

Sustainable Recovery: Analyzing Pandemic Subsidies and Their Role in Promoting Climate-Friendly Investments in Tyrolean Hotels

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Abstract

The COVID-19 pandemic severely disrupted global tourism, prompting governments to implement financial interventions to support the struggling hospitality sector. During the pandemic, governments in many countries offered subsidies to stabilize the economy. At the same time, discussions about climate change mitigation and the future resilience of this industry have gained momentum. Therefore, this study explores the extent to which governmental subsidies during the pandemic facilitated climate change mitigation investments within the Tyrolean hotel sector. Through qualitative interviews with stakeholders, including hotel owners, managers, and representatives from the administration and tourism interest groups, the study examines the role of these subsidies in promoting sustainable practices.

Findings reveal that while the subsidies helped hotels survive the crisis, their impact on fostering climate-conscious investments was mixed. Some hotels used financial support to adopt energy-efficient technologies and renovate facilities, but bureaucratic hurdles and unclear funding regulations often limited the effective use of subsidies for sustainability purposes. Additionally, the primary focus of the subsidies was on economic recovery rather than climate protection, resulting in insufficient incentives for climate-related investments.

The study concludes that future financial interventions should better align economic recovery with climate change mitigation by reducing bureaucratic barriers and providing clearer incentives for the adoption of sustainable practices in the hotel industry. This alignment is essential for ensuring a resilient and sustainable future for tourism.

Introduction

The COVID-19 pandemic has triggered one of the most significant crises in the history of global tourism and hospitality, resulting in an unprecedented decline in travel demand and occupancy rates. According to the World Tourism Organization (UNWTO, 2021), international tourist arrivals fell by 74% in 2020 compared to the previous year, leading to severe financial distress for hotels and related businesses. In response to this crisis, governments around the world implemented a range of financial interventions designed to stabilize the economy and support the beleaguered hotel sector. These measures included direct grants, tax deferrals, wage subsidies, and low-interest loans, aimed at preserving jobs, maintaining liquidity, and preventing widespread business closures (OECD, 2020).

Governmental subsidies have played a crucial role in mitigating the immediate impacts of the pandemic on the hotel industry. For instance, in the United States and Canada, substantial financial packages were introduced to support not only large hotel chains but also small and medium-sized enterprises (SME) that form the backbone of the hospitality sector (Government of Canada, 2020; U.S. Small Business Administration, 2020). These subsidies have provided essential lifelines, allowing hotels to navigate the crisis, retain employees, and maintain operational capabilities despite significant revenue losses.

The pandemic has also prompted a reevaluation of the global tourism industry and its sustainability and role in climate change mitigation. As travel restrictions and lockdowns led to a dramatic reduction in tourist activities, destinations experienced temporary relief from the environmental pressures of over-tourism. This period of "under-tourism" allowed for clearer skies and reduced pollution levels, highlighting the environmental impact of mass tourism. Researchers and industry stakeholders have since recognized the need to adopt more sustainable tourism practices that prioritize environmental health and resilience. The pandemic has accelerated discussions on how to implement sustainable development principles in tourism, emphasizing the importance of reducing carbon footprints and enhancing the industry's overall sustainability (Seabra & Bhatt, 2022).

Many hotels are recognizing that sustainability is not merely a trend but a necessity for long-term viability. The integration of environmentally friendly practices, such as energy-efficient technologies, waste reduction programs, and sustainable sourcing, has the potential to enhance operational efficiency and appeal to an increasingly eco-conscious consumer base (Steiger et al. 2025).

As the industry is almost back to pre-pandemic levels (international arrivals in the first quarter of 2024 reached 97% of 2019 levels; UNWTO 2024), it is vital to assess the broader implications of financial interventions during the pandemic. One particularly pressing question is whether the governmental support received during the pandemic has facilitated investments in climate change mitigation strategies within the hotel sector. The hospitality industry is a notable contributor to greenhouse gas emissions, driven by energy-intensive operations, waste generation, and resource consumption (Gössling et al., 2021). In light of growing concerns about climate change, there is an urgent need for the sector to adopt more sustainable practices.

This paper aims to analyze the extent to which governmental subsidies during the pandemic have positively influenced investments in climate change mitigation within the hotel sector. We conducted qualitative interviews with different stakeholders (hotel owners/managers, representatives of the administration and tourism interest groups) in Tyrol, a federal state in Western Austria.

Understanding the impact of governmental subsidies on climate change investments in the hotel sector is critical for several reasons. First, it will provide insights into how financial interventions can be

designed to not only support economic recovery but also promote environmental sustainability. Second, the findings could inform policymakers about the potential for aligning economic stimulus packages with climate goals, thereby fostering a more resilient and sustainable tourism industry (UNWTO, 2021). As the world emerges from the pandemic, the integration of climate-conscious strategies into recovery plans will be essential for building a future that prioritizes both economic stability and environmental responsibility.

