

## Internet Marketing Evaluation of Skiing Tourism Destination Based on eMICA Model

Ping Wang<sup>1,2</sup>, Zhiqiang Zhu<sup>1,3,\*</sup>, Yuhong Fei<sup>4</sup>, Jun Cong<sup>1</sup>

<sup>1</sup>Post-doctoral Research Station, Harbin Sport University, Harbin, Heilongjiang, China

<sup>2</sup>School of Geosciences, Edinburgh University, Edinburgh, UK

<sup>3</sup>Beijing Organising Committee for the Olympic and Paralympic Winter Games, Beijing, China

<sup>4</sup>Department of Academic Theory Research, Harbin Sport University, Harbin, Heilongjiang, China

\*Corresponding Author: Zhiqiang Zhu

### **Abstract:**

With the rapid development of information and communication technology, especially the Internet, the research on website and online consumer behavior has become a hot topic in academic circles. The COVID-19 epidemic has brought a great impact on the global economy, but also promoted the development of China's digital economy. This study adopts the content analysis method and takes the eMICA model as the criterion to study skiing tourism destination in China. The results show that only 21.4% of the websites of suburban learning ski resorts have entered the third stage, while the vast majority (57.2%) were still in the second stage. This fact shows that there was still room for improvement in the application of the Internet in domestic tourism destination marketing. Destination ski resorts have achieved more positive results in both levels and stages, and most of them (80.0%) were in the third stage. On this basis, the article points out that we must strengthen the communication with consumers, enhance the experience value, and further improve the online business. This study provides a useful reference for the further development of domestic ski tourism destination internet marketing under the background of epidemic normalization.

**Keywords:** eMICA model, Internet, Skiing tourism destination marketing, COVID-19 epidemic.

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### I. INTRODUCTION

In 2020, a sudden COVID-19 epidemic has brought a huge impact on the global economy, and the sports year expected by the whole sports industry and marketing industry has also been pressed the pause button. With the increasing impact of the epidemic, the International Olympic Committee and the Tokyo Olympic Organizing Committee stated on March 24 that the 2020 Tokyo Olympic Games would be officially postponed to 2021. How to carry out timely sports

marketing adjustment in the current epidemic situation has become the focus of attention of many enterprises, but also a major test facing the sports industry. On the other hand, the epidemic has promoted China's Digital Economy: online office, online education, online entertainment, and telemedicine. The evolution of the post new era has promoted the rapid evolution of traditional sports: traditional sports or professional leagues, such as formula one and NASCAR racing cars, turn to the network, and traditional players and game players (NBA and FIFA) compete online [1]. With the new digital football experience, online cloud live interaction with fans is launched for the first time, and the cumulative number of spectators exceeds 1.88 million. Internet plus enables Chinese people to live and work without leaving home, and also to link China and the world more closely through the cloud technology. In the face of the epidemic situation which is still unknown, the media innovation around sports has the potential to change the consumption model of traditional sports. Connecting more consumers and target audiences through the Internet platform is the key to the transformation and upgrading of the sports industry.

In 2015, the State Council issued the guiding opinions on actively promoting the "Internet plus" action. Under the impetus of the new form of "Internet plus", the Internet and various industries have integrated and developed, forming a new economic development pattern based on the new generation of information technology and infrastructure. As of June 2019, the number of Internet users in China has reached 854 million, the Internet penetration rate had reached 61.2%, the number of mobile Internet users has reached 847 million, and the proportion of Internet users using the mobile phone to access the Internet was as high as 99.1% [2]. New information and communication technology (ICT) not only contributes to economic change but also affects the rise of e-commerce logically [3]. Currently, the website is widely considered as low cost distribution channels. As product information can be easily obtained anytime, anywhere, and if the information on the website does not meet their requirements, customers will inevitably turn to other channels [4]. The rapid development of websites as distribution channels has intensified local and global competition among different players in the industry [5]. Website evaluation is important for operators to understand the role of their websites in providing useful and valuable information to customers.

