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Virtual tourism in the post-pandemic reality: Economic-financial flows

El turismo virtual en la realidad pospandemia: Flujos económico-financieros

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ABSTRACT

The work aims to analyse how virtual tourism viability is achieved in face of post-pandemic reality stemming from economic and financial flows for companies in the sector. The analysis is based on surveys from organisations such as MCI Spain and EventoPlus as well as information obtained from ten professional congresses on health, research as well as corporate topics. Five of these are face-to-face (pre-pandemic), four are virtual and one is hybrid (post-pandemic). The results show that virtual events viability is mainly achieved by sustainability, security, audio-visual elements, and types of event formats. The main conclusion is that the post-pandemic reality demands from congress tourism the creation of new, smart and sustainable ideas to improve the overall satisfaction of value chain participants.

Keywords: Business Tourism, Virtual Tourism, MICE, Hybrid Congresses, Economic Viability.

JEL CODE: M16, Z32, Z33

RESUMEN

El trabajo tiene como objetivo analizar cómo se logra la viabilidad del turismo virtual ante la realidad pospandemia derivada de los flujos económico-financieros para empresas del sector. El análisis se basa en encuestas de organizaciones como MCI Spain y EventoPlus, así como en información obtenida de diez congresos profesionales sobre salud, investigación y temas corporativos. Cinco de estos son presenciales (prepandemia), cuatro son virtuales y uno es híbrido (pospandemia). Los resultados muestran que la sostenibilidad, la seguridad, los elementos audiovisuales y los tipos de formatos de eventos son los que principalmente permiten lograr la viabilidad de los eventos virtuales. La principal conclusión es que la realidad pospandemia demanda del turismo de congresos la creación de nuevas ideas, inteligentes y sostenibles para mejorar la satisfacción global de los participantes de la cadena de valor.

Palabras clave: Turismo de Negocios, Turismo Virtual, MICE, Congresos Híbridos, Viabilidad Económica.

JEL CODE: M16, Z32, Z33

INTRODUCTION

The concept of tourism has many definitions and modalities. According to the World Tourism Organization (UNWTO or in Spanish Organización Mundial del Turismo):

Tourism is a social, cultural, and economic phenomenon involving people's movement to countries or places outside their usual environment for personal, professional or business reasons. These people are called travellers (who may be either tourists or excursionists; residents or non-residents) and tourism encompasses their activities, some of which involve tourism expenditure (Organización Mundial del Turismo, 2010, p.12).

Based on this definition, a characteristic of tourism is the "physical movement of people in terms of territory". In a virtual environment, the person remains physically in the same place without moving. However, the virtual environment leads to the sensation of displacement in the face of the experiences and contacts established virtually. The person "travels" virtually and is involved in connection through virtual media that are facilitators of the journey. It is more in line with the Royal Academy of the Spanish Language (RAE) definition. According to the RAE dictionary, tourism is an "Activity or fact of travelling for pleasure, set of means conducive to facilitating tourism trips, group of people who make tourism trips" (Real Academia Española, 2014).

The viability of tourism requires new forward-looking measures, and short- and long-term actions for the growth of the tourism industry itself; not only economically, but also in other aspects such as socio-cultural, socio-economic, and environmental ones (Maymand, Farsijani & Moosavi, 2012; Beck & Egger, 2018; Voronkova, 2018). The latter is an aspect that has a rather high impact and more so during the post-pandemic era, as the economy (Gutiérrez Abad, 2021) and global tourism shutdown led to the creation of new objectives to meet those business sustainability goals. The new global environment leads to a greater emphasis on virtual tourism, which is positioned as fundamental to business in the face of health measures. Therefore, the following question arises: ¿How to achieve the satisfaction of the virtual tour in the post-pandemic reality with financial and economic benefit for the companies in the sector?

THEORETICAL FRAMEWORK

Sustainability

In the face of the pandemic, virtual tourism contributes to preventing a decline in the sector. In addition, it is sustainable because it reduces the flow of people, contributing to the reduction of pollution (Martín & González, 2016; Lu et al., 2022).

The "Strategic Sustainability Plan 2030" sets out the aspects to be followed and names the sustainability plans that the Spanish government has designed for its progressive implementation and to achieve high levels of quality, taking into account the environment (Ministerio de la Industria, Comercio y Turismo, 2019). Tools such as Big Data, which collect information for its subsequent use, mean that tourism intelligence is progressively developing, as well as serving as a basis for other e-commerce and live streaming tools to take advantage of all methods of communication and interest attraction.

These innovations in turn enable the development of smart destination networks (SDN), which are born out of the need to offer other types of differentiated and competitive services. Some organizations certify these smart destinations according to the parameters of governance, sustainability, accessibility, innovation and technology (Segittur, 2021). In tourism, reference is made to measures such as (United Nations, 2015): efficient buildings, access controls, sustainable mobility, tourism intelligence, and virtuality in destinations.

Security

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Museums have adopted relevant measures such as access controls, increased security and hygiene measures, or the virtual tour or 360-degrees access. In this way, a visit to the museum divided into sectors is offered where one can see and hear the exhibition remotely without leaving home, either as a guided or not guided tour. This type of virtual reality is somewhat complex; the challenge of providing the same emotions and experiences is faced by both companies that are dedicated to providing technical support as well as tourist destinations entities.

Virtuality is under question, as many sectors express disagreement as to whether it is sustainable, and even more so because there are still no concrete studies that show that it is more sustainable. The use of the internet is pitted against the wear and tear of human beings. However, virtuality is confirmed to be a useful and easily adopted method and still has a long way to evolve and adapt to future adversities (Lyntia, 2022). Virtuality grew in 2020, a time of adaptation for all sectors and companies in the world, and in business tourism in particular (Puro Marketing, 2022).

Sensory hyper-realism

Virtual experiences seek to leave intense impressions on those involved in them. The intensity of the experiences (Kullmann, 2014; Huggett, 2020) is key to gaining greater weight in virtual tourism as compared to a real experience (De Ortega, 1984). The mechanisms at work in simulation and simulacrum in the design of virtual tourism experiences depend on the relationship established between the expressive representations of a system object (Congress) and the perceptual representations of the user (peer exchange, debate, reflection and the opportunity to create new professional links).

