OgQ4, (access 03.10.2020).





ures to help evacuees, the number of people affected by the collapse and the organisation of recovery efforts. As the meeting ended, the Prime Minister stated during an interview that he had already received solace from European authorities and possible help for rescue attempts, highlighting his refusal since "there was no need to ask for help." From an economic perspective, the statement is symbolic, demonstrating the strong alignment between local and national authorities and reinforcing the Genoa Mayor's message of resilience to the whole country and stakeholders with interests in Genoa. It conveys the city's commitment to investing in the future and fosters a sense of unity and determination in the midst of difficult circumstances.

The day after the collapse, the concreteness and promptness of moving the action by local and national authorities found further confirmation in the resolution of the Council of Ministers' meeting held in Genoa. The allocation of $\in 5$ million for the first interventions⁴⁰ and the immediate declaration of the state of emergency for the municipality of Genoa were decided there.⁴¹ In Italy, these resolutions are put into practice when "A natural disaster or any event related to human activity occurs on the territory of Italy."⁴² A state of emergency allows for a prompt allocation of funds for first interventions, and afterwards, an increase of the already received money upon requests by delegated commissioners.⁴³

On 18 August 2018, another significant moment occurred, with both a symbolic and organizational meaning, as on the morning of that day the state funerals of the 43 victims took place. Even if from the purely economic point of view no significant effects could be registered, the moment was a relevant occasion for the production and consumption of relational goods, which are developed after meetings and enhance social capital.⁴⁴ The latter cannot be quantified in economic terms, but it strengthens the credibility of the city's image as "not bending its knees." This is followed, in the afternoon, by a second meeting of the Council of Ministers, where it was decided to allocate further €28 million to implement urgent interventions related to alternative mobility, optimisation of the transport system and granting accommodation to those people who had been forced to leave their original places of residence due to the risk of further collapse of parts of the bridge.⁴⁵

It is worth noting that the issues concerning the intention to withdraw the highway concession from Atlantia S.P.A., responsible for the routine and emergency maintenance of the Morandi Bridge, have been omitted in the analyses. It is worth noting, however, that, in addition to the aforementioned actions, controversy arose during that period regarding responsibility for the collapse of the bridge.

- 38. PREFETTURA UFFICIO TERRITORIALE DEL GOVERNO DI GENOVA, Crollo del ponte Morandi: aggiornamento delle ore 14.00 del 24/08/2018, http://www.prefettura.it/genova/news/Comunicati_stampa:Crollo_ponte_morandi:_aggiornamento_del_19.08.2018-7135043.htm, (access 03.10.2019).
- 39. Genova, crolla ponte Morandi. Il premier Conte: "Ora piano straordinario per monitoraggio infrastrutture", https://video.repubblica.it/dossier/genova-crollo-ponte-morandi/genova-crolla-ponte-morandi-il-premier-conte-ora-piano-straordinario-per-monitoraggio-infrastrutture/312450/313084 (access 03.10.2020).
- $40.\,\mathrm{Articolo}\ 4,\,\mathrm{Gazzetta}\ Ufficiale,\,\mathrm{Delibera}\ del\,\,\mathrm{Consiglio}\ dei\,\,\mathrm{Ministri}\ del\,\,15$ agosto $2018,\,[\mathrm{Article}\ 4,\,\mathrm{Official}\ \mathrm{Journal},\,\mathrm{Resolution}\ of\ the\,\,\mathrm{Council}\ of\,\,\mathrm{Ministers}\ of\,\,15\,\,\mathrm{August}\,\,2018],\,\mathrm{https://www.gazzettaufficiale.it/eli/id/2018/08/16/18A05521/}\,\,\mathrm{SG},\,(\mathrm{access}\ 04.10.2019).$
- 41. Articolo 1, Gazzetta Ufficiale, Delibera del Consiglio dei Ministri del 15 agosto 2018, [Article 1, Official Journal, Resolution of the Council of Ministers of 15 August 2018], https://www.gazzettaufficiale.it/eli/id/2018/08/16/18A05521/SG, (access 04.10.2019).
- 42. Dipartimento della Protezione Civile, *Stati di Emergenza*, https://servizionazionale.protezionecivile.gov.it/it/attivita/emergenza, (access 03.10.2019).



