



Department of Business and Management

Course of Markets, Regulation and Law

**Environmental policies as a key to growth:  
The Hilti and 110% Super-bonus case.**

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# **Environmental policies as a key to growth in the construction sector: The Hilti and 110% Super-bonus case.**

## **Abstract**

This work aims to provide an empirical analysis of the functionality of the reforms on the energy efficiency buildings, from a multinational company point of view- Hilti S.p.A.

Starting from an initial investigation of the contemporary social economic context, the study proceeds by reviewing the core aspects of the legislation, summarising its scope, benefits that should release and the methodology through which it should work. Then provide an overview of the main features of the law and its direct addressees, the results achieved within the market, as well as how it has been executed and controlled over the past two years and what challenges have led the government to change its terms and conditions in 2022.

In carrying out the research, interviews were conducted with some of the construction industry's stakeholders - Hilti managers and construction company customers - to provide a practical understanding of the legislative gaps and challenges experienced. In addition, the latter allowed the development of more conscious considerations on the extent to which such a major reform can meet initial expectations.

On the bases of what examined, the work concludes by questioning the distance between the theoretical aspects of the legislation and weakness and challenges faced, in terms of sustainability and market growth perspective.

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# Introduction

Over the past decades, the need to reduce inefficiencies and improve the performance of countries for sustainable development in both economic and environmental terms has become increasingly relevant. Precisely in recent years that environmental sensitivities related to pollution and waste have developed, which are no longer sustainable for an advanced and ethically responsible society. Driven by these changes, energy efficiency has become relevant and essential for policy and investment decisions for future generations.

In 2020 and 2021, this issue has become central to the Net Generation EU fund's utilisation choices; since the main challenge for Europe, in the light of the Covid-19 sanitary-economic crisis, will be to ensure a decent future for the next generations. This future can only be directed by a profound reconversion and substantial energy renovation with a view to the eco-sustainability of our states.

Therefore, in recent years, several incentive systems in Italy have been introduced through tax deductions for energy efficiency works, including Eco-bonus, Bonus Casa for residential buildings, and the latest one, the 110% Super-bonus with the additional possibility of opting for a discount on the invoice or the transfer of the credit to third parties. The impact of such incentive measures has been significant in the past, but with the latest measure of the 110% Super-bonus, the legislator aims to create a system in which even citizens with no capacity to spend can carry out energy-efficient work on their homes at zero cost by assigning the credit to a third party.

However, working as a pricing analyst within the multinational company Hilti Italy S.p.A - provider of services and products in the construction industry - I developed a deep interest in the company and market dynamics that followed the implementation of the 110% Super-bonus legislation.

The following thesis brings together elements that are both contemporary and revolutionary: an analysis of the positive benefits for citizens and society will be provided, the difficulties faced by the market and the application of this incentive will be described, as well as the positive economic effects in Italy's post-pandemic recovery. Then the main legislative gaps will be exposed through interviews with major market stakeholders directly affected by the existing regulation.

The first chapter will present the current international and national situation regarding sustainable policies implemented by states. The main European tools available to member states to address the post-pandemic crisis and global warming will be illustrated and described. The regulations

concerning the 110% Super-bonus, as well as the previous incentives Eco-bonus, ventilated façades and seismic bonus, will then be explained, highlighting the main characteristics of the intervention, the modalities of intervention and the financing methods.

The second chapter will provide an analysis of the construction market, starting with an initial comparison of the market before and after the implementation of the legislation. An additional focus will then be given to identifying the major strengths of the regulation in economic terms and in terms of growth, as well as the weaknesses found at the national level. Therefore, it will present issues of fraud, inflation, and the rise of raw materials. This will then be followed by an update on the main actions taken at the government level in 2022 to limit the negative elements observed.

In the third chapter, the multinational company Hilti S.p.A. will be presented. After a general overview of the company's services and products, an insight will be made in terms of growth and profitability recorded in the company after the implementation of the Ventilated Facades and 110% Super-bonus regulations.

In the fourth and final chapter, interviews with three company managers and a Hilti customer will highlight the main problems experienced in the market. Through these interviews, it is possible to notice the main legislative gaps; indeed, the feedback received by the interviewees gives an insight into what the legislator should have probably considered with more attention and, consequently, into what effective changes might be.

Finally, concluding considerations of the work will be provided.

# Chapter 1

## Environmental policies as a key for the growth

### 1.1 International sustainability growth: Green Deal and Next generation EU

Recently, we have become widely aware to what extent the concern of climate change is changing and correcting many old and established habits. This awareness leads to a general, commonly shared attitude to make way for a new, more attentive, and sustainable way of living, which contributes to an increasingly positive impact on our daily lives.

However, the development of a community that can combine well-being and respect for the environment has been, and still is, a great challenge for countries.

This chapter will mainly focus on the plan and strategy put in place by the European Union (EU) to tackle this issue.

In 2019, environmental issues became part of the European Commission's priorities for 2019-2024. The president of the EU Commission, Mrs Ursula Von Der Leyen, launched the so-called "European Green Deal" to implement the United Nations' 2030 Agenda.<sup>1</sup>

The European Green Deal is an action plan with which the European Union intends to achieve a 55% reduction of greenhouse gases by 2030 and no greenhouse gases at all by 2050. All this is to respect global warming limit established by the Paris Agreement<sup>2</sup>: the increase of global warming must not exceed 1.5°C in comparison with pre-industrial time. Otherwise, the threat of serious damages to planet and, consequently, to mankind will become always more concrete.

Therefore, according to the European Commission is necessary to transform the entire economy of the Old Continent to have a sustainable future in which clean energy is the main resource, so that the environment and its biodiversity can be preserved.

There are many areas in which to operate, to reach the ambitious goal that the EU aims to achieve, and all the EU Member States are called upon to implement sustainable policies to reach this aim.

Therefore, nowadays, climate change has become a priority for States and political parties who are required to implement structural reforms and subsidies in line with EU guidance, to the respect and

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<sup>1</sup> Climate change and the EU strategy: The European Green Deal, 2020

<sup>2</sup> The Paris Agreement on Climate Change, *The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015 and entered into force on 4 November 2016*

preserve the environment. This can be considered a long-term goal for Europe which commits to achieve climate neutrality by 2050 in order of fulfilling its international commitments under the Paris Agreement.

The European Green Deal is a package of policy initiatives that aims to put the EU on the path to a green transition, supporting the transformation of the EU into a fair and prosperous society with a modern, competitive economy. The European Green Deal was launched by the Commission in December 2019 and the European Council noted it during its meeting in December of the same year. “The transition to climate neutrality will bring significant opportunities such as potential for economic growth, new business models and markets, new jobs, and technological development.”- European Council conclusions, 12 December 2019.<sup>3</sup>

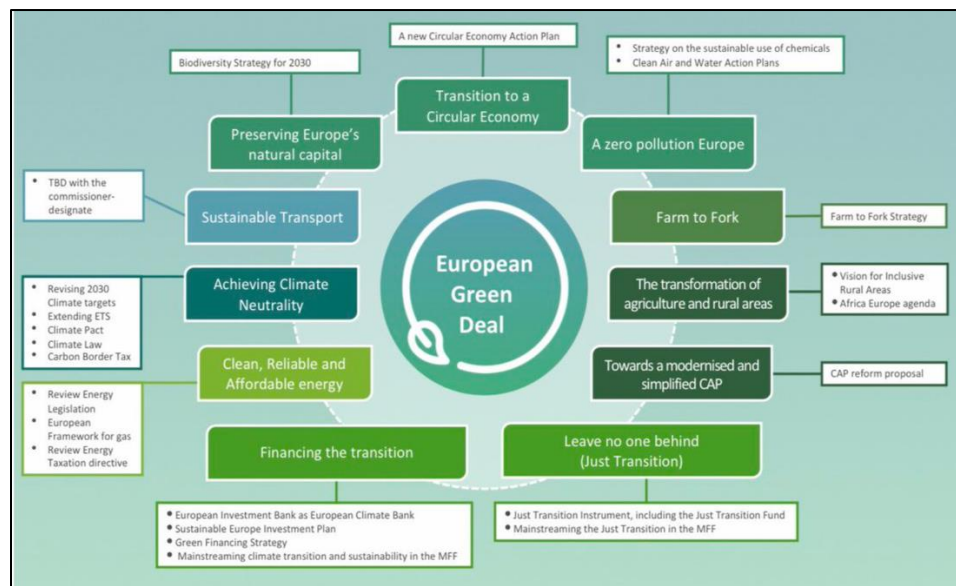


Fig1. European Green Deal pillars.

Source: Climate Change and the EU strategy: The European Green Deal. <sup>4</sup>

Figure 1 shows the pillars on which the European Green Deal is based in its various aspects and provides an insight into the broad scope of these objectives, which range from financial to social issues, from responsible use of resources to a general stimulus for research and innovation.

What is provided in the green deal, all the proposed changes and reforms, must be implemented following the principle of “No One Left Behind”<sup>5</sup>, which has the core value the elimination of any inequality between people and countries. Although all Member States, regions and sectors must contribute to the transition, the scale of the challenge is not the same for all: some regions will be

<sup>3</sup> European Commission, 2020. *A European Green Deal*. [online] European Commission. Available at:

<sup>4</sup> Climate change and the EU strategy: the European Green Deal – Summer School in European Environmental Taxation

<sup>5</sup> No One Left behind, Horizon 202, European Commission, Cordis EU research results,



particularly affected and will undergo a profound socio-economic transformation. The Mechanism for a Just Transition will "provide these regions with tailor-made practical and financial support to help them and generate the necessary local investments"<sup>6</sup>

According to the Commission, this EU Green Deal investment plan will mobilise EU resources and provide an enabling environment to allow and promote the public and private investments needed for the transition to a climate-neutral, green, competitive, and inclusive economy.

The plan, which complements other initiatives announced as part of the Green Deal, has three dimensions:

1. **Financial dimension:** mobilise at least EUR 1 trillion in sustainable investments over the next ten years;
2. **Pro-investment framework:** provide incentives to unlock and redirect public and private investment;
3. **Practical support:** the Commission will provide support to public authorities and promoters in planning, designing, and implementing sustainable projects.

Consequently, a growing consensus among EU States led to the need for a common recovery plan to complement national stimulus packages.<sup>7</sup>

In this scenario, the European Commission has put forward a proposal to establish a European recovery instrument called "Next Generation EU" to reinforce the EU's 2021-2027 multiannual financial framework (MFF).

The *Next Generation Eu* (NGEU) is a tool for the recovery of the EU economy from the Covid-19 downturn, built into a seven-year budget 2021-2027 amounting to approximately EUR 1.8 trillion (the 750 of Next Generation plus the more than EUR 1 trillion in the budget). Furthermore, at the heart of Next Generation EU there is a key instrument, the Recovery and Resilience Facility, which aims to help the EU to emerge stronger and more resilient from the current crisis.

The Facility is the central piece of the NGEU. It enables the Commission to raise money to support Member States in implementing reforms and investments that are in line with the EU priorities, and deal with the difficulties mentioned in country-specific recommendations made within the framework of the European Semester for the coordination of economic and social policy.

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<sup>6</sup> UE. Green Deal, 1000 miliardi per impatto zero al 2050 – Agenzia Dire

<sup>7</sup>Next Generation EU: A European instrument to counter the impact of the coronavirus pandemic – European Parliament

It makes available €723.8 billion (in current prices) in loans €385.8 billion and grants €338 billion for that purpose.

The Recovery and Resiliency Facility alone accounts for almost 90% of the total 750 billion Next Generation Eu. The remaining 10% or so (75.5 billion) are distributed among *React Eu* (47.5 billion), *Horizon Europe* (5 billion), *InvestEu Fund* (5.6 billion), *Rural Development* (7.5 billion), the Just Transition Fund (10.5 billion) and *RescEu* (1.5 billion).

The RRF helps the EU achieve its target of climate neutrality by 2050 and sets Europe on a path of digital transition, creating jobs and spurring growth in the process.<sup>8</sup>

The Council and Parliament came to a trilateral agreement on the Facility in December 2020. On February 9, 2021, the Parliament passed the agreed-upon language in first reading. The law was subsequently formally approved by the Council, published in the Official Journal on February 18, 2021, and went into effect on February 19.

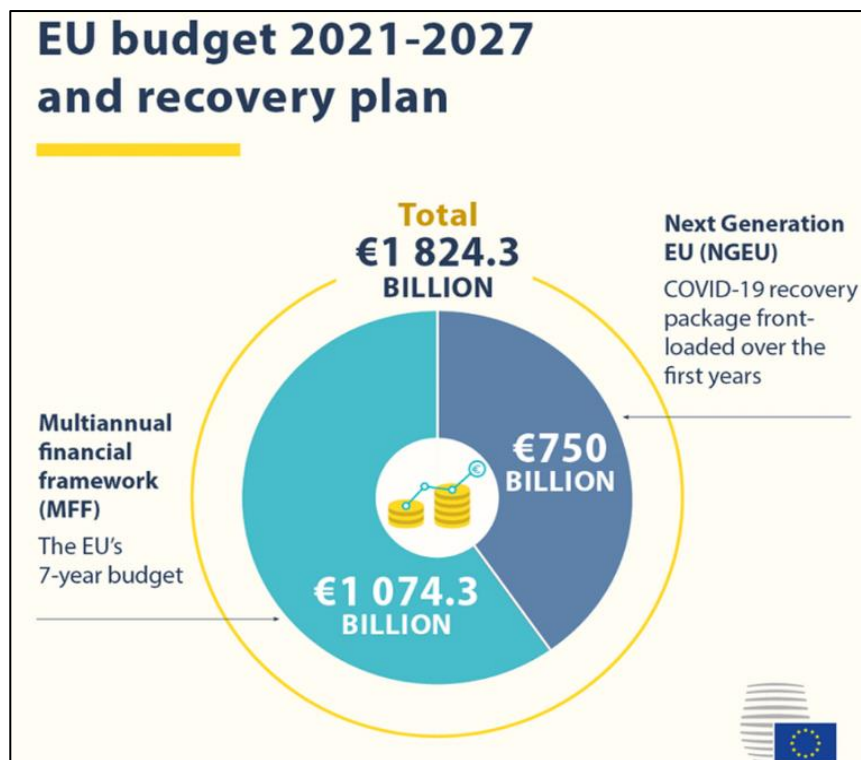


Figure 2: Division of Next Generation EU funds.  
Source: Council of the European Union.

<sup>8</sup> The Recovery and Resilience Facility – European Commission

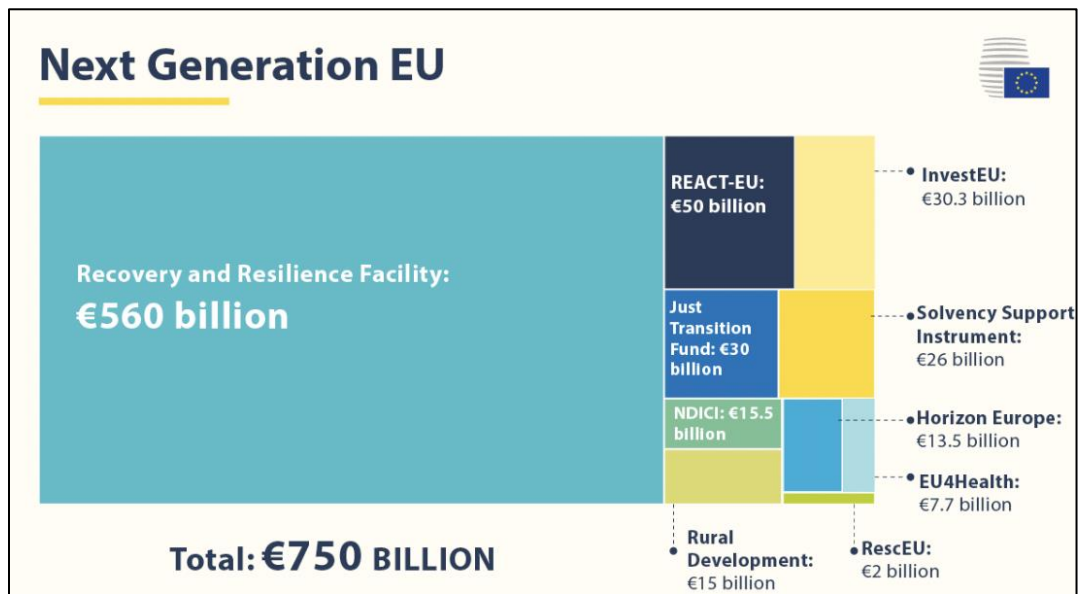


Figure 3: Allocation of funds dedicated to specific sectors in the Next Generation EU.  
Source: Council of the European Union

This facility is based on 6 pillars that are considered the most important areas in which take an action:

1. green transition;
2. digital transformation;
3. economic cohesion, productivity, and competitiveness;
4. social and territorial cohesion;
5. health, economic, social and institutional resilience;
6. policies for the next generation.

For the period of time that goes from the beginning of the crisis, February 2020, to the end of 2026, the Facility supports investments and reforms in Member States. The European Commission will borrow money from the capital markets on behalf of the EU to fund Next Generation EU.

EU Member States must submit recovery and resilience plans to the European Commission. This is to receive the Facility's support. Each plan outlines the investments and changes that must be made by the end of 2026.

Member States have allocated almost 40% of the spending in their plans to climate measures and more than 26% on the digital transition across the 22 recovery and resilience plans approved so far. This exceeds the agreed targets of 37% for climate and 20% for digital spending. Investments and

reforms to be financed in this way must not significantly undermine the EU's environmental objectives.<sup>9</sup>

The Commission, on behalf of the EU, intends to raise 30% of the funds under the NGEU through the issuance of green bonds.<sup>10</sup>

Among this large number of resources, the huge sum of ERU 209 billion divided between grants and loans is allocated to Italy. The Italian government has invested the majority of these funds into the National Recovery and Resilience Plan (hereafter 'NRRP'). The NRRP contains numerous projects and reforms, which are deemed necessary for the economic growth of our country.

According to the economist Carlo Cottarelli<sup>11</sup>, the goal of long-term environmental sustainability is compatible with the country's economic growth and indeed necessary to ensure a future for the economy. However, we must not make the mistakes of the past where, after a crisis in the real economy, the environmental issue took secondary place.

There are many areas in which to intervene to reach the ambitious goal that the EU proposes to achieve, and achieving concrete results is not an arduous undertaking, but it certainly predisposes one to a change of habits and visions of no small importance.

Moreover, also the construction sector plays a very important role in this project, if we consider what we have known for a long time now, namely how this sector is responsible for a lot of emissions and energy consumption that have a strong impact on pollution.

It follows that a new approach in building construction is now necessary, and this means encouraging and promoting the construction of new, better performing buildings with energy input systems that reduce consumption of Co2 emissions into the atmosphere, paying particular attention to the entire life cycle of a building, starting with the choice of materials and construction systems, and ending with energy efficiency technologies.

Thus, it is starting from our homes that we can take action to make a substantial contribution to the goal of the European Green Deal and Next Generation EU, which seeks to overcome the phenomenon of climate change due to rising global temperatures.

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<sup>9</sup> The Recovery and Resilience Facility – European Commission

<sup>10</sup> I finanziamenti e il Green Deal – European Commission

<sup>11</sup> Due anni tra i conti Pubblici, i lavori dell'osservatori CPI dal 2017 al 2019, Carlo Cottarelli e Giampaolo Galli, Feltrinelli.

## 1.2 Italy's National Recovery and Resilience Fund (NRRP)

The government led by Mario Draghi has presented to Parliament the National Recovery and Resilience Plan (NRRP), the document that illustrates how Italy intends to spend the resources made available by the European Union through the Next Generation EU (NGEU) programme. The NGEU, created to tackle the crisis triggered by Covid-19, offers Member States two instruments: REACT-EU, conceived for the initial phase of economic recovery (2021-2022) with several resources, and RRF (Recovery and Resilience Facility) which has a longer duration, until 2026.

In absolute figures, Italy's Recovery and Resilience Plan is the largest national plan under the unprecedented EU response to the crisis triggered by the coronavirus pandemic.<sup>12</sup>

It should be underlined from a financial point of view that the EUR 191.5 billion is divided into EUR 68.9 billion in grants from the EU and thus comparable to non-reimbursable financing and EUR 122.6 billion in very low-interest loans and with a 30-year repayment horizon, thus increasing the debt steadily.

The grant component consist of two parts: a fixed allocation amounting to €47.9 billion, to be committed by 31 December 2022 and a provisional allocation of €21 billion for 2023 commitments. The latter has increased to €21.1 billion, following the RRF regulation provisions updated in June 2022.

The Plan presented by the Draghi government provides a series of reforms, which are necessary to tap into European funds. They are divided into: a) '*horizontal*', public administration and justice; b) '*enabling*', simplification and competition and '*sectoral*'; and c) *accompanying* reforms, fiscal reform. They all pursue the objective of mitigating the effects of the crisis and closing the gaps that separate us from the Continent's most advanced economies.

The funds will be used for different purposes called *Missions*. Each mission is subsequently divided into *Components*, which contain more specific objectives and more defined scopes, they are represented and described in the Appendix-Table A.

In my opinion, what is really relevant, and revolutionary, is the green transition that focus on the green and ecological revolution; it aims to increase the sustainability and resilience of the Italian economy by supporting a fair and inclusive transition. In fact, relevant measures are related to sustainable mobility, the production and use of renewable energy, energy efficiency of private and

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<sup>12</sup> Italy's National Recovery and Resilience Plan, *Alessandro D'Alfonso* - NGEU Monitoring Service, Members' Research Service

public buildings, the circular economy, and management of water and waste as well as hydrogeological risks.

Furthermore, the Council also recommended, when economic conditions allow, the pursuit of fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment.

On the other hand, in addition to these funds, there is the Complementary Fund (details on this can be found in Appendix- Table B) established by Italian Decree-Law No. 59 of 6<sup>th</sup> May 2021 and subsequently converted into Law No. 101<sup>13</sup>, based on the multi-year budget variance approved by the Italian Council of Ministers on 15 April<sup>14</sup>.

The complementary fund has synergies and links with the different missions of the NRRP and should ensure additional funding for its different areas of action:

- EUR 8.5 billion for digitisation, innovation, competitiveness Culture and Tourism,
- EUR 9.3 billion for the Green Revolution and Ecological Transition,
- EUR 6.3 billion for Sustainable Mobility and Infrastructure,
- EUR 1 billion for Education and Research,
- EUR 2.6 billion for Inclusion and Cohesion,
- EUR 2.9 billion for Health.

Decree-Law No. 59/21 also dictates various measures for investments and rules for the so-called. 110% Super Bonus.

This is deemed as one the most significant Italian public investment, seen that over the 1999-2019 period, a relatively low level of investments is registered; the latter is considered as one of main factors that hindered the growth of the Italian economy. The investment component of the NRRP aims to address this challenge, focusing its €191.5 billion of grants and loans on 132 measures that should help to increase the country's growth potential in the long term.

According to Professor Jean Pisani-Ferry, the Italian plan's enormous scale is a suitable answer to the issues faced by a nation whose weak financial position is mostly due to a lack of growth than a fiscal laxity. Therefore, the focus on a limited number of priorities and the governance assigning oversight of implementation to the Treasury should help avoid inefficient spending.

Even though the plan is unlikely to fix all the Italian economy's fundamental flaws, its ability to increase productivity will be the crucial factor. In his opinion, the outcomes of the Italian NRRP will shape the future of the economic discussion in the EU, favouring, if successful, the ideas of solidarity

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<sup>13</sup> Law-Decree no. 59 the 6<sup>th</sup> of May, 2021, converted into Law, no.101 of the 1<sup>st</sup> of July, 2021

<sup>14</sup> The National Recovery and Resilience Plan (NRRP) – Ministero dell'Economia e delle Finanze

and taking fiscal risks as beneficial investments, or, if they are seen a failure, a return to fiscal conservatism.

### **1.2.1 Time distribution of resources and cost of funds**

Following the Council's approval, the European Commission and Italy signed the financing agreement (for the grant component) and the loan agreement, which cleared the way to a pre-financing payment equivalent to 13% of the country's grant and loan allocation. On 13 August 2021, the Commission disbursed the pre-financing of €24.9 billion, which enables Italy to kick-start the implementation of the NRRP.<sup>15</sup>

Carlo D'Adda, Professor of Political Economy at the University of Bologna<sup>16</sup>, also clarified that these tranches of resources require time related to the European debt issuance process and fundraising. However, all funds have a cost, even in the case of grant funding, which as the professor clarifies is a grant to be used by 2023. The coverage of these funds is provided by the capital raised on the market, which gradually must be repaid by the Union, and the needs of the European Commission must be covered by the contributions of the member states in proportion to their national income.

Thus, the advantage of this procedure is generally due to the lower interest expenses on loans, i.e. the lower spread experienced by these bonds, which will be guaranteed by the entire pool of European countries; while in the case of non-repayable loans, the advantage lies in the lower share borne by the individual countries since the share used can be higher than the share paid in the future for the European Commission's requirements on a basis that is merely proportional to the income of each country and not to the actual use made of those funds.

In December 2021, the Commission and Italy signed the operational arrangements for monitoring the NRRP, a pre-condition for Italy to submit payment requests. For both grants and loans, subsequent payments will be made in instalments subjected to progress in the implementation of investments and reforms, and on the condition that Italy has satisfactorily fulfilled relevant milestones and targets.

The Commission pay the pre-financing and the instalments in one or several tranches, depending on the availability of funds. The pre-financing shall be cleared over time, being proportionally deducted

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<sup>15</sup> Italy's National Recovery and Resilience Plan, *Alessandro D'Alfonso* - NGEU Monitoring Service, Members' Research Service

<sup>16</sup> Ibis no. 12

from subsequent payments. The final deadline for completing milestones and targets is 31 August 2026.

### **1.2.2 Governance**

Italy has established a multi-level governance mechanism to guarantee the plan's execution, oversight, and management. Law-Decree No. 77 of May 31, 2021<sup>17</sup> sets up governance guidelines, identifies the responsible organisms, defines their commitments, and streamlines administrative processes. Moreover, measures to increase administrative capacity, especially at the local level, for implementation and monitoring are provided in another legal act Decree-Law of 9 June 2021, No 80<sup>18</sup>.

According to the Commission, the strategy focuses on reforms and investments that will enhance Italy's capacity for growth, increasing labor market conditions, and social resilience. Indeed, the Commission's QUEST model simulation showed that the NRRP's economic impact could result in up to 240 000 more jobs created by 2026 and a 1.5% to 2.5% increase in Italy's GDP. These models, however, do not consider the enormous potential benefits of structural reforms. The strategy fits the Commission's 2020 country-specific recommendations for implementing Italy's national energy and climate plan into action. Examples of efforts include investments in sustainable urban mobility and transit network, clean hydrogen and biofuel generation and consumption, reduction of greenhouse gas emissions from transportation and agriculture, and energy efficiency in residential structures.

