

The Effect of Viral Marketing on Consumer Based Brand Equity in Air Transportation: A Research Specific to The Covid-19 Pandemic Process

Hulusi Can ALTAY¹ Murat ÇAKIRKAYA²

¹ Selçuk Üniversitesi, Uluslararası Ticaret Doktora Programı Öğrencisi, Konya, Türkiye,

hulusi.can.51@gmail.com,  <https://orcid.org/0000-0001-8222-569X>

² Doç. Dr., Necmettin Erbakan Üniversitesi, Uygulamalı Bilimler Fakültesi, Lojistik Yönetimi Bölümü, Konya,

Türkiye, murat.cakirkaya39@gmail.com,  <https://orcid.org/0000-0001-8191-6958>

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ABSTRACT

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Effective implementation of viral marketing strategies within the airline industry can lead to a surge in customer acquisition and enhance brand visibility. Consequently, it can elevate the industry's profile and foster greater consumer preference. Furthermore, airlines boasting strong brand equity are more likely to be favored by customers. The study examined whether viral marketing practices had any effect on customers' brand equity perceptions during the Covid-19 period. Considering the sample number determined within the scope of the study, an online survey was conducted on 388 people. In the study, difference tests, correlation analyzes and regression analyzes were performed using the SPSS. As a result of the study, significant and moderate relationships were detected between viral marketing and brand equity and between viral marketing and Covid-19 variables. On the other hand, the relationship between brand equity and Covid-19 variable is significant and high strength. Additionally, viral marketing practices have a significant impact on brand equity, and viral marketing practices predict brand equity by 27.5%.

Havayolu Taşımacılığında Viral Pazarlamanın Tüketici Temelli Marka Değerine Etkisi: Covid-19 Pandemi Süreci Özelinde Bir Araştırma

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Havayolu taşımacılığı sektöründe viral pazarlama stratejilerinin etkili bir şekilde uygulanması, müşteri kazanımında artışa yol açabilir ve marka görünürlüğünü de artırabilir. Ayrıca bu sektörün profilini güçlendirir ve daha fazla tüketici tercihini teşvik edebilir. Ek olarak, güçlü marka değerine sahip havayollarının müşteriler tarafından tercih edilme olasılığı daha yüksektir. Çalışmada, viral pazarlama uygulamalarının Covid-19 döneminde müşterilerin marka değeri algıları üzerinde herhangi bir etkisinin olup olmadığı incelenmiştir. Araştırma kapsamında belirlenen örneklem sayısı dikkate alınarak 388 kişiye online anket uygulanmıştır. Araştırmada SPSS kullanılarak fark testleri, korelasyon analizleri ve regresyon analizleri yapılmıştır. Çalışma sonucunda viral pazarlama ile marka değeri arasında ve viral pazarlama ile Covid-19 değişkenleri arasında anlamlı ve orta düzeyde ilişkiler tespit edilmiştir. Öte yandan marka değeri ile Covid-19 değişkeni arasındaki ilişkinin anlamlı ve yüksek düzeyde olduğu görülmüştür. Ek olarak viral pazarlama uygulamalarının marka değeri üzerinde önemli bir etkisinin olduğu ve viral pazarlama uygulamalarının marka değerini %27,5 oranında yordadığı çalışmanın bulguları arasındadır.

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INTRODUCTION

Air transport has made important contributions to the development of the world economy by facilitating international socio-cultural activities with the effect of globalization. Air transport has also positively affected the efficiency of economic activities and the quality of life of people and brought countries/people closer to each other. The rise of deregulation in the aviation industry, a sector experiencing continuous growth, has led to an expansion in the number of companies operating in the airline sector and has fostered a competitive business landscape.

The use of viral marketing, which is usually carried out through social media channels, by airline companies contributes to these companies becoming more popular and increasing the number of their customers. This elevates the airline industry's visibility and fosters a stronger inclination towards it. For this reason, airline companies should produce more interesting online content in their social media marketing strategies and encourage their customers to use social media more actively (Seo & Park, 2018).