In this context, however, it is meaningful to point out that one of the measures immediately declared by Prime Minister Conte⁴⁶ after the bridge collapse is the setting up of "Agenzia nazionale per la sicurezza delle ferrovie e delle infrastrutture stradali e autostradali"^{III} (ANSFISA)⁴⁷ to screen the security of highway infrastructure, a measure implemented in the "Genoa Decree."

The "Genoa" Decree

The Genoa Decree-Law 109/2018, "Disposizioni urgenti per la città di Genova, la sicurezza della rete nazionale delle infrastrutture e dei trasporti, gli eventi sismici del 2016 e 2017, il lavoro e le altre emergenze" il sostegno e la ripresa economica del territorio del Comune di Genova" interventi urgenti per il sostegno e la ripresa economica del territorio del Comune di Genova" has been discussed; the second one "Sicurezza della rete nazionale delle infrastrutture e dei trasporti" has not been analysed because it does not deal with Genoa's issues. However, I want to stress the importance of this section due to its greater emphasis on maintenance of infrastructure contemplated by the legislators. For the same reason, the last part of the Decree, "Interventi nei territori dei Comuni di Casamicciola Terme, Forio, Lacco Ameno dell'Isola di Ischia interessati dagli eventi sismici verificatisi il giorno 21 agosto 2017" Il 49 has not been discussed.

The first important point of the decree concerns the appointment of an Extraordinary Commissioner for the reconstruction, "to guarantee, as a matter of urgency, the activities for the demolition, removal and disposal of the resulting waste material, as well as the design and reconstruction of the infrastructure as well as the restoration of the related road system." The term of office is twelve months, and the same person cannot hold the office for more than three terms. ⁵⁰ The Extraordinary Commissioner operates "in derogation of any provision of non-criminal law ("legge extra-penale"), without prejudice to compliance with the mandatory obligations deriving from membership in the European Union." This was criticised by the president of "Associazione Nazionale Anti Corruzione" (ANAC), Raffaele Cantone, due to the derogation of the Anti-Mafia Code; ⁵² unfortunately, this criticism was justified because, during the demolition of the bridge, one of the firms was excluded owing to Mafia infiltration.

A rticle 1 (6) of the Decree provides for a fundamental rule about payment for the new bridge: it is laid down that the motorway operator at the date of the event, due to their responsibility for the safety and functionality of the infrastructure and thus also responsible for the event, must reimburse the costs of the reconstruction of infrastructure and restoration of the related road system.⁵⁴ Another

- 43. Ibidem.
- 44. B. Gui, Non profit e beni relazionali: un rapporto privilegiato, "Impresa socjale", 2003, Vol. 67, pp. 47–56.
- $45.\,Articolo\,1,\,Gazzetta\,Ufficiale,\,Delibera\,del\,Consiglio\,dei\,Ministri\,del\,18\\ agosto\,2018,\,[Article\,1,\,Official\,Journal,\,Council\,of\,Ministers\,Resolution\,of\,18\\ August\,2018],\,\underline{https://www.gazzettaufficiale.it/eli/id/2018/09/13/18A05921/SG,},\,(access\,04.10.2019).$
- 46. Genova, crolla ponte Morandi. Il premier Conte..., op. cit.
- 47. Gazzetta Ufficiale, Decreto-legge 28 settembre 2018, n. 109, [Official Journal, Decree-Law No. 109 of 28 September 2018], https://www.gazzettaufficiale.it/eli/id/2018/09/28/18G00137/sg, (access 04.10.2019).
- 48. Ibidem.
- 49. Ibidem.
- 50. Articolo 1 (1), Gazzetta Ufficiale, Decreto-legge 28 settembre 2018, n. 109, [Article 1 (1), Official Journal, Decree-Law No. 109 of 28 September 2018], $\frac{https://www.gazzettaufficiale.it/eli/d/2018/09/28/18G00137/sg, (access 04.10.2019).$
- 51. Articolo 1 (5), Gazzetta Ufficiale, Decreto-legge 28 settembre 2018, n. 109, [Article 1 (5), Official Journal, Decree-Law No. 109 of 28 September 2018], https://www.gazzettaufficiale.it/eli/



important issue concerning safety: to face an emergency, Regiole Liguria^{IX}, Citta Metropolitana di Genova^X and Comune di Genova^{XI} could hire, for a predetermined period, the personnel needed for the activities of civil protection, local police and for support, within the limit of 250 people⁵⁵ and with the budget of $\le 3,5$ million in 2018 and ≤ 10 million in 2019.⁵⁶