Both the properties of the system (functionality aspects) and those of the receiving subject (usability aspects) are determined by conditions that can be optimised to enhance the experience. The four main conditions are synchronized coverage, intensity, interaction and alternativity (Costa, 2010).

Audiovisual elements

Most conventional virtual reality applications are audiovisual; however, the constant evolution of these technologies makes it possible to provide enriched multisensory virtual reality content that can further increase the potential of virtual reality applied to the field of tourism. The multisensory capability makes users feel physically present in the virtual environment and contributes significantly to the development of positive emotions favouring the consumption of virtual tourism products and services (Melo et al., 2022; Flavián, Ibáñez & Orús, 2021; Hopf et al., 2020).

Types of formats

Virtual congresses have abandoned human contact, creating hybrid formats. Apointments are held entirely online (with new technological supports such as augmented reality or virtualisation), and meetings are established between small groups. The format with the most activity on the part of participants is augmented reality (Spielmann & Mantonakis, 2018).

Collaborations

Collaboration within virtual tourism requires the infrastructure provider (intranet and hardware, value-added services, security and data protection), tourism enterprises, regardless of their size, and virtual tourism service networks (web site and portal, payment system, integrated system with high-speed data transmission, among others) (Maymand, Farsijani & Moosavi, 2012).

Changes in consumer behaviour

The main external variables influencing consumer behaviour are demanded environment, family, reference groups, culture and social strata. They have changed rapidly with the presence of COVID. In addition, prolonged confinement, social isolation, distancing and other health measures have changed the way people make decisions, perceive the shopping experience and interpret service quality (Henao & Cordoba, 2007; Gil, Torres & Lopez, 2013; Di Crosta et al., 2021; Mehta, Saxena & Purohit, 2020; Verma et al., 2022).

Trends and perceptions of virtual tourism in Spain

MICE tourism (acronym for Meeting, Incentives, Conferences and Exhibitions) is the name given to a type of tourism that already exists and which is known worldwide as congress/event tourism. There are different definitions of MICE tourism:

MICE tourism encompasses various types of professional events, which can be broken down into trade fairs, conventions, exhibitions, congresses, conferences or seminars and incentive trips. In addition, MICE tourism has to encompass a series of characteristics, which are depersonalization, economic impact, employment generation and positioning of the destination (OSTELEA Tourism Management School, 2021).

With the help of statistical reports from the Spain Convention Bureau concerning the year 2019, MICE tourism generated around 12,000 million euros per year in Spain (EventoPlus, 2022). Data collected from the INE show that only 5,409,183 Spanish nationals travelled for business purposes, while the total data estimated shows around 10 million travellers of this type (INE Instituto Nacional de Estadística, 2019).

Business tourist spends up to €320 while a sun and beach/leisure tourist generates around €110, which means that MICE tourism generates approximately 30% more income than sun and beach tourism.

Spain is one of the privileged destinations for this type of tourism, as according to the ICCA (International Congress and Convention Association) ranking, Spain is in fourth place among the countries with the most congresses per year, surpassed only by the USA, Germany and France. Madrid and Barcelona are in fourth and fifth position as host cities for this type of tourism (Hosteltur, 2019).

The above references provide an interesting picture of the environment, despite the difficulties encountered in the post-Covid19 era, as it is a result of the consensus of different people with senior positions in different companies fully dedicated to tourism not only MICE but in general.

The aspects to be taken into account with special attention are the following (Tecnohotel, 2021: 12): lack of professionals, Temporary Labour Force Adjustment Plans (ERTEs - Expedientes de Regulación Temporal de Empleo in Spanish) and the non-return of employees, shortening in the booking period (from six months to only two), problems with supply, change in customer demand and security.

Digital updating and innovation are the standards for the survival of all companies dedicated to this type of tourism. The annual briefing note "The MICE sector reinvents itself with the pandemic" comments on the sector's past and current problems, including the 70% drop in activity (Hosteltur, 2021).

METHODOLOGY

As sources of information, the data provided by various companies and professionals in the tourism sector have been used, hereby mainly the primary source of information are analysed, contrasted with different articles and reports on the sector.

Afterwards, for the consolidation of numerous measures applied in feasibility, sustainability and business finance studies, other bibliographic sources have been applied to support the application of formulas and to understand the decisions based on specific projects that were taken when implementing new business channels (Suárez and Suárez, 2014; Mascareñas, 2010). In addition, the following calculation formulas have been used for the presentation of the data: calculation of the budgets of a congress or event, calculation of registration prices, calculation of correlations of attendees and events characteristics, calculation of income, expenses and profits, calculation of elements of economic viability, use of elements measuring the environment.

The financial flows of revenues and costs associated with virtual events realised during and after the Covid-19 pandemic analysed are based on the case of 5 events with data provided by the anonymous company in the MICE tourism sector with headquarters in Madrid, Spain. This information was compared with other 5 face-to-face (or presential) events, organised before pandemics. In order to assure the confidentiality of the sensitive information, the data was provided in percentages. Information on the structural flows and costs borne by the company is not included, as their analysis is outside the scope of this study.

To complete the incomplete statistical information for the recent years under study, different types of results obtained from surveys carried out by MICE tourism entities are analysed in terms of satisfaction, adaptability to virtual elements and measures. This is followed by a quantitative evaluation of the profitability of these events.

DISCUSSION AND ANALYSIS OF RESULTS OF FIVE VIRTUAL POST-PANDEMIC EVENTS VERSUS FIVE FACE-TO-FACE ONES FROM BEFORE THE PANDEMIC

MCI Spain Survey

The data analysed below correspond to surveys conducted by MCI Spain on Spanish (66%) and Latin American companies (34%), representing entities from automotive, healthcare, technology industries, non-profit organisations, professional services and business, and consumer and food sectors (MCI Spain, 2021). Both Spanish and Latin American companies have held virtual events with more than 50% increase in the audience numbers. 57% of the companies surveyed indicated that they have adapted and trained personnel for

a virtual format, while 40% of them already had this knowledge before.

