In-store technologies to improve customer experience and interaction: an exploratory investigation in Italian travel agencies

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Abstract

Purpose – This paper aims to deepen understanding of the role played by new technological tools used in customer–travel agency (TA) interactions by analysing the TA owner/managers' perceptions, pre- and post-Covid-19, regarding the effectiveness of in-store traditional and innovative tools.

Design/methodology/approach – This exploratory study is based on a questionnaire-based survey conducted among Italian TAs and distributed via email from September 2020 to January 2021.

Findings – The study highlights how, even among TAs, the role of in-store technology is gradually taking on greater importance, and it delves into the specific business and socio-demographic factors that seem to cause differences among agencies.

Research limitations/implications – The study focuses on the Italian context, which does not allow for any generalisations. Furthermore, it is only the travel agent perspective that is observed and not the consumer's.

Originality/value – In addition to helping to bridge the literature gap, this study on in-store technologies focuses on the TAs sector, where human resources and human relationships play a decisive role in customer experience and interaction. The paper investigates the travel agents' point of view regarding the introduction of new in-store technologies; it also highlights their growing adoption and use, overall, despite the travel catalogue still remaining the main tool for interacting with customers. The study also shows how the advent of Covid-19 has increased travel agents' propensity to use digital technologies.

Keywords Travel agencies, In-store technologies, Customer experience, Customer interaction, ICT, SMEs

Paper type Research paper

1. Introduction

The recent global economic dynamics, combined with the impact of the internet, have led to a profound change in an information-intensive industry such as tourism (Xie *et al.*, 2020; Devece *et al.*, 2015; Baggio and Del Chiappa, 2014). Instead of decreasing the number of intermediaries as envisaged by some, the distribution chain has become "an increasingly complex array of intermediaries" and "a complex global network" (Maria *et al.*, 2015), today.

If, on the one hand, the intensive use of ICT in tourism modifies the power relations within the supply chain for the benefit of large online operators (Kracht and Wang, 2010), on the other hand, it can represent an extraordinary opportunity for agencies to strengthen ties and relationships with their customers, according to a relationship logic (Oviedo-Garcia *et al.*, 2015).

The new scenario created by the intensive use of information and communication technology (ICT) would, therefore, imply the slow and inexorable decline of every business model that hinges on the traditional methods of offering tourist holiday packages. However, a number of studies hypothesise the rise of hybrid models able to exploit the competitive factors of travel agencies (TAs) and new technologies, at the same time (Sharma *et al.*, 2020; Shi and Hu, 2020; Brun *et al.*, 2020). From this perspective, in-store technologies can improve customers' shopping experience (Brun *et al.*, 2020); the implications of these tools range from enhancing the experiential dimension of purchasing (Aguiar-Quintana *et al.*, 2016; Neuhofer *et al.*, 2014; Abou-Shouk *et al.*, 2013b) to improving perceived quality (Caro and Garcia, 2008) and fostering the co-creation of value (Neuhofer *et al.*, 2012, 2014).

Therefore, it becomes paramount for TAs to not only adapt their retail approaches to new market trends, by combining their historical strengths with the new possibilities offered by technology (Sharma *et al.*, 2020; Shi and Hu, 2020; Brun *et al.*, 2020; Barnett and Standing, 2001), but also to offer an effective strategic response to the power wielded by big online players (Kumar *et al.*, 2021; Kim *et al.*, 2020). Until a few decades ago, the travel catalogue was the only tool traditional agencies could use to interact with the customer (Novak and Schwabe, 2009; Özturan and Roney, 2004), but nowadays, the challenge is to integrate sales channels through ICT tools and physical layouts that will increase the customer's value experience and loyalty (Shi *et al.*, 2020; Rossato and Castellani, 2020; Mahrous and Hassan, 2017; Lai, 2014). In fact, several authors point out that physical stores continue to play a significant role in the current multi-channel context, making it necessary to focus on improving the elements that make up the in-store experience (Baier and Rese, 2020).

Indeed, according to some authors, one of the effects of Covid-19 will be the continuing acceleration of ICT adoption in tourism (Mastroberardino *et al.*, 2021; Sanjeev and Tiwari, 2021; Sigala, 2020), thus contributing to the digital revolution that is changing how businesses will operate over the next decade (Sanjeev and Birdie, 2019). Digital transformation and innovative technologies have been decisive in the response to Covid-19, especially in the hospitality and transport sector; examples include reducing social interactions with customers in the service sector, with self-driving luggage trolleys in airports, contactless catering services and intelligent check-in procedures in hotels (Bharwani and Mathews, 2021), voice and facial recognition for various applications such as social media, virtual reality (VR)/augmented reality (AR), intelligent service desks and service robots (Li *et al.*, 2021; Chi *et al.*, 2020).

Due to closures and limitations imposed (e.g. social distancing), TAs have necessarily had to change their customer contact policies. In many cases, they have set up a system of appointments, both in-store and remotely (Silva *et al.*, 2021), and have, in the meantime, increased their technology use by adopting touchless access devices (Hao and Chon, 2022). Such innovative solutions can play a decisive role in increasing the customer experience, especially in consideration of how traditional agencies must distinguish themselves from online agencies by leveraging classic success factors (Lorente-Martínez *et al.*, 2022).