Studies on brand equity in air transport have shown that there are positive relationships between consumer-based brand equity and purchasing decisions and brand preferences. Therefore, airlines with strong brand equity are more likely to be chosen by customers, and this significantly influences their buying decisions through an intermediary effect.

This study examined how viral marketing impacted consumer-based brand equity in the context of air transportation during the COVID-19 pandemic.

CONCEPTUAL FRAMEWORK

Airline Transport and Brand Equity Interaction During the Pandemic Period

The displacement of people, cargo or mail by an aircraft is air transport (Gerede, 2002). Regardless of the service provided, the service covers a much wider range, not just planes and flights. In this context, all civil aviation activities such as maintenance and ground services, navigation, communication and air traffic, starting from the design and production stage, are important for safe, secure and efficient air transportation (Wells, 1999). Although the basis of air transportation is to ensure the transportation of passengers, the service provided does not only concern the interior of the aircraft. The process, which starts with the reservation of the passengers, includes a wide spectrum such as arrival at the airport, performing the necessary procedures, air travel and departure. This whole process should be evaluated in measuring the quality of the service provided or the customer satisfaction that occurs at the end of this process (Gerede, 2015).

The aviation sector, which is of great importance for all countries, is an indispensable part of today's transportation industry. With the emergence of the Covid 19 pandemic, almost all kinds of economic activities that require one-to-one contact of individuals, first of all in the field of transportation (air, land and sea), have come to a halt (Merican, 2022). Therefore, many industries have been significantly affected by this negative development. On the other hand, air transportation accelerated the spread of the epidemic. With the decline in the sector due to the epidemic, even the continuation of the current operations has become difficult (Dube et al., 2021). Countries have imposed significant restrictions on the aviation industry to prevent the spread of the epidemic. With the rapid spread of the epidemic among people, countries have decided to quarantine. These developments have made the operation of the aviation sector even more difficult (Gössling et al., 2020).

Pitta and Katsanis (1995) defined brand equity as "the value a brand adds to a product". Keller (1993) evaluated brand equity as a psychological state, such as the consumer's recognition of the brand and remembering some positive, strong and unique brand relationships. Company executives are responsible for managing the consumer and company-based values of their products and brands. In Aaker's (1996) framework, a company is essentially a composition of its brand, its products, the tangible

elements associated with it, the core values and objectives of the organization, any intangible qualities linked to the brand, and the symbolic aspects connected to the brand. These elements collectively shape the identity or image of the brand in the consumer's mind. Shifting our focus to Keller's (1993) perspective on brand equity, he approaches it from the consumer's viewpoint and defines it as the distinctive impact of brand knowledge on how consumers react to the brand's marketing efforts. Keller (2008) further emphasizes that consumer-based brand equity becomes evident when customers exhibit a high level of brand awareness and retain strong, distinctive, and positive associations with the brand in their memory. Favorable consumer responses can subsequently translate into increased revenue, reduced costs, and enhanced profitability for companies, as highlighted by Tuominen (1999). According to Aaker and Joachimsthaler (2000), it is important for companies to know their place in the evaluation cluster of customers and to research how high brand awareness is among customers. Because customers like to buy the brand they know. On the other hand, the pandemic period has brought along important risks in terms of brand management. In fact, when the pandemic period is examined in terms of brand management, both the effects of the crisis process on brand perception and the possible reactions of the brand to the situation should be evaluated together (Hegner et al., 2014). Because the perspective of the customers on the brand is also related to how the brand will react in the crisis period (Timothy Coombs & Holladay, 2006). With the epidemic period, people needed more trust, information and support. For this reason, they followed the steps taken by the brands for the society, customers and employees in these periods (Diebner et al., 2020). The measures taken during the epidemic provided confidence and helped to strengthen the presence of brands after the epidemic (Dore et al., 2020). For this reason, it is of great importance for companies to build trust for brands that face the crisis (Hegner et al., 2014).