83% of companies agree that there are real cost savings to be made with virtual events. 64% of companies believe that the virtual format is fully valid for both internal and external events, and 83% of companies agree that it is much more effective and useful in a 15-participants environment.

40% of companies have used a 100% virtual format. Among the companies that tried other formats, 90% of companies used a hybrid format with a stage but without an audience, 45% used a hybrid format with a stage and an audience and 30% were 100% face-to-face events.

The level of user satisfaction has dropped from 80% to 60% for virtual events as the post-pandemic situation has progressed, although it has risen thanks to the inclusion of the stage and the presence of some audience. 69% of respondents considered that the virtual event strategy works, but with a lot of room for improvement, 12% did not change their opinion (stable), 8% found it unsatisfactory and 10% rated it as excellent.

Among the most valued complementary aspects within the virtual/hybrid dimension are, sustainability aspects (20%), sensory hyper-realism (6%), security (20%), audiovisual elements (17%), types of formats (18%), collaborations (4%) and changes in consumer behaviour (13%).

EventoPlus Survey

The EventoPlus study brings together a range of responses from over 500 decision-makers in the tourism industry, agencies of various types, suppliers, incentive companies and surveys of professional conference organisers (PCOs) (Mottard et al., 2021). Significantly, 52% of respondents said that events attendees had declined by more than 70%, with 23% commenting that the decline was between 40%-70%.

Participants consider virtual events to be significantly cheaper, only 11% consider that the costs are higher. Another issue is the estimated profitability of online events, three-quarters of the respondents consider that they are not profitable, but with a fairly high level of optimism. The confidence in the possible profitability of this type of event is 32%, in addition to the 19% of respondents who estimate that the events are already profitable.

Despite the perceived cost-effectiveness issues, virtual events are consolidating, with 62% of respondents believing that they will be another way to adapt to the new normal and that they will be useful when physical events arrive, as they will move to hybrid events formats.

Comparison and analysis of the five events

Before Covid19, the company operated all its congress and event organisation services on a face-to-face basis. The pandemic has meant a rapid adaptation due to the demands of the environment and its relevance for the survival of the company. Like many companies in the sector, during the two years of the pandemic, this entity has also opened several business channels, which are adapted to the new proposals for the organisation of congresses and events in different types of modalities in terms of presence. The detailed information and the breakdown of the subsequent analysis deals with five congresses, with different themes concerning medicine or derivatives (health issues in broad terms) and gastronomy.

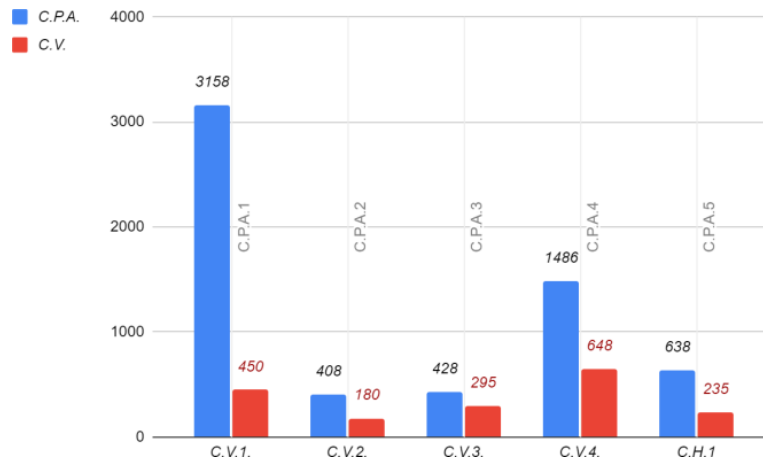
All congresses have a history that precedes them in terms of their importance, objectives, publicity and other other factors that they share, with the "virtual" factor having greater relevance for the analysis. It can be said that virtuality has not impeded the holding of events, as the organisations are assuming that to continue to advance in the context of their sector, it is a novel, affordable and adaptative option.

The congresses studied and analysed contain common features in their breakdowns of income and expenditure or "line items". These items, irrespective of the different amounts set out below are in fact common to any type of medium to large-scale events in MICE tourism.

The four of the five congresses/events analysed are (C.V.) or totally online or virtual congresses/events and the last (C.H.) is a hybrid one with online broadcasting during the entire event. The hybrid congress (H.C.) is a clear example of the progression and evolution of the type of tourism studied. In addition, the comparison data from five fully face-to-face congresses (C.PA.) organised in the pre-Covid19 period are analysed, provided by a proprietary database.

The data obtained on registrations for virtual events is advanced information for an evaluation, as the line of business being studied is new and therefore lacks a history for comparison. After consulting the data provided by the collaborating company, an analysis was made on the different dimensions described above on the types of virtual, hybrid and face-to-face congresses. Graph 1 compares the number of registrations for the five congresses held before and after the pandemic.

Graph 1. Number of registrations at the studied congresses, before and after the pandemic.



Source: Own elaboration based on data provided by the anonymous company.

Graph 1 shows the number of registered attendees for each congress type. Virtual congresses attract a higher number of attendees on average than a hybrid one. This is so, because the data is from the beginning of hybrid congresses implementation, which was progressive as the public and companies were getting used to this type of format.

66 In addition, a large number of registrations in virtual events is registered, which shows that in this case, both the public and the company, have been able to adapt quickly and efficiently to a new business channel. A virtual congress can include a large number of people adjusted to the company's capacity to support such a large virtual event. The events of this type are highly adaptable to any change in demand. A decrease in the number of attendees can be observed in the second congress (C.V.2), although afterwards it increases progressively until the fourth virtual congress (C.V.4). This detail is a sign of good practice, as companies are looking for economic sustainability after the first Covid19 shock, with this sector being one of the most affected.