In conclusion, this study seeks to contribute to the ongoing discourse on the intersection of economic recovery and sustainability in the hospitality sector. By analyzing the effects of governmental subsidies during the COVID-19 pandemic, we aim to shed light on the opportunities and challenges that lie ahead for hotels as they navigate the path toward a more sustainable future.

Case study

Tourism intensity in Austria, measured by tourist overnights per inhabitant, is notably high in many destinations, indicating significant economic importance but also potential negative externalities. Tyrol ranks 4th among European regions with a tourism intensity of 43 overnights per inhabitant (Eurostat 2010). At the municipality level, some areas exceed values of 500 (Statistik Austria, 2023). This situation has spurred public debate about the socio-ecological system's carrying capacity limits.

The Austrian tourism industry is predominantly made up of SMEs, particularly family-owned businesses (Kallmuenzer, Nikolakis, Peters, & Zanon, 2018). Historically, tourism in Austria developed mainly through local entrepreneurs and capital (Bätzing, 2015). However, concerns are growing about the declining control and embeddedness due to succession issues in many locally owned hotels. The increasing presence of international companies may lead to the transfer of control and value added to regions outside the Alps.

A significant mid-term challenge for Austrian tourism is climate change. Since the late 19th century, Austria's temperatures have risen by 1.8°C, about 20% more than the global land average. Projections indicate a further increase of 1.3°C in the next three decades and between 2.1-4.0°C by the century's end, depending on global greenhouse gas emissions (Olefs et al., 2021).

For summer tourism, warmer temperatures could extend the season for many activities, presenting opportunities for growth (Pröbstl-Haider, Hödl, Ginner, & Borgwardt, 2021). However, some activities, like climbing, might suffer due to destabilizing slopes in high alpine areas. Increased droughts could also affect golfing, with around one-third of Austria's golf courses located in areas projected to face water shortages.

Winter tourism faces severe challenges due to declining snow cover and depth (Olefs et al. 2021). Climate change will shorten ski seasons and necessitate more intensive snowmaking. By the 2050s, approximately 20% of ski areas may be unable to guarantee a sufficiently long season even with snowmaking. During the crucial Christmas-New Year holiday period, 34% of ski areas might face high closure risks (Steiger & Scott, 2020). The need for more artificial snow will increase costs and resource consumption (Steiger, Knowles, Pöll, & Rutty, 2022). The winter season of 2022/23 highlighted these issues as the Russian-Ukraine war drove up energy prices, sparking debates about the viability of ski areas amid high operational costs and energy needs. Although an energy crisis was averted, the warm

winter and increased snowmaking requirements reignited discussions about the sustainability of winter tourism in Austria. Climate change mitigation is thus critical for the Austrian tourism industry.

The initial phase of the crisis saw a downplaying of COVID-19's rise. The winter season of 2019/2020 was successful until the pandemic severely impacted the industry in March 2020. Despite early reports of cases in Innsbruck, the capital of Tyrol, in February 2020 and warnings from Icelandic guests about infections, destinations like Ischgl did not take immediate preventive measures (Mayer, Bichler, Pikkemaat, & Peters, 2021). By the weekend of March 13, 2020, all tourism businesses in Tyrol had to close due to several COVID clusters in fully booked destinations. Many hoteliers initially viewed the crisis as short-term, hoping to recover losses later in the year with government support (Peters & Steiger, 2023).

In mid-March 2020, the "Kurzarbeit" (short-work) regulation was introduced, promising government-paid salaries with no or partial work (Tiroler Tageszeitung, 26.03.2020). Initially, few hoteliers utilized this support and instead dismissed staff. However, many managers provided accommodation and support to quarantined seasonal workers.

Tourism demand rose again from June to October 2020, and managers took advantage of government funding. However, the rising infection rates in fall 2020 forced the accommodation sector to close for the entire 2020/21 winter season. November 2021 saw the highest number of infections, leading to a second hard lockdown on November 17, 2021. Shops, restaurants, and hotels were allowed to reopen in February 2022 (Peters & Steiger, 2023).

Public administration at the national and regional level introduced several new subsidies and increased existing subsidies to reduce the negative economic impact on businesses. While many of those subsidies were not bound by climate protection requirements, the so-called Tyrolean Tourism Subsidy (Tiroler Tourismusförderung; TTF) includes some points on climate protection in the regulations. This subsidy aims to ensure the positive development of tourism in Tyrol to strengthen economic performance and competitiveness. Investment projects that aim to significantly improve the operating structure and/or improve the range of services in the small-scale Tyrolean tourism industry are eligible for funding. This also includes the provision of high-quality accommodation/facilities for employees. When implementing investment projects, attention must be paid to energy efficiency and the conservation of resources. Energy systems that are operated with fossil fuels cannot be subsidized. In the case of new buildings, the entire investment cannot be subsidized if an energy system based on fossil fuels is used.