Viral Marketing During the Pandemic Period

Before today's technological developments, companies had to gain the trust of consumers by using traditional marketing tools (television, newspaper, radio, etc.). With the emergence of the internet and web 2.0 in the 21st century, companies have realized that traditional marketing methods are not as effective as in the past and that new marketing tools should be introduced for consumers and they have worked in this direction (Scott, 2011). Traditional marketing, as defined by Todor in 2016, encompasses strategies that involve tangible mediums such as print materials like magazines, newspapers, business cards, posters, and various forms of visual arts. Additionally, Todor includes TV and radio advertising within the traditional marketing realm. This approach primarily focuses on capturing the attention of potential customers within a national or local context. Conversely, digital marketing, in accordance with Wsi's 2013 perspective, is a dynamic method of promoting products and services. It relies on the utilization of database-driven distribution channels to reach audiences. The primary goal of digital marketing is to engage consumers and customers in a way that is timely, highly personalized, and cost-effective. Unlike traditional marketing, digital marketing has the flexibility to target not only local and national audiences but also a global audience, allowing for a broader reach and more tailored interactions with customers. There are two reasons why the Internet is the most powerful advertising media in the world: First, almost every home has constant access to the Internet. Second, the Internet has a larger daily audience than all the historical audiences of traditional media combined (Sarah, 2022). In the globalizing world, people have much more opportunities to have information about the product or service through social media compared to the past. This reduces the impact of traditional marketing methods. When looking at the airline industry, it's common for companies to utilize both approaches to connect with customers on a national and international scale. In addition, especially recently, many airline companies have realized that social media platforms can be used to communicate with existing or potential customers, even that it is a necessity (Hsu, 2012).

Viral marketing, as a concept, was coined in 1997 by Tim Draper and Tony Jeverson to characterize the innovative approach utilized by Hotmail when they offered their free email service. Juverson defined viral marketing simply as “network-enhanced word-of-mouth” (Cruz and Fill, 2008). According to Juverson (2000), one of the most important benefits of viral marketing is that it transforms

consumers into salespeople by enabling the consumer to use the product. In addition, an important feature of viral marketing is that a shared message is approved by close friends or people whose thoughts are trusted and reaches large audiences as a result of sharing it with users in their networks. Today, with the development of technology and the increasing globalization, users can interact with millions of people from various parts of the world. Therefore, companies that can achieve globalization and use technology can benefit from these opportunities. Viral marketing, which companies have recently seen as an effective marketing tool, is one of these opportunities offered by technology and globalization. (Alakuşu, 2013). In viral marketing, the message transferred from customer to customer can reach large masses in a short time with the effect of a snowball. These messages, which spread rapidly, also have an impact on customers, as a result of which there is an increase in sales and the brand equity of the companies is positively affected by these messages. On the other hand, there is a possibility that viral messages that are out of control may turn into an avalanche. This is the most striking difference that distinguishes viral marketing from other marketing methods. For this reason, companies should be aware that viral marketing can offer great advantages as well as bring great risks (Alakuşu, 2013).

Viral marketing applications, which are generally carried out through social media, are frequently used in customer management, promotion activities and efforts to strengthen corporate image of many companies. Because the feedback rate of advertisements performed through social media is 55% higher than the feedback rate of traditional advertisements. The fact that a viral video of Qatar Airways has received more than 12 million likes on its Facebook page is a remarkable example of customers' willingness to participate in such videos. As it is known, positive opinions and thoughts increase the brand equity of the company. The increase in the number of airline passengers day by day (although there are periodic decreases due to the effect of the pandemic and some acute developments, it can be said that air passenger transportation is a growing sector every day) means that such marketing activities gain more importance (Seo & Park, 2018). In addition, with the increase in the use of social media, people share their feelings and thoughts about the products or services they purchase or their experiences in these channels more and more. These developments offer new marketing understandings for marketers. Viral marketing applications are used more and more every day with the effect of these developments (Seo & Park, 2018).