Adaptation and evolution are essential, a point of strength is created. This demonstrates the practice to be adapted towards a new, efficient strategy. Unlike face-to-face events, in the case of virtual congresses, it is necessary to take into account the history of the congress and their attendees to be able to manage all the necessary services.

The virtual elements create possibilities of mixing a virtual event with a degree of presence, the novelty in each case being the form of the event, not its content as such. The hybrid congress (C.H.1) provides very relevant information, i.e. the gradual and slow recovery, the recovery not only of the sector but also of the public's confidence in the fulfilment of health requirements. Registration numbers are lower, even if different types of registrations are mixed according to the mode of attendance (virtual/on-site).

The variation between pre-covid on-site attendees and virtual post-covid attendees can be observed, a relevant drop in attendees' numbers regardless of the subject matter. According to the data collected, the average number of attendees at an on-site congress in the pre-Covid19 period was 1,224. In comparison, the virtual event has an average of 362 attendees, which implies a variation of -70.42%.

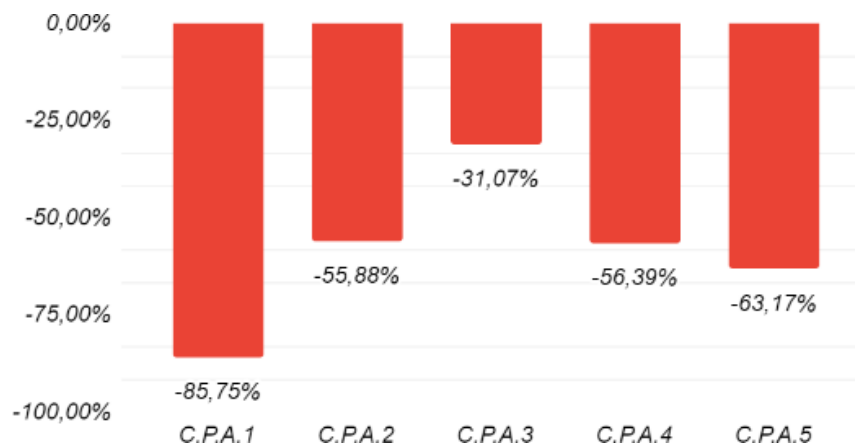
In addition, there is a differentiation between the number of virtual attendees counted at the hybrid event and the number of face-to-face or on-site attendees at the congress itself: 91.06% attended in person and 8.93% in virtual format.

The above data can be a good measure for future trends, i.e. the gradual adaptation of this type of attendance, although in this case, the proportional part that attended virtually refers to individual or small group sessions. Virtual congresses gain in certain aspects such as access to new technologies, faster adaptation to the environment, new online companies and new jobs.

The sharp drop in the number of attendees and the change in attendance means a significant economic decrease in the destination environment revenues, as well as the so-called positive externalities generally associated with this type of events. The variety of suppliers, rentals of certain equipment, restaurant consumption, etc. are limited.

Graph 2 shows the percentage variation between the number of attendees of virtual and hybrid congresses and the data collected from attendees of face-to-face or in-site congresses, ordered from C.P.A.1. to C.P.A.5.

Graph 2. Percentage variation between attendance numbers for events of the same subject matter with different attendance formats.



Source: Own elaboration based on data provided by the anonymous company.

A significant drop in attendance numbers can be observed in comparison with the number

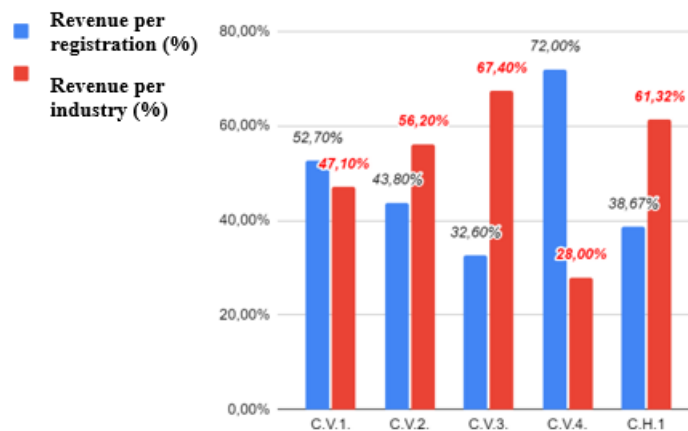
of registered attendees at the virtual congresses that share the same subject matter. This figure indicates that Covid19 has meant a large drop in the number of people registering for the congresses, it is 85.75% less compared to the same congress on the same subject, but in virtual form, implying 2,708 less registrations.

Revenue items.

Graph 3 shows the revenue collected in all the virtual congresses studied, quantifying the revenue from registration versus industry (exhibitors and partners). Registration revenue is of great importance in congresses as it accounts for more than 45% of the total revenue of the congress or event. Companies take care of this numbers even before they know how much they are going to spend during the congress organization process.

Event organisers base their estimates on advance payments issued, pre-registrations, special prices, committee members, guests, non-members, stand attendees, etc. The graph 3 shows the difference between the two revenue streams of the virtual congresses analysed.

Graph 3. Revenue per registration and industry at analysed virtual events.



Source: Own elaboration based on data provided by the anonymous company.

The revenue from attendance is quite positive, as higher than the average profit from these congresses is due to the participation and registration of attendees or partners. Even so, the difference in the data is considered minor. About revenues by industry, the data diverge more. This is due to the commercial dealings with sponsors, partners, etc. At this point, revenue is more varying, as other factors also play a role, such as the topics of the events, which may be more or less attractive to exhibitors and commercial companies.

It follows that revenues are different, even if they come from the same items in virtual and in-site congresses because the same activities cannot be carried out. An example would be the income from square metres sold by stands and exhibitors, which are sold differently,

virtually, by buying "virtual space". In the gastronomy congress, such as the virtual congress three (C.V.3), the amount associated with industry income, is associated to the sponsorship provided by the industry in this sector.