Subsequently, Articles 3, 4, 8 and 9 of the Decree introduce fiscal countermeasures to limit the negative economic effects of the collapse of the Morandi bridge. The first measure concerns exemption from property tax in the red zone. The first exemption regards income derived from leasing buildings that received an eviction order due to the event: it would not be subject to personal income tax and corporate income tax until 31 December 2020.⁵⁷ The beneficiaries of the second exemption were private subjects, owners or title holders or residents or tenants, whose headquarters or operative offices had been damaged by the event, verified by sworn appraisal: the abovementioned articles laid down that contributions and compensations related to the collapse, of any nature and regardless of how they were accounted for, were not subject to income tax and IRAP for natural and legal persons. For the same beneficiaries, it was provided that applications, contracts and documents presented to public administration were not subject to stamp duty and registration fee until 31 December 2020.⁵⁸ Finally, the buildings demolished and unusable as a consequence of the collapse were not subject to inheritance tax, mortgage and land registry fees and stamp duty.⁵⁹

The Genoa Decree concerns also support for enterprises suffering economic damage 60 by ordering that firms which faced a reduction in invoicing as compared with the previous year would receive the entire amount of this sum, up to the maximum of $\le 200,000$. It was also disposed that freelance professionals, artisans and merchants with the headquarters or registered office in the area could request compensation. 61 The total sum that could be requested amounted to ≤ 5 million for the year $2018.^{62}$

Furthermore, to assist all companies with the headquarters or registered office in the città metropolitana di Genova that suffered at least a 25% reduction in invoicing in the period from 14 August 2018 to 30 September 2018, as compared with the same period of 2017, and for new firms established by 31 December 2018 in the same area, a special economic zone was established. The facilities included exemption from value-added tax for each taxation period up to the limit of €100.000; the same measure was introduced for IRAP (Imposta sulle attività produttive del valore della produzione netta) up to the maximum of €200.000 for each period, and the municipal property tax for real es-

id/2018/09/28/18G00137/sg, (access 04.10.2019).

- 52. A. Tripidi, Cantone: lacuna nel decreto Genova, la mafia può infiltrarsi, https://st.ilsole24ore.com/art/notizie/2018-10-10/crollo-ponte-cantone-lacuna-decreto-genova-puo-infiltrarsi-085108.shtml, (access 07.01.2020).
- 53. M. Preve, Cantiere ponte Morandi, bloccata dall'antimafia una delle imprese, https://genova.repubblica.it/cronaca/2019/05/14/news/cantiere_ponte_morandi_bloccata_dall_antimafia_una_delle_imprese-226232516/(access 03.10.2019).
- 54. Articolo 1 (6), Gazzetta Ufficiale, Decreto-legge 28 settembre 2018, n. 109, [Article 1 (6), Official Journal, Decree-Law No. 109 of 28 September 2018], https://www.gazzettaufficiale.it/eli/id/2018/09/28/18G00137/sg, (access 04.10.2019).
- 55. Articolo 2 (1), Gazzetta Ufficiale, Decreto-legge 28 settembre 2018, n. 109, [Article 2 (1), Official Journal, Decree-Law No. 109 of 28 September 2018], https://www.gazzettaufficiale.it/eli/id/2018/09/28/18G00137/sg, (access 04.10.2019).
- $56.\,Articolo\,2\,(2),\,Gazzetta\,Ufficiale,\\Decreto-legge\,28\,settembre\,2018,\,n.\\109,\,[Article\,2\,(2),\,Official\,Journal,\\Decree-Law\,No.\,109\,of\,28\,September\\2018],\,https://www.gazzettaufficiale.it/eli/id/2018/09/28/18G00137/sg,\,(access\,04.10.2019).$



tate located in the zone. Furthermore, it provided for exemption from social security contributions, except for compulsory health insurance, paid by employers on wages and salaries. The abovementioned measures could be applied also to self-employed persons who carried out their activities in the special economic zone. Article 9 of the Decree deals with a specific issue for "Sistema Portuale del Mar Ligue Occidentale": it provides for a subsidy of 3% of value-added tax on imported items for each harbour up to the maximum of €30 million per year. 4