In recognising the importance of adopting competitive strategies in which human and technological factors coexist (Munikrishnan and Al Mamun, 2021) or, in other words, where the boundaries between offline and online access are ever more blurred by contact tools like websites and social networks, the present study aims to investigate, by empirical analysis, the degree of diffusion and the perceived effectiveness of in-store technology use in Italian tourist agencies. It also delves into the differences among groups of agencies categorised

according to the management factors (e.g. size and age of agency, gender of owner/manager) described below and how these variations impact technology use.

The paper is divided as follows: Section 2 proposes a brief overview of the TA-ICT relationship and the role of in-store technological tools for customer interaction; Section 3 defines the methodology used for the quantitative analysis of an exploratory nature; Sections 4 and 5 contain the findings and the discussion, respectively. Finally, Section 6 concludes the paper, with the main practical and theoretical implications, acknowledging the limitations and suggesting future research opportunities.

2. Literature review

2.1 Information and communication technology and travel agencies: a brief overview

The use of ICTs can benefit TAs in several ways (Bignè *et al.*, 2008; Sharma *et al.*, 2020; Xiang *et al.*, 2015), including turnover increase, revenue generation and cost reduction, which are among the most oft-cited motivations for ICT adoption (Cheng and Lok, 2015; Abou-Shouk *et al.*, 2016). TAs that do embrace the use of digital technological tools are often better able to undertake a path aimed at achieving the strategic objectives of marketing, such as global market reputation, customer satisfaction and loyalty (Abou-Shouk *et al.*, 2016).

The relationship between TAs and ICTs has been approached from various points of view. By focusing on the use of the internet and Web-based technologies, some studies highlight its potentiality for tourist package commercialisation (Soegoto and Nugroho, 2021; Henama and Apleni, 2020; Abou-Shouk *et al.*, 2016; Park and Oh, 2012); others focus on the role of the internet to provide information and engage customers (Albattat, 2020; Abou-Shouk *et al.*, 2013a; Suarez Álvarez *et al.*, 2007). The agencies' websites (Sengel *et al.*, 2021) are particularly important as they are key to improving their relationship with the customer, increasing the customer's satisfaction and intention to buy back again (Kim and In, 2013). In addition, other scholars (Del Chiappa *et al.*, 2019) have underscored the importance of using social media to improve communication processes and manage customer relationships.

A study conducted by Sharma *et al.* (2020) revealed that websites, Facebook, WhatsApp and Instagram are the main digital platforms used by Tas, but that they do not always take full advantage of these platforms, which can help build customer loyalty. Nevertheless, the authors also underscored that however useful these technologies are, they cannot and should not ever be a substitute for the direct human contact that takes place in TAs. In a different vein, Lin (2017) delves into the role of mobile technologies, e.g. the website and QR codes, which can increase the agency's competitiveness by allowing clients to access product information at any time and in any place, on their mobile phone.

A second research perspective focuses on the role ICT plays in the relationships between TAs and the tourism supply chain. Tran *et al.* (2016) show how ICTs are able to foster cooperation and cohesion processes between TAs and tour operators. Berné *et al.* (2015) show a positive impact in terms of effectiveness along the entire value chain; Ruiz-Molina *et al.* (2010) and Andreu *et al.* (2010) argue that ICT strengthens the link between satisfaction and loyalty, while Mihajlović (2012) looks at how tourism products are developed thanks to ICTs. Lastly, Ozturan *et al.* (2019) investigate how the level of integration of information systems can optimise internal decision-making processes and affect the exchange of information with external parties.

A third line of studies investigates the relationship between ICT and human resources. The work of Srivastava and Dhar (2016) highlighted how ICT positively impacts the work performance and problem-solving skills of sales agents, while Alonso-Almeida and Llach (2013) focused on the competitive dimension of TAs, demonstrating that ICTs have a positive effect on TAs' organisational performance. Cheng and Cho (2011) investigated four main

factors that favour the adoption of ICTs by travel agents: perceived usefulness, perceived ease of use, trialability and observability.

A fourth group of studies focuses on the multi-channel strategies of TAs (online and offline) and on the impact that such mixed strategies can have on the customer experience (Shi and Hu, 2020; Brun *et al.*, 2020; Rajaobelina, 2018). The peculiarity of the services provided by TAs requires the ability to provide experiences – both in the physical store and online – through the use of ICT (Brun *et al.*, 2020).

From our literature review, we note that a number of studies analyse the use of Web technologies by traditional agencies, but the same cannot be said of in-store technologies aimed at improving the customer experience. Therefore, the present study aims to contribute to filling this gap by investigating what in-store technologies are used by TAs (Kaushal and Srivastava, 2021), how effective they are and whether there are differences in technological tool adoption attributable to different agency characteristics (Sigala, 2020).

2.2 In-store technological tools and customer experience

In-store technological tools such as customer engagement technologies (CETs) and ICT equipment play a decisive role in increasing customers' perception of quality and their satisfaction; these tools also improve personal interaction and outcome (Suarez Alvarez *et al.*, 2007; Caro and Garcia, 2008; Viljoen and Roberts-Lombard, 2016). Similar benefits can be obtained with TA installations (Sanchez *et al.*, 2006) or with reconfigured store layouts, which facilitate the sales process by providing a better experience for both agents and customers (Capriello and Riboldazzi, 2019). The customer becomes the main actor in the purchase process set up by the supplier. The most meaningful experience includes an integrated mix that takes into account the functional aspects connected to traditional service management processes, comprising emotional, aesthetic, sensory, learning and social elements (Shobri *et al.*, 2018).