As for virtual congress two (C.V.2) and four (C.V.4) they are quite similar due to the environments in which they are located, i.e. both of them share a common theme, which is health. Although the medical branch is differentiated, in virtual congress two (C.V.2) the income contributed is due to the sponsorship value.

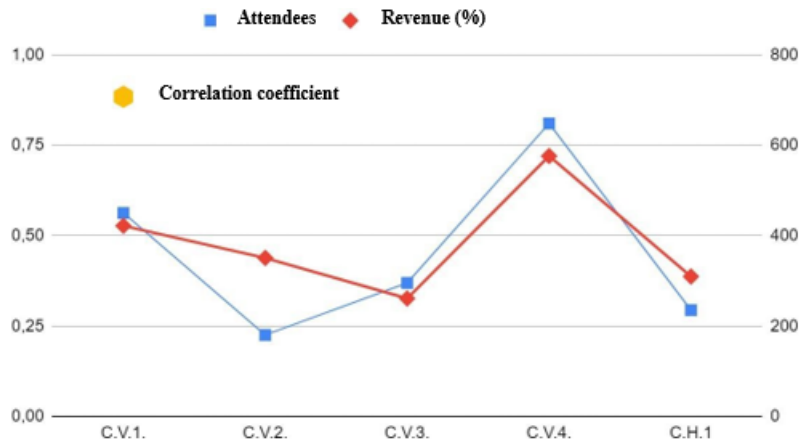
It should be noted that virtual congress one (C.V.1) shares the same theme, but the collaborating entities are different, which means that within the same theme (health) the advertising and marketing are different, although they have similar collaborators, in comparison to virtual congress four (C.V.4) as it is more didactic and practical implying an increase in expenditure on other items. It can be said that the industry in which the virtual congress four (C.V.4) works is less likely to generate marketing or advertising benefits, as well as additional income derived from the participation and organization of the congress.

The difference is also seen in the 61.32% of industry revenue from the hybrid congress, due to global agreements with companies for the formalisation and physical exhibitors with gifts. In the end, the square metre is sold for the private use of any collaborator or member who wants to sponsor the congress.

In the data studied, the Pearson's correlation coefficient of income per enrolment-attendee is 0.88, which shows that this income as the primary source of revenue is positively correlated with the number of attendees enrolled (Graph 4).

"Correlation is a statistical measure that expresses the extent to which two variables are linearly related, positive "r" values indicate a positive correlation in which the values of both variables tend to increase together, while negative "r" values indicate a negative correlation, in which the values of one variable tend to increase while the values of the other variable decrease" (JMP Statistical Discovery, 2022).

Graph 4: Studied events correlation of revenue and registered attendees' numbers in virtual events



Source: Own elaboration based on data provided by the anonymous company.

It should be noted that in virtual events there are very few places in guest mode, i.e. there are some free places for a limited number of staff, such as speakers, table delegates, etc., so that the analysis is not distorted by free places.

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However, it should be borne in mind that, despite the measures adopted by the companies, which are updated daily with increasing experience, piracy in virtual events exists, and therefore the data may be affected. Piracy implies persons sharing their profile or sharing their information with other people when the norm is that at a congress is paid per individual registration, i.e. each registered person has an exclusive access.

Graph 5: Sample correlation of revenue by attendees' number and industry in virtual events



Source: Own elaboration based on data provided by the anonymous company.

The Pearson's correlation coefficient in the industry revenue-attendee number is negative

(Graph 5), as the value that the organising companies receive in revenue from this item is much lower than the registration revenue analysed above. In short, this section shows the differences in registration according to the virtual or in-site nature of the event. Revenue from events where the industry in the locality of the event does not cooperate is reduced. If the industry has greater accessibility and collaborates, other types of channels are created that can encourage the reach and attendance of both virtual and physical events. Although in the case of industry participation, channels suppose only one factor among others to be taken into account.

Expenditure items

The expenses are divided into different types of items common to any type of congress and event, even though their modality is innovative. There are items such as the "Venue" (understood as "the place where a public event or meeting is held") and catering (the business of the companies that prepare food and beverages). Venue and catering are two items that are intertwined due to the characteristics they have between them, as one exists thanks to the other. If there is no place to hold something, it is not possible to provide a service. The venue is a very important expense for companies dedicated to organising meetings and congresses in general, it has a considerable magnitude within the sector. It is essential to find a space that is viable for holding events. This is because it combines facilities, internal services, capacities, etc.

In short, this is a fixed cost for in-site or hybrid congresses, since, as the analysis of the hybrid congress (C.H.1) shows, the venue is a fairly large percentage within the expenses section, with the average close to 38%. In comparison with the virtual events, the difference between the venue and the virtual events is observed. In some of the cases of the study, it is equal to a value of 0%, as in virtual congress two (C.V.2), i.e., no expenses associated with hosting people or renting or using rooms for the operation and development of the event, without auxiliary (hotel) staff, etc. is registered.

The low percentages for virtual congresses one (C.V.1) and three (C.V.3) and a little higher one for four (C.V.4) are not very significant as they do not represent an expense item that has a considerable impact on the agreed budget. In the case of virtual events, the venue as an expense is associated with the companies that facilitate a space for the use of the technical service personnel that is needed to deal with the congress or event.

The virtual venue can also be "a digital environment where users create an avatar and navigate in a video game-like environment, designed to immerse attendees in a 3D virtual world and provide a real sense of space that helps attendees to collaborate, learn and interact naturally". In general, specific venues are made for each event (LKD, 2020).

Virtual events are held in virtual spaces, this type of virtual event has a reception room,

which, depending on the type of meeting, can be more interactive or simple, as it would be an assistance or meeting centre. Companies dedicated to this type of events usually have a customised location, which is amortised in other ways. If the number of congresses raises, it is worth investing in virtual space, that nowadays can be found at all events.

The greater the number of people attending and the greater the interactivity required, the greater are the expenses for the organising company. This issue is related to the impact it can have on the environment. Holding a virtual event is a plus in terms of profitability for the company or its technical service, but at the same time, it stops contributing and collaborating with a large number of companies that are associated with the event, such as venue hotels, rental companies, specialised auxiliary personnel companies/agencies or even companies that assemble stands or exhibition spaces.