To conclude, the abovementioned articles represent a clear Keynesian fiscal expense policy: with a decrease in taxation on firms and people, aggregate consumption increases and this has a positive impact on aggregate demand. First, the legislator aimed to contain any possible shrinkage of investments due to the increase in transaction costs for firms operating in the zone. In addition, a potential decrease in private consumption, estimated at &27 million according to a study by Confindustria Genova, 65 was considered at the same time. This decrease was attributed to redundancies in companies due to the economic losses and extended travel times, which imposed additional costs on families and reduced income available for consumption.

Conclusions

Today, it is still not possible to quantify the economic consequences due to the lack of accurate data to build a significative counterfactual sample; furthermore, the appointment of the Extraordinary Commissioner was the object of political discussion and therefore it was adopted subsequently by the Prime Minister's decree. Thus, no casualty relationship between the implemented countermeasures and effects will not be discussed, but I will stress some significant conclusive points.

The first one is the importance of the Genoa Decree that addressed efficiently and very rapidly the economic losses that some areas of Genoa City would have suffered, with particular attention to economic activities as demonstrated by the immediate suspension of some taxes and the subsidies granted to companies operating in the orange and red zones. I would like to mention especially Article 9, which provides for subsidies to the Sistema Portuale del Mar Ligue Occidentale, the company that operates in the Genoa harbour, because it is a clear demonstration of the good knowledge that the legislator had about all economic implications of the fall of the viaduct.

The second one is the strong resilience that was shown by the Genoese after the fall of Morandi Bridge and that created social capital, that concurred with the reassurance for investors and

57. Articolo 3 (1), Gazzetta Ufficiale, Decreto-legge 28 settembre 2018, n. 109, [Article 3 (1), Official Journal, Decree-Law No. 109 of 28 September 2018], https://www.gazzettaufficiale.it/eli/id/2018/09/28/18G00137/sg, (access 04.10.2019).

58. Articolo 3 (3), Gazzetta Ufficiale, Decreto-legge 28 settembre 2018, n. 109, [Article 3 (3), Official Journal, Decree-Law No. 109 of 28 September 2018], https://www.gazzettaufficiale.it/eli/id/2018/09/28/18G00137/sg, (access 04.10.2019).

59. Articolo 3 (4), Gazzetta Ufficiale, Decreto-legge 28 settembre 2018, n. 109, [Article 3 (4), Official Journal, Decree-Law No. 109 of 28 September 2018], https://www.gazzettaufficiale.it/eli/id/2018/09/28/18G00137/sg, (access 04.10.2019).

60. Articolo 4, Gazzetta Ufficiale, Decreto-legge 28 settembre 2018, n. 109, [Article 4, Official Journal, Decree-Law No. 109 of 28 September 2018], https://www.gazzettaufficiale.it/eli/id/2018/09/28/18G00137/sg, (access 04.10.2019).

61. Articolo 4 (1), Gazzetta Ufficiale, Decreto-legge 28 settembre 2018, n. 109, [Article 4 (1), Official Journal, Decree-Law No. 109 of 28 September 2018], https://www.gazzettaufficiale.it/eli/id/2018/09/28/18G00137/sg, (access 04.10.2019).



stakeholders of firms operating not only in the city. After the appointment of the Extraordinary Commissioner, two fundamental infrastructures were completed: the first one, called "Via della Superba", allowed for a great reduction in truck traffic in the city due to the possibility of reaching directly the Genoa Harbour from the highway without entering the city; the second one was the completion of the street "Guido Rossa", a route connecting two existing highway exits of "Genova Sestri Ponente Aeroporto" and "Genova Ovest": this expressway contributed to preventing congestion of urban traffic by allowing vehicles not to enter the city. These two infrastructures allowed for a significant reduction in transport time within Genoa's city centre generating a positive economic effect, which is not possible to quantify.