Furthermore, the evaluation finds that Italy's control mechanisms are adequate to protect EU financial interests, concluding that the plan contains sufficient information on national security measures against conflicts of interest, corruption, and fraud involving the use of financial resources.

In this regard, a multi-level governance mechanism has been designed to guarantee efficient plan implementation and monitoring. The monitoring and reporting systems are well-defined, in accordance with the intended aims, and include clear, realistic, and suitable milestones and targets.

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<sup>17</sup> Decreto-Legge no. 77 del 31 maggio 2021.

<sup>18</sup> Decreto-Legge no. 80 del 9 giugno 2021.



### 1.3 Italy's National Recovery and Resilience Plan and 110% Super-bonus.

In this scenario, a crucial reforming measure issued by the Italian government is the 110% Super-bonus, which is expected to significantly impact the Italian re-building plan.

The main priority of this measure is to incentive the energy efficiency and is located in Mission 2 of the Ecological Transition.

Overall, as mentioned above, the government has allocated, between the NRRP and the Complementary Fund, 68.9 billion euro for this objective. Thus, approximately one third of the total interventions, should be aimed at tackling climate change with a view to environmental sustainability and an ecological transition of the entire country.

However, it does include the extension of the 110% Super bonus since the plan explicitly refers to the necessity to act with a view to the renovation of the national building stock: "through component 3 of the second mission, we want to strengthen energy efficiency by increasing the level of efficiency of buildings, which is considered one of the most virtuous factors for reducing emissions in a country like ours, which suffers from a building stock over 60% older than 45 years, both in public buildings such as schools and in private buildings."<sup>19</sup>



Figure 4: Breakdown of funding by Mission  
Source: European Parliament, Italy's National Recovery and Resilience Plan.

According to the plan, Component 3 of the second mission has two major objectives: on the one hand, to increase the energy efficiency of buildings and, on the other hand, an indirect objective to stimulate

<sup>19</sup> Italian government Prime Minister's Office 2021. National Recovery and Resilience Plan, NexGenerationItalia, April 2021

local investments through job creation and increased national penetration of all forms of renewable energy.

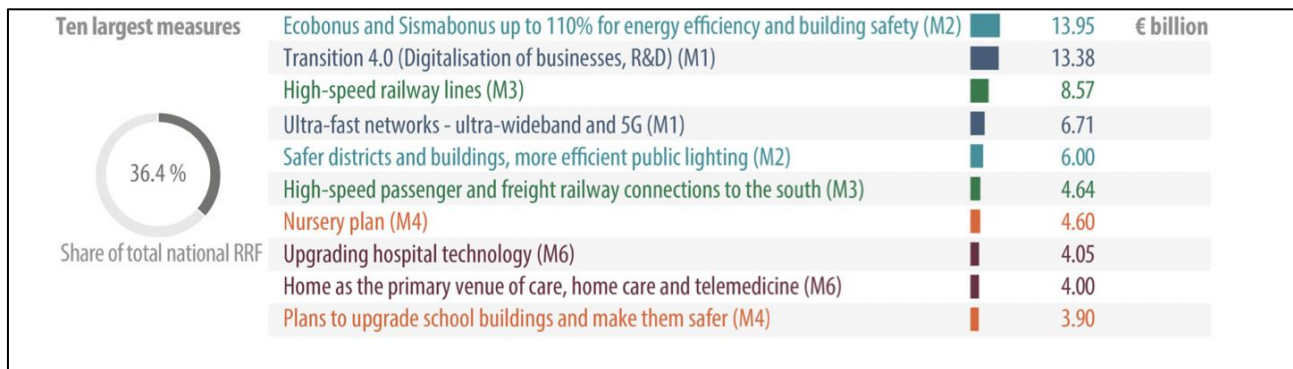


Figure 5: Details on financing measures  
Source: European Parliament, Italy's National Recovery and Resilience Plan.

Figure 5 shows the resources made available and provided in the NRRP corresponding to EUR 13.95 billion. These do not consider the funding extension introduced by the Anti-Fraud Decree, the Budget Law 2022, and the Support Decree Ter. The allocation of the necessary funds to ensure the extension of the super-bonus amounts to EUR 10 billion. It therefore appears necessary in this context to have access to further allocations that translate into further debt on the part of the Italian state, at a time when the latter is exploding because of numerous decrees supporting economic activities affected by the closures linked to the pandemic years.

It would indeed be detrimental to discontinue the measure after not even two years, marked among other factors by several lockdowns for which proceeding with the work would also have been very complicated.

### 1.3.1 110% Super-bonus: legislative framework

The 110% Super-bonus is an incentive measure aimed to improving the efficiency of Italian buildings. Article 119 of Decree-Law No. 34 of the 19<sup>th</sup> 2020<sup>20</sup> - the so-called Relaunch Decree - introduces a deduction equal to 110% of the expenses, costs related to energy efficiency measures such as demolition and reconstruction and anti-seismic measures on buildings including those for the implementation of continuous structural monitoring systems for anti-seismic purposes.

In particular, the Super-bonus is applicable, subject to certain conditions, for expenses incurred for works carried out on common parts of buildings, on building units that are functionally independent

<sup>20</sup> Decreto-Legge n. 34 del 19 maggio 2020.

and have one or more independent accesses from the outside, located within multi-family buildings, as well as on individual building units.

Paragraph 66 of the Budget Law 2021<sup>21</sup> clarifies that a real estate unit can be considered functionally independent if it is equipped with at least three of the following installations or artefacts under exclusive ownership: water supply facilities; gas facilities; electricity facilities; winter air-conditioning facilities.

The improvement must ensure the jump of at least two energy classes of the building or, if not possible because the building or family unit is already in the second last/third last class, the achievement of the highest energy class.

Under Article 119 of the Relaunch Decree and as cited by the Revenue Agency in its Guide: "the highest deductions are recognised for documented expenses incurred between July 1, 2020, and June 30, 2022 that remain the taxpayer's responsibility".<sup>22</sup>

The total expenditure was estimated at almost EUR 12.3 billion over the period 2020-2032. Including the higher tax revenues directly attributable to the higher GDP induced by the Super bonus, the cost was reduced to EUR 11.8 billion. The National Recovery and Resilience Plan (NRRP) envisages a 12-month extension of the Super bonus, which should therefore be extended at least until December 2022 for private housing and until July 2023 for social housing. The costs estimated by the NRRP, also because of this extension, are higher than those envisaged by the 'Relaunch' decree: in fact, about 18.5 billion are set apart for Super bonus-related interventions (13.95 in the NRRP + 4.65 from the Complementary Fund). In the annexes attached to the Plan that the government sent to Brussels, the dual purpose of the measure is also made explicit: 'to contribute [...] to energy saving and emission reduction targets', and 'to provide counter-cyclical support to the construction sector and private demand to offset the effects of the downturn in the economy'.<sup>23</sup>

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<sup>21</sup> Legge 30 dicembre 2020, n. 178 (Legge di Bilancio 2021)

<sup>22</sup> Superbonus 110% - L'agenzia informa, Giugno 2022

<sup>23</sup> See (pag. 295): [https://ec.europa.eu/info/sites/default/files/com\\_2021\\_annex\\_it.pdf](https://ec.europa.eu/info/sites/default/files/com_2021_annex_it.pdf)

**Tav. 1: Stanziamento di Risorse per il Superbonus 110%**  
(valori in milioni di euro)

	2020	2021	2022	2023	2024	2025	2026	2027	2028-32
IRPEF	-62	-854	-1.910	-1.306	-1.330	-1.330	-375	959	558
Credito	0	-414	-1.330	-1.330	-1.330	-1.330	-915	0	0
Totale	-62	-1.268	-3.239	-2.636	-2.659	-2.659	-1.290	959	558
Extra gettito:									
IRPEF/IRES	0	170	265	-145	0	0	0	0	0
IRAP	0	28	44	-24	0	0	0	0	0
IVA	40	80	0	0	0	0	0	0	0
Totale	-22	-990	-2.930	-2.805	-2.659	-2.659	-1.290	959	558

Figure 6. Source: Elaborazioni OCPI su dati MEF.

For this deduction, it is possible to use it on one's own taxable income or to opt for a discount on the invoice with the supplier or to assign the credit to a financial intermediary, a banking institution or even to other parties. In the beginning, the rule only provided the possibility of assigning the tax credit upon completion of the work, with critical issues related to the dilution of financial commitments over time for the companies involved. Consequently, the possibility of proceeding by works progress was also included, to anticipate the issuing of invoices and payments by customers. These cannot be more than two per intervention with the first must covering at least the 30% of the intervention, while the second at least 60%.

The Super-Bonus was designed by the legislator for the residential sector; therefore, as clarified by the Agenzia delle Entrate, these measures can be applied to energy efficiency measures carried out by condominiums, natural persons not engaged in business, arts or professions, autonomous social housing institutes, housing and indivisible property cooperatives, third sector entities as well as by amateur sports associations and clubs for certain types of intervention.

### 1.3.2 Super-bonus 110%, Eco-bonus, Sisma-bonus and Bonus Facades.

The 110% allowance is in addition to the deductions, already in force for many years currently governed, respectively, by Articles 14 and 16 of Decree-Law No. 63/2013 and the can briefly described as follow:

- the Eco-bonus, regulated by Art. 14 of Law-Decree no. 63 of 2013, consists of a deduction for interventions that increase the level of energy efficiency of buildings. The deduction, normally 50 to 85%, can rise to 110% with the introduction of the Super-bonus<sup>24</sup>,
- the Sisma-bonus, introduced with Art. 16 of Law-Decree no. 63 of 2013, provides deductions from 50 to 85% for expenses incurred for safety works on buildings at high seismic risk (also in this case it can go up to 110% with the introduction of the Super-bonus)<sup>25</sup>,
- the Facade Bonus, regulated by Law no. 160 of 2019, now provides for a 60 % deduction (whereas initially it was 90%) for works to restore building facades.<sup>26</sup>

The bonus ventilated façades regulated by Law 160/2019, provides a tax deduction for anyone who decides to modify the exterior façades of buildings. However, there are differences between the bonuses both in terms of the enforcement procedure and the deduction.

The incentive of Facade consists of a tax deduction, to be divided into 10 constant annual tranches, equal to 90% of the expenses incurred in 2020 and 2021 for interventions aimed at the recovery or restoration of the external façade of existing buildings located in certain areas, including those of exterior cleaning or painting only.

Subsequently, the Budget Law 2022 extended this deduction until 31 December 2022, at a reduced rate of 60 %.

The following paragraphs will firstly provide an overview of the main requirements to meet to have access to these tools, and later will analyse its most relevant measures.

### **1.3.3 Grantees and entitlement to benefits**

To be eligible and have access to this financial benefit, applicants must meet a series of conditions. Indeed, the 110% Super-bonus is granted only in the following scenarios:

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<sup>24</sup> See: Decreto-legge del 4 giugno 2013, n.63, Art.14.

<sup>25</sup> See: Decreto Legge del 4 giugno 2013, n.63, Art.16.

<sup>26</sup> See: Decreto Legge del 27 dicembre 2019, n. 160, Art.1, comma 219-222.

1. For expenses incurred by 31 December 2022, under the condition that, by 30 September 2022, work had been carried out for at least 30% of the total amount of the intervention, for works carried out on property units by:
  - a) Condominiums,
  - b) individuals, outside the exercise of business, art or profession, for interventions on buildings consisting of between two and four distinctly registered real estate units, even if owned by a single owner or co-owned by several individuals,
  - c) non-profit organisations - as per Article 10 of Legislative-Decree No. 460 of 1997, voluntary organisations - listed in the registers referred under Law No. 266 of 1991- and social promotion associations -listed in the national, regional, and autonomous provinces of Trento and Bolzano registers, as per Article 7 of Law No. 383 of 2000
2. For expenses incurred by condominiums by 31 December 2022 for interventions with at least 60% of work completed by 30 June 2022.
3. for expenses incurred until 31 December 2023 if works had been carried out by 30 June 2023 for at least 60% of the total intervention by:
  - a) social Housing units (the so called Italian IACP: Istituti Autonomi Case Popolari) as well as bodies having the same social purpose as IACP, set up in the form of companies meeting the requirements of European legislation on 'in house providing'. The deduction is due for work carried out on buildings, owned by them, or managed for the municipalities.
  - b) to housing cooperatives on real estate owned by them and granted in beneficial interest to their members.

Finally, the beneficiaries also include non-profit organisations and registered sporting associations and clubs, the latter only for work on changing rooms.

For the above-mentioned beneficiaries, “the deduction is divided among those entitled in five equal annual tranches and in four equal annual tranches for the portion of the expenditure incurred after 1 January 2022.”

In all the above-described cases, the deduction is granted to parties who own or hold the property subject to the intervention based on an appropriate qualification at the time of beginning of the works or at the time of incurring the expenses, if prior to the above-mentioned beginning.

In the end, the allowance is granted on condition that the regularity of the interventions is certified by qualified professionals, who must also certify the congruity of the expenses incurred with the subsidised interventions (this will be analysed in more details in paragraph 1.5).

#### **1.3.4 Leading and Towed activities**

The incentive measure linked to the 110% Super-bonus includes the differentiation between different actions, some of which are mandatory in order of having access to the deduction of the capital spent. The latter belong to the so-called 'leading activities'.

The measures concerning the energy improvement of the building covered by this category are three:

1. *Thermal isolation works* of the vertical, horizontal, and inclined opaque areas affecting the building envelope (so-called thermal cladding), including single-family buildings, with an incidence of more than 25 per cent of the gross dispersing surface of the building itself, or of the functionally independent building unit with one or more independent accesses from the outside, located within multi-family buildings,
2. *Replacement of existing winter air-conditioning systems* with centralized heating, cooling or domestic hot water supply systems on the common parts of buildings, or with heating, cooling or domestic hot water supply systems on single-family buildings or on functionally independent building units with one or more independent accesses from the outside located in multi-family buildings,
3. *Earthquake-proof interventions* (provided for in Article 16, paragraphs 1-bis to 1-septies, of Decree-Law No. 63 of 2013) is raised to 110% for expenses incurred from 1 July 2020 to 30 June 2022. This rate also applies to interventions aimed at eliminating architectural barriers (provided for in Article 16-bis, paragraph 1, letter e, of Presidential Decree No. 917 of 1986), even if they are carried out in favour of persons over sixty-five years of age and provided that:
  - A. they are carried out in conjunction with at least one of the earthquake-resistant interventions (provided for in Article 16, paragraphs 1-bis to 1-septies, of Decree-Law No. 63 of 2013)

- B. they are not already requested (pursuant to Article 119 (2) of Law-Decree no. 34 of 2020) as a "trailed" intervention.<sup>27</sup>

Regarding the so-called towed interventions, they must be carried out in association with a leading intervention to be eligible for the 110% deduction. They may consist of:

1. *Installation of photovoltaic solar systems and storage systems:*

- A. grid-connected photovoltaic solar systems on buildings (Article 1(1)(a), (b), (c), (d) of Presidential Decree No 412 of 1993) or photovoltaic solar systems on structures pertaining to buildings,
- B. storage systems integrated into solar photovoltaic systems concurrently with or after the installation of the systems themselves.

2. *Infrastructure for electric vehicle charging:*

- A. if the installation of infrastructures for recharging electric vehicles in buildings is carried out in combination with thermal isolation of opaque areas or the replacement of winter air-conditioning systems that qualify for the Super-bonus, the deduction provided for in Article 16-ter of Decree-Law No. 63 of 2013 is due in the amount recognised for these same interventions, in relation to the year in which the expenditure was incurred. It is to be divided among those entitled in four equal annual tranches,

3. From 2021, these measures also include those intended to *eliminate architectural barrier*.

Details on the interventions included in the current framework can be found in the Appendix Table C.

Regarding the application of the tax relief to towed interventions, it should be noted that paragraph 2 of Article 5 of the MISE decree establishes that towed interventions must be carried out in conjunction with the leading ones.

Moreover, the expenses for these two interventions must be sustained in the timeframe of the leading interventions, specifically between the 1<sup>st</sup> July 2020 and 30<sup>th</sup> June 2022<sup>28</sup>.

Only if the above conditions are met, the same deduction percentage applies to the towed interventions as for the leading interventions.

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<sup>27</sup>O ibis. No. 22

<sup>28</sup> As per Art. 119 of the Relaunch Decree.



The energy efficiency measures, must ensure the improvement of at least two energy classes or, if not possible, the achievement of the highest energy class, which must be demonstrated by the energy performance certificate-A.P.E. (Article 6 of Legislative Decree No. 192 of August 19, 2005), issued by the Department of Energy before and after the intervention.

Concerning the other provided measures, buildings that lack a roof, one or more perimeter walls, or both are also included among those that are eligible for deductions.

Specifically, the 2021 Budget Law establishes that the benefit of the 110% reduction can be granted if the buildings:

- achieve an energy class in band A after interventions; or
- if the structure is already in energy class A3, moving it up to class A4.

### **1.3.5 Financing arrangements: credit assignment and invoice discounting**

Article 119 of the Relaunch Decree allows a 110% deduction (IRPEF and IRES<sup>29</sup>) for certain energy efficiency and seismic risk reduction works.

The deduction is due for expenses incurred from 1 July 2020 until 30 June 2022 to be divided among those entitled in five equal annual tranches and in four equal annual tranches for the portion of expenses incurred in 2022.

The receiver may choose whether to use the deduction or opt for the invoice discount applied by the company or companies, or to assign the credit to other parties, including credit institutions with the option of further assignment.

Article 121 of the Relaunch Decree establishes that entities that incur, in the years from 2020 to 2024, expenses for energy renovation interventions may opt alternatively:

- a) for a contribution, in the form of a discount on the amount due of a maximum amount not exceeding the amount itself, advanced by the supplier of goods and services relating to the subsidised interventions. The supplier recovers the contribution advanced in the form of a tax credit of an amount equal to the deduction due, with the option of subsequently assigning that credit to other parties, including credit institutions and other financial intermediaries,
- b) for the assignment of a tax credit, corresponding to the deduction to which it is entitled, to other parties, including credit institutions and other financial intermediaries, without the

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<sup>29</sup> IRPEF is a tax paid on the income of individuals and is progressive and graduated i.e. with several rates depending on the taxpayer's income. IRES is a tax levied on corporate income and has a single rate of 27.5%. This classifies it as a proportional and non-progressive tax.

option of subsequent assignment, subject to the possibility of two further assignments only if made in favour of:

- banks and financial intermediaries listed in the register provided for in Article 106 of the Consolidated Law on Banking and Credit (referred to in Legislative Decree No. 385 of 1993).
- companies belonging to a banking group registered in the register referred to in Article 64 of the Consolidated Law on Banking and Credit
- insurance firms licensed to operate in Italy pursuant to Legislative Decree No 209 of 2005.<sup>30</sup>

Paragraph 1-quater of Article 121 of Decree-Law No. 34 of 2020 (introduced by Article 28, Paragraph 1- bis (a) (3) of Decree-Law No. 4 of 27 January 2022) clarifies those credits resulting from the exercise of options -first assignment or invoice discount- relating to the Super-bonus and the other building bonuses may not be the subject of subsequent partial assignments.

For expenditure relating specifically to the interventions referred to in Article 119, this possibility, according to a rule introduced by the Budget Law 2021, is also granted until 2025.

The deduction is available in the following measures:

1. 110% for expenses incurred by 31 December 2023
2. 70% for those incurred in 2024
3. 65% for those incurred in 2025.

Furthermore, the 110% super bonus provides for variable spending limits depending on both the type of intervention and the type of property.

The maximum amounts of expenditure eligible for deduction are:

- a. for the replacement of winter air-conditioning systems equal to:
  - 30,000 euro for single-family buildings or building units located within multi-family buildings,
  - 20,000 euros multiplied by the number of building units for buildings consisting of two to eight units,
  - 15,000 euros multiplied by the number of building units for buildings consisting of more than eight units.

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<sup>30</sup> Il superbonus edilizia al 110 per cento - aggiornamento al decreto-legge 21 giugno 2022, n. 73. Camera Dei Deputati, servizio studi.

b. Thermal insulation interventions:

- 50.000 euro for single-family buildings or building units located within multi-family buildings,
- 40.000 euros multiplied by the number of building units for buildings consisting of two to eight units,
- 30.000 euros multiplied by the number of building units for buildings consisting of more than eight units.

The same applies to the thresholds for the installation of photovoltaic systems and storage systems of EUR 48,000 per individual property unit - with an expenditure limit of EUR 2,400 for each KW of nominal power of the photovoltaic solar system and EUR 1,000 for each KWh of capacity of the storage system.

On the other hand, for electric vehicle recharging stations, the expenditure limit is equal to 3,000 euro up to a maximum of 7 KW of power increase from the electricity meter.

As for the 110% super bonus, also for ventilated façades, pursuant to Article 121 of Decree-Law No. 34 of 2020 (the so-called "Decreto Rilancio"), persons incurring expenses for the renovation or restoration of the façade of buildings may opt, instead of the direct use of the deduction due, alternatively:

- for a contribution, in the form of a discount on the consideration due, up to a maximum amount equal to the consideration itself, advanced by the suppliers who have carried out the works and recovered by them in the form of a tax credit, of an amount equal to the deduction due, with the option of subsequently transferring the credit to other parties, including credit institutions and other financial intermediaries
- for the assignment of a tax credit of an equal amount, with the option of subsequent assignment to other parties, including credit institutions and other financial intermediaries.

The only difference between the two bonuses lies in the 90% deduction for ventilated façades as opposed to 110%, and in the division of the annual instalments for which a longer payback period (10 years) is defined for ventilated façades only.

## **1.4 Recovery reforms - Bureaucracy and links with 110% Super-bonus**

All the above described and analysed, it is still necessary to make a consideration about the legal and administrative environment in which these measures shall take place.

In fact, the recovery fund also has objectives related to reforms that have been deemed necessary and urgent for our country for several years by scholars and researchers: removing the excessive bureaucracy that suffocates entire sectors is a matter of priority.

However, this 'simplification' must take place by guaranteeing conditions of regularity in trade and thus security using the so-called 'good bureaucracy'

Therefore, it is not always easy to discern the extent to which bureaucracy is good or bad, functional or unfunctional; also considering that bureaucracy priority goal is to prevent irregularities. In addition, there is an ageless legal slowness that causes a slowdown of all processes in the country.

This is one of the most common sources of problems for the companies involved in the implementation of the super bonus, as many times it takes months to just get access to building records. These delays manifest themselves in the prior attestation of building conformity of buildings for which work is to be carried out.

The legislator has consequently tried to avoid cases where, for example, a partially unauthorised property is regularised with a super bonus intervention. This raises the question of how far it is optimal to go in simplifying these procedures.

A digitisation of the public administration would certainly guarantee shorter access times to certain data, but it is not possible to imagine that this would happen in the short term and that consequently the energy efficiency measure would benefit immediately.

In the Law-Decree no. 77 of 28 May 2021<sup>31</sup>, the legislator has hence attempted to remedy the bureaucratic and administrative red tape.

One good example is the allowance to use the instrument of the Commencement Notice (in Italian, Comunicazione Inizio Lavori Asseverata – CILA) for interventions taken within the Superbonus, instead of the SCIA (Segnalazione Certificata di Inizio Attività). Indeed, ordinarily the kind of interventions covered by the Super Bonus shall the procedure of the SCIA, which provides a double compliance examination issued by a technical professional – engineers or land surveyor. By contrast, this external verification is not required by using the CILA instrument.

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<sup>31</sup> D.L. n. 77 of 28 of May, 2021, Semplification-decree.

However, this new discipline also does not apply in cases where there is demolition and reconstruction of the building. Any irregularities must in any case be reported in the appropriate forums and not through a prior assessment by the technician of the building's state of legitimacy.

### **1.5 Recovery fund - Tax evasion and links with 110% Super-bonus**

The area of intervention of the Recovery Fund reforms also includes the battle against tax evasion, which in Italy is a particularly acute phenomenon.

The European Parliament recognises the gravity of the situation, as EUR 825 billion is lost annually from the coffers of the EU states precisely because of tax evasion.

The estimate of tax evasion can be found in the January 2019 report 'the European TAX Gap' of the European Parliament, which assigned to Italy the first place, in negative, in terms of European tax evasion. (Appendix Table C for details). It is important to highlight that this phenomenon related to tax evasion subtracts resources from the Italian state amounting to 109.9-billion-euro, equivalent to almost 12% of GDP. IVA evasion in Italy is 25.78%, about twice as high as in France (11.7%) Germany (9.6%) and the United Kingdom (10.8%).

To make our country more competitive in terms of tax revenue collection, it would be necessary to reduce the current extent of the phenomenon by half. The 110% super bonus and the other energy efficiency measures allow the innovative possibility, as mentioned above, of transferring the credit to third parties or discounting it on the invoice, which must necessarily be 'spent' within the time frame foreseen by the rule in their annual tranches that would otherwise be lost.

Thus, it is a strong incentive to declare and not to evade and should help reduce the phenomenon. However, it is also necessary to add other instruments to these measures, such as the use of electronic and traceable payments, trying to avoid the use of cash for most transactions and at the same time to increase the measures to control payments by the state.

By focusing on these problems, the legislator should therefore try to limit the phenomenon, but at the same time there is a need for greater executive control that can also act effectively.

In fact, it should be recalled that the 191 billion is precisely the amount of the recovery fund and in Italy a number of resources comparable to the PNRR allocation is evaded every year.

## Chapter 2

### Building and Construction Sector: Market Analysis

The residential construction market is defined as the value of work put in place annually for residential buildings. Market value is defined in general as the total output value of construction activity in any given time, including costs related to construction materials, equipment and services for new construction, refurbishment, repair and maintenance and demolition.<sup>32</sup>

It is worth remembering that every euro spent on infrastructure generates a much higher economic return in terms of increased GDP and employment. In particular, the construction sector has a multiplier effect of 3.5% due to the tangible positive spin-offs on the related industries.<sup>33</sup>

However, it should be mentioned that the construction sector accounts for 9% of Europe's GDP and is therefore considered a major economic driver at both European and national level.

#### 2.1 Market Analysis before the 110% Super bonus implementation

Despite being a key market, in the period from 2008 to 2020, the construction sector suffered a significant crisis.

The weaknesses of the Italian construction sector are profound and the poor performance in recent years is not only due to the crisis of 2008 or 2020; in general, the following gaps can be identified in the sector:

- In comparison with construction companies in the European Union, Italian companies are characterised by their small size: on average, in 2017, there were 2.6 employees per company in Italy compared to 3.6 employees in the European average.
- The productivity of Italian companies, calculated as turnover generated per employee, is on average lower than that of companies in other European countries. This is another factor that should drive the concentration of the market into fewer, larger, and more structured players.
- The average education level of employees in construction is very low. The low level of education is reflected in the level of professional qualification: only 13.5 % work in highly

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<sup>32</sup> Residential Construction in Italy, MarketLine Industry Profile, April 2022.