In the case of the hybrid congress (C.H.1), the above analysis is equally valid, although to a greater or lesser extent, as it is in line with the number of people attending and the previously formalized programme. Then, it should be taken into account that the catering item is an expense that companies emphasize when organizing the event since commercial ties are forged at these lunches and dinners and that in turn, it works together with the income item, due to the sale of additional dinner and lunch tickets.

⁷² In this sense, in principle, the catering expenses are quick to interpret, since in the case of virtual congresses (C.V.), no type of service derived from the hotel and catering industry should be found. Virtual congress one (C.V.1) adds a catering cost of 1.10% for a kind of per diem paid to the travelling event' hosting personnel and a short-term service on the set used to manage the congress.

In virtual congress two (C.V.2), it can be observed that there is no expenditure on the catering item because it was a 100% online and virtual event. On the other hand, in virtual congress three (C.V.3), per diems were paid for the staff involved in the technical secretariat and collaborators involved in the central headquarters from where the monitoring was carried out.

In virtual congress four (C.V.4), as in case of other congresses, the expenditure is derived from the duration of the congress and per diems paid for the travel expenses of some of the members of the organizing entity and the event broadcast stage use, taking into account catering for its administrators, and buses for transfers to the catering area. As it can be seen, there are many associated expenses. The involvement of companies and sub-companies that boost the financial and economic flows is highlighted in this item. In addition to the aforementioned items, in this type of virtual modality, flows related to communication, support and virtual management of online/virtual congresses can be seen.

AV-Streaming (AV - Audiovisual) is the activity of listening to or watching sound or video directly from the Internet, more precisely in this context "it refers to any media content, whether live or recorded, that can be enjoyed on computers and mobile devices over the Internet and in real-time" (Verizon Fios, 2022).

In the analysis, AV-streaming is interpreted as the cost item that has been derived from the creation of the virtual infrastructure, broadcasting of the event, tools involved and very technical aspects for the creation of the event. The platform and management, which is added as a separate item, concentrates on technical support, platform or support company costs, broadcasting tools and materials, additional rooms, and so on.

In what regards AV-Streaming item, there are considerable variations between different events, highlighting the virtual congress two (C.V.2), which has a higher expenditure in comparison with the others and the attendance it had. This is due to the infrastructure needed for its realization. It is possible that its 100% virtualisation, previously mentioned, has risen considerably due to the need to cover all the requirements for its realisation. This is a major but cost-effective expense compared to the other expenses.

The other events show a standard average, as the data are practically identical, although with a variation of 11.20% between virtual congress three (C.V.3) and four (C.V.4), which may be related to the difficulty of the scope and use of different interactive tools that have an additional cost. Virtual congresses were equipped with all the necessary infrastructure for the realisation of the event, as not all congresses requirements are the same. The events that have had a lower cost in this area and are virtual or hybrid when it comes to formalizing the process may have lower demands in comparison to their attendance.

The hybrid congress (C.H.1) is supported by a platform, although the organiser himself was in possession of a large part of what is necessary for the virtualization of the event, such as televisions, cables, personnel, and so on. About the costs derived from the platform support, in the case of virtual congress two (C.V.2), the infrastructure was a high expense, accompanied by the chosen platform and its collaborators expenditures. This congress costs, despite its participants' high virtual expenses, was compensated by a large revenue from the industry. The congress had some striking peculiarities, as the administrative body of the event organiser had requirements that could be met without external support.

The other three congresses studied have a fairly low investment, which may be because the management of the platform was already in place, the requirements of the requesting body were fully or partially covered without the need for external operators, or because the industry factor (sponsors) was more decisive. The hybrid congress (C.H.1), has a high management investment for its modality, including here the management and reception of the participants within the platform but also the auxiliary personnel and the management of

their fees, as well as extra help for each of the auxiliary operators for emergency cases, the rental of the space, etc.

The percentage is low when compared to its own budget, but not to other congresses, i.e. the total cost impact was higher compared to virtual congresses. This data allows to project the average costs in the future hybrid congresses.

The following shows the value of the design according to the congress held. It is an item that includes expenses derived from suppliers, commercial requirements and requirements imposed by the collaborating body.

Events, in general, have a designed decoration that changes and is editable according to the moment and situation. It can be observed that virtual congress one (C.V.1) stands out in this aspect. It can be so for several reasons, either for the design and planning of the website itself or the advertising and design of the virtual event. The design of websites, payment platforms, welcome emails or even letters or packages sent as an invitation or gift, are part of this expense item. It is important to highlight the adaptation to the new virtual market. In the past, websites, registration and payment platforms were generally provided by the congress committee itself, even when the requesting entity managed the platform. Nowadays, virtual events include this process in their planning, thus offering a new service that entails expenses that return in another way in the form of income.

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The virtual congress two (C.V.2) leads all types of expenditure that must do exclusively with virtuality, an item that corroborates this is the general design of the entire event, even the virtual rooms, virtual scenarios and animations come out of this item, as well as the expense of the fees of the professionals who provide support in this type of issues. In comparison, the hybrid congress (C.H.1) remains at a standard average, where the agreed requests are given by its facilities, considering that invitations, lunch, and dinner vouchers, etc., are part of this branch of expenses.

Speaker is "said of a magistrate, a civil servant or a member of a collegiate body or assembly appointed to report on a matter and propose a resolution" (Real Academia Española, 2014). "Speakers" is an item of expenditure that is in line with the invitations made to professionals for the presentation of the topics of interest to be carried out during the duration of the congress, as well as the fees requested for their interventions.

These roles are accompanied by moderators, auxiliary staff and room technicians who also form part of this item. These expenses vary according to the capacity of the congress and its style, as there are congresses where there are different roles with their respective administrative bodies, and then others, where there are fewer but more expensive roles, including round tables or the organisation of meetings within the congress venue itself.