The viral cycle works as follows: First of all, the marketing messages created by the companies are delivered to large audiences through the users determined by the companies and who will start the spark. These messages reach millions like a virus, thanks to the liking and sharing desire created on users. This viral cycle does not only deliver the message to large masses. At the same time, it creates an incentive for users to purchase the product that causes the formation of the viral cycle. This type of purchase is called impulsive buying (Abbas & Ali, 2020). The messages created by the marketers during the pandemic period and prioritizing the risk of contamination or possible risks in the supply chain had a serious impact on consumers and led them to impulse buying (Kazi et al., 2019). On the other hand, with the epidemic, people spent more time on their mobile phones, which increased the volume of their shopping from online markets (Iriani et al., 2021).

METHOD OF THE RESEARCH

Purpose, Scope, Universe and Sample

The Covid-19 (coronavirus) pandemic period has had significant effects on the aviation industry as well as in many other sectors. This study seeks to investigate how the utilization of viral marketing strategies during the pandemic has impacted consumer-based brand equity towards airline brands. Another aim is to guide future studies with the information obtained as a result of the research. The data obtained by the online survey method were analyzed and concluded with the SPSS statistical program. Passengers who have traveled with airline companies constitute the sample of the research. Within the scope of the study, 388 people were reached and the following findings were obtained:

FINDINGS

Demographic Characteristics of Participants

Table 1. Demographic Characteristics of the Participants

Variable		F	%
Gender	Female	163	42.0
	Male	225	58.0
Age	18 – 25 years	50	12.9
	26 – 35 years	238	61.3
	36 – 45 years	69	17.8
	46 – 55 years	24	6.2
	55 years and over	7	1.8
Education	Elementary education	5	1.3
	High school	34	8.8
	Associate Degree	106	27.3
	University	195	50.3
	Postgraduate	48	12.4
Monthly Household Income	0 – 4250 TL	57	14.7
	4.251 – 7.500 TL	101	26.0
	7.501 – 10.000 TL	154	39.4
	10.001 – 15.000 TL	68	17.5
	15.001 TL and above	8	2.1
Preferred Airline Company	THY	217	55.9
	Pegasus	98	25.3
	Anadolu Jet	65	16.8
	Atlas Global	6	1.5
	Onur Air	2	0.5
Reason for Flight	Business trip	30	7.7
	Family visit	131	33.8
	Holiday	176	45.4
	Religious tourism	23	5.9
	Other	28	7.2

According to the data presented in Table 1, 58% of the participants are male and 42% are female. The age ranges of the participants are as follows; 12.9% are in the 18-25 age range, 61.3% are in the 26-35 age range, 17.8% are in the 36-45 age range, 6.2% are in the 46-55 age range, and 1.8% are in the age group of 55 and above. About half of the participants are university graduates (50.3). Others are; 27.3% of them are associate degree graduates, 12.4% are postgraduates, 8.8% are high school graduates, and 1.3% are elementary education graduates. While 14.7% of the participants have monthly household income of 4250 TL or less, 26% of them have monthly household income between 4251-7500 TL, 39.4% of them have monthly household income between 7501-10000 TL, 17.5% of them have monthly household income between 10001-15000 TL and 2.1% of them have monthly household income 15001 TL and above. More than half of the participants prefer Turkish Airlines. (55.9%). The percentages of those who prefer other airline companies are as follows; Pegasus 25.3%, Anadolu Jet 16.8%, Atlas Global 1.5% and Onur Air 0.5%. Nearly half of the participants prefer air travel for holiday (45.4%).

Other reasons for choosing air travel are as follows; 7.7% business trip, 33.8% family visit, 5.9% religious tourism and 7.2% other.

Findings Related to Research Hypotheses

In this section, the test results of the hypotheses determined within the scope of the research are given. To examine the established hypotheses, a range of statistical methods were employed, including independent samples t-tests, ANOVA tests, correlation analysis, and regression analysis.

The Role of Gender Variable in The Effect of Viral Marketing Activities on Brand Equity:

H₁. There is a significant difference in terms of gender variable in the perceptions of the participants about the effect of viral marketing activities on brand equity.

H_{1a}. There is a significant difference in terms of gender variable in the perceptions of the participants about the effect of viral marketing activities on brand loyalty.

H_{1b}. There is a significant difference in terms of gender variable in the perceptions of the participants about the effect of viral marketing activities on brand awareness.