The novel coronavirus pneumonia has also caused a thousand things to wait to be done for the tourism industry. Because of the significant impact of ICT on the management of tourism companies and the behavior of consumers and tourism products, the writer attempts to evaluate the existence and functional of the Internet in a region with economic importance and strategic significance, namely, through the analysis of the content of ski resorts website. To assess and whether resort Internet sites are conducive to efficient connection with their target mass or they are suitable for e-commerce. Secondly, use the extended Model of Internet Commerce Acceptance (eMICA) method to pick out the chances brought by using Web 2.0 tools, and improve the defects found to help enterprises achieve more competitive management.

## II. MATERIALS AND METHODOLOGY

### 2.1 eMICA Model for Ski Resorts

Australian metal manufacturing industry was the first research for using the eMICA model, which includes network-based promotion, providing information, and transaction process. These phases provide a roadmap that indicates where a given industry (the case of ski resorts) is in e-commerce application development. With the continuous development of the website, the complexity and functional level of the website are increased under the model. These new levels of consolidation reflect the company's evolution from a static Internet state to a dynamic website.

Many various industries have applied the eMICA model to practice and adapted to specific features and new virtual environments of the Internet (TABLE I) [6]. Based on the evolutionary model, the model can evaluate the website from the promotion level to the transaction process of the highest stage of the website. Even though it often reduces the complexity of the research, the website can be at two various development levels simultaneously or it can be complete without them. This study attempts to adjust the model to testify the maturity of ski resort websites. For this reason, the eMICA model used here comprises information, interaction, and transaction dimensions.

**TABLE I. Extended model for e-commerce**

eMICA	Features
Stage 1: Publicity (information)	
Layer 1.1: Basic information	1.1.1 Overview of ski resort (type of ski resort, number of ski ropeway, ski kilometers, snow depth, size, etc.) 1.1.2 Ski resort location and route map 1.1.3 Photos of the ski resort 1.1.4 Contact information 1.1.5 Date and time of last update 1.1.6 Ski resort condition (open or closed) (To qualify for the first level, the site must contain at least 3 of the 6 suggested variables)
Layer 1.2: Details	1.2.1 Snow field report (snow depth, track, others) 1.2.2 Email contact information 1.2.3 News / information on events and business environment 1.2.4 Online offers 1.2.5 Weather report 1.2.6 Multilingual support 1.2.7 Quality certification

	(To qualify for Level 2, it must have at least 3 of the 7 suggested variables)
Stage 2: Providing (dynamic information)	
Layer 2.1: Low interactivity	2.1.1 Season tickets and snow season time 2.1.2 Hyperlinks to accommodation 2.1.3 Hyperlinks to restaurants 2.1.4 Hyperlinks to other services 2.1.5 Safety rules 2.1.6 Terms and conditions of use (To qualify for level 1, the site must have at least 3 of the 6 suggested variables)
Layer 2.2: Moderate interactivity	2.2.1 Downloadable brochures / photos / materials 2.2.2 You can sign up to receive news via email / SMS 2.2.3 User support (FAQ, webmap, virtual navigation, webcam, etc.) 2.2.4 Privacy policy or legal statement 2.2.5 Online survey 2.2.6 Common problem 2.2.7 Opinions and suggestions 2.7.8 Search function 2.7.9 Online store (To qualify for Level 2, it must have at least 4 of the 9 suggested variables)
Layer 2.3: High interactivity	2.3.1 Customer / partner area 2.3.2 Interactive Roadmap 2.3.3 Multimedia applications 2.3.4 Blog, forum or chat function 2.3.5 Newsletters 2.3.6 Social media profile of visiting the ski resorts 2.3.7 Online reviews 2.3.8 Service satisfaction evaluation 2.3.9 Link to travel service review website 2.3.10 Video with flash animation 2.3.11 Mobile version of the website 2.3.12 Down loadable mobile apps. (To qualify for Level 3, it must have at least 6 of the 12 suggested variables)
Stage 3: Transaction processing	

Advanced applications	3.1.1 Purchase or renewal of season tickets 3.1.2 Buy products online 3.1.3 Complete accommodation purchase process 3.1.4 Secure online transactions (digital signature and encryption) 3.1.5 Database, purchase history, etc (To reach this stage, the site must contain at least 2 of the 5 suggested variables)
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### 2.2 Data Sources