In the cases of the virtual events, in virtual congress one (C.V.1), the cost of the management for the speakers to have their space well managed was low compared to the others and the speakers' fees were higher respectively. In the case of virtual congress two (C.V.2), the expenses for the platform and its management were high, therefore, the speakers had more time for their talk or booking in the planning of the event program, and therefore, they had more broadcasting time.

This leads to high costs, although the costs per speech are quite low, which means that, even taking into account a longer speech time, the fees are lower. Despite the particularities, virtual event two (C.V.2) had the lowest expenses per speaker of the average of the five congresses. In virtual events three (C.V.3) and four (C.V.4), there is a discrepancy in the data, concerning virtual congress three (C.V.3). The percentage is high, with planning expenses within the average and an average attendance that could be considered normal.

Virtual congress four (C.V.4) is a priori the most participative, with the highest number of attendees, and has a very affordable average cost per speaker, as it cuts back on other services, such as design, catering, platform, management, etc. Thus, the customers are more interested in the quality of the virtual design and other aspects than in the amount of information to be presented at the congress as such. It can be seen that the speakers' fees are either very low or very few speeches are programmed.

In the hybrid congress (C.H.1), the expenses for presentations are very well managed due to the number of attendees. They are in line with the expenses and income, with few rooms for presentations and therefore few speakers. Taking into account that there was a virtual part, it could have been exploited more when it comes to marketing due to its easy accessibility from anywhere with internet and wifi. This is also due to a lack of habit and inexperience, as this modality is a new topic to be dealt with and needs to be included in all departments when organising a congress. Overheads are divided according to fees paid to professional conference and event organisers, or expenses incurred by professionals who are not classified as professional conference and event organisers.

Expenses borne by the technical secretariat, which is part of the company organising the congress, can be presented as professional fees, per diems (professionals only), clothing, equipment, and so on. Analysing, the virtual congresses one (C.V.1) and two (C.V.2) had a higher expenditure than all the others.

This may be due to the difficulty in combining all the tasks carried out by the staff, for which a high degree of specialisation may have been required, which is then reflected in the cost of fees. Virtual congress one (C.V.1) required highly trained staff to provide virtual on-site support for the congress, as did virtual congress two (C.V.2) which, despite having a

significant drop in attendance, required, at first glance, a fairly high level of involvement, as can be seen throughout the analysis.

Virtual congresses three (C.V.3) and four (C.V.4), either because of the described requirements or because of the experience gained previously or even because of the requirements or services presented, needed less professional attention or less technical support because of the qualities of the virtual congress itself, although participation was quite large in one of them.

The hybrid congress (C.H.1) is more predictable since on average the same professionals usually attend all the congresses organised by the company. Support may be required, but the cost of the fees is not very variable, since the cost of the technical secretariat in on-site model is usually fixed and then complemented with bonuses and extras, assistance, travel, required documentation, staff movements, etc.

The heading "Others" is a very recurrent topic to contain expenses of the event that are not associated with another defined items, during or after the event. In a face-to-face or hybrid mode, it is easier for a professional to find and justify expenses that are found, as these are expenses incurred during the congress such as stand construction, energy supplies, expenses such as gifts or envelopes that are handed out with invitations and documentation, requests for recycling containers, lanyards, office material necessary for the use and development of the congress (López, 2020).

In virtual congresses, other types of expenses are observed while many of the previous ones are eliminated. No or very few physical items are provided. On the other hand, other expenses are found, such as support from commercial companies dedicated to the reception and confirmation of e-mails for advertising and promotion of the congress, and support companies for the authentication of the networks used to connect to the congress. This item includes the periodic sending of congress newsletters on an estimated date, which include advances of the programme, speakers confirmed up to the date of sending, speakers invited by collaborators, and even apps of the congress itself managed and created exclusively for its use during the duration of the congress, something that is fashionable nowadays in virtual congresses for signaling pending appointments with colleagues or friends within the event, updates of the programme and so on.

In general, these are expenses that are not included in any of the previous items, generated during the congress and not belonging to any of the previously budgeted items. In the virtual congresses, the percentages are quite low for what was expected; unnecessary expenses have been eliminated. However, a gap is observed in virtual congress three (C.V.3) and an exponential drop in virtual congress four (C.V.4), where expenses such as assets or stages have been incurred.

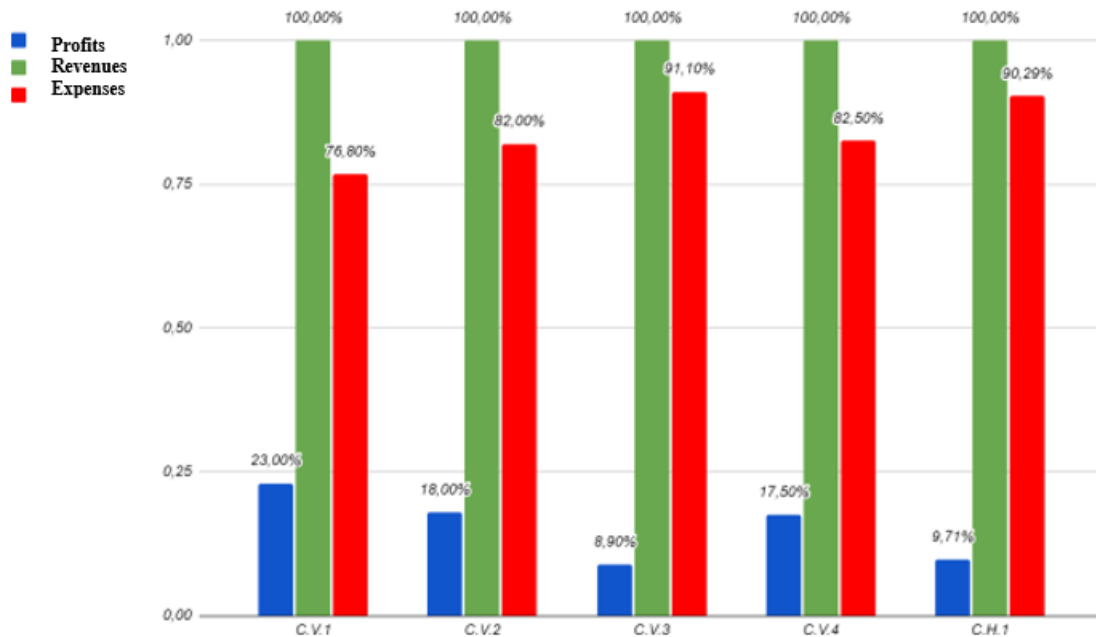
In the hybrid congress (C.H.1), this is a normal percentage, which generally decreases and increases progressively according to the number of attendees, as this is usually linked in almost all of them to the issue of documentation and prior preparation of the material to be used at the time of the congress, as well as external help and support platforms.