The wide range of alternative technological tools currently available can be used to improve the in-store shopping experience and interaction with the customer (Baier and Rese, 2020), not only in a broader context, but also in TAs, specifically. Included among these tools are the tablet, the touchpoint and monitors or liquid crystal display (LCD) screens, which, in addition to being used to interact with the consumer, can also function as store furnishings. Among the more recent technologies, tools such as 3D AR and QR codes represent an important innovative lever in tourism (Table 1).

VR and AR are changing the way businesses interact with customers in tourism (Orús *et al.*, 2021; Gibson and O'Rawe, 2018) and in retail (Nikhashem *et al.*, 2021) sectors. When implemented in TAs such tools can provide and promote travel-based learning through workshops, conferences and exhibitions (Rajobellina, 2018).

During the Covid-19 pandemic, the QR code has proven very useful. This technology ensures touchless access, particularly in the travel industry where it is used to reduce contact points

Tools mentioned in questionnaire	Reference
Tablet	Baier and Rese (2020), Piotrowicz and Cuthbertson (2014), Bennett and El Azhari (2015)
Touchpoint	Baier and Rese 2020, Mugodo and Baschiera (2015), Cao (2014)
Monitor or LCD screen	Savastano *et al.* (2016), Bennett and El Azhari (2015), Piotrowicz and Cuthbertson (2014), Blázquez (2014)
3D (AR and VR)	Nikhashem *et al.* (2021), Baier and Rese (2020), Rajobellina (2018), Gibson and O' Rawe (2018), Won (2018), Roy *et al.* (2017), Piotrowicz and Cuthbertson (2014), Blázquez (2014)
QR code	Yan *et al.* (2021), Baier and Rese (2020), Roy *et al.* (2017), Lin (2017)

Table 1.
In-store technological tools

when providing services to tourists; a further advantage lies in the limited investment costs associated with QR codes (Lin, 2017). The use of the QR code (Yan *et al.*, 2021; Baier and Rese, 2020) has become widespread in various contexts such as hotels (Bonfanti *et al.*, 2021) and restaurants (Li *et al.*, 2021), where customers can view digital content on their smartphones.

Despite the wide range of tools available to agencies and the fact that most of the studies in the field affirm their usefulness in customer relationships, there remains a dearth of empirical surveys about their use and effectiveness. Hence, considering both the pre- and post-Covid19 scenarios, we formulate our research questions as follows:

RQ1. What in-store technological tools are used/have been used by TAs in interacting with the customer and what are the post-Covid-19 perspectives?

RQ2. What is the owner/manager's perceived effectiveness of in-store technological tools used for interacting with the customer pre- and post-Covid-19?

Furthermore, the use and effectiveness of these tools may vary from one agency to another, with differences based on certain agency management factors, as happens for the adoption of ICTs in general. Factors such as small size (Munikrishnan *et al.*, 2019; Abou-Shouk *et al.*, 2013b), lack of resources (Lin, 2017; Cheng and Lok, 2015), limited number of employees (Xie *et al.*, 2020) and high firm seniority (Özturan *et al.*, 2019), for example, can constitute barriers to ICT adoption. On the other hand, belonging to a network has a positive impact on efficiency, innovation and productivity (Abrate *et al.*, 2020; Diaz-Chao *et al.*, 2016); in addition, if a TA organises tours as its main activity, rather than exclusively selling holiday packages (Abrate *et al.*, 2020; Wu *et al.*, 2016), adopting ICT becomes advantageous.

Concerning the characteristics related to the owner/manager, recent reports show that TAs owned by women (Unioncamere, 2020; Mas-Tur and Soriano, 2014) who have completed a higher level of education often show a greater capacity for innovation, including technology adoption (Cruz *et al.*, 2009).

Table 2 summarises the groups of agencies divided by factors potentially capable of determining differences in in-store technological tool adoption.

From those considerations, the third research question emerges:

RQ3. What differences among agencies emerge regarding the perceived effectiveness of in-store technological tools?

3. Methodology
3.1 Sampling design
The data were collected using a questionnaire survey performed on a population of $n = 9,000$ Italian TAs, using simple random sampling. A structured questionnaire was distributed via

Factors	Categories	References
1) Firm size	Individual – micro – small	Xie *et al.* (2020), Munikrishnan *et al.* (2019), Lin (2017), Abou-Shouk *et al.* (2013b)
2) Firm seniority	>=10 years of activity	Özturan *et al.* (2019)
3) Network membership	Yes – no	Abrate *et al.* (2020), Diaz-Chao *et al.* (2016)
4) Main activity	TA – tour organiser	Abrate *et al.* (2020), Wu *et al.* (2016)
5) Gender of the owner/manager	Male – female	Unioncamere (2020), Mas-Tur and Soriano (2014)
6) Education level of the owner/manager	High-school diploma or less – bachelor's degree or higher	Cruz *et al.* (2009)

Table 2.
Agency categories based on firm and owner/manager factors

computer-assisted Web interviewing (CAWI) between September and December 2020. The survey was administered by e-mail, in a three-step process: once the first round was completed, the questionnaire was sent out twice more, asking those who did not have time to fill it out previously to do so. This resulted in a total of 279 responses from TAs that agreed to participate.