<sup>33</sup> Il settore costruzioni prima e dopo la tempesta Covid-19, ARNA (Associazione Nazionale dei risk manager e responsabili assicurazioni aziendali), Federica Maria Rita Livelli, 2020.

qualified professions. This does not help to increase productivity and thus to be competitive on an international scale.

- The use of irregular employment - a structural feature of many Italian sectors - is particularly widespread in construction. It is estimated that there are more than 240.000 undeclared workers in this sector.

Furthermore, it must also be considered that the national building stock contains many buildings constructed between 1945 and 1972 (corresponding to 39.9%) and has a large proportion of pre-1945 buildings (20.2 %). As a result, the energy performance of these buildings is poor and almost 60% of the buildings are in the two energy classes F-G.

New buildings are now in energy class A as a legal requirement.<sup>34</sup> For second-hand properties, however, more and more customers are informing themselves about the energy class of the property at the assessment stage. They are informed and are aware of the importance of being in class A. They know that the purchase value will be higher than for a B-class or second-hand property, but they understand that they will recover this higher initial outlay with a low amount of condominium expenses for heating.

The 2020 annual report on energy certification, drawn up by ENEA<sup>35</sup> and CNI<sup>36</sup>, shows a gradually improving situation, but most buildings in Italy remain in low energy classes outside European standards.

As of 2017, Italian construction had almost returned to the levels of the early 1960s, before the economic boom. The construction market was at a complete standstill, stalled, and the purchase of new homes by households had collapsed by an estimated EUR 100 billion. This was also accompanied by a determined contraction in the public sector, which saw a drop in investment of around 20 billion per year. As a result, all companies in the construction industry found themselves at the end of their tether and started to go bankrupt one after the other.

But it is not only the bankruptcy of construction companies that is the most serious factor, because the effects of the building crisis have spread in ever-widening waves. This leads to the volatilisation of an important part of the country's heritage. The construction industry is not an end itself, but has a

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<sup>34</sup> LAW No. 90 of 3 August 2013.

<sup>35</sup> ENEA is the National Agency for New Technologies, Energy and Sustainable Economic Development.

<sup>36</sup> The National Council of Engineers (regulated in the Italian legal system by Law 1395/23, Royal Decree 2537/25, Lieutenant's Decree 382/44, and Presidential Decree 169/2005), is a public law body supervised by the Ministry of Justice. is the national institutional representative body of the relevant interests of the professional engineering profession.

huge induced industry, because without new houses no furniture, washing machines, chandeliers cars no new contracts for Enel or gas can be bought. This is an enormous, induced industry that follows closely on the heels of the collapse of the construction industry, and with it also collapses the investments and hopes of all those who work in the induced industry.

Consequently, in the decade 2008-2017, employment in the construction sector in Europe decreased by 3.4 million. During the same period, in Italy, the reduction amounted to about 400.000 jobs. The number of employees fell from approximately 1.9 million to 1.5 million. On the age side, an estimated 73% of workers were between 15 and 34 years old. Specifically at territorial level:

- 44% of employment was lost in the North,
- 40% in the South,
- 16% in the Centre.

European countries have started to record a discrete increase in the number of people employed in the construction sector since 2015. On the other hand, Italy, showed a slow and timid increase in employment in the years after the crisis, reaching a more sustainable employment rate only in 2020, the year of implementation of the legislation discussed above.

Below is a time series from 1960 to 2020 on the weight of the construction sector on employment and GDP for the entire nation.

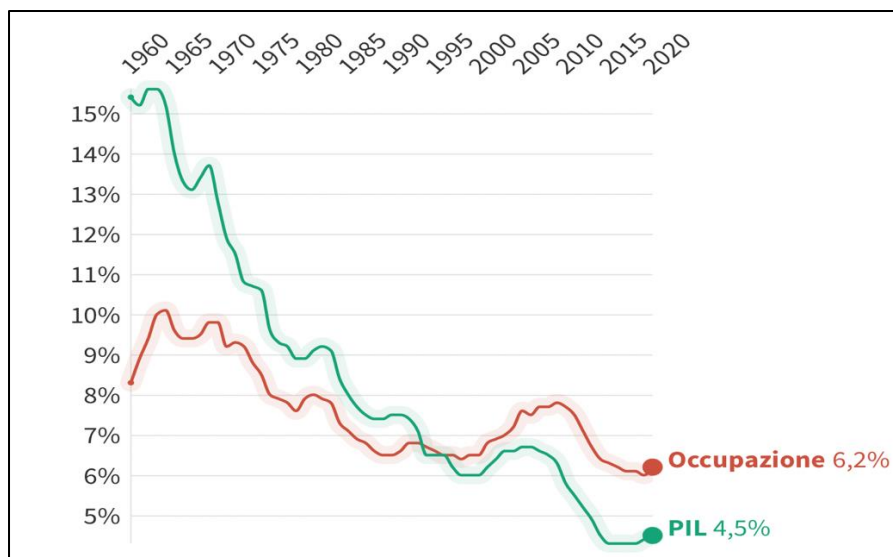


Figure 7: The Italian construction sector. Source: Italian data.

Part of the responsibility lies within the legislative measures adopted in the building sector, which were in almost all cases totally inadequate, indeed in many cases certainly harmful. But certainly, the



most serious damage that has been done to construction in Italy is that of taxes. The tax burden on real estate, including IMU<sup>37</sup>, was in 2017 the highest in Europe and was considered unsustainable. A 2015 market survey showed that 70% of Italian households declared the increase in expenses to keep a roof over their heads, and owned by them, unaffordable.

In the residential construction segment investments made in 2017 were still more than 60% lower than in 2008, which could not be compensated by a 20% increase in restoration work (mainly based on public investments). Investments in new residential buildings grew just 2% in 2018.<sup>38</sup>

The 2018 saw the peak of the crisis in the Italian construction sector: investment in public construction remains far below the pre-crisis level of 2008. Although the number of public tenders increased by 33% in 2018 (to EUR 29.7 billion, driven by investments in railway infrastructure), financial coverage has been a problem due to increased uncertainty about future spending capacity.

Besides the still low spending capacity, ongoing tight lending conditions set by banks remain one of the main reasons for the subdued performance of construction, exacerbating the fact that many Italian construction businesses are highly geared.

New loans for construction businesses decreased 12% year-on-year in value in 2018, more than for any other Italian industry.<sup>39</sup>

Larger construction companies have looked for alternative liquidity sources such as bonds, but those are more expensive than bank loans when operating.

Italy: construction sector			
	2017	2018 <sup>a</sup>	2019 <sup>a</sup>
GDP growth (%)	1.6	0.9	0.4
Sector value added growth (%)	1.1	0.8	0.5
Average sector growth over the past 3 years (%)			0.1
Average sector growth over the past 5 years (%)			-2.1
Degree of export orientation			medium
Degree of competition			very high

Sources: Macrobond, Oxford Economics, Atradius

Figure 8. Source: Macrobond, Oxford Economics, Atradius.

The catalyst for the crisis was then payment defaults within the sector in question. In 2018, in fact, the top 50 Italian construction companies faced a severe liquidity crisis due to payment defaults. This was due to high leverage to finance working capital needs and investments, but also due to slow

<sup>37</sup> IMU, Municipal Property Tax (in Italian Imposta Municipale Propria), is the tax introduced by the Monti government in the 2011 “Save Italy” manoeuvre and is paid at municipal level on the ownership of real estate. It has been in force since January 2012, and until 2013 it also applied on the main dwelling.

<sup>38</sup> Market Monitor construction Italy 2019, Atradius, 2019.

<sup>39</sup> O ibis n. 37.

payments from public customers. The bankruptcies of larger companies also affected many subcontractors and suppliers of cement, concrete, and steel.

The lock-down policy from Covid-19 then generated heavy repercussions on the construction sector and the entire building industry.

According to ISTAT<sup>40</sup> data, from the beginning of April 2020, about 61% of workers in our country were inactive in the face of the Prime Ministerial Decree of 22 March<sup>41</sup> and the subsequent Ministerial Decree of 25 March (which also involved building sites and private construction)<sup>42</sup>.

The reopening of construction sites then took place according to safety parameters a few months after the first lockdown following a letter sent by the national associations representing the construction sector, dated 24 April 2020, and addressed to the President of the Senate, the President of the Chamber of Deputies and Prime Minister Giuseppe Conte.<sup>43</sup> The letter urged the government to consider all those activities that could be carried out at a time of progressive recovery, i.e., repair and maintenance of roads, upgrading and securing of schools that had remained closed, energy and structural upgrading of housing stock and city suburbs, interventions, and recoveries to remedy the hydrogeological instability of the territories.

The above was aimed at not blocking again a sector that in 2019 had witnessed a minimal recovery. It was therefore hoped for a necessary and strategic recovery, since if the construction market had restarted, it would have been possible to trigger the 'flywheel' of the economic recovery of the country, which, due to the continuous lockdowns, risked a sudden loss of GDP.<sup>44</sup>

The global construction scenario was heavily impacted by the effects of the Covid-19 pandemic. In 2020, worldwide, the construction sector suffered a 10.3% drop on average compared to the previous year. In Italy, a drop of 13.6% was estimated.

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<sup>40</sup> ISTAT (Istituto Nazionale di Statistica) is a public research institution that deals with static demographic and economic-financial surveys. It also deals with censuses and sample surveys and at the national level.

<sup>41</sup> Ministry of the Interior, Decree of 22 March 2022 - Decree in accordance with Article 2(3) of Decree of the Minister of the Interior No. 127 of 21 August 2019, concerning the identification of employers.

<sup>42</sup> Interventions for the realisation of photovoltaic systems to be installed on buildings for productive use in the agricultural, zootechnical and agro-industrial sectors, to be financed under the NRP, Mission 2, component 1, investment 2.2.

<sup>43</sup> The Conte II government was the 66th executive of the Italian Republic, the second of the 18th legislature. It remained in office from 5 September 2019 to 13 February 2021.

<sup>44</sup> Il settore costruzioni prima e dopo la tempesta Covid-19, ARNA (Associazione Nazionale dei risk manager e responsabili assicurazioni aziendali), Federica Maria Rita Livelli, 2020.

## **2.2 Market analysis after the legislative 110% Super-bonus implementation**

As mentioned above, in the past years, the Italian residential construction sector has been impacted by general economic forces as well. Italy's economy reached crisis in 2018, largely because of political unrest and excessive debt levels. In 2019, the economy sees some improvement, but the COVID-19 pandemic has significantly slowed Italy's economic recovery.

Aware that the decrease in public investment from 2008 to 2017 certainly did not help the Italian economy, the European Union and Italy decided to respond to the Covid-19 pandemic in a decidedly more interventionist manner. As a result, projections for the three-year period 2021-2023 see the construction sector growing by an average of 7% in the private sector and 10% in the public sector. The Italian government launched the "110% Super-bonus" programme in July 2020 to recover the building industry and promote positive economic growth following the outbreak.

The 110% Super-bonus is today the principal mechanism not only for the requalification of the national housing stock, but also for setting the construction sector back on track, which is crucial for the country's economy.

In the initial phase, the bonus received fewer applications than expected. At the end of November 2020, i.e. at the end of the fifth month since the measure came into force, the then Minister for Economic Development Patuanelli reported 193 authorised interventions, a meagre level compared to the total set aside.

However, positive GDP growth of 6.2% and a national COVID-19 economic recovery package in 2021 increased consumer confidence, and greater demand amongst homebuyers boosted the market over 2021.

In fact, there were and still are so many works in progress and construction sites open everywhere in Italy, which, compared to previous years, correspond to an increase in the number of orders of more than 300% and a slightly smaller increase in the overall economic value of building works, against significant benefits in terms of reduced energy consumption and the revaluation of the building stock, which have yet to be assessed.

Table 1: Italy residential construction sector value: \$ million, 2017–21			
Year	\$ million	€ million	% Growth
2017	121,188.2	102,484.3	
2018	128,236.8	108,445.0	5.8%
2019	125,557.5	106,179.2	(2.1%)
2020	119,893.3	101,389.2	(4.5%)
2021	152,535.3	128,993.3	27.2%
CAGR: 2017–21			5.9%
SOURCE: MARKETLINE			MARKETLINE

Figure 9: Italy residential construction sector value: 2017-2021. Source: MarketLine

These data in figure 8 suggest that the 110% Super-bonus has achieved its goal of supporting the construction sector and stimulating private demand for real estate: not only the number of transactions in the second half of 2020 exceed the pre-pandemic level, but the data for the last three months of 2020 show a much higher growth rate than in the previous years.

The Italian residential construction sector grew by 27.2% in 2021 to reach a value of €152,535.3 million. The compound annual growth rate of the sector in the period 2017–21 was 5.9%.<sup>45</sup>



Figure 10: Italy residential construction sector value 2017-2021. Source: Market line.

Figures 9 and 10 show exponential growth after the implementation of the 2020 building energy renovation legislation. We can consider its exponential and imminent growth as the first results will be seen after just under a year.

The super bonus economic incentive scheme is managed and evaluated by ENEA.

Since August 2021, ENEA has published a monthly report on the results of the Super-bonus scheme. (Details can be found in Appendix Table E).

The key results achieved by the end of November 2021 are:

<sup>45</sup> Residential Construction in Italy, MarketLine Industry Profile, April 2022.

- Nearly 70.000 applications submitted,
- Super-bonus tax deductions allowed total €11.936 billion,
- At a cost of over €13.129 billion to the Italian State (110%).

Figure 1: Share of interventions by building type

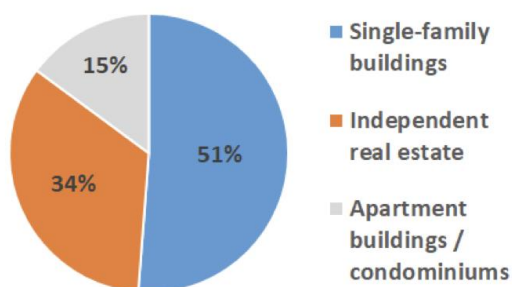


Figure 2: Deduction of interventions according to the type of building

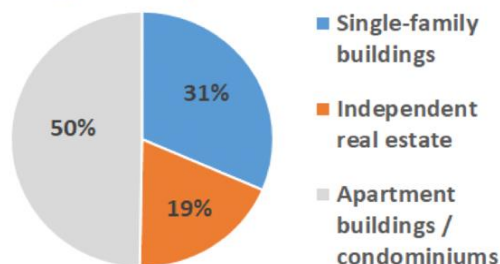


Figure 11 and 12 . Source: European Construction Sector Observatory, November 2021

Figure 11 shows the percentage of applications submitted at the end of November 2021. Specifically, the number of applications submitted for single-family buildings accounted for 51% of the total number of applications corresponding to 35,542. Detached buildings accounted for the second 34% share corresponding to several applications of 23,508 and finally condominiums accounted for 15% corresponding to a number of applications of 10,339.

These numbers correspond to an amount of deductions for a total of €11.936 billion divided, as shown in Figure 11, into:

- €5.937 billion for condominiums,
- €3.756 billion for free-standing properties,
- €2.242 billion for single-family buildings.

The new construction segment was the market's most lucrative in 2021, with total revenues of €59.8bn, equivalent to 39.2% of the market's overall value.

The data presented by CRESME <sup>46</sup> and MEF<sup>47</sup> also show a territorial difference in the amount of work started: drawing up a regional classification, it emerges that the Italian regions with the highest

<sup>46</sup> Cresme provides the private sector and public institutions with information and know-how to describe and forecast economic and construction market trends at a territorial, national and international level

<sup>47</sup> The Ministry of Economy and Finance (MEF) performs the functions of guiding and directing the overall economic and financial policy of the State

concentration of companies operating in the construction sector are after the implementation of the legislation are:

Lombardy, Emilia Romagna, Piemonte and Lazio while at the bottom of the ranking, on the other hand, we find: Basilicata, Molise, and Valle D'Aosta.

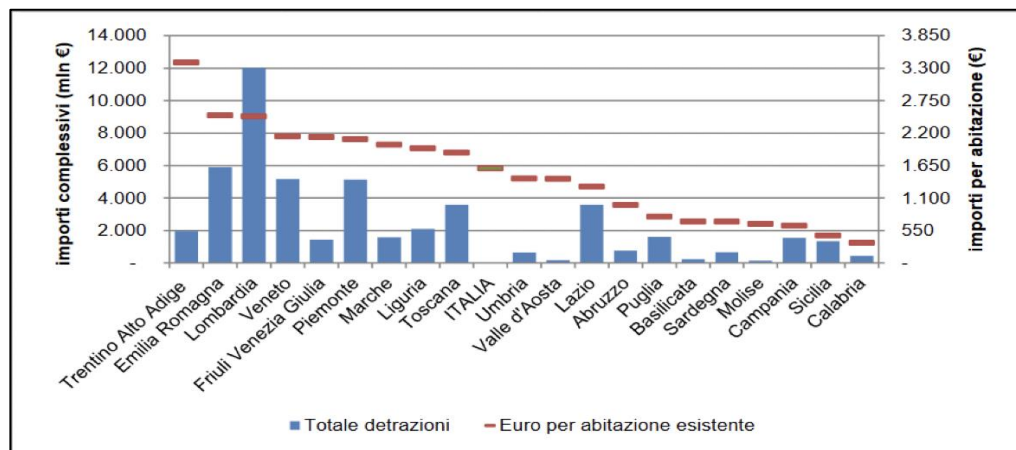
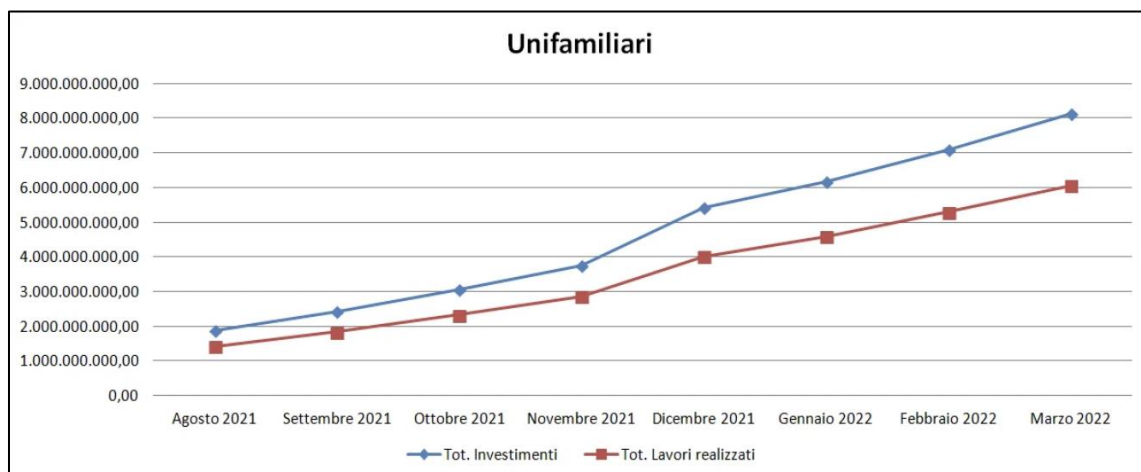


Figure 12: Territorial difference in the amount of work in the field. Source: CRESME and MEF

Furthermore, according to data presented by ENEA in its 110% Super- bonus Report, as of March 2022, there were 199.124 building interventions underway with incentives, amounting to approximately 35.2 billion in investments eligible for deductions, which will lead to deductions of 38.7 billion euro <sup>48</sup> as showed in Figure 13-14-15:



<sup>48</sup>Il superbonus edilizia al 110 per cento - aggiornamento al decreto-legge 21 giugno 2022, n. 73, Camera dei deputati, Dossier n. 118, 2022.

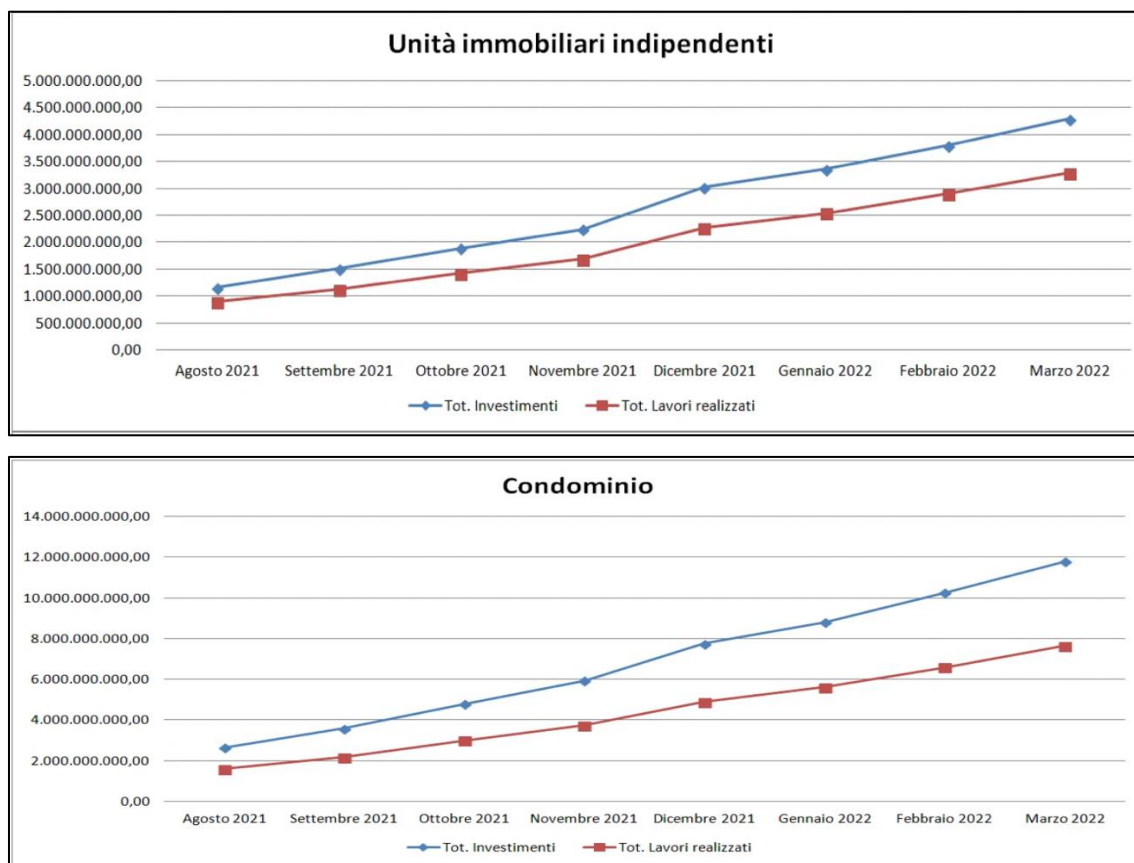


Figure 13-14-15: Estimated total investments (blue line) and completed works (red line) as of March 2022 by: single family business, functionally independent housing, and condominium.

Source ENEA.

More specifically there are:

- 107.000 works started in single-family buildings representing 34% of the total investments (of which 73.9% already completed),
- 62.000 works started in functionally independent housing units representing 16.9% of the total investments (of which about 78% already completed),
- 30.000 condominium works already underway representing about 49% of the total investments (of which 66% already completed).

Once again in 2022, the region with the most works started is Lombardy (30,721 buildings for a total of over €5.8 billion of investments eligible for deduction), followed by Veneto (24,670 interventions and €3.3 billion of investments) and Lazio (17,905 interventions already started and €3.3 billion of investments).

With the innovations introduced by the Budget Law 2022, some procedures, especially in relation to the assignment of credit, have changed.

In fact, the 110% super bonus is still active in 2022, but with new rules and a 'sliding scale' system that change forever one of the most expansive and revolutionary instruments introduced in the building sector.

For condominiums the 110% Super-bonus was extended in 2022 and 2023 but will then be raised to 70% of the expenditure incurred in 2024 and 65% in 2025. For single-family buildings and small villas, it continues until 31 December 2022 but only if 30% of the work has been carried out by 30 September 2022. New provisions are introduced for IACPs and earthquake zones. In addition, to limit fraud, the credit transfer mechanism is changed several times as of 1 March 2022.

Furthermore, the increase in raw material prices in each region is not only related to a speculative factor, but to an objective context of general commodity inflation. Price lists if drawn up once a year lag far behind the speed at which commodity prices move. The increases in each region were also caused by the short-term expiry of the 110% Super-bonus subsidies, to which we must now add the very serious repercussions generated by the international conflict between Russia and Ukraine, which threatens to cause further increases that are difficult to control, leading to greater difficulties for businesses and citizens.

## **2.3 Pros and cons of the regulatory framework**

To analyze the strengths and weaknesses of the regulations discussed above, in the following paragraphs the benefits and challenges related to will be described. Data covers the period from March 2020 until the latest updates in July 2022.

### **2.3.1 Pros**

#### **a. Sustainability**

The renovation of buildings usually involves the integration of new technologies and applications with the aim of increasing their energy efficiency or improving the health and safety conditions of their citizens and the environment.



Nowadays, the re-qualification also offers the opportunity to stimulate the transition of the building stock towards carbon neutrality and addresses the very current problem of energy insecurity in our country. At the same time, those who opt for the Super-bonus get not only 110% on the work carried out, but also an increase in the value of their property linked to savings on consumption, which provides additional value to the property itself.

Considering that the existing measure allows all buildings currently in class G (which alone are responsible for more than 50 % of national energy consumption) to be halved by two energy classes with a jump to class E, each of them would essentially halve its impact on domestic heating and hot water consumption, leading to a 25 % reduction in national energy consumption in the residential sector.<sup>49</sup>

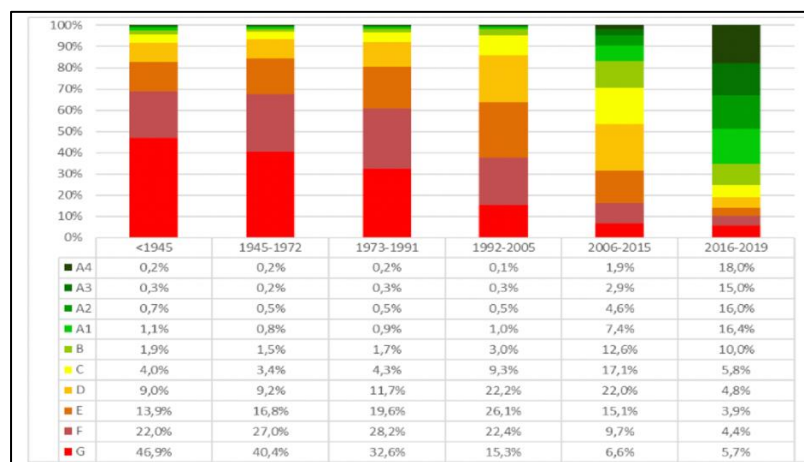


Figure 16: Distribution of APE by energy class in the different construction periods of Italian buildings.  
Sources: ENEA and SIAPE.