In conclusion, following the initial analysis, the declarations in the days following the collapse of the Morandi Bridge were considered trustworthy due to the coherent policies implemented. The Genoa case furthermore is an example of the success of economic expectations, as the famous statement made by Mario Draghi in 2012. It is important to highlight the importance of the declaration to build trust in investors through coherence of declarations by local and national authorities concerning the immediate situation after the collapse and subsequently about the future of the city. Finally, the article, as has been mentioned above, cannot discuss causal relationship or quantify the economic effects of politicians' statements; however, as more specific data referring to the period after the fall of the Morandi bridge are available, it will be possible to make a quantitative analysis of the economic consequences of the event.

Explanatory footnotes

 $I.\ Confindustria\ is\ the\ most\ important\ association\ that\ represents\ the\ interests\ of\ enterprises\ in\ Italy.$

II. The colour an area is determined by its geographical location. The red zone was in the proximity of the Morandi Bridge and it was not accessible, while the orange zone was accessible but with significant limitations.

III. Eng. "National Agency for the safety of railways and road and motorway infrastructure."

IV. Eng. "Urgent provisions for the city of Genoa, the security of the national infrastructure and transport network, the seismic events of 2016 and 2017, employment and other emergencies."

62. Articolo 4 (2), Gazzetta Ufficiale, Decreto-legge 28 settembre 2018, n. 109, [Article 4 (2), Official Journal, Decree-Law No. 109 of 28 September 2018], https://www.gazzettaufficiale.it/eli/d/2018/09/28/18G00137/sg, (access 04.10.2019).

63. Articolo 8 (2), Gazzetta Ufficiale, Decreto-legge 28 settembre 2018, n. 109, [Article 8 (2), Official Journal, Decree-Law No. 109 of 28 September 2018], https://www.gazzettaufficiale.it/eli/id/2018/09/28/18G00137/sg, (access 04.10.2019).

64. Articolo 9, Gazzetta Ufficiale, Decreto-legge 28 settembre 2018, n. 109, [Article 9, Official Journal, Decree-Law No. 109 of 28 September 2018], https://www.gazzettaufficiale.it/eli/id/2018/09/28/18G00137/sg, (access 04.10.2019).

65. Effetti economici indotti..., op. cit.

66. Presidenza del Consiglio, Atto di Nomina, Roma, 2018, [Presidency of the Council, Act of Appointment, Rome, 2018], https://presidenza.governo.it/AmministrazioneTrasparente/Organizzazione/CommissariStraordinari/Bucci/DPCM%20Marco%20Bucci.pdf, (access 04.10.2019).





V. Eng. "Urgent measures for the support and economic recovery of the territory of the Municipality of Genoa."

VI. Eng. "Security of the national infrastructure and transport network."

VII. Eng. "Interventions in the territories of the municipalities of Casamicciola Terme, Forio and Lacco Ameno on the island of Ischia affected by the seismic events of 21 August 2017."

VIII. "National Anti-Corruption Authority."

IX. Eng. "Liguria Region."

X. Eng. "Metropolitan City of Genoa."

XI. Eng. "Municipality of Genoa."

XII. It is the authority that manages Ports of Genoa.

Bibliography

Acharya V.V., Eisert T., Eufinger C., Hisch C., Whatever It Takes: The Real Effects of Unconventional Monetary Policy, "The Review of Financial Studies", 2019, Vol. 32 (9), pp. 3366–3411.

Angeletos G.M., La'O J., Noisy Business Cycles, "NBER Macroeconomics Annual", 2009, Vol. 24 (1), pp. 319-378.

Bachmann R., Berg T.O., Sims E.R., Inflation Expectations and Readiness to Spend: Cross-Sectional Evidence, "American Economic Journal: Economic Policy", 2015, Vol. 7 (1), pp. 1–35.