The main purpose of this study is to investigate the application of the Internet in tourism destination marketing of China by using the eMICA model. In terms of sample selection, according to the “white paper on China skiing industry” and “the complete collection of ski resorts in China” in 2019, the websites of 28 provinces, municipalities, and autonomous regions were selected as the research samples. According to the core target groups, the ski resorts mainly included 9 tourism experience types, 14 suburban learning types, and 5 destination vacation types. These three types of ski resorts accounted for 77%, 20%, and 3% of the total ski resorts respectively. From April 1 to April 30, 2020, these websites were visited one by one and compared with the functional attribute indicators in TABLE I. In addition, to upgrade from one level to another, the website must have a minimum number of attributes. Therefore, as long as the site also included variables corresponding to the foregoing level, they were neglected. For all variables, the scale adopted dichotomy. If the website had a certain function attribute, the score was 1, otherwise, the score was 0. The 45 index values of each website can be accumulated, and the highest possible score of each website was 45. To pick out the presence of every component and facilitate analysis and comparison in resort kinds, the outcomes were expressed as the percent of sites applying each tool based on the kind of resort to which the facility belongs.

## III. DATA ANALYSIS

### 3.1 Information Dimension

Tourism is an industry that uses information widely, so it is very important to set up appropriate communication channels. Information dissemination is one of the essential goals of tourism marketing internet sites. The content dimension analyzed the mechanism of ski resort implementation to offer information to tourists who might be interested in their products and services in the area (TABLE 1). Therefore, there was little difference in the content of resort-type, and suburban learning ski resort shows more development space. The content of information about ski resorts (1.1) and their services and devices (1.2) has been well reflected, particularly in the destination ski resorts (Fig 1). Therefore, as far as the dissemination of content was concerned, ski resorts could provide the essential circumstances for tourists to meet their requirements as looking for ski tourism destinations.

On the other hand, it was worth noting that 17.9% of the ski resorts provide at least one

version in other languages, with destination ski resorts accounting for 40.0% of the total. According to the analysis report of China ice and snow industry from 2019 to 2023, with the approaching of Beijing Winter Olympic Games, the continuous enrichment of China ice and snow tourism products and the continuous improvement of ski resorts and other facilities, the world skiing tourism enthusiasts will come to Zhangjiakou, Changbai Mountain, Harbin and other ice and snow tourism destinations and famous ski resorts for ice and snow sports training, sightseeing and leisure vacation [7]. Therefore, this discovery is becoming more and more important. The results of quality certification were still poor, only eight ski resorts indicated that they had obtained ski resort-quality level certification or other certification (1.2.7), such as International Snow Federation and International Winter biathlon Union certification.