Currently, there are no trade associations in Italy able to provide an updated database on the real situation regarding Italian TAs, where there is a high rate of companies rising and dying. Therefore, the authors of the present study turned to one of the main national tour operators to request a database of (presumably) all Italian TAs for the reference period considered, i.e. summer of 2020. The 9,000 agencies contacted potentially represent the entire population of Italian agencies, for that time period; the questionnaire was then administered subsequently (September–December 2020). At that time, Italy was feeling the full effects of the Covid-19pandemic: the turnover of Italian TAs had collapsed, many companies were closed, others had not yet reopened and, in November 2020, Italy ended up in a second period of national lockdown. Although the response rate would seem low in a different historical moment, given the adverse conditions that prevailed in Italy, the number of respondents appears to be quite significant.

The questionnaire was divided into three sections (Appendix). The first section identifies the sample profile of the respondent TAs (years of activity, number of employees, etc.). Section 2 describes the profile of the owner/manager (gender, education), while Section 3 reveals the agency's technological profile (rating of technological tools).

To create the questionnaire items, the authors followed the main indications provided by the extant literature; in addition, an association of TAs supported the research, testing the items deriving from the literature analysis and helped disseminate it in the panorama of Italian agencies. Table 1 shows the items related to technological tools used by TAs to answer RQ1 and RQ2, while Table 2 refers to the factors determining how the agencies were categorised to evaluate differences in perceptions (RQ3). Those items were used to develop the analysis of variance (ANOVA) analysis.

3.2 Measures

The research aimed to develop an exploratory analysis (Malhotra and Grover, 1998) to discern which technological tools are considered most effective by TAs and to investigate the differences among TA categories.

Descriptive analysis was performed to determine the sample profile of the respondent agencies and their owner/manager. A five-point Likert scale was used by respondents to evaluate the technological tools used (Tables 1 and 2).

ANOVA was performed using F-tests to statistically test the equality of means (Markowski and Markoski, 1990) and analyse differences among TAs regarding technological tool perception, considering different factors that could encourage (or hinder) their in-store adoption.

Non-response bias was assessed by verifying that early and late respondents, during the three-step administration were not significantly different (Armstrong and Overton, 1977). A set of tests compared respondents who answered the questionnaire during the first administration and those who answered when the survey was submitted for the second or third time. All possible t-test comparisons between the means of the two groups showed insignificant differences ($p < 0.1$ level).

4. Findings

Firstly, the profile of respondent TAs and of the owner/manager that participated in the survey (Table 3) was defined. Of the sample of TAs, 70.3% have been in business for ten or

Measures	ITEM	Number (N = 279)	Percentage (%)
TA size	Individual firm	46	16.5
	Micro firm (from 2 to 9 employees)	219	78.5
	Small firm (from 10 to 50 employees)	14	5.0
TA seniority	Less than 10 years	83	29.7
	Equal to or more than 10 years	196	70.3
TA main activity (N = 257)	TA	138	53.7
	Tour organiser	119	46.3
TA network membership	Yes	185	66.3
	No	94	33.7
Profile of manager	Owner	239	85.7
	Manager	40	14.3
Owner/manager's Gender	Male	118	42.3
	Female	161	57.7
Owner/manager's education level	High-school diploma or less	188	67.4
	Bachelor/master's degree or higher	91	32.6

Table 3.
Characteristics of the respondents

more years, with a mean age of 21.17 years. Among these, 78.5% are micro firms, 16.5% are individual firms and only 5.0% are small firms. The majority of the TAs does outgoing tourism (91.0%) and proposes generalist offers to their customers (67.4%). Moreover, 66.3% of the agencies belong to a network. As for the profile of the TA owner/manager, 85.7% of respondents were the owners of the agency, while 14.3% were the managers; their mean age is 49.95 years, the majority are female (57.7%), with a high school diploma (66.3%) and 24.32 years of experience in the field.

4.1 The use of in-store technological tools (RQ1)

To answer RQ1, the interviewees were asked to indicate which in-store technological tools they use; this included the travel catalogue, which is the traditional means of interaction between travel agent and customers. Furthermore, since the questionnaire was disseminated during the Covid-19 emergency, we also asked which tools they were planning to use after the pandemic.

Considering the pre-Covid-19 period (until the end of 2019), it clearly emerges that travel catalogues are still among the most used tools (Table 4). In fact, 85.7% of respondents declared that they used them pre-Covid-19, and there would be only a slight drop in their expected use post-Covid-19. A fairly high percentage of use is evident for monitors (76.3%), followed by QR codes and tablets (65.6 and 63.1%, respectively), and finally, 3D technology

	Pre-Covid-19				Post-Covid-19				
	Yes		No		Yes		No		Δ in use of
	n	%	n	%	n	%	n	%	the tool (%)
Travel catalogues and brochures	239	85.7	40	14.3	221	79.2	58	20.8	−6.5
Tablet	176	63.1	103	36.9	217	77.8	62	22.2	14.7
Touchpoint	148	53.0	131	47.0	207	74.2	72	25.8	21.2
Monitor or LCD screen	213	76.3	66	23.7	248	88.9	31	11.1	12.6
3D (AR and VR)	164	58.8	115	41.2	222	79.6	57	20.4	20.8
QR code	183	65.6	96	34.4	232	83.2	47	16.8	17.6

Table 4.
The use of sale tools pre- and post-Covid-19

(58.8%) and touchpoints (53%). It is interesting to note how the post-Covid-19 perspectives seem to change the intentions of future use by the same respondents concerning the same tools. The use of travel catalogues is expected to drop (−6.5%), while that of the other tools is expected to increase, with the most significant growth for touchpoints +21.2%) and AR (+20.8%).