Economic and Financial Assessment

The economic viability of many companies was called into question by Covid19, yet all of them have taken relevant solutions to take advantage of possible opportunities. Following the above analysis, companies in the MICE sector have taken the path of virtuality until other, better ways are found that also provide financial muscle to the companies. Therefore, the analysis is focused on finding if the events have provided a series of objectives that were sought from the beginning, technical and economic viability, as well as environmental and social viability. Technical feasibility is based on the resources available to the organisation, the capacity and technical equipment, and its operation system, in addition to the computer systems and programmes used to carry out its activities (Posgrados Empresariales, 2019).

The company providing the information for the study notes that its adaptation was quick, although not free of doubts when it came to implementing new processes that had not yet been put in place. However, its professionals were more than sufficiently prepared. The infrastructures at their disposal were not prepared to withstand such events, but external reinforcements were available.

Graph 6. The ratio of profits, revenues and expenses.



Source: Own elaboration based on data provided by the anonymous company. Profits=Revenues-Expenses.

Profits suppose between 9 and 23% of revenues, as the comparison in graph 6 shows. 100%

is assigned to revenue, as these are inflows for the company. The profit item shows an average of 15.42% per congress, the virtual congresses one (C.V.1) and two (C.V.2), are the ones that received the most profits for their expenses items with a variable rate of 53.8% and 64% respectively.

The hybrid congress (C.H.1) shows comparatively low profits, taking into account the work involved in organising a semi face-to-face type of congress nowadays. All the items include the VAT rates for the services provided, which are generally 21% in Spain, except for restaurant and catering which have 10% VAT in case of Spain (Gavilán, 2021).

Economic viability can be measured according to different formulas based on financial elements, rates of return, payback periods and time value of money (López, 2003). In this case, it is difficult to find the method to be used, since the data provided and analysed were percentages and not whole numbers which can be counted. Nevertheless, some of the most relevant formulas for congress and event companies that open a new line of business such as virtual events are analysed below.

In case of estimating the activity of the company organising events, formulas such as NPV (Net Present Value) could be used, which helps the company to know whether future cash flows applying discount rates create value or destroy it (Cabrera, 2018). Then, the IRR (Internal Rate of Return) can be used, which by finding the rate that equals the NPV to zero, measures the gain (or loss) concerning the cost of capital. Both NPV and IRR are total measures of profitability (Mascareñas, 2010).

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However, methods such as the payback period help the indicators proposed above, measuring the time that must elapse for the accumulation of net profits to cover the initial investment (Lledó, 2007). Finally, the ROI formula can be used in this type of investment, which is a method that measures short-term profitability. In this case, the study contains an analysis of income and expenses close to the ROI calculation, which has helped the company to mark a short-term rate of return, thus giving the go-ahead to the creation of events of this type.

CONCLUSIONS

The virtual congresses carried out by the company have had conclusive benefits, which allowed them to remain active and open up new opportunities in the short-term future, as it can be seen in the analysed data. Social viability is established through marketing techniques, methods of attraction and ways of thinking. People are collaborative due to the current moment specificity, as it is a way to progress and advance, as well as to implement new social relation methods, which make people think and have new perspectives. As it is shown in this study, virtual or hybrid events are becoming more and more accepted by the

public and the sector. The creation and execution of the event, as well as possible impacts derived from the activity that affect the environment are minor and thus environmental viability is high.

The data collected reaffirm the need to reinvent and create new virtual and/or hybrid experiences within this type of business and within the congress tourism sector. Furthermore, it is an imperative to create new smart and sustainable ideas to improve the overall experience of value chain participants.

Virtual events are an economically viable outlet. It would be preferable for them to be discovered before Covid19 and to be implemented in a less forced and more creative way. Virtuality in events is one more way of creating new lines of business that have been implemented before in other sectors, even if they have never been experimented within this one, due to the type of tourism, its predispositions and associated preferences. The social dimension of virtual or hybrid events is being increasingly accepted by the public and the sector, which makes it more viable to continue along this line.

Although proximity and contact are key concepts that define face-to-face congresses and events, the future lies in a mix of both modalities, not only because of the enrichment of revenue streams but also because of digital progress and the new global doors that are opening up with the virtual or hybrid format. This type of meeting will become more common, if not the norm when it comes to organising congresses and professional events.

In terms of the economic environment, companies are still looking for profitability, so this type of meeting will help to eliminate unnecessary expenses, establish a starting point in the sales of services and seek a higher profit (Yebra, 2021). An example of this would be transport, which is drastically reduced, also positively affecting environmental sustainability.

Further studies on the feasibility and economic impact of this type of events in the broad sense are needed, especially in terms of the positive externalities that they can bring. As it has been noted, virtual or hybrid meetings currently seem to have a much lower revenue stream than face-to-face or on-site events (venue, catering, etc.). It would also be advisable to study and consider the structural costs of the organising company, which, as previously announced, are not included as the subject of this study.

It would be possible to analyse further whether with this type of new business the company must host more congresses to remain stable or increase its economic level. In any case, this first approximation can be of help to experts in the sector and academics in the area, especially in what refers to the composition of the main economic-financial flows of the organisers of this type of event.

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