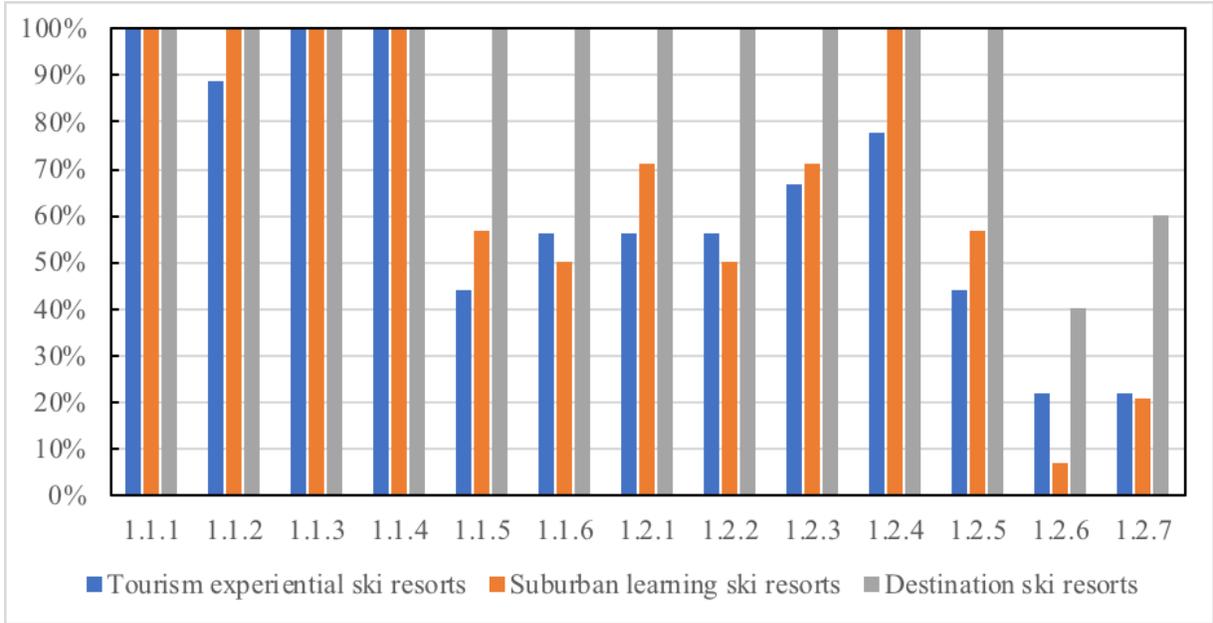


Fig 1: Information index of skiing destination type

### 3.2 Interaction Dimension

When designing an online business, the key is to increase its impact and help build relationships with customers. This variable consists of three categories and was designed to test the accessibility of ski resort web appliances that communicate with tourists (TABLE I). The interaction dimension contains tools that help interact with tourists through the web site and Web 2.0 characteristics. We could see the results of interactivity were remarkably lower than those of previous information dimensions (Fig 2). Usually, companies rarely used their websites to talk to users except for the traditional telephone and email (2.2.2), and the company own FAQ (2.2.6) or suggestions (2.2.7) were seldom used. In addition, the websites analyzed did not contain an online form (2.2.5) for submitting comments. Except for the snow mountain ski resort in Xiling and Sichuan Province, other ski resorts did not provide customers with the satisfaction evaluation of the services provided (2.3.8).

As for interactivity, the results showed that though big differences were discovered according to the kind of ski resort, they frequently preferred the destinationski resort. Most of the websites analyzed include WeChat and other social media connects such as QQ (2.3.6). The lesser ski resortshad the link of related video platform (2.3.10). As for the availability of the mobile version, 50.0% of the whole number of Internet sites analyzed contained relates to mobile version websites (2.3.11) and provided users with mobile applications (2.3.12). In this regard, recognized websites in the market, such as Heilongjiang Yabuli ski resort and Xinjiang Silk Road ski resort, hadenforced mobile versions of their Internet sites and achieved goodgrades. Under these circumstances, tourism companies had a greater competitive advantage in entering the tourism market through mobile phones [8] (Fig 2).