4.2 The perceived effectiveness of in-store technological tools (RQ2)
Respondents were asked to evaluate, based on a five-point Likert scale, the effectiveness of the tools they used. Overall, the results are very modest; none of the tools ever achieves even an average of 3 points. Interestingly, the travel catalogue is still perceived to be the most effective with an average of 2.85 points, followed by monitors (2.48), QR codes (2.12), 3D projection (1.98), tablets (1.88) and touchpoints (1.62).

As for RQ1, the respondents were also asked to predict the effectiveness of these tools after the pandemic (Table 5).

Consistently with what emerged above, the prognostication by agents indicates a slight decline in the effectiveness of the paper travel catalogue. In the agents' opinion, all the hi-tech tools will be more effective after the pandemic, especially the QR code.

4.3 The difference among agencies regarding the perceived effectiveness of in-store technological tools (RQ3)
Considering the firm *size* factor, technological tools are considered more effective by small firms compared to individual and micro agencies (Table 6). These larger enterprises, in fact,

	Pre-Covid-19		Post-Covid-19		
	Mean	SD	Mean	SD	Δ Mean
Travel catalogues and brochures	2.85	1.470	2.38	1.399	−0.47
Tablet	1.88	1.168	2.31	1.424	0.43
Touchpoint	1.62	1.052	2.27	1.388	0.65
Monitor or LCD screen	2.48	1.429	3.05	1.479	0.57
3D AR and VR)	1.98	1.290	2.75	1.502	0.77
QR code	2.12	1.317	2.95	1.567	0.83

Table 5.
Perceived effectiveness of technological tools pre- and post-Covid-19

	Total sample $n = 279$ (100%)		Individual firm $n = 46$ (16.5%)		Micro firm (2–9 employees) $n = 219$ (78.5%)		Small firm (10–49 employees) $n = 14$ (5.0%)		F	Sig
	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Travel catalogues and brochures	2.85	1.470	3.20	1.500	2.79	1.450	2.57	1.604	1.714	0.182
Tablet	1.88	1.168	2.09	1.427	1.79a	1.069	2.71b	1.383	5.164***	0.006
Touchpoint	1.62	1.052	1.61	1.183	1.59	1.002	2.14	1.292	1.811	1.165
Monitors or LCD screen	2.48	1.429	2.74	1.612	2.40	1.376	2.93	1.542	1.824	0.163
3D (AR and VR)	1.98	1.290	2.24	1.433	1.88a	1.221	2.57b	1.651	3.083***	0.047
QR code	2.12	1.317	1.65a	0.994	2.19b	1.351	2.43	1.453	3.678***	0.027
Note(s): Significantly different average scores * = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$										

Table 6.
Perceived effectiveness of in-store technological tools in relation to firm size (number of employees)

express a significantly better opinion of offering travel proposals with 3D technology (2.57 compared to an overall average of 1.98) and QR codes (2.43 compared to an overall average of 2.12). The travel catalogue, instead, consistently emerges as the most effective tool in the view of individual firms (3.20 compared to an overall average of 2.85).

Considering the *seniority* factor, technological tools (especially the tablet) are considered more effective by younger companies, with statistical significance. In fact, companies in business for less than ten years rate their effectiveness with an average score of 2.11, while the older TAs assign a score of 1.79 (F 4.509; sig. 0.035) (Table 7). Although not statistically significant, the data show greater use of the travel catalogue by older companies (2.88) versus an average of 2.76 for younger companies.

Interesting results emerge when we observe the TA's *network membership*. The companies that belong to a network declare, on average, that they use the technological tools effectively and, in the case of monitors, this difference is significant (Table 8). In addition, these agencies have a higher opinion of the effectiveness of catalogues, compared to non-network member TAs (3.04 versus 2.47, respectively).

As concerns the *main activity* factor, a very clear difference emerged between TAs and tour organisers. The agencies that sell holiday packages produced by others (see *TAs* in Table 9) give greater importance to technological tools than do agencies that function as tour organisers (see *tour organisers* in Table 9). This can be explained by the fact that the latter are (usually) small and are engaged in the design and sale of personalised offers, in which they do not use promotional material, either in paper or digital form. The former, on the contrary, who

	Total sample $n = 279$ (100%)		Less than 10 years $n = 83$ (29.7%)		Equal to or more than 10 years $n = 196$ (70.3%)			
	Mean	SD	Mean	SD	Mean	SD	F	Sig
Travel catalogues and brochures	2.85	1.470	2.76	1.486	2.88	1.465	0.412	0.522
Tablet	1.88	1.168	2.11	1.325	1.79	1.084	4.509***	0.035
Touchpoint	1.62	1.052	1.75	1.146	1.57	1.008	1.628	0.203
Monitor or LCD screen	2.48	1.429	2.53	1.484	2.46	1.408	0.143	0.705
3D (AR and VR)	1.98	1.290	2.06	1.382	1.94	1.251	0.516	0.473
QR code	2.12	1.317	2.15	1.433	2.1	1.269	0.061	0.806

Table 7.
Perceived effectiveness of in-store technological tools in relation to firm seniority

Note(s): Significantly different average scores * = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

	Total sample $n = 279$ (100%)		Part of a network $n = 185$ (66.3%)		Not part of a network $n = 94$ (33.7%)			
	Mean	SD	Mean	SD	Mean	SD	F	Sig
Travel catalogues and brochures	2.85	1.470	3.04	1.423	2.47	1.493	9.661***	0.002
Tablet	1.88	1.168	1.94	1.176	1.77	1.149	1.395	0.239
Touchpoint	1.62	1.052	1.67	1.035	1.54	1.084	0.843	0.359
Monitor or LCD screen	2.48	1.429	2.63	1.447	2.19	1.354	5.892***	0.016
3D (AR and VR)	1.98	1.290	2	1.325	1.94	1.225	0.127	0.721
QR code	2.12	1.317	2.1	1.282	2.15	1.391	0.095	0.758

Table 8.
Perceived effectiveness of in-store technological tools in relation to belonging to a network

Note(s): Significantly different average scores * = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$

sell the holiday packages of large tour operators, consider promotional materials essential for interacting with their customers. This difference appears in all tool categories, with the exception of QR codes.