Regarding the residential buildings on which the Super-bonus may act, the first column of Figure 13, highlights the critical situation in Italy, where more than one third of the buildings are in the last energy efficiency class and overall, the last three classes represent about four fifths of the Italian real estate stock, most of which dates to buildings constructed in the years 1945-1991.

"If done properly, redevelopment can bring huge economic benefits,"<sup>50</sup> says Thibaut Maraquin, Innovate project coordinator and project manager at the French association Energy Cities. Buildings play a very important role in this project, if we consider how much this sector is responsible for a quantity of emissions and energy consumption that have a strong impact on pollution.

<sup>49</sup> Lucchi, E., & Pracchi, V. (2013) Efficienza Energetica e patrimonio costruito: la sfida del miglioramento delle prestazioni nell'edilizia storica (Vol. 662). Maggioli Editore.

<sup>50</sup> Integrated solutions for ambitious energy refurbishment of private housing, CORDIS, European Commission, 2020.

According to the first social and environmental report of the measure, developed in cooperation with ANCE<sup>51</sup> Emilia, the bonus is sustainable both economically and environmentally. "The building bonus has already made possible to significantly reduce the ecological footprint of buildings, with a reduction of 979,000 tons of CO<sub>2</sub>, equivalent to a CO<sub>2</sub> saving of 46.4 per cent, with 3 energy class jumps," as said in the report.<sup>52</sup>

Therefore, it is precisely by starting from our homes that we can intervene to make a substantial contribution to the objective of the European Green Deal and the Next Generation EU, which tries to overcome the phenomenon of climate change due to rising global temperatures.

A new approach in building construction is now necessary and means encouraging and promoting the construction of new, better performing buildings with energy input systems that reduce consumption and CO<sub>2</sub> emissions into the atmosphere, paying particular attention to the entire life cycle of a building, starting with the choice of materials and construction systems, and ending with energy efficiency technologies.

A necessity that aims to achieve an important objective in the long term, but which also coincides with the possibility, in the immediate future, of bringing a considerable improvement in the everyday life of each of us: carrying out interventions that consider sustainable construction and the energy requalification of buildings means reducing emissions into the atmosphere, but also having lower consumption costs and greater living comfort. A very important combination to be able to travel smoothly along the road to energy transition.

Thus, the most important benefits of the renovation of the building stock can be briefly listed as follows:

- Reduction of environmental impact,
- Decarbonization,
- Widespread generation of energy from renewable sources,
- Lower energy costs, greater availability for other expenses,
- Concrete help to restart the Italian economy after the Covid-19 impact.

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<sup>51</sup> National Association of Building Operators: in conjunction with the relevant labour unions, ANCE runs a national network for training (Building Schools), assistance (Building Classes) and safety for construction workers.

<sup>52</sup> Super-bonus ACNE Emilia e Nomisma DAI 38,7 MILIARDI INVESTITI RITORNO DA 124.8 MILIARDI, ACNE, 2022.

### b. Employment rate and growth of a stalled sector

The General Director of ANCE<sup>53</sup>, Massimiliano Musmeci, highlighted how in recent years the economic scenario has been redefined by profound changes that have also affected the construction world. The future of construction, in line with the relevant international objectives, is in fact increasingly oriented towards the theme of sustainability, which is at the center of the reconfiguration of production processes and training paths.

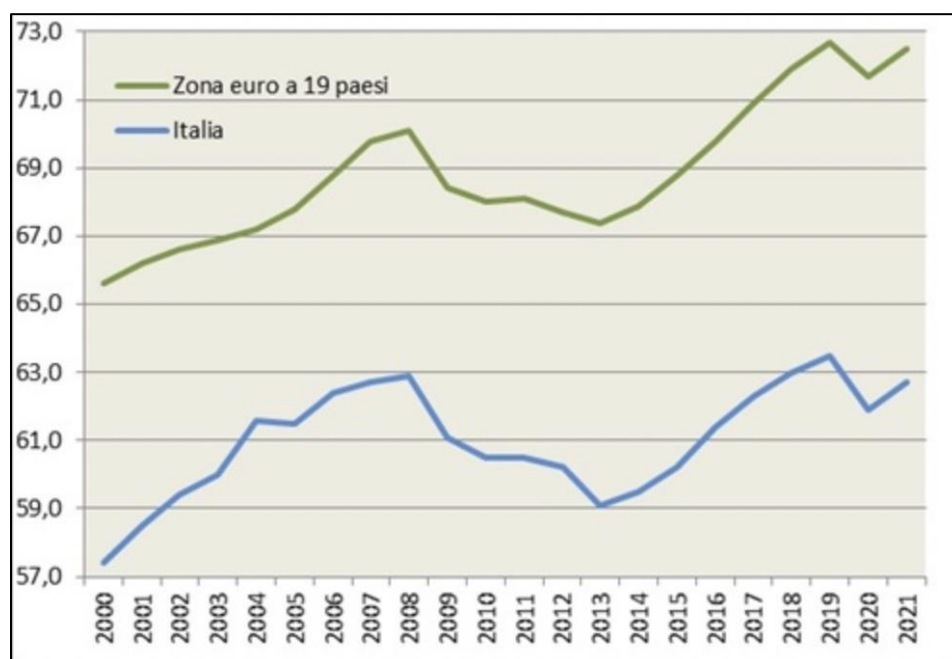


Figure 17: Employment rate- annual data in % of the population aged between 20 and 64- Blue line: Italy Green line: Eurozone

Source: DIPE elaboration based on Eurostat data. <https://www.programmazioneeconomica.gov.it/andamenti-lungo-periodo-economia-italiana/>

After the deep crisis that marked the construction sector, leading to a sharp reduction in employment, the perspective offered by the National Recovery and Resilience Plan, tax incentives and a recovery in the real estate market is that of a return, in the medium term, to the employment levels recorded before the crisis as showed by figure 17. After the implementation of the 110% Super-bonus regulation and the consequent boom within the construction sector, according to the CNCE monitoring in 2021 there is an increase of 12.58% in the number of construction workers and 27.90% in the number of hours worked.<sup>54</sup>

<sup>53</sup> National Association of Building Operators: in conjunction with the relevant labour unions, ANCE runs a national network for training (Building Schools), assistance (Building Classes) and safety for construction workers.

<sup>54</sup>Rapporto sulle imprese 2021, ISTAT, Andrea De Panizza, 2021.

The 110% super-bonus has therefore brought and continues to bring an increase in employment of over 100,000. The numbers were collected, gathered, and published by the employment agency Orienta.<sup>55</sup>

The report analyses in particular the effects on the labour market: according to the observatory, the sectors, and areas most affected by the current legislation are the construction industry and related sectors such as insurance, tax and legal experts and consultants, design and maintenance companies and financial companies. Going into detail, the agency has recorded increased percentages of requests for certain types of workers linked in some way to the measure, including: electricians (+13%), hydraulics (+8%), boiler makers (+6%), construction workers and production of building materials (+6%), engineers (+5%), administrative workers (+4%), surveyors (+3%), window and door fitters (+3%), plumbers (+3%), carpenters (+3%), accountants (+3%).

The recovery in employment was strongest in the South, where employment grew by 1.3%, compared to +0.5% in the North-West, +0.2% in the North-East and +0.3% in the Centre.

"The 110% super bonus on the value of building renovations, both infrastructural and residential, will have a strong impact on the country's economic development, and the entire construction sector will play a significant role as a driver of the recovery with obvious positive impacts on employment," the words of Giuseppe Biazzo, managing director of Orienta. "The sector's labour market, including the entire allied and related sectors, will benefit enormously both in quantitative terms, with more than 100,000 new employees per year, but also in qualitative terms, given the impact on energy and environmental policies, the use of new technologies, and the consequent demand for more qualified professional profiles." <sup>56</sup>

### **c. Construction: 110% Super-bonus drives the economic growth**

According to data published by ISTAT, in 2021 Gross Domestic Product has also grown thanks to the construction sector, which is driving the recovery largely due to the regulations discussed above. The recovery was facilitated by Industry: +12.8% in the North-West and +13.1% in the North-East, but especially by the Construction sector, which grew by 22.8% in the North-West. The performance of Construction was even higher in the South +25.9%. The regions of the Centre are those in which

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<sup>55</sup> Orienta is the Group company operating as an employment agency in the market. It deals with temporary and permanent employment, personnel search and selection, and training.

<sup>56</sup> Il super-bonus vale 100 mila occupati, Italia oggi, Michele Damiani, 2020.

the propelling effect of the construction sector is less evident: the increase of 16.3% is, in fact, relatively smaller than in the other areas of the country, even though Lazio was considered one of the regions where the super bonus works were most evident.

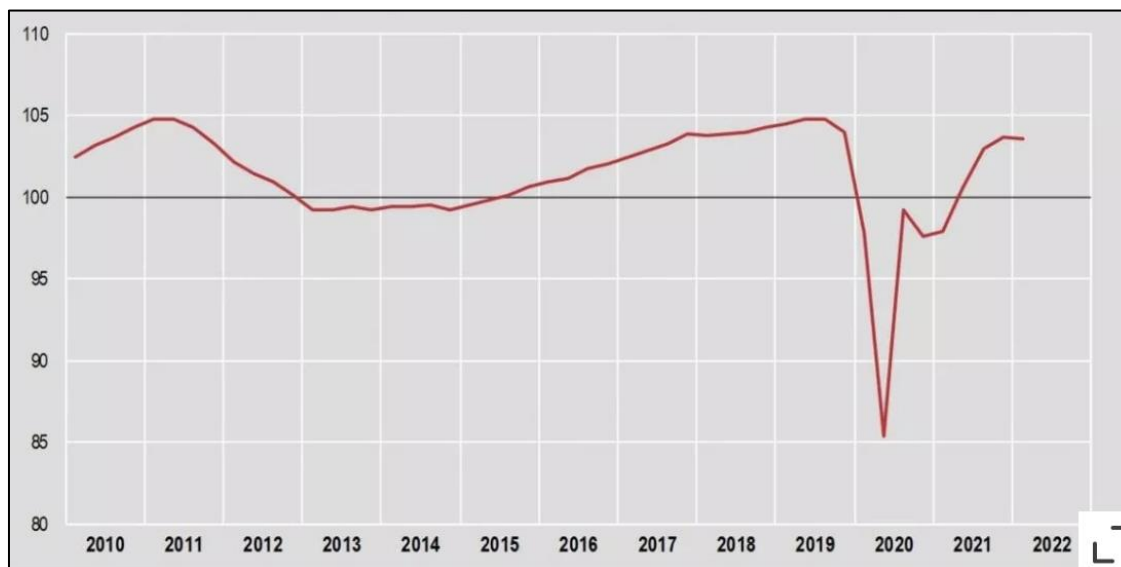


Figure 18: Gross domestic product trend up to the first quarter of 2022.

Source: ISTAT. <https://www.programmazioneeconomica.gov.it/andamenti-lungo-periodo-economia-italiana/>

As of today, the economic value of the Super-bonus has reached EUR 124.8 billion, or 7.5 % of the country's GDP. The health of our economy is still sending out positive signals. In the second quarter of 2022, ISTAT estimates that Italy's gross domestic product (GDP) increased by 1 % compared to the previous quarter and by 4.6 % when compared to the second quarter of 2021.

### 2.3.2 Cons

#### a. Works undertaken by citizens with higher incomes and slow bureaucracy

The 110% super-bonus was created also with the aim of giving citizens with no real financial assets the opportunity to assign credit to third parties and make their houses efficient compared to the past.

In the initial phase, the bonus received fewer applications than expected. At the end of November 2020, the then Minister for Economic Development Patuanelli reported 193 authorised interventions, a low level compared to the total set expected.

In February 2021, at a subsequent hearing of Minister Patuanelli, the total amount of interventions allowed for deductions was 3,100. Although in the following months there was a marked increase in the number of requests submitted and approved, the measure was utilised far below expectations. The initially low number of applications was mainly due to the complexity of the bureaucratic procedures and the resulting long timeframe. Few condominium buildings had applied for the Super-bonus, almost all the approved applications were for single-family buildings and independent housing units.

According to ENEA data, more than 86% of the interventions eligible for deductions concern single-family buildings or functionally independent property units.

Furthermore, the Court of Auditors pointed out that the tax benefits introduced in the past for building renovation and energy efficiency have been particularly attractive to the better-off.

It is reasonable to assume that these dwellings are more frequently occupied by people with medium-high incomes, and that it is therefore wealthier households that have benefited most from the allowances. Even though the average investment is higher for condominium works the percentage of such works is much lower than for the other two categories of buildings.

To take advantage of the bonus, it is necessary to have an efficient condominium administrator - also from the point of view of the ability to find agreement between the condominiums - and it is often the case that properties inhabited by low-income households are without an administrator.

Households living in detached properties do not have this problem, but it is reasonable to assume that these households would have used the available subsidies even in the case of 65 per cent deductions. Which means that the same energy efficiency target would have been achieved at a much lower cost to the state.

#### **b. Lack of professional labour force.**

The necessity to adapt rapidly to the changed expansive post-pandemic scenario has changed the demand of companies for sought-after professional profiles. The drivers, in this sense, are digital and 'green' skills, both in great demand and central themes on which the NRRP is focusing. For construction the gradual increase in demand for certain specific skills is, presumably, also connected to the implementation of interventions linked to the Super-bonus, a tax tool that was very successful in the market last year.

Based on the ANCE Conjunction Observatory, more than 70% of the responding companies lamented high difficulties in finding certain professional profiles. It is therefore clear that the issue of professional training is a priority for the construction sector, since it represents an added value for the professional career of workers, favouring their necessary mobility, and is decisive for ensuring the specialisation required by the market, strengthening the competitiveness of the company, ensuring safety in the workplace, and combating irregular work.

To support these objectives are directed the substantial resources put in place by the NRRP and the definition, in particular, of the National New Skills Plan (PNC), adopted by the Ministerial Decree of 14 December 2021 and articulated in three guiding programmes (GOL Programme - Dual System - New Skills Fund), which represents the strategic coordination tool for qualification/re-skilling interventions, especially for young people, aimed at addressing the needs for new skills resulting from digital and ecological transitions, as well as from the effects of the COVID-19 pandemic, and at fostering the connection between the education and training system and the labour market.

#### **c. Obstructionism by banks**

From March 2022 until today, the banks have exhausted their fiscal plafond and are not accepting any credit to be ceded. This has resulted in a liquidity problem for construction companies, which has led to work being suspended and, in some cases, stopped halfway through.

This means that if construction companies can no longer work (due to a lack of liquidity and therefore unable to buy the material needed to build), citizens are left with work that has been started but not finished by the deadline to be able to benefit from the tax allowance, which is therefore not granted to them because it does not meet the limits set by law.

#### **d. Rising raw material costs**

The price of a product is set by the market which, is subject to the rule, as simple as famous, of 'supply-demand' in an indirectly proportional way: as demand increases, the value of the good increases and vice versa, the price decreases.

The increase in raw material prices was noted by the government in the MIMS<sup>57</sup> decree of 11 November 2021.<sup>58</sup>

Furthermore, according to the National Confederation of Craftsmen and Small and Medium-sized Enterprises, with the Super-bonus, the cost of materials has risen dramatically, reaching an increase of about 70 %. <sup>59</sup>

As evidenced by a statement made recently by Regina De Albertis, president of Assimpredil Ance: 'In addition to the increase, there is the fact that the delivery of materials has also become aleatory. All of us builders have received a letter from our suppliers informing us that, in addition to double-digit increases, it is impossible to guarantee delivery times and that the price will be done when the materials arrive on the worksite. There is also a paradox... That we are in a phase of great expansion of the market: public works with the NRRP funds, energy redevelopment with the super-bonus, the private market on the upswing. What is happening involves one certainty: no one will be able to stay within the cost of the works in progress.'<sup>60</sup> We are therefore experiencing an unsustainable situation from all points of view: the market is growing without measure and those who are in it cannot keep up with its rhythm.

Among the materials with the highest percentage increase, concrete rebar increased by 117% between November 2020 and April 2021. Other metals followed this scenario and we have now reinforcing bars at +43.80% and steel sheets at +59.37%. Not even wood (fir: +43.77%) or bricks (solid bricks: +19.08%) or plastics (rigid plastics pipes: +21.52%), insulation material (+15%) and so on.

The price increase is mainly due to a combination of reasons, accumulated over time:

- a) initial supply difficulties, due to the Covid pandemic situation,
- b) lack of materials and resources, caused by the intense and renewed bonus-driven construction activity for which the production system was unprepared,
- c) rising energy costs, mainly triggered by the war in Ukraine.

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<sup>57</sup> Ministry of Sustainable Infrastructure and Mobility, (In Italian: Ministero delle Infrastrutture e della Mobilità Sostenibili)

<sup>58</sup> Informazioni Parlamentari, 2021

<sup>59</sup> PROPERTY: Is this the end of Italy's building 'superbonus'?, 2022.

<sup>60</sup> Aumento prezzi materiali: anticipo del 50% alle imprese e più di 320 MIL per le compensazioni, EdilTecnico, Redazione tecnica. 2022.



Regarding the point b), the fact that the deduction exceeds the expenditure for the intervention generates a lack of attention among citizens who are not sufficiently sensitised to check the work of the firms as the money is paid entirely and not partially by the state.

Obviously, the boom generated by this measure will increase the pool of citizens willing to upgrade their property disproportionately, and on the one hand the country is not ready to meet such a large demand and on the other hand the materials needed for construction cannot balance the demand as well.

#### **e. Inflation**

In addition to the increase of raw materials in the construction sector, we are facing an inflationary challenge in these months more than in previous ones.

According to ISTAT data, inflation reached an all-time high in June 2022, reaching a value of 8%, a value not recorded since 1986.

There is no doubt that the main cause of this run-up in prices is due to the ongoing war between Ukraine and Russia, commodity-exporting countries, so much so that the main component affecting the rise in average inflation was energy. But energy is indispensable for the creation of building materials and consequently, as the price of energy rises, so does the price of materials, and here again one sector is driven within another.

## **2.4 Actual risks and regulatory changes.**

Since 2020, thousands of Italians have undertaken work in their homes or condominiums thanks to the benefits of the regulation that provides a deduction of 110% or 90% of the expenses incurred for energy requalification work.

However, unfortunately, work has been initiated in an excessive and unmonitored manner, creating a boom within the construction sector, and with poor executive regulation, real speculation has been created by those who initiated work but who were either not in compliance (as required by law) or did not actually need to carry out work on their homes.

### 2.4.1 Frauds

It turned out that 'one of the biggest scams ever seen in the history of the Republic', as Economy Minister Daniele Franco called it in Parliament, was on building bonuses: almost €6 billion have been taken away from the State, of which €2 billion have been 'already collected'.<sup>61</sup>

The Agenzia delle Entrate and the Guardia di Finanza identified, according to the statement made at the Senate hearing by the Director of the Agenzia delle Entrate Ernesto Maria Ruffini on 10 February 2022, a total amount of non-existent tax credits on building bonuses (a term used here to include the 110 % Super-bonus, the Eco-bonus, the Sisma-bonus, and the Facades Bonus) amounting to EUR 4.4 billion.<sup>62</sup>

The disposals of building bonuses and invoice discount generated fraud by spreading non-existent tax credits. Building bonuses have certainly been effective in relaunching the construction sector, which has been particularly hard hit by the crisis but unfortunately, they have also shown several weaknesses.

The most frequently used building allowances were the facade bonus (51% of cases) and the Eco-bonus (37% of cases) while the less used bonus was the 110% Super-bonus (3% of the total) as showed in Figure 19:

Tipo intervento	Percentuale
Bonus Facciate	51
Eco-bonus	37
Sisma-bonus	9
Superbonus 110%	3

Figure 19 Building subsidies most frequently used for fraud. (Details on the tab: in the left side there is the description of the measures while in the right the percentage of frauds)

Source: Elaborazioni OCPI su dati presentati nell'audizione parlamentare del Direttore dell'Agenzia delle Entrate del 10 febbraio 2022, pag. 16.

The perpetration of the frauds was facilitated by the initial possibility, provided for under the 2020 Relaunch Decree, to assign the credits of the various building subsidies an almost unlimited number of times. The decree, in fact, had not originally provided for any guarantees, such as a compliance

<sup>61</sup>Tutte le truffe del superbonus: dai conti esteri ai detenuti quai 6 miliardi sottratti allo Stato, L'Economia, Fiorenza Sarzanini, 2022.

<sup>62</sup> Le frodi sui bonus edilizi, OCPI, Francesco Bortolomai, 2022.

certificate attesting to the existence of the prerequisites entitling to tax deductions (only the 110% Super-bonus provided for such measures).

On the other hand, as far as the 110% Super-bonus is concerned, the first credit assignment mechanism allowed everyone (even people without income) to work on their property using building credits. Invoice discount and subsequent assignment of the credit seemed to have created a perfect mechanism. However, a mechanism not free of errors, which were used instrumentally to sweep everything away.

In fact, the biggest problem was found in the circulation and assignment of tax credits, which in some cases were assigned with irresponsible applications by financial intermediaries, who, to speed up the processing of files or to grab as many customers as possible or even for little knowledge of the subject, assigned credits even without a real check on the customers and the regularity of their applications.

As Revenue Agency Director Ernesto Maria Ruffini said: "the circulation of tax credits - when made through a chain of transfers - makes complex for the intermediary to assess the legitimacy of the transaction, with the risk of involuntarily taking part in fraudulent conducts also related to money recycling. In fact, regarding a credit that is the subject of multiple assignments (admissible under the regulations), an examination carried out only for the last assignee who requests its monetisation may be ineffective."<sup>63</sup>

Moreover, not all financial intermediaries were affected and damaged by this process, as some, precisely to avoid it, acted proactively with checklist and using external auditing firms to avoid the purchase of credits for which AML-related problems were found (lack of building permits, certifications, reports, bank transfers, invoices, etc.).

As of 22 June 2022, fraud reached an estimated value of EUR 5.6 billion by the Guardia di Finanza, although the numbers show an increase compared to EUR 4.4 billion in the second quarter of 2022 there was a cooling in the fraud phenomenon.

This is because to prevent scams several measures have been introduced.

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<sup>63</sup> Circa l'80% delle frodi da Bonus facciate ed Ecobonus, Eutekne info, Ernico Zanetti, 2022

#### **2.4.2 Decree-Law 'Antifraud':**

According to Decree-Law No. 157 'Antifraud' containing 'Urgent measures to combat fraud in the area of tax and economic benefits' of 11 November 2021:<sup>64</sup>

- the taxpayer must request a compliance certificate for the documentation attesting the existence of the prerequisites entitling to the building bonus. In this regard, the decree extends the fulfilments and procedures already provided for the 110% Super-bonus to the other home bonuses,
- a qualified technician must certify the appropriateness of the expenses incurred,
- preventive controls are intensified on the communication of transfer and invoice discount referred to all types of home bonus.

#### **2.4.3 Support Decree Ter**

According to the Support Decree Ter of 27 January 2022:<sup>65</sup>

- the tax credit may only be assigned once (except for credits already subject to multiple assignments as of 7 February, which may still be the subject of a further assignment)
- contracts concluded despite this prohibition are null and void.

#### **2.4.4 Law Decree February 25, 2022**

According to the Decree-Law of 25 February 2022:<sup>66</sup>

- The assignment of credits becomes possible again, although under more circumscribed conditions,
- the receivable is assigned a 'unique identification code' to be indicated in notifications of any subsequent assignments,
- Penalties and detection measures are envisaged for the 'qualified technician' who makes false statements to obtain the building bonus.

#### **2.4.5 Aid Decree**

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<sup>64</sup> Vedi: Decreto-legge dell'11 novembre 2021, n. 157.

<sup>65</sup> Vedi: Decreto Legge del 27 gennaio 2022, n.4, art.26.

<sup>66</sup> Vedi: Decreto Legge del 25 febbraio 2022, n.13.

Following the entry into force on 30 July 2022 of the Aid Decree DL 50/2022, converted into Law 91/2022, the run for the 110% super-bonus has started again.

Article 8-bis of DL 34/2020, the so-called Relaunch decree, as modified by DL Aiuti provided as follows: 'for the interventions carried out on real estate units by the natural persons referred to in paragraph 9, letter b), the 110% deduction is also due for the expenses incurred by 31 December 2022, provided that as at 30 September 2022 works have been carried out for at least 30 per cent of the total intervention, in the calculation of which the works not facilitated pursuant to this Article may also be included'.

It is not difficult to finish 30% of the planned work by September, also because it is possible to calculate the design costs within the first SAL.

This date applies to 'single' building units, for condominiums there is a longer deadline of 2024.

Essentially this Aid decree is important for two important measures also to contrast the obstructionism by the banks: on one hand the financing is extended from 30 June to 30 September 2022, on the other hand financial intermediaries may assign credits acquired by companies or private individuals to a party outside the banking circuit without having to perform the two steps required within the same financial intermediaries. In addition, the assignment of credits outside the banking circuit can only be made to 'professional private account holders'.

## **Chapter 3**

### **Circular growth process of the market: the Hilti case**

As shown above, the regulations present some weakness from the point of view of control and financing, but at the same time it has also proven many benefits over the past two years. Among these benefits, one of the most important is that it has been a key to the country's economy and the construction sector which has seen an exponential growth. After all, growth does not only stop with the construction company sector, but as anticipated it also drives growth for all construction-related sectors and companies such as suppliers, plumbers, architects and so on.

A practical example of this growth can be described through a study carried out on the multinational company Hilti: an important player in the construction industry as a supplier of tools and consumables for construction companies.

In the following chapter a briefly description of the company will carried out and then will be analyzed how the 110% Super-bonus, the Eco-bonus and the Façade Bonus have contributed to the development of a new trade within the company and partly also to the economic growth in terms of remuneration.

#### **3.1 Hilti history**

Hilti is an iconic B2B brand in the construction industry. Based in Liechtenstein, the family-owned company is one of the largest power tool producers in the professional segment, known for the superior quality of its product innovation. In its traditional business model, Hilti mainly act as a tool manufacturer and sell its tool to the construction companies who are responsible for all activities related to the management of their tool fleet.

Hilti was founded in 1941 in Liechtenstein by two brothers, Martin and Eugen Hilti respectively. When it was founded, it was a small company with very few people. Years later the brothers signed their first foreign sales agreement in the Italian market, exactly in 1952: we are close to the years of Italy's economic boom, the years in which the biggest construction numbers in our country were register.