The approved funding amounts and investments of the TTF have increased massively with the start of the pandemic. While in 2019, subsidies of € 224,597 were approved for investments of € 4.1 million, this multiplied to € 1.65 million subsidies (+638%) and € 36.8 million investments (+793%) in 2020 and € 2.9 million subsidies (+74%) and € 40.1 million investments (+11%) in 2021.

Methodology

Semi-structured qualitative interviews were conducted with three stakeholder groups (Table 1): 1) representatives of the administration, who are responsible for applying for and approving subsidies and/or disseminating the relevant information, to gain insights into the processing of subsidies; 2) tourism interest groups, for industry perspectives on the pandemic; 3) managing directors and/or

owners of accommodation establishments in Tyrol , to inquire about the relevance of subsidies during and after the Covid pandemic, particularly concerning greater climate protection. The interviews took place between September 2022 and August 2023 and lasted between 45-90 minutes.

Stakeholder group	Institution	Interview partner	Date
Administration	Chamber of Commerce, Tourism and Leisure Industry	A1	September 2022
Administration	Province of Tyrol Department of Regional Development	A2	November 2022
Administration	Province of Tyrol, Department of Economic Development and Funding Transparency	A3	November 2022
Administration	Province of Tyrol, Department of Tourism	A4	November 2022
Administration	Standortagentur Tirol	A5	October 2022
Tourism interest group	DMO Wilder Kaiser	T1	July 2023
Tourism interest group	DMO Achensee	T2	November 2022
Tourism interest group	DMO Tirol Werbung	T3	January 2023
Tourism interest group	DMO Arlberg	T4	July 2023
Tourism interest group	ÖHV Tirol	T5	February 2023
Hotel owners/managers	Hotel	H1	February 2023
Hotel owners/managers	Hotel	H2	February 2023
Hotel owners/managers	Hotel	H3	March 2023
Hotel owners/managers	Hotel	H4	March 2023
Hotel owners/managers	Hotel	H5	April 2023
Hotel owners/managers	Hotel	H6	May 2023
Hotel owners/managers	Hotel	H7	June 2023
Hotel owners/managers	Hotel	H8	August 2023

Table 1: Interview partner

For the selection of interview partners from group 3, hotel owners who have received funding from the province of Tyrol (Tyrolean tourism subsidy) were approached in order to identify exemplary cases that illustrate prototypical individual reactions of hotel owners. Potential interview partners were identified based on the available data, taking care to ensure that a broad spectrum of hotel categories was considered. Initial contacts were made with hotels known from previous projects and recommended by representatives of tourism associations. In addition, the hotel managers interviewed were asked to recommend other potential interview partners in the region.

The audio recordings of the interviews were transcribed verbatim for the analysis. A qualitative content analysis was carried out with the available data (Mayring 2010; Döring & Bortz 2016) using MAXQDA and Atlas.ti software.

Results

Administration

From the perspective of the interviewees from the administration, the pandemic has led to significantly higher funding budgets and an upturn in the relevant departments. They see themselves as supporters for companies that want to invest. Areas of responsibility include dealing intensively with pandemic funding, politically demanding aid measures, providing support in the event of problems with COFAG and advising companies on funding: “In principle, we were involved with the pandemic from hour 0 in all aspects of supporting companies right through to politically demanding aid measures.” (A1). “We experienced an enormous upswing during the Covid period due to additional political initiatives and an increased budget.” (A3)

Strategic goals such as energy and thermal refurbishment were highlighted as important, as they are well supported in the Tyrolean funding landscape from the perspective of the interviewees in the administration. It was also pointed out several times that subsidies should not be seen as enabling investments, but rather as stimulating investment decisions: “Subsidies are always an incentive to make certain investments, but should not be the sole basis for investment decisions.” (A1). In this context, subsidies in the area of energy efficiency are particularly in demand: “Subsidies for innovative concepts and energy efficiency are important incentives for companies” (A5).

A common problem is when projects are implemented before the necessary funding has been officially approved: “The most common mistake is the premature implementation of a project before funding has been approved” (A1). This premature initiation can lead to considerable financial and organizational challenges if the requested funds are ultimately not approved. The lack of funding can impair the progress of the project or even bring it to a standstill, which can jeopardize not only the timeline but also the quality of the results. Furthermore, this approach often creates additional administrative hurdles.