Lastly, two socio-demographic factors relating to the owner/manager were added to the analysis: *gender* and *education level*. Our findings show that, on average, women use technological tools more than men do, although these differences are not significant (Table 10); moreover, the travel catalogue is considered more effective by female than by male managers.

Concerning the *education level*, on average, TA managers with a high school diploma or less use technological tools more than university graduates do. These differences are significant for the tablet and QR code tools (Table 11). The same group's perception of the effectiveness of the travel catalogue is slightly higher than that of owners with a university degree.

5. Discussion

The study shows an overall good level of adoption of in-store technologies pre-Covid-19, (monitor or LCD screen (76.3%), QR code (65.6%), tablet (63.1%), 3D (AR and VR) (58.8%), and finally, the touchpoint (53.0%), albeit with modest levels of perceived effectiveness in customer interaction. Alongside the technological tools, a traditional tool like the travel catalogue seem to remain quite relevant for travel agents (Tan *et al.*, 2021; Zhang, 2020); in

	Total sample $n = 257$ (100%)		TAs $n = 138$ (53.7%)		Tour organisers $n = 119$ (46.3%)		F	Sig
	Mean	SD	Mean	SD	Mean	SD		
Travel catalogues and brochures	2.85	1.487	3.28	1.378	2.36	1.460	27.040***	0.000
Tablet	1.91	1.179	2.05	1.275	1.74	1.037	4.515***	0.035
Touchpoint	1.64	1.077	1.77	1.222	1.50	0.862	4.133**	0.043
Monitors or LCD screen	2.55	1.455	2.79	1.531	2.26	1.311	8.716***	0.003
3D (AR and VR)	2.01	1.311	2.24	1.487	1.74	1.012	9.593***	0.002
QR code	2.16	1.340	2.15	1.299	2.17	1.392	0.019	0.891
Note(s): Significantly different average scores * = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$								

Table 9. Perceived effectiveness of in-store technological tools in relation to main activity

	Total sample $n = 279$ (100%)		Male managers $n = 118$ (42.3%)		Female managers $n = 161$ (57.7%)		F	Sig
	Mean	SD	Mean	SD	Mean	SD		
Travel catalogues and brochures	2.85	1.470	2.61	1.384	3.02	1.510	5.343***	0.022
Tablet	1.88	1.168	1.77	1.120	1.96	1.198	1.838	0.176
Touchpoint	1.62	1.052	1.59	1.016	1.65	1.080	0.279	0.598
Monitors or LCD screen	2.48	1.429	2.55	1.412	2.43	1.444	0.498	0.481
3D (AR and VR)	1.98	1.290	1.84	1.147	2.08	1.381	2.280	0.132
QR code	2.12	1.317	2.24	1.394	2.03	1.255	1.776	0.184
Note(s): Significantly different average scores * = $p < 0.10$; ** = $p < 0.05$; *** = $p < 0.01$								

Table 10. Perceived effectiveness of in-store technological tools in relation to the gender of the owner/manager

fact, it is used by over 85% of the interviewees and is considered the first tool in terms of effectiveness, despite not receiving excellent ratings (2.85 points, on average).

These modest values attributed to the effectiveness of technological and traditional tools can be interpreted as confirmation that a multi-tool approach, in which the agencies balance the use of these tools together with particular attention to human contact (Wu *et al.*, 2018), is important; it is even stronger when the very small average size of the sample is taken into consideration.

In looking at the post-Covid-19 usage forecasts, it seems that the pandemic will have increased both the propensity to use in-store technology and their perceived effectiveness.

The study has brought to light significant differences among agencies concerning the use of in-store technological tools. It emerges that the larger companies in the sample (small agencies with between 10 and 49 employees) perceive a greater effectiveness of technological tools compared to how individual and micro agencies rate them. Moreover, individual firms are the ones that rely the most on travel catalogues and brochures. However, it bears underscoring that this difference is not so evident: the Likert scale ratings are only modest (Table 6).

In terms of firm seniority, technological tools are considered more effective by agencies that are relatively young (<ten years old), but in this case, too, the declared effectiveness is weak, never reaching a median score of 3 out of 5 (Table 7). This finding confirms those of studies that see the youngest companies as the most innovative. However, the perceived effectiveness of travel catalogues and brochures appears to change very little, with only a minor and statistically insignificant difference between younger and older companies.

Summarising the results regarding *size* and *seniority*, there appears to be a foreseeable scenario of gradual abandonment of the travel catalogue by smaller and younger agencies in favour of the new technological tools.

As regards the *belonging to a network* factor, it emerges that this type of membership influences TAs' openness to new technologies and innovation; at the same time, these agencies also give a positive rating of the effectiveness of travel catalogues and brochures (Table 8). This weakens the meaning of the results and suggests that membership in a network does not play a significant role in the adoption of digital tools.