The world's first gunpowder and direct fixing tool, the DX 100 to be exact, was created by Hilti and was a commercial and technological success in 1957. In the following years, the company improved its production systems and expanded them by starting to develop the first mechanical anchoring systems.

Subsequently, Hilti continued to grow and develop both within the company and geographically.

New production plants are opened in Germany, Scotland, U.S.A, Africa, Asia and so on. The company also broadens its management base and soon begins to operate a four-member executive board.

In 1975 was Michael Hilti who took over the leadership of Marketing and sales.

However, 10 years later, the company's first iconic strategy called 'strategy 2000' was introduced, focusing on market segmentation and with it a corporate culture expressed in the motto 'leadership make the difference'. The strategy focuses on three fundamental aspects that will be the company's key turning point until today: *customer-competence-concentration* giving an excellent push in the production field with a focus on housing solutions, social development, education, and interventions in disaster areas. In 2004, 'leadership make the difference' is replaced by 'our Culture Journey' in which the most significant aspect is the regular training of its salespeople around the world.

It was in 2009, because of the global economic crisis, that the company reached its first downturn, when profits dropped by 20% and a major restructuring process was initiated. Against this scenario, however, the strong CHF<sup>67</sup> led to a shift of activities from the Switzerland region to the European region. The Executive Board grows from four to six members.

Hilti's current CEO, Christoph Loos, started his role some years later in 2014. With him begins a new corporate strategy called "Champion 2020" focused on the creation of sustainable value through leadership and differentiation. Finally, in 2017 Hilti strengthened its position in new markets with the acquisition of Norwegian Oglaend System Group.

Nowadays, the Hilti Group provides the global construction and energy industry with technologically advanced products, systems, software and services. With a workforce of more than 31,000 employees

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<sup>67</sup> Switzerland's currency.

in over 120 countries, the company is characterised by direct customer relations, quality, and innovation.

### **3.2 Corporate structure, trades and costumers**

The company has a well-structured hierarchy. The members of the Board of Directors of Hilti Corporation are elected by the annual general meeting and hold office for three years. As a rule, board members hold office for no more than four mandates.

Hilti Italy is present throughout the country from north to south.

Employee roles are divided into *staff* roles and *headquarter* roles: the first are distributed within Italian territory and are considered the heart of the company because of the important engagement role with costumers they cover, while the second ones cover of all those production management and strategic development activities.

On one hand, regarding the staff roles, the company is structured into trades and areas divisions. The divisions represent the major geographical areas in which trades are developed.

Trades refer to the different kinds of customer business. Specifically, there are 5 different types of trades to report:

1. Building and construction (BC)
2. Steel and metal (SM)
3. Energy and industry (EI)
4. Subcontractors and diamond (DIA- concerning everything related to shipbuilding)
5. Mechanical and electrical (ME)

Each trade has its own figurehead, responsible for the development and control of all areas.

Each area then, has its own sales manager called Area Sales Manager (ASM) who manages his salespeople in turn. There are usually 10 to 15 salespeople per area to which customers are pre-assigned. They are called Account managers (AM). The AMs are considered the heart of the company as they are the ones who develop the relationship with the customer and have the duty to follow the customer at all stages, through regular meetings and consultations on the company's products and services.



On the other hand, the headquarter roles are based in Milan- Sesto San Giovanni and range from Strategic marketing to roles in IT services, legal and controlling teams, developers, product managers, engineers and so on.

Furthermore, the hierarchy is also present at the customer level. In fact, by company strategy, customers are grouped into different potentials from band A to band E. The configuration within the band is defined in accordance with the structure and size of the customer's company considering the number of employees and equity.

Customers of potential A, B and C are followed by the AMs in their territory. For customers of potential D and E, a reference figure called Inside Account Manager has been created. ISAMs hold the same role as AMs but with the difference that they do not need to be in the customer's territory. They can also be followed up and developed via online meetings or via the customer service team.

For customers of A-B and C potential, different pricing conditions are provided to favour more aggressive price levels in relation to the customer's history and loyalty with the company.

There are three kinds of pricing pillars as per the pricing policy aimed at generating sustainable growth for Hilti and its customers:

- a. price engine,
- b. overwrite,
- c. commercial agreement.

Firstly, the price engine (PE) is a predefined fixed discount differentiated by product and customer potential/trade. This ensures consistency towards customers, a fair price and full control over profitability.

Secondly, the overwrite (OW) is used for large orders that are not repeatable in time and outside the customer's ordinary business. The OW must be an exception and there is a maximum discount limit that can be applied by the sales force. Once this limit is exceeded, it is called Extra OW which the discount must be approved by the pricing team. Extra OW is only possible for customer A-B-C and exceptionally for D and E.

Finally, the commercial agreement (AC) is a customer-oriented instrument: ad-hoc discounts are defined together with the customer and have a duration of one year. The aim is to increase customer

loyalty, create a relationship based on trust and designed at increasing purchase volumes. The agreement is not mandatory for the customer and the discount is guaranteed on every order and for any channel chosen. It must be agreed on products that are part of the loyal customer's regular business and therefore the repetition of orders is necessary. But if it is not done correctly, it can undermine the company's profitability.

Clients can choose different sales channels in addition to their AMs. Hilti has stores open throughout the country as well as an E-commerce site. These consumers with dedicated discounts can independently choose whether to buy from the site or in Hilti stores, and on their dedicated lines they will take the agreed terms.

As mentioned before, leadership, differentiation and engagement are the heart of Hilti's strategy. Great benefits can be achieved through leadership: the market leader is able to invest more into R&D, subsequently earns more brand recognition than any follower and this results in more loyal customers; at the same time the leader leverages economies of scale in operations.

There are two pathways to market leadership: cost focus or differentiation focus. Hilti follows the way of differentiation.

Differentiation and direct sales are two sides of the same coin: on one hand differentiation is necessary to finance the expensive direct sales model, on the other hand direct sales needed to sell differentiation in the market. The direct sales force (AM and ASM) are the more important drivers of differentiation and engagement of the company. They are close to customers to understand their problems and find the better solution in terms of products and services.

A competitive advantage is certainly the presence of field engineers, who, when necessary, work alongside the AM and the customer to always support them, making even the application of certain innovative products more efficient.

### **3.3 Company innovation after the 110% Super-bonus and Façade implementation: the exponential growth inside the company**

The pandemic strongly affected all global and Italian companies. In the first quarter of 2020, Hilti suffered a real freeze in sales as all construction projects were at a standstill because of the Italian lock-down.

In the second quarter, as soon as all construction companies were back in the field, it resumed its activities in an excellent way, bringing unexpected results. These results were partly driven by the super-bonus and ventilated façades legislation described above.

Initially, customers who dealt with this type of work were approached in the same way as in the traditional process thus analysing the purchasing potential and evaluating appropriate discounts in case of large orders.

Subsequently, with increasing demands and especially sales volumes, the company decided to expand new positions to be able to take care of these specific customers as effectively and professionally as possible.

A key innovation in this scenario is the creation of a 'Ventilated Facades' segment within the Steel and Metal trade with its own coordinator and trade manager.

However, others two new company figures have been created: *a business developer* (BD) whose task is to evaluate customers working with bonuses, see sites and propose the best solutions in terms of product lines and pricing, and *a team of developers* who then follow the customer through all the other phases of the work and throughout the operational phase. Hence, the first figure mainly concerns the technical part while the second concerns more the operational part.

In handling these types of orders, the company followed a well-established procedure in which the different teams must work together. After an initial examination of the opportunity by the BD, the AMs and the developers team create a hypothetical order needed for the customer with some aggressive discounts than usual. Subsequently, the request is sent to the pricing team, which will make its evaluations in terms of opportunity and profitability, and if there are no weaknesses in the transaction, the order is processed.

### 3.3.1 Results after the implementation

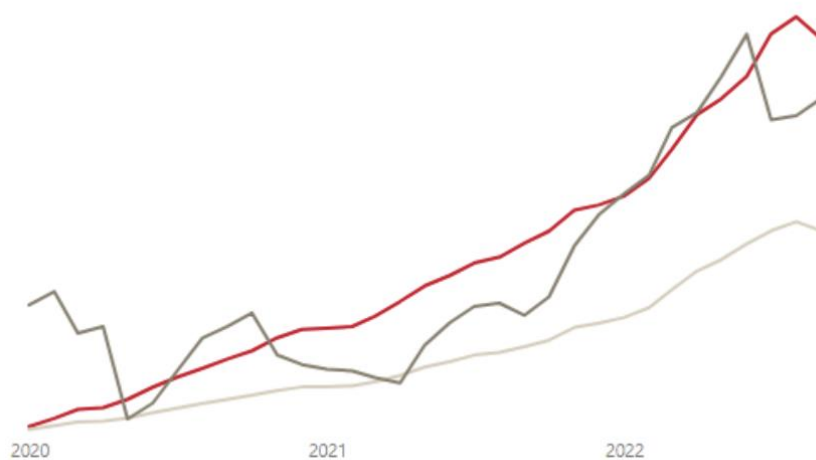
The results achieved since the legislation came into force are not only in terms of business organisation but also in terms of operational growth and profitability. Due to all this bonus work, the ventilated façade trade has achieved an increase in sales volume, turnover and margin over the last two years.

In the following graphs we can observe this growth in the years from 2020 to 2022 YTD -in our company we use the term “*year to date*” (YTD) to refer to the period from the beginning of the year to the current date- within the Façade Ventilated trade.

In the first graph, there are three different lines representing respectively:

- red line: the net sales (NS) given by list sales – discount,
- grey line: the strategic product profit (SPP) given by NS- SPcosts,
- beige line: the strategic product margin (SPM %) given by (NS- SPcost)/NS

Since I cannot enter the exact values, due to privacy regulations, I will only explain this growth in percentage terms between one year and the next. In this specific case I used data until 1-09-2022.



Source: PowerBI – a software utilized by the company.

From 2020 to 2021, there was no growth in net sales comparable to that of 2021, partly due to the repeated lockdowns and instability in the industry and partly also because the regulation had just come into force and many customers were dealing with paperwork before they could get the material. In fact, the SPP, as we can see in the graph, in mid-2020 falls to the downside. This will have been caused by an initial inability of the market, and all following sectors, to balance supply and demand with profitability. After all, volume growth, in this specific trade was about 28% higher than the year before and the SPM registered a steady upward trend. Nevertheless, it was a positive result for the company.

Exponential growth was instead achieved by the end of the year 2021 and early 2022. In this period, the company counts a very high number of bonus transactions. The growth in net sales, and thus in sales volume, increases at a rate of approximately 100% compared to the year before.

SPP shows a considerable, although not constant, increase in this period. This instability is caused by the fact that some product lines in this trade have higher costs for the company and consequently the strategic profit per product line may be variable. Despite this irregularity, the total SPM of the trade recorded a sustainable growth.

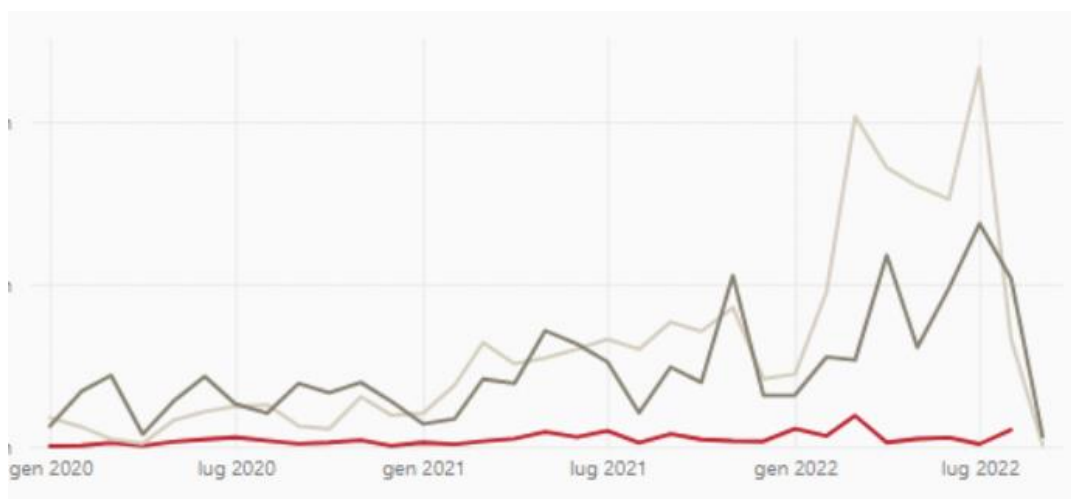
From 2022 to YTD because of legislative changes, there is still a steady and very positive growth for all the variables analysed. The growth in terms of volume shows a further increase of 70% compared to the previous year. Nowadays, the situation has changed as we can see from the graph. In the last few summer months, in fact, due to the high cost of raw materials and the difficulty in finding materials, the company is experiencing a slight decrease in this segment. As of June 2022, production costs have risen and the inflation we are facing is affecting all sectors of the economy. NS, SPP and SPM are decreasing, but comparing these data with those of the early 2020s indicates an excellent result.

In these two years, all transactions in this trade were completed through the traditional pricing process.

The following graph will show the performance of the pricing pillars used by the company, in particular:

- the red line represents all the transactions carried out at the pricing engine (PE)
- the grey line represents all the transactions processed via Overwrite (OW)
- the beige line represents all the transactions processed via commercial agreement (AC)

For this figure I used data from January 2020 to July 2022.



Source: Power-BI

As the figure shows, most of the deals were concluded in OW and AC. This is because, in view of the high volumes, the company implemented a more aggressive discount to generate loyalty and engagement with customers in this sector.

Since 2022 to date the ACs represented the line with the highest growth. The reason lies in the awareness of companies to mature more sustainable pricing conditions for the entire current year.

Based on the volumes and activities that have been performed by and in the company since the implementation of the current super bonus and ventilated facade regulations, we can therefore say that on the supplier side, it turns out to be a very profitable law.

## Chapter 4

### **How the market stakeholders deal with regulation: Has it been an efficient way for the growth? Was it a positive or negative key for the market?**

To conduct a more accurate and comprehensive analysis of the current implementation and its effects within this important market, I decided to interview some of the major stakeholders this market segment. All of them, each for specific aspects, have been involved in these kinds of work.

On the HILTI side, I had the opportunity and the honour of interviewing three important managers.

On the other hand, for the customer side, I had the opportunity to interview a customer from the Central Southern Italy. I will call it 'XXXX XX' for privacy reasons.

Within the company instead, I interviewed three figures, which I consider very relevant: first, Alessandro Ammirati, a financial manager who has worked with the assignment of credit in recent years and will give us a practical and concrete insight on how HILTI has worked with this kind of 'remuneration' and what have been the internal differences after the legislative changes, what challenges we as suppliers have met and what our benefits have been.

Secondly, Luca Barbieri, an Area Sales Manager in the North-Est area of Italy in which, as showed in the second chapter, were done the higher number of works in this field. Through the feedback received from his customers who have worked with the 110% Super-bonus and Ventilated Facades, Luca will explain the main critical points experienced, the evolution of the business in recent years, and some suggestions on regulations. In addition, we will see how our company entered a market segment in which we did not have a strong market share, achieved only after the laww's implementation.

Finally, Sebastiano Franco, Area Sales Manager in the Central Southern Italy.

Sebastiano will give us an overview of his area, underlining that few works have been carried out under the 110% Super-bonus and will answer questions by specifically explaining the technical differences between a coat and a ventilated façade. Sebastiano's reasoning and explanation help to understand how such a large speculative bubble has been created.

In addition, Sebastiano gave me the important opportunity to meet his client 'XXXX XX' and receive significant feedback from him.

#### **4.1 Interview with the Financial manager: Alessandro Ammirati**

**In recent years, how has HILTI been working with the transfer of the credit and the discount on the invoice provided by the regulation?**

<< Hilti started working on the credit transfer in November 2021, so we do not have that many records. We are currently analysing the opportunity of super-bonus, but we also work with other types of credit to respond to the needs of companies that refer to ours. What changes, of course, is the deductibility because the 90% face bonus is deducted in 10 years, while the 110% super-bonus in 5 years and, consequently, the operation costs are different. From the point of view of transactions, we operate only with the assignment of credit, we do not practice discount on invoice, but we work, for example, with companies that have accrued discount credits on the invoice.>>

**Are there differences between classes of potential customers A-B-C-D and E?**

<< The main customers who interface with us for these requests concern the upper market; to date, we do not have cases of base market customers (pot. D and E). All the operations we have done so far, which are four in terms of credit assignment for a total amount of €X.000.000,00, have been done with customers of the upper market. (A-B-C). >>

**Why are there no base market customers?**

<<We have set a minimum limit of the amount to access the credit transaction. Therefore, the company that turns to us must make a possible order of at least €X00.000,00. Not all the customers of the base market can reach this minimum threshold, determined by the fact that we also face costs imposed by new regulations; in fact, the companies that have entered with us in this modality (credit assignment) are mainly those that already work in the sector of the facades of the anti-seismic or super-bonus. >>



**Following the Decree-Law of 25 February 2022, which restricts the assignment of credits, what operational differences were found?**

<< Let me start with the differences. Yes, there are internal and external differences. As for the internal ones, we left in November 2021 with a type of process in which the amount for the minimum order was lower. It was €X0.000,00. In March 2022, we had to change our process because of the main regulatory changes introduced in February of the same year. We started working with "co-responsibility" in acquiring credit. What does that mean? This means that if HILTI closed operations before February 2022, if a credit did not meet all the requirements, the problem returned to the person who had accrued the credit in the first instance and, usually, it was a condominium (because most of these relationships were made by private). Thus, before February 2022, if the company, after having made the certifications with its architect, subsequently screened by a CAF or an accountant, provided all the documentation, asserting its completeness and validity, we could rest assured. From February onwards, it has not been so. With the change, though, if HILTI has an unfounded claim cash is responsible for that claim. This has also required us to carry out the control of the appropriations under co-responsibility

**How do you check the certifications?**

<<We do it with one of the Big Four (to date, the awards for all customers are doing the big Four, thus: Ernest and Young and Deloitte KPMG and PWC). We already have PWC as an auditor and rely on them for this audit. Of course, this has a considerable cost to us, so we set, for this reason, the minimum order of X00.00, 00 which we have already mentioned. If I had not done so, we would not have been able to cover the costs of the consultation.>>

**Is co-responsibility, then, new in your sphere of intervention?**

<< It is undoubtedly the first significant innovation that changed the process, but not the only one. The other is the limit to the assignment of credit. A limit has been placed on the second disposal; from the second disposal, it is possible to transfer one's claim only to the banking system. We, therefore, like suppliers today, can only close operations with the subjects that mature the credit in the first instance>>

### **Who are these parties?**

<<They are two types. One is the "General contractor", that is the one who buys the building, puts it back to new, perhaps with the super-bonus because it has all the necessary asseverations and, therefore, in this case, it is the General contractor that matures the credit in the first instance. Here, he is, for us, a candidate for a possible sale. Another circumstance is the discount on the invoice that presents a different credit maturing process. >>

### **And how do you accrue credit in this case?**

<<It is soon said. Let's assume that an apartment building must do a job for 100,000 €. The one who must do the work says to him: "out of this 100,000 €, I will give you a 50% discount on the invoice". What happens, then, is that these 100,000 € are divided into two. Of these, 50,000 € remain in the heads of the condominiums, which in turn can decide to give them away or to serve them with annual tax returns in 5 years. The other 50% matures it with the one who does the work and matures it in the first instance. Therefore, these € 50,000 for us are usable>>

### **What has changed about external differences since February 2022?**

<<External differences substantially affect banks. We currently receive many contacts from customers, much more than in the past, because banks are stonewalling.

They are no longer taking these credits, implying that companies can cover with this block if decisive and with cash in hand. Instead, medium-small (and in Italy mainly there are medium-small companies that have exposed themselves) do not have the strength to sustain the lack of liquidity; they go into difficulties, so they turn to a supplier to get material. That is how we get more opportunities. In fact, of the four closed operations I mentioned earlier, we closed three this year and only one last year.>>

### **Is it cheaper to turn to Hilti or the banks for credit transfer?**

<<It is essential to make the customer understand the difference compared to the transaction he makes with a bank. Let me give an example: if you have a 110% credit from 100,000 €, then 110,000 € (because the state also gives a 10% more) if you turn to a bank, of this 110,000 € it pays 100,000 euro, retaining a cost of 10%, then applies a real interest rate. In our case, we do not give liquidity or

money; we give materials. Therefore, the rate we practice for the customer is the discount rate and, thus, the pricing. In this case, we have asked for your support for the pricing definition.

In 2021 the banks were beating us up because the maximum markup for us was XX%, while they were practising a markup of 8/ 10%, so the customer, knowing that with us, he would have an aggressive discount that would allow him to absorb the markup, preferred to have liquidity in the bank. The fraud that occurred at the beginning of the year was due to this situation. In all the newspapers, we read about the Italian Post Office settling invoices in 7 to 8 days on building sites that were stopped in their accounts. So, in 2021 we were paying the intense competition from the banking system and the financial companies. Some companies only did tax credit trading because, for a time, it was convenient for the banks to do tax credit trading instead of investing in BTPs. In practice, the State Treasury bond yielded less than this credit game, and that was where the fundamental limitation lay.>>

#### **For the customer, what is the real cost?**

<<With us, the customer's actual cost is given by pricing and, therefore, by the discount rate on which markup is applied. This may depend on the customer's decision, who may assign this credit in one, two or more tranches/ annuity. It is, of course, a markup compared to the standard customer discount even by commercial agreement. >>

#### **What are the variables that impact the markup?**

<< Depends. That is the question our sales force asks the customer before we consult the pricing team. As mentioned before, the tax credit can be deducted for the entire 5 years. The markup will be very low if the customer wants to give us the entire amount of the credit and the total annuities. The markup will differ if the customer divides the annuities into 5-4-3 years. Coming back to the example of those €100.000,00, the clients can decide to close the operation by giving five annuities from 20.000,00€. He can also decide to give two, 2023 and 2024, for example, in a single solution. This aspect is essential because if you receive an annuity from the customer in 2023 or 2024, it means that we recover the margin of those tools in one or two years, and we can make more aggressive pricing and consequently, the markup will be lower. If it gives the credit in 5 tranches for us to recover that margin on the tools in 5 years, a higher markup will be applied. >>

### **In general, what markup percentage do we apply as Hilti?**

<< (controlling analysis): We usually apply markups of XX% if the customer gives us credit in total (5 years). For each annuity less, we take off a percentage, so if instead of giving 5 annuities, we give 4 we apply XX%; if he gives 3, we apply XX%; if he gives 2, we apply XX%; if he gives 1 we apply X%. If he even gives the current annuity, i.e. 2022, because, for example, he accrued it last year, we will come out of standard pricing, therefore, with the commercial agreement. Obviously, for the facade bonus, the pricing and the markup are different because the deductibility of this bonus is at 10 years, not at 5, so usually, if the customer asks us for a 90% facade bonus at 10 years, the markup is higher, it is between XX% and XX%.>>

### **How does the credit transfer process take place?**

<<We started by giving initial training to our sales force colleagues. Specifically, we made them understand this bonus and how it is accrued.

As far as the process is concerned, the first part is purely pre-qualification, which the sales force colleagues do. It consists of three elementary questions:

- 1) Does he accrue the credit in the first instance? Because if he receives it from an assignment, he cannot make a further assignment with us.
- 2) What are the nature of the credit and the actual accrual in the tax drawer of the credit if he has a credit accrued from a 110% super bonus job, if it is a 90% facade bonus, or if it is a 100% seismic bonus.
- 3) What is the amount of the operation? Because below 100,000 EUR, the application is not considered.

About the second question, knowledge of the nature of the credit is necessary because, depending on the nature, there are differences in deductibility. Concerning the accrual in the tax drawer, it is important because only credits the customer already has in his tax drawer are considered, not those that will have to accrue.>>

### **Could you be more explicit?**

<< Certainly. Let me give an example. There are some customers who have asked us: "I'm working on a building site for the super-bonus, but I have not accrued credit yet because my balance and my work progress does not allow it to accrue. Can I place an order for 100.000,00€ and then, when I open

the credit, will you balance it for me?". In this case we say "no" because for the tax agency if we issue an invoice that must be balanced with the tax credit, that credit must already be accrued by the customer.

One consideration: as I mentioned earlier, for customers who continue to work with these bonuses, €100.000,00 is ok and, therefore, we get to them straight away. On the other hand, clients who may have only recently entered the market or, precisely to benefit from the legislation, have opened two or three sites but have no others, raise some objections because they claim that they must make space to take goods, to make stock.

Once we have passed pre-qualification and ascertained that the answers to the questions asked are positive, we move on to the full operational part: we call in the credit business partners (figures who are part of my team) and go to the client to whom we explain what the process consists of and then move on to the agreements.