Beltrametti L., Bottasso A., Conti M., Ferrari C., Piana M., Effetti della caduta del ponte Morandi sull'economia, "Rivista di Economia e Politica dei Trasporti", 2018, Vol. 2, pp. 1–6.

Bordo M.D., Siklos P.L., Central Bank Credibility: An Historical and Quantitative Exploration, Working Paper 20824, NATIONAL BUREAU OF ECONOMIC RESEARCH 2015, https://www.nber.org/system/files/working_papers/w20824/ w20824.pdf, (access 01.10.2019).





Coibion O., Gorodnichenko Y., Ropele T., Inflation Expectations and Firm Decisions: New Causal Evidence, "The Quarterly Journal of Economics", 2020, Vol. 135 (1), pp. 165–219.

Effetti economici indotti dal crollo del viadotto Morandi, stime preliminari, https://www.confindustria.ge.it/images/Morandi_primi_risultati_def.pdf, (access 01.10.2019).

Crump R.K, Eusepi S., Tambalotti A., Topa G., Subjective Intertemporal Substitution, Federal Reserve Bank of New York 2015, https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr734.pdf, (access 01.10.2019).

Cusumano N., Siemiatycki M., Vecchi V., The politicization of public-private partnerships following a mega-project disaster: the case of the Morandi Bridge Collapse, "Journal of Economic Policy Reform", 2022, Vol. 25 (2), pp. 173–189. DOI: 10.1080/17487870.2020.1760101

Davig T., Leeper E.M., Walker T.B., "Unfunded liabilities" and uncertain fiscal financing, "Journal of Monetary Economics", 2010, Vol. 57 (5), pp. 600–619.

Dipartimento della Protezione Civile, *Stati di Emergenza*, https://servizio-nazionale.protezionecivile.gov.it/it/attivita/emergenza, (access 03.10.2019).

Dräger L., Giang N., *Are Consumers' Spending Decisions in Line With an Euler Equation?*, "The Review of Economics and Statistics", 2021, Vol. 103 (3), pp. 580–596.

Farmer R.E.A., Animal Spirit, Animal Crises and Persistent Unemployment, Working Paper 17137, NATIONAL BUREAU OF ECONOMIC RESEARCH 2011, https://www.nber.org/system/files/working_papers/w17137/w17137.pdf, (access 07.01.2020).

Fellner W., *Towards a Reconstruction of Macroeconomics: Problems of Theory and Policy*, American Enterprise Institute for Public Policy Research 1976.

 $\textbf{Gennaioli N., Ma Y., Shleifer A.}, \textit{Expectation and Investment}, "NBER \, \texttt{Macroeconomics Annual"}, 2015, Vol. \, 30, pp. \, 379-431.$

Giavazzi F., Carraro C., *Teoria dei giochi e teoria della politica economica*, Dipartimento di Scienze economiche DSE 1989, pp. 1–55. DOI: 10.6092/unibo/amsacta/5340





Gui B., Non profit e beni relazionali: un rapporto privilegiato, "Impresa socjale", 2003, Vol. 67, pp. 47–56.

Genova, crolla ponte Morandi. Il premier Conte: "Ora piano straordinario per monitoraggio infrastrutture", https://video.repubblica.it/dossier/genova-crollo-ponte-morandi/genova-crolla-ponte-morandi-il-premier-conte-ora-piano-straordi-nario-per-monitoraggio-infrastrutture/312450/313084, (access 03.10.2020).

Genova, crolla ponte Morandi. Il sindaco Bucci: "Le colpe? Non spetta a noi", https://www.youtube.com/watch?v=Y7Ff
D9OgQ4, (access 03.10.2020).

Haberler G., Notes on Rational and Irrational Expectations (Reprint No. 111), American Enterprise Institute 1980.

Ioana D.A., Kenny G., Reuter A., Can consumers' inflation expectations help stabilise the economy?, https://www.ecb.eu-ropa.eu/pub/economicresearch/resbull/2021/html/ecb.rb210112~f5d940bff2.en.html, (access 07.01.2022).