H_{1c}. There is a significant difference in terms of gender variable in the perceptions of the participants about the effect of viral marketing activities on brand association.

H_{1d}. There is a significant difference in terms of gender variable in the perceptions of the participants about the effect of viral marketing activities on perceived quality.

We performed an independent samples t-test to evaluate the H₁ hypothesis, and the outcomes are detailed in Table 2.

Table 2. T-Test Results for Gender Variable

Dimensions	Gender	N	\bar{x}	S	t	p
Viral Marketing	Famale	163	3.26	.55	-1.27	.001
	Male	225	3.34	.68		
Brand Loyalty	Famale	163	3.85	.73	1.746	.082
	Male	225	3.98	.74		
Brand Awareness	Famale	163	4.22	.71	3.479	.001
	Male	225	4.46	.63		
Brand Association	Famale	163	3.94	.82	3.770	.000
	Male	225	4.25	.78		
Perceived Quality	Famale	163	3.95	.80	4.205	.000
	Male	225	4.28	.76		
Brand Equity	Famale	163	3.91	.85	3.647	.000
	Male	225	4.24	.87		

When the results were examined, it was seen that there was no significant difference in terms of gender variable in the perceptions of the participants regarding the effect of viral marketing activities on brand loyalty [$p = .082$; ($p > .05$)]. On the other hand, significant differences were found in the perceptions of the participants regarding the effect of viral marketing activities on the main dimension of brand equity [$p = .000$ ($p < .05$)] and the effect on the other sub-dimensions of brand equity [Brand Awareness: $p = .001$ ($p < .05$); Brand Association: $p = .000$ ($p < .05$); Perceived Quality: $p = .000$ ($p < .05$)]. According to the results obtained, the H₁, H_{1b}, H_{1c} and H_{1d} hypotheses were supported, while the H_{1a} hypothesis was not supported.

The Role of Age Variable in The Effect of Viral Marketing Activities on Brand Equity:

H₂. There is a significant difference in terms of age variable in the perceptions of the participants about the effect of viral marketing activities on brand equity.

H_{2a}. There is a significant difference in terms of age variable in the perceptions of the participants

about the effect of viral marketing activities on brand loyalty.

H_{2b}. There is a significant difference in terms of age variable in the perceptions of the participants about the effect of viral marketing activities on brand awareness.

H_{2c}. There is a significant difference in terms of age variable in the perceptions of the participants about the effect of viral marketing activities on brand association.

H_{2d}. There is a significant difference in terms of age variable in the perceptions of the participants about the effect of viral marketing activities on perceived quality

ANOVA test was conducted to test the H₂ hypothesis. The results are presented in Table 3.

Table 3. ANOVA Results for Age Variable

Dimensions	Age	N	\bar{x}	S	F	p
Viral Marketing	18 - 25	50	3.32	.67	.167	.955
	26 - 35	238	3.31	.60		
	36 - 45	69	3.30	.65		
	46 - 55	24	3.22	.70		
	56 age and above	7	3.11	.91		
Brand Loyalty	18 - 25	50	3.89	.76	1.30	.268
	26 - 35	238	3.92	.70		
	36 - 45	69	3.85	.83		
	46 - 55	24	4.19	.85		
	56 age and above	7	4.25	.57		
Brand Awareness	18 - 25	50	4.23	.66	1.40	.268
	26 - 35	238	4.37	.64		
	36 - 45	69	4.31	.81		
	46 - 55	24	4.55	.62		
	56 age and above	7	4.61	.67		
Brand Association	18 - 25	50	3.96	.80	1.23	.294
	26 - 35	238	4.13	.82		
	36 - 45	69	4.08	.89		
	46 - 55	24	4.30	.74		
	56 age and above	7	4.52	.37		
Perceived Quality	18 - 25	50	4.08	.81	.628	.643
	26 - 35	238	4.15	.77		
	36 - 45	69	4.15	.88		
	46 - 55	24	4.35	.74		
	56 age and above	7	3.92	.73		
Brand Equity	18 - 25	50	3.95	.85	1.33	.268
	26 - 35	238	4.11	.87		
	36 - 45	69	4.13	.93		
	46 - 55	24	4.33	.77		
	56 age and above	7	3.64	.98		