This is what we explain to the client, as credit business partners, about the credit. It is at this point that the client will make his own assessments.>>

### **If the client gives a positive evaluation, what happens?**

<<If the client is ok with it, we move on to the next step, i.e. we ask him for the asseverations of that credit, accompanied by all the necessary documentation, and we turn everything over to PWC, which will make its verifications. If the credits are fraudulent, i.e., some document is missing, or PWC finds that the documentation is not adequate, the pec has not been sent to the revenue agency. We stop the process because that credit does not have the required characteristics, and if the customer agrees, we close the supply with standard supply conditions, i.e., with the standard payment terms to be defined (it is always a matter of large orders). If, on the other hand, PWC gives us the "go-ahead", we communicate this to the customer, who will have to evaluate our private deeds, consisting of a framework agreement and a private charter summarising the nature of the credits, super, facade bonus, for example, or other, the establishment for which it was accrued, in this case purely technical details that are revealed by the asseverations. Once all this has been completed, we affix our and the customer's signatures, thus sanctioning the end of the process and placing the order. We like to emphasize that this whole process follows a much faster procedure than that followed by banks.>>

### **Once the order has been placed, what happens?**

<<The process of placing the order requires an invoice. An invoice is then issued, balanced against the credit the customer gives us in the tax drawer, so we process the order and then balance the invoice against the credit. This is another aspect that should not be underestimated, and, in fact, we always explain to the customer the value of the order: the value of the invoice must always be equal to the value of the credit that the customer assigns because this is a prerequisite for the tax agency, which will check precisely this, i.e. it will go and check whether these credits correspond to an invoice.>>

**Is the 'credit business' partner a figure created specifically for the management of the bonuses or did it already exist within your company?**

<<It already existed. It is a figure created in 2018, not for the tax credit, but since we also have those skills, we decided to take part in the process, also to support our colleagues.>>

**On a practical level, Hilti's profit comes out of the markup, but for the customer where is the benefit?**

<< The actual advantage of the customer who has to make a supply with Hilti is placing a large order without a cash outflow, i.e. he does not have a cash payment but pays for a supply with credits. His real advantage is determined by the fact that if, for example, he must open a construction site and he needs the goods, by turning to Hilti, he does not affect his cash liquidity because he "pays" by giving us credit. Therefore, he does so at zero cost, affecting neither his own economic system nor the entire economic cycle. For Hilti, there are further advantages in this way and higher pricing. We have a higher margin with this operation. At the same time, since it is a transaction on a large order, we have no credit risk. There will be no risk that this customer will not pay for the supply, which will generate outstanding debts and, therefore, write-downs in the provision for bad debts.>>

**- Do we implement a loyalty system through this modus operandi?**

<<Certainly. That is another advantage for Hilti. We make the customer more loyal because he feels he is followed at 360°. We should also not forget that, for companies that have an important structure like ours, this credit assignment is convenient because it allows the general accounting department to dispose of all employee and IVA taxes with these credits and, considering that our company, in Italy, has as many as 1,300 employees, the benefits are considerable. It is, therefore, essential to enter the market and close one or more transactions with zero outstanding risk.>>

### **Can I ask you for some feedback on legislation?**

<<Mhh.... Taking a balance of the circulating news with the super-bonus, we will not go ahead, and it will end in December 2022, while we will proceed with the facade bonus, the seismic bonus. I think, therefore, that we will continue to have requested.>>

### **Could the suspected stoppage of super-bonus payments have been avoided?**

<<In Italy, as always, you make the law and find the deception!... Who knows, maybe if the state had imposed the restrictions included in the rule from the outset as of February 2022, the market would not have exploded. In this regard, Gabanelli's report on the 110% super bonus is relevant in which, after analysing the ATECO codes activated for construction in 2021, she highlighted the boom. This year, many people who were involved in logistics, catering, or something else went to the Chamber of Commerce and, within two hours, activated a building trade code. This shows how the market was pumped up; it was 'doped' with the apparent negative consequence: the end of the super bonus.>>

### **And the banks are exempt from 'blame'?**

<<Criticism affects everyone, including the government and banks. The truth lies somewhere in between. I repeat, however, if the state had set the rules from the outset, we would not be in this situation, in which many companies could go bankrupt in the autumn due to the inability to address the lack of liquidity.>>

### **Considering that the 110 super-bonus will probably be blocked and the focus will be on the facade bonus or the earthquake bonus, how do you see this market in the future? Do you think it could be a speculative bubble or is there some positive?**

<< I think the other two bonuses, facades, and seismic bonus, will go ahead because that is a high-level market. The super-bonus, if you are redoing a building, anyone can do it because you don't need specific skills. Conversely, the other two are much more technical, so the applicants are companies that do just that market. In my opinion, the market segment will continue to move forward because the Italian area is highly seismic, and the tremors that have occurred over the years have left traces, sometimes evident, in the buildings, which must be remedied, in addition to which we have many buildings from the 1960s/70s/80s that need to be refurbished. That is why for me, those will go on.

I am also not convinced that the super-bonus will disappear. Instead, it will be revised. Everything, however, will depend a bit on what happens this autumn because if many companies go bankrupt, then the state will not even try to reintroduce different formulas. If, on the other hand, there are no bankruptcies and we will move forward, in my opinion, there will be possibilities.>>

**To regulate the assignment of credit in the Italian market, considering that we are a multinational company, did you have to ask for internal permits before going ahead?**

<<Yes. We had to explain these operational novelties to the parent company, highlighting their opportunities. The parent company then gave its approval and a budget of €X.000.000,00. Of course, if we exceed that, we will make a business case to the parent company and ask for reinforcement. The big stumbling block remains the banks' obstructionism, so customers are trying hard to figure out how they can get out of these credits.

As a multinational, we have only found these opportunities in Italy because of government regulation in the other markets where we operate, we have not found them.>>

#### **4.2 Interview North-East Area Sales Manager: Luca Barbieri**

**Considering the current Regulation, how do you see the market? And what is the feedback from customers?**

<< I will start by answering the second question. Customer feedback shows that the biggest mistake was to put the Post Office in charge of this Regulation. The Post Office had neither the competence nor the capacity at the general level in the territory to be present and to check that everything was going well.

This gave speculators and companies, even improvised ones, the opportunity to grant credit and, therefore, sometimes even to grant 100 per cent financing for work that was never completed.

On the other hand, as far as the operational side is concerned, I see a limitation on the time side, in the sense that having created a time frame of one/two/three years left room for speculation, as there was not enough time for planning. Add to this the high cost of raw materials that did not help and, shortly afterwards, the difficulty of finding them on the market. If a ten-year plan had been made for the super-bonus, professionals and not improvised companies would have worked, as happened.

Today, the companies that carried out the bonus are those that dealt with engineering services or logistics companies and this, in short, gives some idea of what kind of speculation there was.



This is also what happened in photovoltaics: I also experienced that business, and I see much parallelism in the temporal part and the speculative part, even though, in both, there would have been a tremendous economic advantage for the sector. >>

**What is your idea of the boom in work that has resulted from taking advantage of the bonuses?**

According to my clients, there was certainly an incredible boom of work, and there could have been a lot more if a wider time window had been opened and if they had also created certification constraints for clients. This means that these works would have really been carried out by clients who were qualified to do so, i.e. clients who had also done ventilated façades in the past, rather than improvised speculators who set out to do these works with, let me say, very, very poor results.>>

**Could the regulation have been a springboard for the economy?**

<<From my point of view, it is an incredible waste because if it had been done well, the Regulation could have been a springboard for the whole economy and the whole building industry as well as arriving at, A-range energy parameters and at the same time beautifying the cities, giving them an architectural sense. Indeed, on a theoretical level, the Regulation is exceptional. The critical points have been the control and the time frame. >>

**Regarding the 110, do you think a regulation that subtracted 80% or 90% would have been more appropriate?**

<< I also manage the 110% parts of the bonus because I manage clients who do coats, and they distribute this feedback: a good 70/80/90% would have been ok just the same, and if the time frame had been widened, this would have allowed for better planning and development of the structure of the companies, even with recruitment plans. If a slightly less aggressive investment had been made, 80/90%, but with a ten-year plan, possibly putting stakes on the clients' certifications or the skills of the clients doing these jobs, there would have been more professionally practical jobs. These customers today have quintupled their turnover in two years. However, what will these companies do tomorrow? Tomorrow they will go back.

Construction companies became self-appointed specialists, and companies that did not work in the building trade started to make coats, but then what happened? Even here, the materials could not be found, and prices went up. In practice, therefore, if you want to go and do an installation outside the

bonus, you pay double or triple because the costs have risen exponentially. The most damaging aspect of this bonus was putting so much into so little time. If you need to call a plumber to do a boiler, you cannot find him because he is busy with the bonus. If you need to call a contractor to do work outside the bonus, you cannot find him because he is busy with the bonus. It has, therefore, certainly created an unmanageable peak of work within a specific time frame.>>

### **Is there a risk that the sector will return to pre-pandemic levels in a year or two?**

<<From this point of view there are two aspects in my opinion: on the one hand (and this is what customers say) the positive aspect is that this bonus has made people aware of what investment in coats for example is. Until a year ago, people did not even know what a coat was. Today, everyone knows what a coat is and has also entered the construction world as a fixed dimension. For example, even in the south, people now use overcoats, whereas two years ago, they did not. So, there are undoubtedly positive effects on sales, for example.

The same is true for ventilated façades in which, thanks to this Regulation, the energy advantage of using a façade in a building has been rediscovered.

Having said this, in my opinion, the customers who have now firmly pushed into this type of bonus, and I am referring above all to coats, are companies that tended not to have their market in the building industry, that is: those who were pushed into the industrial/residential market did not direct their interest to coats, and, therefore, I hardly see an opportunistic vision, while this was the case for plumbers, who entered the coatings market, precisely because they only did installations, to make a 100 per cent profit with minor specialization. On the other hand, a severe company already established within a market segment hardly followed the bonus world because it knew full well that it would be a bubble.

Returning, then, to the time frame, here, too, a structured company could easily have created a department linked to the bonus, with even competent people who could then have helped the citizen to fill in the forms to be submitted, but they did not do so for a question of time sustainability because after two years when the bonus was over, what would the company have had to do? Go back?

Unfortunately, unprofessional companies have also entered this market and taken full advantage of this opportunity. Moreover, paradoxically, the customers I was following, who specialized in ventilated façades, were only affected by the super-bonus by 1-2%, not more, because they continued with their business. These are mainly smaller clients; they are either financial investors or small companies that have chosen to take this tax drawer home.>>

**What kind of approach did HILTI take with these customers? Did you follow a predefined process?**

<< We focused much more on our high-potential customers and took the opportunity of smaller customers in the same way. We have had an economic return because we have also made enough turnover regarding ventilated façades. On the other hand, as far as cladding is concerned, the only product we saw was fixing systems. With these products, we were out of the market, and we took the opportunity not only to enter the market but also to sell a product which was not sold very much at a very high price. There have been situations where market players, as far as fastening systems are concerned, could not find material, and turned to alternative suppliers because last year, they found themselves in May/June with their usual suppliers who could not guarantee them the required volumes, and in this case, they asked us for the material.>>

**What was the year in which the largest number of applications in the 110 super-bonus sector was recorded?**

<<In May last year, the biggest requests started. The big building sites have started this year, so all the apartment blocks are in Milan, which is my area. Regarding coats, on the other hand, we will have a boom between this and next summer because the deadline date for condominiums has been changed.>>

**Of the developers and business developer team, what does it say?**

<<These two positions we have implemented because we have doubled the volume and consultancy required by customers in the last two years. The bonus gave us the push we needed to specialize even more. >>

**How do you see the future of the bonus?**

<< If control had been tighter and entrusted to competent bodies, it would perhaps have prevented speculation and what happened. The post office could not precisely control this dimension because they were not competent, and indeed the planning part is what limited investors the most.

Once the eco-bonus is over, in my opinion, these credits will have to be guaranteed somehow. A bonus, perhaps 60% to 70%, on energy efficiency should also be maintained because it is a sector that has driven the economy in these two post-pandemic years. If the flywheel stops, the state will

have difficulty paying all these credits. If it does not stop, in my opinion, it will be a wheel that will carry on and perhaps reach a point where it will get into difficulty. If the person who creates an engine/bonus even at a low rate, indirectly, creates volume to income and on the tax side comes in for sure. By putting an 80% bonus, people who invest even that 20% will follow better because they may not be doing it to receive a profit, but they are doing it precisely because they need and want to pursue that investment. If we look at our building stock, which certainly needs renovation, we will have work for the next 100 years. Think of schools, hospitals, and courts.>>

**For public buildings, schools etc., how many requests have been submitted?**

<<Few requests, if any. All those that arrived concerned industrial structures because perhaps some farsighted entrepreneur chose to take advantage of the 90 or 60 bonus to beautify the facades or the logistical part and still have an energy benefit.

Schools 0, hospitals 0. As far as my area is concerned, I do not remember a school building site or public parts. Furthermore, this is a drama because if a private party struggled, how could a public body carry out this process? Too much bureaucracy and, at the same time, too few controls. In the end, it is a bit of a paradox.

That is what we should be aiming at: thinking of covering all schools, even partially with coats. We would then have schools that are more beautiful to look at, more energy efficient, and we could be economically more sustainable.>>

**4.3 Interview South-Centre Area Sales Manager: Sebastiano Franco**

**How do you see the market after the 110% regulation?**

<< The business generated after the new Regulation of 110% sees significant key players throughout Italy, but they are concentrated in the north of Italy and specifically in the northeast. In the central south, we are still not very segmented. Few customers do this type of business. I own one of this is called the 'xxxx xx' customer, and it carries out traditional facades, i.e. shopping centres rather than industries. This customer has had minimal impact with the 110%, as he had been working with this trade since before.>>

**From a technical point of view, has there been an acceleration of business in this specific trade?**

<<As far as the acceleration of business on the new regulations is concerned, well, there has undoubtedly been an epochal change, which has meant, from a technical point of view, that the simple cladding, i.e. the building envelope that is put into buildings to optimize the energy part of the building, has certainly been a driving force in many interventions. Nevertheless, due to a lack of material, a differentiation of approach, and new profit opportunities, some companies in the sector, basically window and door manufacturers, have started to propose the ventilated façade rather than cladding.>>

### **Why didn't this facade proposal catch on earlier?**

<<Because the "coat" is much cheaper than the ventilated façade. The last, costs 140 € per square meter, while the coat costs 30/40 € per square meter. Pros and cons: the coat costs less, but if the installer is not very good, the weather can cause reactions, so it ruins the façade; moreover, it is not definitive, and every few years, it must be redone. The ventilated façade, from what I have been hearing from specialists in the field, firstly has two functions: it ventilates in the summer and covers in the winter, hence, double effect, whereas the coat covers. Secondly, the maintenance of the ventilated façade has been minimized over the years. Therefore, it is a more permanent intervention. These are the technical aspects. I also gave an overview as to why it was not catching on in the residential sector, to which intervention is also difficult. The façade of a commercial building is generally linear, it does not have many balconies, so it is easy to apply a ventilated façade. It is another thing in residential because there are balcony overhangs, a lot of windows and, therefore, many interruptions. In addition to the higher cost of intervention, there are more difficulties for the applicator who must install a ventilated façade.

So, you don't necessarily have to put the aluminium panel, which is not widely used in residential solutions.

If I look at 110, it is clear that the accelerator has been determined by the fact that if, for example, you go to a condominium manager and the person in charge of several condominiums and you propose to him the renovation of the ventilated façade, at no cost to the condominiums, emphasizing the greater optimization in terms of weather resistance, i.e., resistance to heat and cold, the condominium manager is more interested in proposing it to the various condominiums in the building, because nothing would be more convenient.>>

**In your opinion, at the end of this regulatory period, will there be a bursting of a speculative bubble? Do you think the construction sector could go backwards?**

<< Unfortunately, I do not see a very bright future. In residential construction, there will always be this Delta between coat and ventilated façade, so if the private individual must bear the cost, he will tend towards the coat and no longer the façade. Also, if you contact ten companies 8.5, maybe even 9, they will propose the coat and, rarely, the ventilated façade in the residential out of the norm. >>

**Do you think that even for Hilti's customers, i.e. building contractors, it is more cost-effective to have a coat than a façade?**

<<Yes, also for the companies because the material is easier to find and historically, they are more competent, they have more teams capable of installing the cladding and, therefore, it goes without saying that the ventilated façade becomes a much more niche and more complex product.>>

**Regarding our customers in your area, do you think they are satisfied with this regulation since, perhaps, their business has increased compared to previous years, or are they complaining because of the difficulties there have been, both at the bank level and in terms of credit assignment?**

<<Until last year, the customers in our area were overjoyed, they had tripled their business and were going strong. Now there has been a total freeze, so it is not that they are dissatisfied, they are scared, and many of them are in danger of closing because of a lack of liquidity. Because before, for example, an average customer generated €400,000 in annual turnover. Thanks to 110, they doubled, if not tripled, their turnover. If I, as a client, have a state of progress such that I need some liquidity and I have in my tax drawer two million out of the 800,000 I used to invoice, now, I have two million in bad debts because the banks have blocked everything. So I am entirely at a standstill. Not only that, but I risk closure, and I don't even see the possibility of being able to move forward differently. They risk bankruptcy, and some are close to it.

The constant changes to the energies also create enormous uncertainty, so right now, we have eight months of total gridlock that cannot be recovered, and this affects the ongoing construction sites.>>

**And what is happening to the new construction sites?**

<< None of them is taking on anything else or are even abandoning the contracts they have signed. The situation, therefore, is burdensome and dire.

I would add that the new government's priorities have not included the 110% to date. There is talk of everything except how to fix the issue of pending claims by companies.

I have read that two decrees could be transformed shortly, thus improving the situation, but the problem is that the banks are blocking them. Those few moving players, specifically Enel x, have raised the percentages so much, from 8%/10% they were asking to 14-16-20%. Therefore, that part of the margin the company was seeing is being nibbled away by the higher costs of assigning the credit. The situation is very critical at the residential level, at 110%.>>

### **Can I ask you for some feedback on legislation?**

<< Regulation at the theoretical level is okay because, in any case, it is an exemplary implementation at the level of public funding. The problem, in my opinion, is more at the executive and control levels. I liked the fact that, at last, as in northern Europe, the state had given us all the tools to bring us into line with other countries, making the technical part and the bureaucratic part responsible: the engineer who must asseverate and the accountant who must verify and if everything is in order, we continue tacitly. Both civil and criminal figures are responsible for following the process on time. Nevertheless, in the end, the work itself, as usual, was contrived both at the bureaucratic and the executive level. Unfortunately, this is how it is in Italy. This implementation was created to stem the phenomenon of the black market, trying to evade as little tax as possible compared to the past. Instead, the opposite effect had as a result. Even with the super-bonus and even unlike Europe, the data show precisely abysmal differences from this point of view because, in Germany and France, there is also tax evasion, but it is not at the level of Italy.>>

### **What is your consideration, summing up?**

<<110% was too much. On the one hand, liberalising and opening in this way gave way to those who, in the end, were not competent to do the work, and on the other hand, also to those who had no particular interest in doing this kind of work. A good manoeuvre would have been 80%, for example, from the state, and whoever commissions the work contributes by paying 20%. Then those who do the work, because they have put money into it, monitor that the contractor does it on time. Unfortunately, this is also related to the need not to give everything away but to charge something.

**On the company level, however, from an internal Hilti point of view, are you satisfied with the results?**

<<Well, how not to be? This has brought us excellent results>>

#### **4.4 XXXX XX Customer Interview**

**What kind of company are you? Have you worked a lot with the current building bonus regulations?**

<<My company deals with interior design, but we also have a pole that operates in the building sector, so I am partly involved in the 110%. I want to point out that we work with residential and, therefore, purely with private individuals. We are also specialists in ventilated façades and let me say that we have worked in this sector for many years, even before the implementation of the regulations.>>

**What has changed compared to before?**

<< The unsustainable number of requests from private individuals. In the first period, in the very first months, it was impossible to understand which works had priority and which not because there was also the problem of not having to stay out of the market. Later, however, I realized the mechanism was lacking and started sceptical of these incentives. We are a big company, and we have been working with these items for years, and although this law could have been an exponential accelerator for our profits, something did not convince me, too little time available, too much demand and too few controls. I was left with doubt about whether to take this great opportunity offered by the state. >>

**So, what did you decide to do?**

<< I did some work, a few, not a lot... although it was a few jobs, the capital invested is considerable. I did not encounter too many difficulties until February 2022. That is when the real problems started; the Post Office and the banks managed the credit assignment poorly. Constant changes in the law meant that we had to stop work, then due to the high demand, the materials started to run out, and the cost went up exponentially; we could start work again, but we did not have the resources to do so. It was a critical situation>>.



**Did you turn to us at this critical time?**

<< Yes, we could not stop the work for too long because the employees had to be paid, resulting in unnecessary loss of money and time. Fortunately, we could take the materials from the company through the cession of credit, and we managed this period of 'drought'>>.

**How do you see the market in the future?**

<< Unfortunately, such an incentive is undoubtedly very positive for the country's economy, especially with Italy's real estate heritage. Instead, the Regulation has too many gaps. It has allowed speculation and fraud never seen before, people and companies that had never worked in construction to have ten construction sites open around Italy and all this translates into wasted money and poorly done work.>>

**Do you find yourself with blocked jobs now?**

<<Yes, unfortunately, I have many blocked credits due to the new regulations; we should start again in October, but who knows?! >>

**Has your company faced a bankruptcy?**

<< <<Actually, as I told you before, we are a big company, and we don't only work with these types of jobs. So fortunately, I manage to cover these moments of crisis and remain sustainable. The problem is the small and medium-sized Italian companies, which despite having regularly done everything, now, because of third parties, find themselves with a broken bank and forced to close the company.>>

**What would you change about the legislation?**

<< The financial terms, a regulation that promises you 110% on redevelopment work, pushes the average citizen, who has no interest in this investment, to jump into this market to benefit from it. This does not lead to creating efficient and sustainable jobs but the opposite. In addition, I would change the timeframe for the completion of works because I think of how many applications there have been in Italy and realize that the time was not enough. Finally, I would have set up competent bodies to inspect before the work: it would have been better to have someone certify the presence of

sustainable and professional construction companies, perhaps with a history in this sector and a technical basis for carrying out this work. We would have achieved the sustainability goal without falling into the usual games of pure economic gain.>>

## **Conclusions**

The purpose of this thesis was to provide a detailed representation of the current Italian situation concerning the energy efficiency of buildings and the effect that both the new Super-bonus 110% and the previous incentive had on our country's building stock and market. A market that is considered as a driving sector for the country economy.

The topic discussed in this paper is also highly current, and future developments will need to be monitored further to understand the real effects of the 110% super-bonus on our country and our market. Indeed, the current historical period is characterized by national and international tensions of various natures on a political, economic, and social level, with the Russian-Ukrainian conflict, the price tension at the European level linked to the rising cost of energy, and numerous other issues related to the effects of the legislation discussed above. We also observed that a country's definition of 'well-being' must consider not only economic aspects but also environmental and innovation factors that can drive the economy towards an almost predictable growth that is easy to achieve.

Thus, the state is called upon to act through a drive to protect and enhance its natural, human, cultural and economic capital, and this was one of the goals of the energy efficiency regulations.

Removing inefficiencies through the more conscious use of resources and thus lowering a nation's emissions and pollution are tasks that a state must perform to ensure the long-term utilization of a country's resources. In fact, the 110% super-bonus was also created to give citizens with no real financial assets the opportunity to assign credit to third parties and make their houses efficient compared to the past.

However, in conducting this thesis, it emerged that these very high incentives lead to real operational challenges, which are accompanied by raw material price upsets, excess demand, and interventions in which the applicant is not motivated to the responsible use of the resources. It was also discussed that the risk that the dispersion of the incentive among many parties could partially defeat the benefit for the state, as it is necessary for any incentive mechanism to be as focused as possible on the type of beneficiaries on which the marginal benefit is greatest and, in this case, on the residential sector.

The super-bonus is part of the political debate as more than 190 billion has been allocated to our country at the European level. Therefore, the measure is in line with the European Union's

prerogatives for the Green New Deal and climate neutrality is foreseen for 2050 and has also been included in the NRRP.

As a matter of fact, this plan represents a real unrepeatable opportunity to carry out the necessary reforms to ensure stable growth for our country in the medium to long term and to resolve historical issues that make our republic less competitive than other countries, such as the excessive length of bureaucratic procedures and tax evasion. It was precisely tax evasion that was partially addressed by the super bonus, which, through the mechanism of credit assignment, included a check on the allocated resources and a hypothetical return of this funding into 'the state's pocket'. However, as highlighted in the second and fourth chapters, this has not been adequately controlled, creating a situation of tax evasion and fraud never seen before.

The substantial energy savings guaranteed to households is another important objective of the existing regulation, which translates into more sustainable energy use and exponential economic benefit. From this point of view, all the laws on energy efficiency implemented by our state have led to a real goal if we think of a future in which Italy is less dependent on foreign states in terms of energy.

However, this may not be enough to meet the demands of market players, and the best solution, as described in Chapter 4, should be to make this incentive more structural in the coming years. As for the problem of excessive demand, the solution could be to limit these jobs only to the first house, where consumption is greater. They are, in fact, settled for almost the whole year and their consumption, as a result, is considerably greater than the others.

The regulatory complexity and the continuous changes scared private and specialized construction companies because they were not sure of the real possibilities of intervention. At the same time, however, it has allowed other market players not involved in this sector to speculate on this incentive. The few or weak controls have led to fraud of valuable EUR 6.6 billion; a waste never seen before. As said and repeated by the main stakeholders of the market interviewed, a deduction of 90/80/70% would have guaranteed greater rationality in the interventions. It would have sensitized citizens and workers to carry out only necessary work.

The risk in the case of incentives so high in which many see a "gift" from the state rather than an "aid" is - also, for example, to remove new windows or make a ventilated facade - only because there is a deduction of 110% and not because it is useful or necessary to carry out such work. Work, therefore, if there was even a minimum payment by the citizen, would not have been accomplished. Moreover, as the interviews revealed, a temporal widening of the operating space would have made

this bubble less speculative, the demand would have been less concentrated in a determined period, and the price increase would not have been so drastic. As seen in chapter 4 and as mentioned by Luca Barbieri, such funding for public buildings would add value to our state's assets and consequently lead to greater general welfare, both for citizens and for the state itself.

Finally, a more specialized check on the firms which carried out this work would have been an excellent way of preventing fraud and would have enabled specialists in the sector to carry out their work professionally and efficiently. In general, these incentives, such as the 110% Super-bonus, ventilated facades, Sisma-bonus, and Eco-bonus, represent a great opportunity for the country's growth as they guarantee substantial support for GDP and high employment in the construction sector. As seen and analysed in chapter three, these incentives were also a key to the growth of all construction-related sectors. At social level, households benefit both in terms of economic savings linked to costs per square metre and in terms of living comfort. Efficient properties have lower emissions and significantly higher market values.

The norm is then profoundly centred on the values of sustainability required at the European level. The works promoted by the Super-bonus in this period are constantly growing, given the latest changes in funding deadlines. Therefore, not reviewing this measure's operation conditions would mean wasting a massive opportunity for development for our country.

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## APPENDIX

TABLE A: Description of the different missions within the National Recovery and Resilience Plan.  
Data source: European Commission, SWD (2021) 165.