Worthy of note, the *main activity* carried out by TAs appears to be the most differentiating factor. For nearly all the tools used, the differences are statistically significant (Table 9). Companies that sell holiday packages (TAs) rely entirely on their ability to interact with the customer; on the contrary, those who organise trips on request (TOs) do not need tools for

	Total sample n = 279 (100%)		High-school diploma or less n = 188 (67.4%)		Bachelor's degree or higher n = 91 (32.6%)		*F*	Sig
	Mean	SD	Mean	SD	Mean	SD		
Travel catalogues and brochures	2.85	1.470	2.92	0.109	2.70	1.369	1.343	0.248
Tablet	1.88	1.168	2.02	1.206	1.61	1.040	7.775***	0.006
Touchpoint	1.62	1.052	1.69	1.080	1.49	0.990	2.120	0.146
Monitors or LCD screen	2.48	1 0.429	2.51	1.439	2.42	1.413	0.266	0.606
3D (AR and VR)	1.98	1.290	2.06	1.343	1.81	1.167	2.361	0.126
QR code	2.12	1.317	2.21	1.371	1.93	1.185	2.745*	0.099
Note(s): Significantly different average scores * = *p* < 0.10; ** = *p* < 0.05; *** = *p* < 0.01								

Table 11.
Perceived effectiveness of in-store technological tools in relation to the education level of the owner/manager

interaction but can offer tailor-made solutions. This also explains why the catalogue is considered more effective by TAs than by tour organisers.

Lastly, two personal factors relating to the TA owner/manager were analysed: gender and education level. While no significant differences emerged for gender, the data for education, in contrast with other studies, points to a greater adoption of hi-tech tools by owners/managers with a lower level of education. A similar dynamic was observed with travel catalogues and brochures.

6. Conclusions

Despite the important role played by TAs in the tourism industry, especially in Italy, there are no studies that analyse how TAs are reacting to the digital revolution, specifically concerning the use of new technologies to improve the customer experience inside the store. The present paper provides a preliminary contribution to fill this research gap while also highlighting the future impact that Covid-19 could have on these processes.

The principal conclusion of our research is that among the various tools adopted by TAs, in-store technological tools are the most widely promoted, although travel agents still consider the catalogue to be the most effective in-store tool. We hold that this is probably because TAs are certain that their customers are looking for personal contact with a trusted professional, who is experienced and able to provide travel advice; the agent can also answer traveller's questions about risks, insurance and financial issues, identifying the best choices to build a holiday that usually involves a high emotional and financial investment. Furthermore, the travel catalogue is likely to play an important role in improving the agency's display environment and window dressing, which is consistent with the servicescape policies aimed at encouraging interaction between the store (the agent) and the customer. This aspect merits more in-depth study. It cannot be overlooked that in the perception of travel agents, older customers – and in any case those who do not belong to the generation of digital natives – are still very fond of the paper format; they derive satisfaction from perusing the catalogue in the store and also being able to take it home to consult at their leisure. In light of this, travel agents' somewhat lukewarm attitude towards in-store technologies is understandable, given that an important segment of their customers are not digitally savvy and do not enjoy interacting with technological supports, preferring direct contact with the agent and the traditional catalogue.

However, it should be noted that about 14% of the agencies interviewed declare that they no longer use travel catalogues, suggesting the existence of "technological agencies" who firmly believe in the adoption of innovative models, even in the product sales phase. Thus, the role of in-store technologies is destined to take on greater importance, both in terms of adoption by agencies and of the owner/manager's perception of how effectively they improve the customer experience. Our findings, in line with other studies (Sigala, 2020; Zenker and Kock, 2020), highlight that the advent of Covid-19 has increased travel agents' propensity to adopt new technologies to relate to customers both inside the store and online, as they understand the importance of a multi-channel approach to the market and business model innovation.

Furthermore, the study highlights that the most recently established agencies, the (relatively) larger ones and those connected to networks show a greater willingness to adopt digital technologies in the store, revealing a lack of homogeneity in the sector. This finding is in line with the study by Del Chiappa et al. (2019), which revealed that the Italian TA sector is highly differentiated, composed of clusters of very traditionalist operators who are sceptical of new technologies and probably strategically short-sighted, but also including extremely innovative and highly digitised clusters.

In fact, considering the future tourist context, it is reasonable to expect that digital travellers and the new segment of smart tourists will appreciate contact with TAs that are

able to propose significant purchasing experiences that go beyond the mere re-proposal of traditional tools and approaches and that can stimulate emotions using high-tech equipment and applications. This will concern, above all, digital natives and Gen Zers, who are strongly immersed in the infosphere (Floridi, 2014). They are comfortable with an environment consisting of wireless information processes that are disseminated, distributed and made operational in any place and at any time (anywhere, anytime); the infosphere will not be conceived as merely an alternative way of referring to the information space, but as a synonym of everyday reality.

6.1 Theoretical and managerial implications

On a theoretical level, the findings foreshadow a greater willingness of travel agents to invest further in technological tools, but not to the exclusion, however, of the travel catalogue. The technology should be used to enhance human-to-human communication, in a customer experience and customer value co-creation perspective (Hollebeek and Rather, 2019). The objective of the agencies should, therefore, be to propose tourist packages by using ICTs to facilitate the sales process and increase tourist satisfaction, especially as a result of a better service offered (Brune *et al.*, 2020). In this sense, new in-store technologies can play a fundamental role in improving the quality of the information and service, as agencies shift from a transactional logic to a relational one with customers (Yen, 2014).