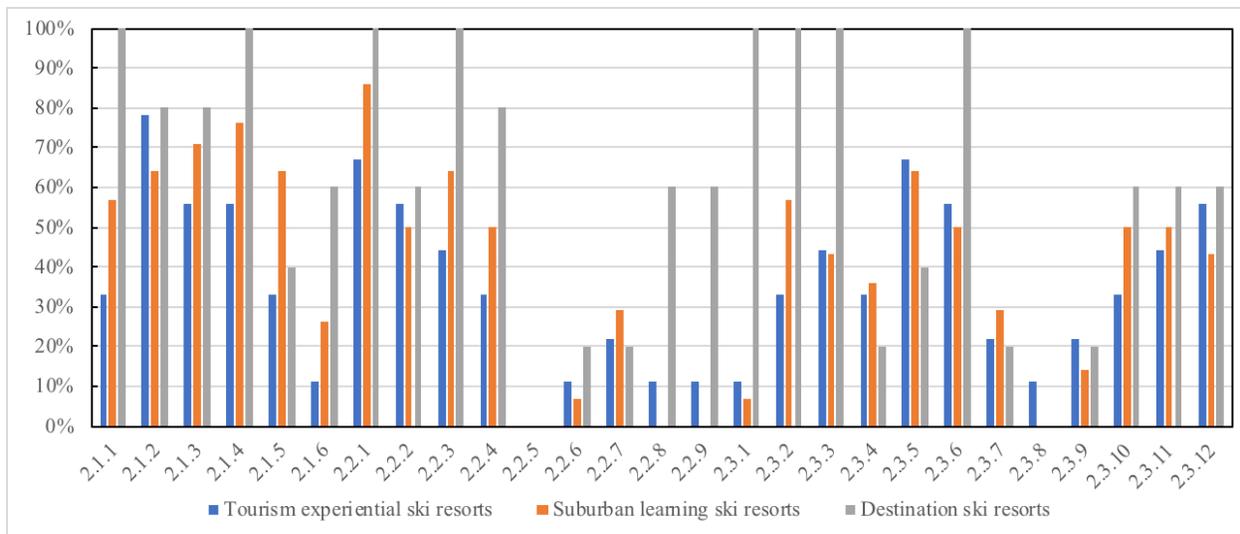


Fig 2: Interactive index of skiing destination type

### 3.3 E-commerce Dimension

This dimension means the capability to distribute on-line ski tourism goods [9]. E-commerce features an online payment and booking mechanism provided by ski resorts to allow customers to access their services and products over their official resort websites. Although the level of e-commerce in the implementation of e-commerce facilities was medium, the analysis of this level of e-commerce booking was still low (Fig 3). Destination ski resorts offered 100% online booking (3.1.1) or payment options (3.1.4). In contrast, 21.4% of suburban learning ski resorts provided online booking (3.1.1), while 50.0% of customers provided online payment (3.1.4). These travel websites generally did not adopt tactics which facilitate interaction with customers or encourage them to buy online goods (3.1.5).

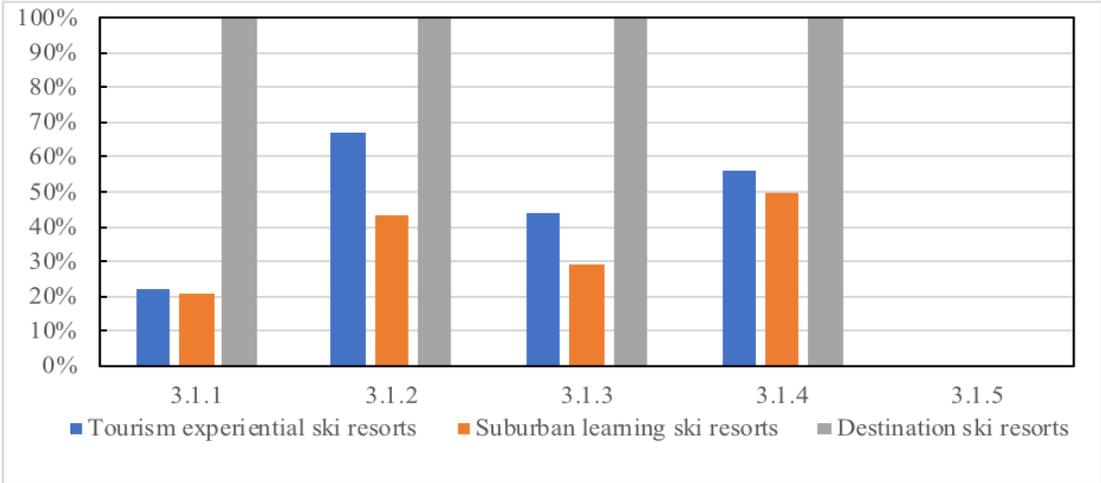


Fig 3: E-commerce index of skiing destination type

The analysis of these three dimensions shows that most ski resorts had basic and usually static online services in China, especially the destination ski resorts. These findings were the same as other surveys carried out in Spain, which show that companies view websites as static displays of goods and cannot use their dynamic and collaborative capabilities to promote each other relationships [10,11].

IV. CONCLUSION

This paper shows the status of ski tourism in the use of Internet business marketing. In general, the results show that there was still space for promotion in the use of e-commerce between tourism experiential ski resorts and suburban learning ski resorts. This fact shows that the functional maturity of ski resorts in website development was low and needed a shift from a static point of view to a more interactive dynamic website. However, while only 14.3% of websites provided a medium level of interactivity, this proportion was largely due to the availability of downloadable materials or web maps of ski resorts. As for the third stage of the process, only 64.3% of ski resorts allowed the entire purchase process through network, which might result in the reduction of prospective customers.

In terms of the types of ski resorts, destination ski resorts occupied more websites in both layers and stages, and obtained better grades. Surprisingly, 20.0% of the ski resorts were in the second stage, the vast majority (80.0%) were in the third stage, and no ski resort was in the first stage, which could be explained by the fact that there are more skiers in this type of ski resort. Suburban ski resorts did not display a high e-business utilization rate. The first stage still accounted for 21.4%, the second stage accounted for 57.2%, and the third stage only accounted for 21.4%. This also explained why the number of skiers in this type of ski resort is smaller than that in the destination resort. The results gained in this paper were the same as the results of other national-level research reports, taking the China Internet Network Statistics Center for an

example [12].