Table 1 – Components of Italy's NRRP

Mission (M)	Component (C)	RRF resources (€ billion)	Share
Mission 1: Digitalisation, innovation, competitiveness, culture and tourism	M1C1. Digitalisation, innovation and security in the public administration	9.7	5.1 %
	M1C2. Digitalisation, innovation and competitiveness in the production system	23.9	12.5 %
	M1C3. Tourism and culture 4.0	6.7	3.5 %
Mission 2: Green revolution and ecological transition	M2C1. Circular economy and sustainable agriculture	5.3	2.7 %
	M2C2. Renewable energy, hydrogen, grid and sustainable mobility	23.8	12.4 %
	M2C3. Energy efficiency and renovation of buildings	15.4	8.0 %
	M2C4. Protection of land and water resources	15.1	7.9 %
Mission 3: Infrastructures for sustainable mobility	M3C1. Investments in the rail network	24.8	12.9 %
	M3C2. Intermodality and integrated logistics	0.6	0.3 %
Mission 4: Education and research	M4C1. Strengthening the provision of education services: from crèches to universities	19.4	10.1 %
	M4C2. From research to business	11.4	6.0 %
Mission 5: Inclusion and cohesion	M5C1. Employment policies	6.7	3.5 %
	M5C2. Social infrastructure, households, the community and the third sector	11.2	5.9 %
	M5C3. Special interventions for territorial cohesion	2.0	1.0 %
Mission 6: Health	M6C1. Local networks, facilities and telemedicine for local healthcare	7.0	3.7 %
	M6C2. Innovation, research and digitalisation of the national health service	8.6	4.5 %
<b>Total</b>		<b>191.5</b>	<b>100.0 %</b>

TABLE B: List of investments of the Complementary Plan by amount with information on synergies with the various PNRR Missions. Data Source: Italian Government, Complementary Fund to the PNRR

<https://www.mef.gov.it/en/focus/The-National-Recovery-and-Resilience-Plan-NRRP/>

List of investment plan complementary to the NRRP			
N°	INVESTMENT	AMOUNT (billion EUR)	Synergies and complementarities with NRRP
1	Digital services and digital citizenship-platform Pago Pa and App "IO"	0,35	Complementary investment of the PNRR strategy of Mission 1 Digitization. Innovation-competitiveness and cultures.
2	Digital services and digital citizenship-platform digital notifications	0,25	Component 1- Digitalization innovation and security in the PA
3	"Polis"- digital citizenship services homes	0,60	
4	Satellite technologies and space economy	1,00	Complementary investment of the PNRR strategy of Mission 1 Digitization. Innovation-competitiveness and cultures.
5	Fast connections (ultra-broadband and 5G)- extra urban streets	0,4	Component 2- Digitalization, innovation, competitiveness in production system
6	Transaction 4.0	4,48	
7	Strategic investment plan on cultural heritage sites, buildings, and natural areas	1,46	Investment complementing the NRRP strategy of mission 1- Digitisation, innovation, competitiveness and culture. Component 3- Tourism and culture 4.0
8	Supply chain and district contracts for the agri-food, fisheries and agriculture, forestry, floriculture and plant care sectors	1,20	Investments complementary to the NRRP strategy of Mission 2- Sustainable Agriculture and Circular Economy. Component 1- Energy transition and sustainable mobility.
9	Fleet renewal - BUS	0,60	Investments complementary to the NRRP strategy of Mission 2- Green Revolution and Ecological Transition. Component 2- Energy transition and sustainable mobility.
10	Fleet renewal - Ships	0,80	
11	Safe, Green and Social: Public Housing Redevelopment	2,00	Complementary investments to the NRRP strategy of Mission 2- Green Revolution and Ecological Transition.
12	Ecobonus and sismabonus up to 110% for energy efficiency and buildings safety	4,72	Component 3- Energy Efficiency and Refurbishment of Buildings
13	Strengthening of regional lines - regional lines operated by regions and municipalities	1,55	Complementary investments to the NRRP strategy of Mission 3 - Infrastructure for sustainable mobility.
14	Renewal of rolling stock	0,20	Component 1- High-speed rail and road maintenance 4.0
15	Saferoads - Implementation of a dynamic monitoring system for remote control of bridges, viaducts and tunnels (A24-A25)	1,00	Complementary investments to the NRRP strategy of Mission 3 - Infrastructure for sustainable mobility.
16	Saferoads - Implementation of a dynamic monitoring system for remote control of bridges, viaducts and tunnels (ANAS)	0,45	Component 1- High-speed rail and road maintenance 4.0 Measure: Saferoads
17	Development of maritime accessibility and resilience of port infrastructure to climate change	1,47	Complementary investments to the NRRP strategy of Mission 3 - Infrastructure for sustainable mobility. Component 2- Intelligent Districts and Integrated Logistics Interim (former Integrated Ports of Italy Project)
18	Selective increase in port capacity	0,39	
19	Last/Penultimate Mile Rail/Road	0,25	
20	Energy-efficient	0,05	
21	Electrification of docks (cold ironing)	0,70	
22	Interventions for the Environmental Sustainability of Ports (Green Ports)	0,27	
23	Innovation Agreements	1,00	Complementary investments to the NRRP strategy of Mission 4- Education and Research Component 2- From Research to Enterprise
24	Construction and improvement of pavilions and spaces in adult and juvenile correctional facilities	0,13	Complementary investments to the NRRP strategy of Mission 5- Inclusion and Cohesion. Component 2- Social infrastructure, households, communities and the third sector
25	Interventions for the 2009 and 2016 earthquake areas	1,78	Investments complementary to the strategy of Mission 5- Inclusion and Cohesion. Component 3- Special interventions for territorial cohesion.
26	National Strategy Inner Areas - Improving Road Accessibility and Safety	0,30	
27	Ecosystems for innovation in the south in marginalised urban contexts	0,35	
28	Health environment and climate	0,50	Complementary investments to the strategy of Mission 6-Health. Component 1- outreach assistance and telemedicine.
29	Towards a safe and sustainable hospital	1,45	Complementary investments to the strategy of Mission 6-Health. Component 2- innovation, research and digitisation of the National Health Service.
30	Innovative health ecosystem	0,44	
31	Research initiatives for innovative technologies and pathways in health and care	0,50	
TOT		30,64	

Table C: Interventions envisaged by the 110% super-bonus regulations with details of intervention regulatory reference and minimum eligible expenditure.

Source: Il Super-bonus 110%, Gli speciali di edile, gruppo tecniche nuove.

<https://www.lavoripubblici.it/speciale/superbonus-110>

Intervention	Normative Reference	Intervention Definition	Reference to Art. 2.C.1	Maximum guaranteed expenditure
<b>Building envelope (ex sec. 345)</b>	(a) C.1 Art. 119. DL 34/2020	Insulation work on vertical and horizontal opaque surfaces affecting the building envelope with an incidence > 25% of the total gross area of the building.	(b), p ix	(#)
<b>Solar collectors</b>	(b) C.1 Art.119 LD 34/2020 (c) C.1 Art.110 LD 34/2020	k) installation of solar thermal collectors	(d)	(\$) 30.00,00
<b>Winter air-conditioning and domestic hot water production system</b>	(b) C.1 Art.119 LD 34/2020 (c) C.1 Art.110 LD 34/2020	n) boilers and condensers with ns > 90% on centralised systems	(e), p.iii	(\$) 30.00,00
	(b) C.1 Art.119 LD 34/2020 (c) C.1 Art.110 LD 34/2020	(q) full or partial replacement of winter air-conditioning systems with systems equipped with high-efficiency heat pumps	(d), p.vi	(\$) 30.00,00
	(b) C.1 Art.119 LD 34/2020 (c) C.1 Art.110 LD 34/2020	(q) full or partial replacement of winter air-conditioning systems with systems equipped with hybrid appliances	(e), p.viii	(\$) 30.00,00
	(b) C.1 Art.119 LD 34/2020 (c) C.1 Art.110 LD 34/2020	(u) microgenerators	(e), p.x	(\$) 30.00,00
	(b) C.1 Art.119 LD 34/2020	(w) replacement of heat pump water heaters dedicated to the production of domestic hot water	(e), p.xii	(\$)
	(c) C.1 Art.110 LD 34/2020	(y) replacement of winter air-conditioning systems, existing boilers, biomass with emission performance with the values required for at least class 5 stars, identified in accordance with the regulation referred to in the Decree of the Minister for the Environment and Protection of Land and Sea 7 Nov. 2017 No. 186	(e), p. xiv	30.000,00
	(b) C.1 Art.119 LD 34/2020 (c) C.1 Art.110 LD 34/2020	z) connection to efficient district heating systems	(d), p. xv	(\$) 30.00,00

Intervention		Specific eligible expenditure
<b>Energy requalification</b>		
Interventions referred to in Article 2(1)(a)- climate zone A B C		800,00 €/m <sup>2</sup>
Interventions referred to in Article 2(1)(a)- climate zone D E F		1.000,00 €/m <sup>2</sup>
<b>Horizontal opaque structures: roof insulation</b>		
External		230,00 €/m <sup>2</sup>
Internal		100,00 €/m <sup>2</sup>
ventilated roof		250,00 €/m <sup>2</sup>
<b>Horizontal opaque structures: floor insulation</b>		
External		120,00 €/m <sup>2</sup>
Internal/Ground		150,00 €/m <sup>2</sup>
<b>Horizontal opaque structures: perimeter wall insulation</b>		
External		150,00 €/m <sup>2</sup>
Internal		80,00 €/m <sup>2</sup>
Ventilated wall		200,00 €/m <sup>2</sup>
<b>Replacement of transparent closures, including frames</b>		
Climate zone A B C   windows and doors		550,00 €/m <sup>2</sup>
Climate zone A B C   windows and doors + shutter (blind, shutter, shutter)		650,00 €/m <sup>2</sup>
Climate zone D, E and F   windows and doors		550,00 €/m <sup>2</sup>
Climate zone D, E and F   windows and doors + shutter (blind, shutter, shutter)		650,00 €/m <sup>2</sup>
Installation of solar shading and/or mobile shading systems including any automatic control mechanisms		230,00 €/m <sup>2</sup>

Intervention		Specific eligible expenditure
<b>Solar collectors</b>		
overdrafts		750,00 €/m <sup>2</sup>
glazed pains		1.000,00 €/m <sup>2</sup>
vacuum and concentrate		1.250,00 €/m <sup>2</sup>
<b>Condensing water boilers and condensing air heaters (*)</b>		
P <sub>nom</sub> ≤ 35kWt		200,00 €/kWt
P <sub>nom</sub> > 35kWt		180,00 €/kWt
<b>Microcogenerators</b>		
endothermic/other engine		3.100,00 €/kWt
fuel cells		25.000,00 €/kWt
<b>Heat pumps (*)</b>		
Kind of heat pump	Ester/intern	
Electric or prime mover steam compression and absorption heat pumps	air/other	600,00 €/kWt (**)- 1300,00 €/kWt
geometric heat pumps		1900,00 €/kWt
Hybrid system (*)		1.550,00 €/kWt
<b>Biomass-fuelled heat generators (*)</b>		
P <sub>nom</sub> ≤ 35kWt		350,00 €/kWt
P <sub>nom</sub> > 35 kWt		450,00 €/kWt
<b>heat pump water heaters</b>		
Up to 150 litres of storage		1.00,00 €
Up to 150 litres of storage		1.250,00 €
Installation of building automation technologies		50,00 €/m <sup>2</sup>



Table D: Summary table on estimated tax evasion in the various EU countries and the UK.  
Data source: “The European Tax GAP, a report for the socialists and democrats’ group in the European Parliament”.

<https://academic.oup.com/book/39754/chapter/339816709>

Member state	EU sourced GDP data 2015	EU reported tax yield as a proportion of stated GDP 2015	Tax gap estimate based on average grossed up GDP	Tax gap estimate based on reported GDP	Average tax gap estimate based on the two previous estimates
	€'bn	%	€'bn	€'bn	€'bn
Austria	344.5	43.20%	13.4	12.3	12.9
Belgium	410.3	45.20%	33	27.8	30.4
Bulgaria	45.3	29.10%	4.3	3.2	3.8
Croatia	44.5	37.10%	4	3	3.5
Cyprus	17.7	33.20%	1.8	1.3	1.6
Czech Republic	168.5	34.00%	9.5	8.1	8.8
Denmark	271.8	46.50%	18.7	16.2	17.5
Estonia	20.3	33.70%	1.5	1.2	1.4
Finland	209.6	43.90%	11.4	10	10.7
France	2194.2	45.60%	124.9	110.9	117.9
Germany	3043.7	38.40%	132.1	118.1	125.1
Greece	176.3	36.60%	22.9	16.8	19.9
Hungary	110.7	38.80%	10	8.1	9.1
Ireland	262	23.40%	7.3	6.5	6.9
Italy	1652.6	43.00%	216.3	165.5	190.9
Latvia	24.3	30.10%	1.9	1.5	1.7
Lithuania	37.4	28.90%	3.5	2.6	3.1
Luxembourg	52.1	37.20%	1.7	1.5	1.6
Malta	9.5	32.10%	1	0.8	0.9
Netherlands	683.5	37.40%	23.1	21.2	22.2
Poland	430.1	32.40%	38.9	30.2	34.6
Portugal	179.8	34.40%	12	10	11.0
Romania	160.3	28.00%	19.2	13.2	16.2
Slovak Republic	78.9	32.10%	6.1	4.7	5.4
Slovenia	38.8	36.60%	2.9	2.3	2.6
Spain	1080	33.70%	66.4	53.5	60.0
Sweden	449	43.10%	18.1	15.6	16.9
United Kingdom	2602.1	33.10%	91.9	83	87.5
	14798	36.10%	897.6	749.1	823.5

Table E: Number of asseverations uploaded on the dedicated site; the absolute value of investments admitted to the deduction; the absolute and percentage values of works already completed. In addition, data are specified for works on condominiums, single-family buildings, and detached property units. Three-monthly data

Source: ENEA <https://www.energiaenergetica.enea.it/detrazioni-fiscali/superbonus/risultati-superbonus.html>



Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile



MINISTERO DELLA  
TRANSIZIONE ECOLOGICA

Super-Bonus 110%		August, 31 2021	Tot. National		
			% completed works	% buildings	% Investment
Number of asseverations		37.128			
Total investments eligible for deduction		5.685.136.399,19€	68,80%		
Total investments for completed works eligible for deduction		3.910.461.424,26 €			
Deductions at the end of the work		6.253.650.039,11 €	burden on the state		
Deductions accrued for completed works		4.301.507.566,69 €			
of which	<b>CONDOMINUS</b>				
	No. of condominium observations	4.844	59,80%	13,00%	46,60%
	Tot. condominium inv.	2.650.594.251,95 €			
	Tot. condominium works carried out	1.585.897.583,68 €			
	<b>SINGLE-FAMILY BUILDINGS</b>				
	No. of Single-family buildings	19.072	76,30%	51,40%	33,00%
	Tot. Single-family buildings INV.	1.874.091.151,86 €			
	Tot. Single-family buildings works carried out	1.429.072.894,74€			
	<b>FUNCTIONALLY INDEPENDENT UNITS</b>				
	No. of U.I. functionally independent	13.212	77,20%	35,60%	20,40%
	Tot. U.I. functionally independent INV.	1.160.450.995,38 €			
	Tot.U.I. functionally independent works carried out	895.490.945,84€			
		<b>Average investment</b>			
<b>Condominus</b>		547.191,22 €			
<b>Single-family business</b>		98.264,01 €			
<b>Functionally Independent Units</b>		87.833,11 €			

Super-Bonus 110%		December, 31 2021	Tot. National		
			% completed works	% buldings	% Investment
Number of asseverations		97.718			
Total investments eligible for deduction		16.204.348.017,13€	69,00%		
Total investments for completed works eligible for deduction		11.181.415.615,10 €			
Deductions at the end of the work		17.824.782.818,84 €	burden on the state		
Deductions accrued for completed works		12.299.557.176,61 €			
of which	<b>CONDOMINIUS</b>				
	No. of condominium observations	14.330			
	Tot. condominium inv.	7.758.337.321,76 €	63,10%	15,00%	47,90%
	Tot. condominium works carried out	4.894.661.861,07 €			
	<b>SINGLE-FAMILY BUILDINGS</b>				
	No. of Single-family buildings	49.944	74.1%	52,20%	33,50%
	Tot. Single-family buildings INV.	5.424.025.810,15 €			
	Tot. Single-family buildings works carried out	4.021.410.412,15 €			
	<b>FUNCTIONALLY INDEPENDENT UNITS</b>				
	No. of U.I. functionally independent	31.441	75,00%	32,80%	18,60%
	Tot. U.I. functionally independent INV.	3.020.735.248,47 €			
	Tot.U.I. functionally independent works carried out	2.264.938.948,08€			
		Average investment			
Condominus		541.405,26 €			
Single-family business		108.602,15 €			
Functionally Independent Units		96.076,31 €			

Super-Bonus 110%		April 30, 2022	Tot. National		
			% completed works	% buildings	% Investment
Number of asseverations		155.543			
Total investments eligible for deduction		27.446.194.587,41€	69,90%		
Total investments for completed works eligible for deduction		19.195.815.273,06 €			
Deductions at the end of the work		30.190.814.046,15 €	burden on the state		
Deductions accrued for completed works		21.115.396.800,37 €			
of which	<b>CONDOMINUS</b>				
	No. of condominium observations	24.263			
	Tot. condominium inv.	13.426.808.088,57 €	64,80%	15,60%	48,90%
	Tot. condominium works carried out	8.699.862.503,54 €			
	<b>SINGLE-FAMILY BUILDINGS</b>				
	No. of Single-family buildings				
	Tot. Single-family buildings INV.	81.973	74.1%	52,70%	33,50%
	Tot. Single-family buildings works carried out	9.207.263.516,03 €			
		6.818.662.054,65 €			
	<b>FUNCTIONALLY INDEPENDENT UNITS</b>				
	No. of U.I. functionally independent				
	Tot. U.I. functionally independent INV.	49.303	76,40%	31,70%	17,50%
	Tot.U.I. functionally independent works carried out	4.810.778.684,78 €			
		3.675.444.259,40 €			
		Average investment			
Condominus		553.386,15 €			
Single-family business		112.320,69 €			
Functionally Independent Units		97.575,78 €			



Super-Bonus 110%		August, 31 2022	Tot. National		
			% completed works	% buildings	% Investment
Number of asseverations		243.907			
Total investments eligible for deduction		43.018.493.039,02€	70,00%		
Total investments for completed works eligible for deduction		30.409.633.602,26 €			
Deductions at the end of the work		47.320.342.342,92 €	burden on the state		
Deductions accrued for completed works		33.450.596.962,49 €			
of which	<b>CONDOMINUS</b>				
	No. of condominium observations	35.321	66,90%	14,50%	48,00%
	Tot. condominium inv.	20.657.503.051,41 €			
	Tot. condominium works carried out	13.811.133.602,04 €			
	<b>SINGLE-FAMILY BUILDINGS</b>				
	No. of Single-family buildings	134.397	72,80%	55,10%	35,30%
	Tot. Single-family buildings INV.	15.164.657.657,24 €			
	Tot. Single-family buildings works carried out	11.035.606.161,70 €			
	<b>FUNCTIONALLY INDEPENDENT UNITS</b>				
	No. of U.I. functionally independent	74.184	77,30%	30,40%	16,70%
	Tot. U.I. functionally independent INV.	7.195.567.852,17 €			
	Tot.U.I. functionally independent works carried out	5.562.243.867,33€			
		<b>Average investment</b>			
<b>Condominus</b>		584.850,46 €			
<b>Single-family business</b>		112.834,79 €			
<b>Functionally Independent Units</b>		96.996,22 €			

## **Executive Summary**

Over the past decades, the need to reduce inefficiencies and improve the performance of countries for sustainable development in both economic and environmental terms has become increasingly relevant. Precisely in recent years that environmental sensitivities related to pollution and waste have developed, which are no longer sustainable for an advanced and ethically responsible society. Driven by these changes, energy efficiency has become relevant and essential for policy and investment decisions for future generations.

Therefore, several incentive systems in Italy have been introduced through tax deductions for energy efficiency works, including Eco-bonus, Bonus Casa for residential buildings, and the latest one, the 110% Super-bonus with the additional possibility of opting for a discount on the invoice or the transfer of the credit to third parties. The impact of such incentive measures has been significant in the past, but with the latest measure of the 110% Super-bonus, the legislator aims to create a system in which even citizens with no capacity to spend can carry out energy-efficient work on their homes at zero cost by assigning the credit to a third party.

This work aims to provide an empirical analysis of the functionality of the reforms on the energy efficiency buildings, from a multinational company point of view - Hilti S.p.A.

Starting from an initial investigation of the contemporary social economic context, the study proceeds by reviewing the core aspects of the legislation, summarising its scope, benefits that should release and the methodology through which it should work. Then provide an overview of the main features of the law and its direct addressees, the results achieved within the market, as well as how it has been executed and controlled over the past two years and what challenges have led the government to change its terms and conditions in 2022.

In carrying out the research, interviews were conducted with some of the construction industry's stakeholders - Hilti managers and construction company customers - to provide a practical understanding of the legislative gaps and challenges experienced. In addition, the latter allowed the development of more conscious considerations on the extent to which such a major reform can meet initial expectations.

### **Environmental policies as a key to growth for the construction sector- International scenario**

Recently, we have become widely aware to what extent the concern of climate change is changing and correcting many old and established habits. This awareness leads to a general, commonly shared attitude to make way for a new, more attentive, and sustainable way of living, which contributes to an increasingly positive impact on our daily lives.

However, the development of a community that can combine well-being and respect for the environment has been, and still is, a great challenge for countries. In 2019, environmental issues became part of the European Commission's priorities for 2019-2024. The president of the EU Commission, Mrs Ursula Von Der Leyen, launched the so-called "European Green Deal" to implement the United Nations' 2030 Agenda.<sup>68</sup>

The European Green Deal is an action plan with which the European Union intends to achieve a 55% reduction of greenhouse gases by 2030 and no greenhouse gases at all by 2050.

According to the Commission, this EU Green Deal investment plan will mobilise EU resources and provide an enabling environment to allow and promote the public and private investments needed for the transition to a climate-neutral, green, competitive, and inclusive economy.

The plan, which complements other initiatives announced as part of the Green Deal, has three dimensions:

4. **Financial dimension:** mobilise at least EUR 1 trillion in sustainable investments over the next ten years;
5. **Pro-investment framework:** provide incentives to unlock and redirect public and private investment;
6. **Practical support:** the Commission will provide support to public authorities and promoters in planning, designing, and implementing sustainable projects.

There are many areas in which to operate, to reach the ambitious goal that the EU aims to achieve, and all the EU Member States are called upon to implement sustainable policies to reach this aim.

In this scenario, the European Commission has put forward a proposal to establish a European recovery instrument called "Next Generation EU" to reinforce the EU's 2021-2027 multiannual financial framework (MFF).

The *Next Generation Eu* (NGEU) is a tool for the recovery of the EU economy from the Covid-19 downturn, built into a seven-year budget 2021-2027 amounting to approximately EUR 1.8 trillion (the 750 of Next Generation plus the more than EUR 1 trillion in the budget).

Furthermore, at the heart of Next Generation EU there is a key instrument, the Recovery and Resilience Facility, which aims to help the EU to emerge stronger and more resilient from the current crisis.

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<sup>68</sup> Climate change and the EU strategy: The European Green Deal, 2020 <https://www.suseet.eu/2020/02/29/climate-change-eu-strategy-european-green-deal/>

The Facility is the central piece of the NGEU. It enables the Commission to raise money to support Member States in implementing reforms and investments that are in line with the EU priorities, and deal with the difficulties mentioned in country-specific recommendations made within the framework of the European Semester for the coordination of economic and social policy.

This facility is based on 6 pillars that are considered the most important areas in which take an action:

7. green transition;
8. digital transformation;
9. economic cohesion, productivity, and competitiveness;
10. social and territorial cohesion;
11. health, economic, social and institutional resilience;
12. policies for the next generation.

There are many areas in which to intervene to reach the ambitious goal that the EU proposes to achieve, and achieving concrete results is not an arduous undertaking, but it certainly predisposes one to a change of habits and visions of no small importance.

Moreover, also the construction sector plays a very important role in this project, if we consider what we have known for a long time now, namely how this sector is responsible for a lot of emissions and energy consumption that have a strong impact on pollution.

It follows that a new approach in building construction is now necessary, and this means encouraging and promoting the construction of new, better performing buildings with energy input systems that reduce consumption of Co2 emissions into the atmosphere, paying particular attention to the entire life cycle of a building, starting with the choice of materials and construction systems, and ending with energy efficiency technologies.

### **Environmental policies as a key to growth for the construction sector- National scenario**

The government led by Mario Draghi has presented to Parliament the National Recovery and Resilience Plan (NRRP), the document that illustrates how Italy intends to spend the resources made available by the European Union through the Next Generation EU (NGEU) programme. The Plan provides a series of reforms, which are necessary to tap into European funds. They are divided into: a) '*horizontal*', public administration and justice; b) '*enabling*', simplification and competition and '*sectoral*'; and c) '*accompanying*' reforms, fiscal reform.

They all pursue the objective of mitigating the effects of the crisis and closing the gaps that separate us from the Continent's most advanced economies. On the other hand, in addition to these funds, there is the Complementary Fund (details on this can be found in Appendix- Table B) established by

Italian Decree-Law No. 59 of 6<sup>th</sup> May 2021 and subsequently converted into Law No. 101<sup>69</sup>, based on the multi-year budget variance approved by the Italian Council of Ministers on 15 April<sup>70</sup>.

This is deemed as one the most significant Italian public investment, seen that over the 1999-2019 period, a relatively low level of investments is registered; the latter is considered as one of main factors that hindered the growth of the Italian economy. Even though the plan is unlikely to fix all the Italian economy's fundamental flaws, its ability to increase productivity will be the crucial factor. Italy has established a multi-level governance mechanism to guarantee the plan's execution, oversight, and management. Law-Decree No. 77 of May 31, 2021<sup>71</sup> sets up governance guidelines, identifies the responsible organisms, defines their commitments, and streamlines administrative processes.

In this scenario, a crucial reforming measure issued by the Italian government is the 110% Super-bonus, which is expected to significantly impact the Italian re-building plan. The main priority of this measure is to incentive the energy efficiency and is in Mission 2 of the Ecological Transition. According to the plan, Component 3 of the second mission has two major objectives: on the one hand, to increase the energy efficiency of buildings and, on the other hand, an indirect objective to stimulate local investments through job creation and increased national penetration of all forms of renewable energy.

### **110% Super-bonus Legislative Framework**

The 110% Super bonus is an incentive measure aimed to improving the efficiency of Italian buildings. Article 119 of Decree-Law No. 34 of the 19<sup>th</sup> 2020<sup>72</sup> - the so-called Relaunch Decree - introduces a deduction equal to 110% of the expenses, costs related to energy efficiency measures such as demolition and reconstruction and anti-seismic measures on buildings including those for the implementation of continuous structural monitoring systems for anti-seismic purposes. In particular, the Super bonus is applicable, subject to certain conditions, for expenses incurred for works carried out on common parts of buildings, on building units that are functionally independent and have one or more independent accesses from the outside, located within multi-family buildings, as well as on individual building units. The improvement must ensure the jump of at least two energy classes of the building or, if not possible because the building or family unit is already in the second last/third last class, the achievement of the highest energy class.

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<sup>69</sup> Law-Decree no. 59 the 6<sup>th</sup> of May, 2021, converted into Law, no.101 of the 1<sup>st</sup> of July, 2021

<sup>70</sup> The National Recovery and Resilience Plan (NRRP) – Ministero dell'Economia e delle Finanze <https://www.mef.gov.it/en/focus/The-National-Recovery-and-Resilience-Plan-NRRP/>

<sup>71</sup> Decreto-Legge no. 77 del 31 maggio 2021.

<sup>72</sup> Decreto-Legge n. 34 del 19 maggio 2020.

Under Article 119 of the Relaunch Decree and as cited by the Revenue Agency in its Guide: "the highest deductions are recognised for documented expenses incurred between July 1, 2020, and June 30, 2022 that remain the taxpayer's responsibility".<sup>73</sup>

For this deduction, it is possible to use it on one's own taxable income or to opt for a discount on the invoice with the supplier or to assign the credit to a financial intermediary, a banking institution or even to other parties.