The results of the empirical analysis show how technology appears to be less readily embraced in the smallest agencies (individual and micro), those with high seniority ($\geq$ ten years) and/or those that organise tours (TOs); in other words, companies with these characteristics indicate a lower perception of the benefits associated with the adoption of in-store technologies. Nevertheless, it must be recognised that no matter the size, age and/or activity of TAs, as the level of digitalisation of society grows and generation Z consumers become more and more technologically oriented, travel agents will have to take into greater consideration the use of technological supports in their interactions with customers, thus innovating how they manage the customer experience at the point of sale.

Despite the profound changes that the digital revolution has generated in the tourism brokerage system, agencies still remain a crucial node for the retail distribution of holiday packages. While the majority of customers use the Web to search for and book tourist services that they consider financially and emotionally low risk, for the purchase of more complex and higher risk tourism products, where personalised advice may be needed, the pre-consumption phase very often includes consultation with a travel agent (Pencarelli, 2020) who often acts as an infomediary (Kracht and Wang, 2010).

It is assumed that tourists who enter a brick-and-mortar TA and purchase a holiday package are probably looking for reassurance and human contact with the staff while also trying to establish a fiduciary relationship. For this reason, technology cannot in any way replace human relations, although it can play an increasingly important role in the customer purchase process.

In sum, the managerial implications are evident. Certainly, TAs should not neglect human interaction to save costs, but rather, should invest more in training aimed at increasing competence in relational and sales techniques for their front-office staff, which would have the added benefit of reducing frontline staff turnover (Choy and Kamoche, 2021). At the same time, technology should be used to enhance human-to-human communication in a customer experience and customer value co-creation perspective. The objective of agencies must therefore be to propose holiday packages by using ICT to facilitate the sales process, thus increasing tourist satisfaction and customer loyalty (Abou-Shouk *et al.*, 2016). A further challenge for TAs also concerns the adoption of mobile technologies, such as apps, which would allow them to not only provide information to customers in the pre-purchase and the consumption phases, but also to receive customer satisfaction assessments at the end of the

trip (Lin, 2017). For this purpose, TAs need to increase their digital skills, both in the store and to relate to the market, by making professional use of social media and other digital marketing processes, for example.

A further managerial implication concerns the main partners of traditional agencies, namely tour operators. In addition to investing in enhanced customer relationship management (CRM) with the objective to develop tourism packages (Mihajlović, 2012), tour operators could implement loyalty policies with agencies that aim to improve customer relationships through the adoption of technologies, by replacing paper catalogues and by modernising the furnishing of physical spaces.

6.2 Limitations and future research directions
The final concluding remarks pertain to some limitations of the present study and suggested pathways for future research. A first limitation derives from the fact that the research has exclusively focused on the Italian context; further investigations are needed to compare the emergent findings in different countries. Second, the final consumer was not considered in this study as the investigation was focused exclusively on travel agents. This does not allow a complete and adequate assessment of future trends in relation to the client–agency relationship and the use of technological tools; this aim could be pursued in future studies. One possible line of research requires delving into the point of view of tourists who go to TAs, to assess their interest in new technologies and to understand if these can contribute to a better shopping experience and loyalty to the agency.

Moreover, our research encourages further study paths that could be useful not only for TAs, but also for TOs. In fact, while the digitisation of in-store supports can represent a significant cost savings of TOs, it can generate dissatisfaction in the traditional customer who is unwilling to use in-store technologies; consequently, this can lead to potentially conflicted relationships between TAs and wholesaler tour operators.

Finally, it would be interesting to investigate to what extent the introduction of new technologies in agencies favours integration into the digital tourism ecosystem and how these impact on the economic and competitive performance of TAs.

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Appendix
Questionnaire

Section 1 – agency profile

(1) To date, how many people work in the agency (including owner, owner's family, employees, collaborators)?

(2) When was the agency founded (e.g. 1995)?

(3) From the point of view of the type main activity, your turnover mainly depends on (TA or tour organiser):

(4) Does your agency belong to a network (Yes or No)?

Section 2 – owner/manager profile

(1) Are you the owner or manager of the agency?

(2) What is your gender?

(3) What is your educational background (e.g. high school diploma, bachelor's degree, etc.)?

Section 3 – technological profile

(1) Considering the period prior to the Covid-19 emergency, in the communication/promotion of products to customers within the agency, how important do you consider the following technological tools? (Indicate 0 if you do not have that tool and for the tools you have, indicate values from 1 = not at all important to 5 = very important.)

Travel catalogue/brochure	0 – 1 – 2 – 3 – 4 – 5
Tablet	0 – 1 – 2 – 3 – 4 – 5
Touchpoint	0 –1 – 2 – 3 – 4 – 5
Monitor or LCD screen	0 – 1 – 2 – 3 – 4 – 5
3D (AR and VR)	0 –1 – 2 – 3 – 4 – 5
QR code	0 – 1 – 2 – 3 – 4 – 5

(2) Once the Covid-19 emergency has been overcome and in the years to come, how important do you think the following technological tools will be? (Please indicate a value from 1 = not important at all to 5 = very important.)

Travel catalogue/brochure	1 – 2 – 3 – 4 – 5
Tablet	1 – 2 – 3 – 4 – 5
Touchpoint	1 – 2 – 3 – 4 – 5
Monitor or LCD screen	1 – 2 – 3 – 4 – 5
3D (AR and VR)	1 – 2 – 3 – 4 – 5
QR code	1 – 2 – 3 – 4 – 5

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