Tourism interest groups

The first lockdown in March 2020 is described as a shock by stakeholders. However, this is also viewed positively to a certain extent, as the following two statements show: “After the shock, I don't think the first lockdown was such a bad pause for reflection. You were forced to take a break and because it was a real lockdown, because everything was at a standstill, you really had time to think about yourself and the future.” (T2). “Ultimately, people were more aware of what they wanted from life and how they wanted to shape their work-life balance” (T1)

Concerning the Covid subsidies, the interviewees stated that the main aim of these special subsidies was to provide economic security for the companies and that it was therefore not to be expected that they would have a positive effect on climate protection: “In my opinion, the Covid-19 subsidies have not contributed to climate friendliness. Nor was the purpose of this type of funding, it has to be said.” (T1)

There are two perspectives on climate change. Firstly, the concern that winter business will suffer as a result of climate change: “Climate change is actually threatening our main core business and our cash cow, which is winter tourism” (T1).

On the other hand, there is also hope that Tyrol could become more competitive in summer as a result of climate change: “We will be winners in the short term. We will become even more attractive as a vacation destination because we will become a place of refuge for those suffering from the heat” (T2)

Hotelier owners/managers

The peak phase of the pandemic was characterized by business closures and the resulting uncertainty. Business losses were reduced by subsidies such as fixed cost subsidies, turnover compensation or short-time working allowances. These types of support were perceived positively.

The situation is somewhat different for investment subsidies and grants. Here, the picture was split between companies that initially did not make any major investments due to the existing uncertainties during the pandemic. Others, on the other hand, were able to carry out larger investment projects during the lockdown, for which funding was also applied for. Investment projects carried out by the respondents included, for example, the renewal of the heating system, renovation work in the hotel swimming pool and apartments, as well as the construction of new, more luxurious rooms.

The interviewees agree that subsidies can provide a certain motivation to implement planned investments: “So the investment premium may have provided a slight motivation.” (H3) However, the loss compensation and fixed cost subsidies were considered to be more relevant, as they ensured economic stability.

However, the interviewees also expressed criticism concerning investment funding. This is largely related to perceived bureaucratic hurdles and, in some cases, overly vague wording in the funding regulations: “We are always told: you have to be able to finance it even without funding. The funding should be your bonus. But for many, it's only possible or only attractive if I know I'll get - I don't know how much - funding.” (H7)

“We would actually be willing to implement something, but we are simply being held back by the bureaucracy.” (H5)

Waiting times were also criticized as being too long, which has resulted in higher costs for projects due to rising inflation: “This means that between the time you applied for funding and the time it was awarded, you often had 15/20/30% higher costs than we didn't actually think” (H4).

Another problem was the availability of goods: “We wanted to do photovoltaics, but we heard from the suppliers that the material was not available.” (H7).

Discussion and Conclusion

Our study aimed to analyze the extent to which governmental subsidies during the pandemic have positively influenced investments in climate change mitigation within the hotel sector. The qualitative interviews conducted with stakeholders in Tyrol revealed mixed perceptions regarding the effectiveness of these subsidies in promoting climate-friendly investments.

From the administration's perspective, the pandemic led to significantly higher funding budgets and an upturn in relevant departments, which in turn supported companies in making strategic investments in

energy efficiency and thermal refurbishment. However, a common issue identified was the premature implementation of projects before official approval of funding, which could lead to financial and organizational challenges

Tourism interest groups generally viewed the COVID-19 subsidies as primarily aimed at providing economic security rather than promoting climate protection. While the need for climate-conscious strategies was recognized, the immediate focus during the pandemic was on economic survival.

Hotel owners and managers had varied experiences with investment subsidies. Some were able to carry out significant investment projects during the lockdown, such as renewing heating systems and renovating hotel facilities, which were supported by subsidies. However, there was also criticism regarding bureaucratic hurdles and vague funding regulations, which sometimes hindered the effective utilization of these subsidies for climate-friendly investments.

The findings of this study have several broader implications for policymakers and industry stakeholders. First, it highlights the importance of designing financial interventions that not only support economic recovery but also promote environmental sustainability. Aligning economic stimulus packages with climate goals can foster a more resilient and sustainable tourism industry (UNWTO, 2021).

Second, the study underscores the need for clear and accessible funding regulations to facilitate the effective use of subsidies for climate change mitigation. Reducing bureaucratic hurdles and providing clear guidelines can enhance the uptake of environmentally friendly practices within the hotel sector.

Finally, as the industry recovers and approaches pre-pandemic levels of activity, there is an urgent need to integrate climate-conscious strategies into recovery plans. This will be essential for building a future that prioritizes both economic stability and environmental responsibility.

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