Jaimovich N., Rebelo S., Behavioral Theories of the Business Cycle, "Journal of the European Economic Association", 2007, Vol. 5, No. 2/3, pp. 361–368.

Leccis F., Public-Private Partnership: Lessons from Italy's Morandi Bridge Collapse, in: Handbook on Public Private Partnerships in Transportation, Vol II., eds. S. Hakim, R.M. Clark, E.A. Blackstone, Springer 2022, pp. 139–156.

Lorenzoni G., A Theory of Demand Shocks, "American Economic Review", 2009, Vol. 99, No. 5, pp. 2050–2084.

 $Ponte\ Morandi:\ 422\ milioni\ di\ danni\ alle\ imprese,\ crollano\ le\ assunzioni\ (-22,5\%),\ \underline{\text{https://www.consulentidellavoro.it/}}\\ \underline{\text{home/storico-articoli/10864-ponte-morandi-422-milioni-di-danni-alle-imprese-crollano-le-assunzioni-22-5},\ (access\ 03.10.2020).$

PREFETTURA - UFFICIO TERRITORIALE DEL GOVERNO DI GENOVA, Crollo del ponte Morandi: aggiornamento delle ore 14.00 del 24/08/2018, http://www.prefettura.it/genova/news/Comunicati_stampa:Crollo_ponte_morandi:_aggiornamento_del_19.08.2018-7135043.htm, (access 03.10.2019).

Preve M., Cantiere ponte Morandi, bloccata dall'antimafia una delle imprese, https://genova.repubblica.it/cron-aca/2019/05/14/news/cantiere_ponte_morandi_bloccata_dall_antimafia_una_delle_imprese-226232516/, (access 03.10.2019).





Statistiche Autorità di Sistema Portuale del Mar Ligure Occidentale, https://www.portsofgenoa.com/components/com_publiccompetitions/includes/download.php?id=607:n%20ota-traffici-2018.pdf, (access 02.10.2019).

Speech by Mario Draghi, President of the European Central Bank at the Global Investment Conference in London 26 July 2012, https://www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html, (access 07.01.2020).

Tamburelli P.P., Quel ponte era bello, https://www.ilfoglio.it/cronache/2018/08/22/news/quel-ponte-era-bello-210607/, (access 01.10.2019).

Tripidi A., Cantone: lacuna nel decreto Genova, la mafia può infiltrarsi, https://st.ilsole24ore.com/art/notizie/2018-10-10/crollo-ponte-cantone-lacuna-decreto-genova-puo-infiltrarsi-085108.shtml, (access 07.01.2020).

Van Der Heijden M., Beetsma R., Romp W., 'Whatever it takes' and the role of Eurozone news, "Applied Economics Letters", 2018, Vol. 25 (16), pp. 1166–1169. DOI: 10.1080/13504851.2017.1403555

Legal and normative acts

 $Gazzetta~Ufficiale, Decreto-legge~28~settembre~2018, n.~109, [Official~Journal, Decree-Law~No.~109~of~28~September~2018], \\ https://www.gazzettaufficiale.it/eli/id/2018/09/28/18G00137/sg, (access~04.10.2019).$

Gazzetta Ufficiale, Delibera del Consiglio dei Ministri del 15 agosto 2018, [Official Journal, Resolution of the Council of Ministers of 15 August 2018], https://www.gazzettaufficiale.it/eli/id/2018/08/16/18A05521/SG, (access 04.10.2019).

 $Gazzetta~Ufficiale, Delibera~del~Consiglio~dei~Ministri~del~18~agosto~2018, [Official~Journal, Council~of~Ministers~Resolution~of~18~August~2018], \\ https://www.gazzettaufficiale.it/eli/id/2018/09/13/18A05921/SG, (access~04.10.2019).$

 $\label{lem:constraint} Presidenza del Consiglio, Atto di Nomina, Roma, 2018, [Presidency of the Council, Act of Appointment, Rome, 2018], \\ \underline{\text{https://presidenza.governo.it/AmministrazioneTrasparente/Organizzazione/CommissariStraordinari/Bucci/DPCM\%20}\\ \underline{\text{Marco}\%20Bucci.pdf, (access 04.10.2019)}.$