The 110% allowance is in addition to the deductions, already in force for many years currently governed, respectively, by Articles 14 and 16 of Decree-Law No. 63/2013 and the can briefly described as follow:

- the Eco-bonus, regulated by Art. 14 of Law-Decree no. 63 of 2013, consists of a deduction for interventions that increase the level of energy efficiency of buildings. The deduction, normally 50 to 85%, can rise to 110% with the introduction of the Super-bonus<sup>74</sup>,
- the Sisma-bonus, introduced with Art. 16 of Law-Decree no. 63 of 2013, provides deductions from 50 to 85% for expenses incurred for safety works on buildings at high seismic risk (also in this case it can go up to 110% with the introduction of the Super-bonus)<sup>75</sup>,
- the Facade Bonus, regulated by Law no. 160 of 2019, now provides for a 60 % deduction (whereas initially it was 90%) for works to restore building facades.<sup>76</sup>

The incentive measure linked to the 110% Super-bonus includes the differentiation between different actions, some of which are mandatory in order of having access to the deduction of the capital spent. The latter belong to the so-called 'leading activities'.

The measures concerning the energy improvement of the building covered by this category are three:

1. *Thermal isolation works* of the vertical, horizontal, and inclined opaque areas affecting the building envelope,
2. *Replacement of existing winter air-conditioning systems* with centralized heating, cooling or domestic hot water supply systems.

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<sup>73</sup> [https://www.agenziaentrate.gov.it/portale/documents/20143/233439/Guida\\_Superbonus\\_110\\_2022.pdf/21e9100a-9d7e-f582-4f76-2edcf1797e99](https://www.agenziaentrate.gov.it/portale/documents/20143/233439/Guida_Superbonus_110_2022.pdf/21e9100a-9d7e-f582-4f76-2edcf1797e99)

<sup>74</sup> See: Decreto-legge del 4 giugno 2013, n.63, Art.14.

<sup>75</sup> See: Decreto Legge del 4 giugno 2013, n.63, Art.16.

<sup>76</sup> See: Decreto Legge del 27 dicembre 2019, n. 160, Art.1, comma 219-222.

3. *Earthquake-proof interventions* (provided for in Article 16, paragraphs 1-bis to 1-septies, of Decree-Law No. 63/2013) is raised to 110% for expenses incurred from 1 July 2020 to 30 June 2022.

Regarding the so-called towed interventions, they must be carried out in association with a leading intervention to be eligible for the 110% deduction. They may consist of:

1. *Installation of photovoltaic solar systems and storage systems:*
2. *Infrastructure for electric vehicle charging:*
3. From 2021, these measures also include those intended to *eliminate architectural barrier*.

### **Building and Construction Sector: market Analysis before and after the implementation**

The residential construction market is defined as the value of work put in place annually for residential buildings. Market value is defined in general as the total output value of construction activity in any given time, including costs related to construction materials, equipment and services for new construction, refurbishment, repair and maintenance and demolition.<sup>77</sup>

It is worth remembering that every euro spent on infrastructure generates a much higher economic return in terms of increased GDP and employment. Despite being a key market, in the period from 2008 to 2020, the construction sector suffered a significant crisis. As of 2017, Italian construction had almost returned to the levels of the early 1960s, before the economic boom. The construction market was at a complete standstill, stalled, and the purchase of new homes by households had collapsed by an estimated EUR 100 billion.

Furthermore, it must also be considered that the national building stock contains many buildings constructed between 1945 and 1972 (corresponding to 39.9%) and has a large proportion of pre-1945 buildings (20.2 %). As a result, the energy performance of these buildings is poor and almost 60% of the buildings are in the two energy classes F-G. New buildings are now in energy class A as a legal requirement.<sup>78</sup>

The 2018 saw the peak of the crisis in the Italian construction sector: investment in public construction remains far below the pre-crisis level of 2008. In this year in fact, the top 50 Italian construction companies faced a severe liquidity crisis due to payment defaults. This was due to high leverage to

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<sup>77</sup> Residential Construction in Italy, MarketLine Industry Profile, April 2022.

<sup>78</sup> LAW No. 90 of 3 August 2013.

finance working capital needs and investments, but also due to slow payments from public customers. The bankruptcies of larger companies also affected many subcontractors and suppliers of cement, concrete, and steel. The lock-down policy from Covid-19 then generated heavy repercussions on the construction sector and the entire building industry. According to ISTAT<sup>79</sup> data from the beginning of April 2020, about 61% of workers in our country were inactive in the face of the Prime Ministerial Decree of 22 March<sup>80</sup> and the subsequent Ministerial Decree of 25 March.

Aware that the decrease in public investment from 2008 to 2017 certainly did not help the Italian economy, the European Union and Italy decided to respond to the Covid-19 pandemic in a decidedly more interventionist manner. The 110% Super-bonus is today the principal mechanism not only for the requalification of the national housing stock, but also for setting the construction sector back on track, which is crucial for the country's economy.

positive GDP growth of 6.2% and a national COVID-19 economic recovery package in 2021 increased consumer confidence, and greater demand amongst homebuyers boosted the market over 2021.

In fact, there were and still are so many works in progress and construction sites open everywhere in Italy, which, compared to previous years, correspond to an increase in the number of orders of more than 300% and a slightly smaller increase in the overall economic value of building works, against significant benefits in terms of reduced energy consumption and the revaluation of the building stock, which have yet to be assessed. The Italian residential construction sector grew by 27.2% in 2021 to reach a value of €152,535.3 million. The compound annual growth rate of the sector in the period 2017–21 was 5.9%.<sup>81</sup> The new construction segment was the market's most lucrative in 2021, with total revenues of €59.8bn, equivalent to 39.2% of the market's overall value.

## **Pros**

Nowadays, the re-qualification offers the opportunity to stimulate the transition of the building stock towards carbon neutrality and addresses the very current problem of energy insecurity in our country. At the same time, those who opt for the Super-bonus get not only 110% on the work carried out, but also an increase in the value of their property linked to savings on consumption, which provides additional value to the property itself. However, After the implementation of the 110% Super-bonus regulation and the consequent boom within the construction sector, according to the CNCE

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<sup>79</sup> ISTAT (Istituto Nazionale di Statistica) is a public research institution that deals with static demographic and economic-financial surveys. It also deals with censuses and sample surveys and at the national level.

<sup>80</sup> Ministry of the Interior, Decree of 22 March 2022 - Decree in accordance with Article 2(3) of Decree of the Minister of the Interior No. 127 of 21 August 2019, concerning the identification of employers.

<sup>81</sup> Residential Construction in Italy, MarketLine Industry Profile, April 2022.



monitoring in 2021 there is an increase of 12.58% in the number of construction workers and 27.90% in the number of hours worked.<sup>82</sup> The 110% super-bonus has therefore brought and continues to bring an increase in employment of over 100,000. The recovery in employment was strongest in the South, where employment grew by 1.3%, compared to +0.5% in the North-West, +0.2% in the North-East and +0.3% in the Centre.

In addition, according to data published by ISTAT, in 2021 Gross Domestic Product has also grown thanks to the construction sector, which is driving the recovery largely due to the regulations discussed above. As of today, the economic value of the Super-bonus has reached EUR 124.8 billion, or 7.5 % of the country's GDP. The health of our economy is still sending out positive signals. In the second quarter of 2022, ISTAT estimates that Italy's gross domestic product (GDP) increased by 1 % compared to the previous quarter and by 4.6 % when compared to the second quarter of 2021.

## **Cons**

The 110% super-bonus was created also with the aim of giving citizens with no real financial assets the opportunity to assign credit to third parties and make their houses efficient compared to the past. In the initial phase, the bonus received fewer applications than expected. At the end of November 2020, the then Minister for Economic Development Patuanelli reported 193 authorised interventions, a low level compared to the total set expected. According to ENEA data, more than 86% of the interventions eligible for deductions concern single-family buildings or functionally independent property units.

Furthermore, the Court of Auditors pointed out that the tax benefits introduced in the past for building renovation and energy efficiency have been particularly attractive to the better-off.

Furthermore, the necessity to adapt rapidly to the changed expansive post-pandemic scenario has changed the demand of companies for sought-after professional profiles. Based on the ANCE Conjunction Observatory, more than 70% of the responding companies lamented high difficulties in finding certain professional profiles. It is therefore clear that the issue of professional training is a priority for the construction sector, since it represents an added value for the professional career of workers, favouring their necessary mobility, and is decisive for ensuring the specialisation required by the market, strengthening the competitiveness of the company, ensuring safety in the workplace, and combating irregular work.

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<sup>82</sup>Rapporto sulle imprese 2021, ISTAT, Andrea De Panizza, 2021.

Another important aspect is that from March 2022 until today, the banks have exhausted their fiscal plafond and are not accepting any credit to be ceded. This has resulted in a liquidity problem for construction companies, which has led to work being suspended and, in some cases, stopped halfway through. This means that if construction companies can no longer work (due to a lack of liquidity and therefore unable to buy the material needed to build), citizens are left with work that has been started but not finished by the deadline to be able to benefit from the tax allowance, which is therefore not granted to them because it does not meet the limits set by law. At the same time the increase in raw material prices was noted by the government in the MIMS<sup>83</sup> decree of 11 November 2021.<sup>84</sup> The price of a product is set by the market which, as we know, is subject to the rule, as simple as famous, of 'supply-demand' in an indirectly proportional way: as demand increases, the value of the good increases and vice versa, the price decreases.

The price increase is mainly due to a combination of reasons, accumulated over time:

- d) initial supply difficulties, due to the Covid pandemic situation,
- e) lack of materials and resources, caused by the intense and renewed bonus-driven construction activity for which the production system was unprepared,
- f) rising energy costs, mainly triggered by the war in Ukraine.

In addition to the increase of raw materials in the construction sector, we are facing an inflationary challenge in these months more than in previous ones.

According to ISTAT data, inflation reached an all-time high in June 2022, reaching a value of 8%, a value not recorded since 1986.

Even considering all these negative aspects, the biggest challenges presented by the super-bonus are the frauds. It turned out that 'one of the biggest scams ever seen in the history of the Republic', as Economy Minister Daniele Franco called it in Parliament, was on building bonuses: almost €6 billion have been taken away from the State, of which €2 billion have been 'already collected'.<sup>85</sup>

The most frequently used building allowances were the facade bonus (51% of cases) and the Eco-bonus (37% of cases) while the less used bonus was the 110% Super-bonus (3% of the total). The perpetration of the frauds was facilitated by the initial possibility, provided for under the 2020 Relaunch Decree, to assign the credits of the various building subsidies an almost unlimited number of times. The decree, in fact, had not originally provided for any guarantees, such as a compliance

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<sup>83</sup> Ministry of Sustainable Infrastructure and Mobility, (In Italian: Ministero delle Infrastrutture e della Mobilità Sostenibili)

<sup>84</sup> Informazioni Parlamentari, 2021

<sup>85</sup> Tutte le truffe del superbonus: dai conti esteri ai detenuti quai 6 miliardi sottratti allo Stato, L'Economia, Fiorenza Sarzanini, 2022.

certificate attesting to the existence of the prerequisites entitling to tax deductions (only the 110% Super-bonus provided for such measures).

In fact, the biggest problem was found in the circulation and assignment of tax credits, which in some cases were assigned with irresponsible applications by financial intermediaries, who, to speed up the processing of files or to grab as many customers as possible or even for little knowledge of the subject, assigned credits even without a real check on the customers and the regularity of their applications.

As of 22 June 2022, fraud reached an estimated value of EUR 5.6 billion by the Guardia di Finanza, although the numbers show an increase compared to EUR 4.4 billion in the second quarter of 2022 there was a cooling in the fraud phenomenon.

This is because to prevent scams several measures have been introduced:

1. Decree-Law 'Antifraud',
2. Support Decree Ter
3. Law Decree February 25, 2022
4. Aid Decree

### **Circular growth process of the market: the Hilti case**

As shown above, the regulations present some weakness from the point of view of control and financing, but at the same time it has also proven many benefits over the past two years. Among these benefits, one of the most important is that it has been a key to the country's economy and the construction sector which has seen an exponential growth. After all, growth does not only stop with the construction company sector, but as anticipated it also drives growth for all construction-related sectors and companies such as suppliers, plumbers, architects and so on.

A practical example of this growth can be described through a study carried out on the multinational company Hilti: an important player in the construction industry as a supplier of tools and consumables for construction companies. Hilti is an iconic B2B brand in the construction industry. Based in Liechtenstein, the family-owned company is one of the largest power tool producers in the professional segment, known for the superior quality of its product innovation. In its traditional business model, Hilti mainly act as a tool manufacturer and sell its tool to the construction companies who are responsible for all activities related to the management of their tool fleet.

Hilti was founded in 1941 in Liechtenstein by two brothers, Martin and Eugen Hilti respectively. Nowadays, the Hilti Group provides the global construction and energy industry with technologically advanced products, systems, software, and services. With a workforce of more than 31,000 employees

in over 120 countries, the company is characterised by direct customer relations, quality, and innovation.

The company has a well-structured hierarchy. Hilti Italy is present throughout the country from north to south. Employee roles are divided into *staff* roles and *headquarter* roles. Regarding the staff roles, the company is structured into trades and areas divisions. The divisions represent the major geographical areas in which trades are developed. Each area then, has its own sales manager called Area Sales Manager (ASM) who manages his salespeople in turn. There are usually 10 to 15 salespeople per area to which customers are pre-assigned. They are called Account managers (AM). The AMs are considered the heart of the company as they are the ones who develop the relationship with the customer and have the duty to follow the customer at all stages, through regular meetings and consultations on the company's products and services.

The pandemic strongly affected all global and Italian companies. In the first quarter of 2020, Hilti suffered a real freeze in sales as all construction projects were at a standstill because of the Italian lock-down. Initially, customers who dealt with this type of work were approached in the same way as in the traditional process thus analysing the purchasing potential and evaluating appropriate discounts in case of large orders. Subsequently, with increasing demands and especially sales volumes, the company decided to expand new positions to be able to take care of these specific customers as effectively and professionally as possible. A key innovation in this scenario is the creation of a 'Ventilated Facades' segment within the Steel and Metal trade with its own coordinator and trade manager.

However, others two new company figures have been created: a *business developer* (BD) whose task is to evaluate customers working with bonuses, see sites and propose the best solutions in terms of product lines and pricing, and a *team of developers* who then follow the customer through all the other phases of the work and throughout the operational phase. Hence, the first figure mainly concerns the technical part while the second concerns more the operational part. The results achieved since the legislation came into force are not only in terms of business organisation but also in terms of operational growth and profitability. Due to all this bonus work, the ventilated façade trade has achieved an increase in sales volume, turnover and margin over the last two years.

Exponential growth was instead achieved by the end of the year 2021 and early 2022. In this period, the company counts a very high number of bonus transactions. The growth in net sales, and thus in sales volume, increases at a rate of approximately 100% compared to the year before.

SPP (Strategic product profit) shows a considerable, although not constant, increase in this period. This instability is caused by the fact that some product lines in this trade have higher costs for the company and consequently the strategic profit per product line may be variable. Despite this irregularity, the total SPM (strategic product margin) of the trade recorded a sustainable growth.

## **Interviews**

To conduct a more accurate and comprehensive analysis of the current implementation and its effects within this important market, I decided to interview some of the major stakeholders this market segment. All of them, each for specific aspects, have been involved in these kinds of work.

On the HILTI side, I had the opportunity and the honour of interviewing three important managers.

On the other hand, for the customer side, I had the opportunity to interview a customer from the Central Southern Italy. I will call it 'XXXX XX' for privacy reasons.

Within the company instead, I interviewed three figures, which I consider very relevant: first, Alessandro Ammirati, a financial manager who has worked with the assignment of credit in recent years and will give us a practical and concrete insight on how HILTI has worked with this kind of 'remuneration' and what have been the internal differences after the legislative changes, what challenges we as suppliers have met and what our benefits have been.

Secondly, Luca Barbieri, an Area Sales Manager in the North-Est area of Italy in which, as showed in the second chapter, were done the higher number of works in this field. Through the feedback received from his customers who have worked with the 110% Super-bonus and Ventilated Facades, Luca will explain the main critical points experienced, the evolution of the business in recent years, and some suggestions on regulations. In addition, we will see how our company entered a market segment in which we did not have a strong market share, achieved only after the laww's implementation.

Finally, Sebastiano Franco, Area Sales Manager in the Central Southern Italy.

Sebastiano will give us an overview of his area, underlining that few works have been carried out under the 110% Super-bonus and will answer questions by specifically explaining the technical differences between a coat and a ventilated façade. Sebastiano's reasoning and explanation help to understand how such a large speculative bubble has been created.

In addition, Sebastiano gave me the important opportunity to meet his client 'XXXX XX' and receive significant feedback from him.

## **Interview with Financial Manager: Alessandro Ammirati**

### **In recent years, how has HILTI been working with the transfer of the credit and the discount on the invoice provided by the regulation?**

<< Hilti started working on the credit transfer in November 2021, so we do not have that many records. We are currently analysing the opportunity of super-bonus, but we also work with other types of credit to respond to the needs of companies that refer to ours. What changes, of course, is the deductibility because the 90% face bonus is deducted in 10 years, while the 110% super-bonus in 5 years and, consequently, the operation costs are different. From the point of view of transactions, we operate only with the assignment of credit, we do not practice discount on invoice, but we work, for example, with companies that have accrued discount credits on the invoice.>>

### **Following the Decree-Law of 25 February 2022, which restricts the assignment of credits, what operational differences were found?**

<< Let me start with the differences. Yes, there are internal and external differences. As for the internal ones, we left in November 2021 with a type of process in which the amount for the minimum order was lower. It was €X0.000,00. In March 2022, we had to change our process because of the main regulatory changes introduced in February of the same year. We started working with "co-responsibility" in acquiring credit. What does that mean? This means that if HILTI closed operations before February 2022, if a credit did not meet all the requirements, the problem returned to the person who had accrued the credit in the first instance and, usually, it was a condominium (because most of these relationships were made by private). Thus, before February 2022, if the company, after having made the certifications with its architect, subsequently screened by a CAF or an accountant, provided all the documentation, asserting its completeness and validity, we could rest assured. From February onwards, it has not been so. With the change, though, if HILTI has an unfounded claim, cash is responsible for that claim. This has also required us to carry out the control of the appropriations under co-responsibility

### **What has changed about external differences since February 2022?**

<<External differences substantially affect banks. We currently receive many contacts from customers, much more than in the past, because banks are stonewalling.

They are no longer taking these credits, implying that companies can cover with this block if decisive and with cash in hand. Instead, medium-small (and in Italy mainly there are medium-small companies that have exposed themselves) do not have the strength to sustain the lack of liquidity; they go into

difficulties, so they turn to a supplier to get material. That is how we get more opportunities. In fact, of the four closed operations I mentioned earlier, we closed three this year and only one last year.>>

**- Do we implement a loyalty system through this *modus operandi*?**

<<Certainly. That is another advantage for Hilti. We make the customer more loyal because he feels he is followed at 360°. We should also not forget that, for companies that have an important structure like ours, this credit assignment is convenient because it allows the general accounting department to dispose of all employee and IVA taxes with these credits and, considering that our company, in Italy, has as many as 1,300 employees, the benefits are considerable. It is, therefore, essential to enter the market and close one or more transactions with zero outstanding risk.>>

**Can I ask you for some feedback on legislation?**

<<Mhh.... Taking a balance of the circulating news with the super-bonus, we will not go ahead, and it will end in December 2022, while we will proceed with the facade bonus, the seismic bonus. I think, therefore, that we will continue to have requested.>>

**Could the suspected stoppage of super-bonus payments have been avoided?**

<<In Italy, as always, you make the law and find the deception!... Who knows, maybe if the state had imposed the restrictions included in the rule from the outset as of February 2022, the market would not have exploded. In this regard, Gabanelli's report on the 110% super bonus is relevant in which, after analysing the ATECO codes activated for construction in 2021, she highlighted the boom. This year, many people who were involved in logistics, catering, or something else went to the Chamber of Commerce and, within two hours, activated a building trade code. This shows how the market was pumped up; it was 'doped' with the apparent negative consequence: the end of the super bonus.>>

**Interview North-East Area Sales Manager: Luca Barbieri**

**What is your idea of the boom in work that has resulted from taking advantage of the bonuses?**

According to my clients, there was certainly an incredible boom of work, and there could have been a lot more if a wider time window had been opened and if they had also created certification constraints for clients. This means that these works would have really been carried out by clients who were qualified to do so, i.e. clients who had also done ventilated façades in the past, rather than improvised speculators who set out to do these works with, let me say, very, very poor results.>>

**Regarding the 110, do you think a regulation that subtracted 80% or 90% would have been more appropriate?**

<< I also manage the 110% parts of the bonus because I manage clients who do coats, and they distribute this feedback: a good 70/80/90% would have been ok just the same, and if the time frame had been widened, this would have allowed for better planning and development of the structure of the companies, even with recruitment plans. If a slightly less aggressive investment had been made, 80/90%, but with a ten-year plan, possibly putting stakes on the clients' certifications or the skills of the clients doing these jobs, there would have been more professionally practical jobs. These customers today have quintupled their turnover in two years. However, what will these companies do tomorrow? Tomorrow they will go back.

Construction companies became self-appointed specialists, and companies that did not work in the building trade started to make coats, but then what happened? Even here, the materials could not be found, and prices went up.>>

**What was the year in which the largest number of applications in the 110 super-bonus sector was recorded?**

<<In May last year, the biggest requests started. The big building sites have started this year, so all the apartment blocks are in Milan, which is my area. Regarding coats, on the other hand, we will have a boom between this and next summer because the deadline date for condominiums has been changed.>>

**For public buildings, schools etc., how many requests have been submitted?**

<<Few requests, if any. All those that arrived concerned industrial structures because perhaps some farsighted entrepreneur chose to take advantage of the 90 or 60 bonus to beautify the facades or the logistical part and still have an energy benefit.

Schools 0, hospitals 0. As far as my area is concerned, I do not remember a school building site or public parts. Furthermore, this is a drama because if a private party struggled, how could a public body carry out this process? Too much bureaucracy and, at the same time, too few controls. In the end, it is a bit of a paradox.

That is what we should be aiming at: thinking of covering all schools, even partially with coats. We would then have schools that are more beautiful to look at, more energy efficient, and we could be economically more sustainable.>>

**Interview South-Centre Area Sales Manager: Sebastiano Franco**



**From a technical point of view, has there been an acceleration of business in this specific trade?**

<<As far as the acceleration of business on the new regulations is concerned, well, there has undoubtedly been an epochal change, which has meant, from a technical point of view, that the simple cladding, i.e. the building envelope that is put into buildings to optimize the energy part of the building, has certainly been a driving force in many interventions. Nevertheless, due to a lack of material, a differentiation of approach, and new profit opportunities, some companies in the sector, basically window and door manufacturers, have started to propose the ventilated façade rather than cladding.>>

**In your opinion, at the end of this regulatory period, will there be a bursting of a speculative bubble? Do you think the construction sector could go backwards?**

<< Unfortunately, I do not see a very bright future. In residential construction, there will always be this Delta between coat and ventilated façade, so if the private individual must bear the cost, he will tend towards the coat and no longer the façade. Also, if you contact ten companies 8.5, maybe even 9, they will propose the coat and, rarely, the ventilated façade in the residential out of the norm. >>

**Can I ask you for some feedback on legislation?**

<<110% was too much. On the one hand, liberalising and opening in this way gave way to those who, in the end, were not competent to do the work, and on the other hand, also to those who had no particular interest in doing this kind of work. A good manoeuvre would have been 80%, for example, from the state, and whoever commissions the work contributes by paying 20%. Then those who do the work, because they have put money into it, monitor that the contractor does it on time. Unfortunately, this is also related to the need not to give everything away but to charge something.>>

**“XXXX XX Customer Interview”**

**What would you change about the legislation?**

<< The financial terms, a regulation that promises you 110% on redevelopment work, pushes the average citizen, who has no interest in this investment, to jump into this market to benefit from it. This does not lead to creating efficient and sustainable jobs but the opposite. In addition, I would change the timeframe for the completion of works because I think of how many applications there have been in Italy and realize that the time was not enough. Finally, I would have set up competent bodies to inspect before the work: it would have been better to have someone certify the presence of sustainable and professional construction companies, perhaps with a history in this sector and a

technical basis for carrying out this work. We would have achieved the sustainability goal without falling into the usual games of pure economic gain.>>

## **Conclusion**

The purpose of this thesis was to provide a detailed representation of the current Italian situation concerning the energy efficiency of buildings and the effect that both the new Super-bonus 110% and the previous incentive had on our country's building stock and market. A market that is considered as a driving sector for the country economy.

The topic discussed in this paper is also highly current, and future developments will need to be monitored further to understand the real effects of the 110% super-bonus on our country and our market. Indeed, the current historical period is characterized by national and international tensions of various natures on a political, economic, and social level, with the Russian-Ukrainian conflict, the price tension at the European level linked to the rising cost of energy, and numerous other issues related to the effects of the legislation discussed above.

The substantial energy savings guaranteed to households is another important objective of the existing regulation, which translates into more sustainable energy use and exponential economic benefit. From this point of view, all the laws on energy efficiency implemented by our state have led to a real goal if we think of a future in which Italy is less dependent on foreign states in terms of energy.

The regulatory complexity and the continuous changes scared private and specialized construction companies because they were not sure of the real possibilities of intervention. At the same time, however, it has allowed other market players not involved in this sector to speculate on this incentive. The few or weak controls have led to fraud of valuable EUR 6.6 billion; a waste never seen before. As said and repeated by the main stakeholders of the market interviewed, a deduction of 90/80/70% would have guaranteed greater rationality in the interventions. It would have sensitized citizens and workers to carry out only necessary work. The risk in the case of incentives so high in which many see a "gift" from the state rather than an "aid" is - also, for example, to remove new windows or make a ventilated facade - only because there is a deduction of 110% and not because it is useful or necessary to carry out such work. Work, therefore, if there was even a minimum payment by the citizen, would not have been accomplished. Moreover, as the interviews revealed, a temporal widening of the operating space would have made this bubble less speculative, the demand would have been less concentrated in a determined period, and the price increase would not have been so drastic. Finally, a more specialized check on the firms which carried out this work would have been an excellent way of preventing fraud and would have enabled specialists in the sector to carry out their work professionally and efficiently.

The norm is then profoundly centred on the values of sustainability required at the European level. The works promoted by the Super-bonus in this period are constantly growing, given the latest changes in funding deadlines. Therefore, not reviewing this measure's operation conditions would mean wasting a massive opportunity for development for our country.