Later research should investigate ski resorts in the rest of the world and compare ourselves to others. Besides, the e-commerce of Chinese ski resorts should be improved in the following aspects under the background of epidemic normalization [13]. Firstly, strengthen communication with consumers. According to the information and needs of skiers, reasonable skiing service should be designed and customized service should be added to provide a platform for skiers to exchange experience. Besides, the utilization of these Web 2.0 resources also increases synergistic capabilities, which are especially useful for intercommunicating with users and even quickly solving questions. Furthermore, enhance the experience value. Multiple means of information transmission is adopted to enhance the sensory experience, such as adding multimedia functions, virtual tour, and interactive map, to effectively and harmoniously integrate various expression methods, and provide online search engine and online service support for consumers. Finally, improve online business. Using advanced technology to improve the website construction, develop a safe and stable online trading system, follow a whole train of guidelines, containing a series of basic factors linked to the three proposed dimensions, so that consumers can complete the whole process of online transaction through a safe and reliable network channel.

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## REFERENCES

- [1] Sina Finance (2020) Novel coronavirus pneumonia: the world will have these changes after the new crown pneumonia outbreak. Available at <https://baijiahao.baidu.com/s?id=1664470901471686312&wfr=spider&for=pc>
- [2] China Information and Communication Research Institute (2020) Internet plus industry personal information protection report. Available at <http://www.wfnetworks.cn/news1/shownews.php?id=376>
- [3] Dipietro Robin B, Wang Youcheng (2010) Key issues for ICT applications: impacts and implications for hospitality operations. *Worldwide Hospitality & Tourism Themes* 2(1): 49-67
- [4] Dennis Alan R, Yuan Lingyao IVY, Feng Xuan (2020) Digital nudging: numeric and semantic priming in e-commerce. *Journal of Management Information Systems* 37(1): 39-65
- [5] Xue Desheng, Liu Huaikuan, Guo Wenjiong, Liu Ye (2019) Comprehensiveness and Locality: Website Marketing of World City Governments in the Era of Globalisation. *Chinese Geographical Science* 29: 86-99

- [6] Lois Burgess, Belinda Parish, Carole Alcock(2011) To what extent are regional tourism organizations (RTOs) in Australia leveraging the benefits of web technology for destination marketing and eCommerce? *Electronic Commerce Research* 11: 341-355
- [7] China Investment Information Network (2019) Analysis of influencing factors of China's ice and snow industry from 2019 to 2023. Available at <http://www.ocn.com.cn/touzi/chanye/201901/joysu02111550.shtml>
- [8] KimSeungyeon., ChangYounghoon, WongSiew Fan (2020) Customer resistance to churn in a mature mobile telecommunications market. *International Journal of Mobile Communications* 18: 41
- [9] Mutlu Nevin, Bish Ebru K (2018) Optimal demand shaping for a dual-channel retailer under growing e-commerce adoption. *IIE Transactions* 51: 92-106
- [10] Daries-Ramon Natalia, Cristóbal-Fransi Eduard, Martín-Fuentes Eva, Mariné-Roig Estela(2016) Adopción del comercio electrónico en el turismo de nieve y montaña: análisis de la presencia web de las estaciones de esquí a través del Modelo eMICA. *Cuadernos de Turismo* 37: 113-134
- [11] Eduard Cristóbal Fransi, Natalia Daries Ramón, Estela Mariné Roig, Eva Martín Fuentes(2017) Implementation of web 2.0 in the snow tourism industry: analysis of the online presence and e-commerce of ski resorts. *Spanish Journal of Marketing - ESIC* 21: 117-130
- [12] China Internet Network Information Center (2018) Statistical report on the development of China's Internet. Available at [https://www.sohu.com/a/214482557\\_800248](https://www.sohu.com/a/214482557_800248)
- [13] Stephen Kissler, Christine Tedijanto, Edward Goldstein, Yonatan Grad, Marc Lipsitch (2020) Projecting the transmission dynamics of SARS-CoV-2 through the postpandemic period. *Science* 367(6493):860-868