When the results were examined, it was seen that there were no significant differences in terms of age variable in the perceptions of the participants regarding the effect of viral marketing activities on the main dimension and all sub-dimensions of brand equity [Brand Loyalty: $p = .268$ ($p > .05$); Brand Awareness: $p = .268$ ($p > .05$); Brand Association: $p = .294$ ($p > .05$); Perceived Quality: $p = .643$ ($p > .05$); Brand Equity: $p = .268$ ($p > .05$)]. According to the results obtained, the hypotheses H₂, H_{2a}, H_{2b}, H_{2c} and H_{2d} were not supported.

The Role of Education Level Variable in The Effect of Viral Marketing Activities on Brand Equity:

H₃. There is a significant difference in terms of education level variable in the perceptions of the participants about the effect of viral marketing activities on brand equity.

H_{3a}. There is a significant difference in terms of education level variable in the perceptions of the participants about the effect of viral marketing activities on brand loyalty.

H_{3b}. There is a significant difference in terms of education level variable in the perceptions of the participants about the effect of viral marketing activities on brand awareness.

H_{3c}. There is a significant difference in terms of education level variable in the perceptions of the participants about the effect of viral marketing activities on brand association.

H_{3d}. There is a significant difference in terms of education level variable in the perceptions of the participants about the effect of viral marketing activities on perceived quality

ANOVA test was conducted to test the H₃ hypothesis. The results are displayed in Table 4.

Table 4. ANOVA Results for Education Level Variable

Dimensions	Education Level	N	\bar{x}	S	F	p
Viral Marketing	Elementary Education	5	3.38	.76	.123	.974
	High School	34	3.34	.83		
	Associate Degree	106	3.30	.61		
	University	195	3.29	.61		
	Postgraduate	48	3.35	.58		
Brand Loyalty	Elementary Education	5	4.25	.84	.521	.720
	High School	34	4.03	.91		
	Associate Degree	106	3.88	.68		
	University	195	3.92	.72		
	Postgraduate	48	3.95	.80		
Brand Awareness	Elementary Education	5	5.00	.00	2.77	.027*
	High School	34	4.43	.64		
	Associate Degree	106	4.21	.69		
	University	195	4.38	.65		
	Postgraduate	48	4.45	.72		
Brand Association	Elementary Education	5	4.46	.55	1.12	.344
	High School	34	4.12	.90		
	Associate Degree	106	4.01	.77		
	University	195	4.13	.83		
	Postgraduate	48	4.27	.76		
Perceived Quality	Elementary Education	5	4.20	.75	.791	.531
	High School	34	4.08	.97		
	Associate Degree	106	4.05	.76		
	University	195	4.18	.76		
	Postgraduate	48	4.27	.81		
Brand Equity	Elementary Education	5	4.00	1.17	.422	.739
	High School	34	3.98	.94		
	Associate Degree	106	4.05	.76		
	University	195	4.13	.91		
	Postgraduate	48	4.18	.92		

When the results are examined, it is seen that there is a significant difference in terms of education level variable only in the perceptions of the participants about the effect of viral marketing activities on Brand Awareness. [$p = .027$ ($p < .05$)]. On the other hand, in the context of education level, it is seen that the participants' perceptions of the effect of viral marketing activities on brand equity do not differ in terms of either the main dimension [$p = .739$ ($p > .05$)], of brand equity or other sub-dimensions [Brand Loyalty: $p = .720$ ($p > .05$); Brand Association: $p = .344$ ($p > .05$); Perceived Quality: $p = .531$ ($p > .05$)]. According to the results obtained, the H₃, H_{3a}, H_{3c} and H_{3d} hypotheses were not supported, and the H_{3b} hypothesis was supported.

The Role of Monthly Household Income Variable in The Effect of Viral Marketing Activities on Brand Equity:

H₄. There is a significant difference in terms of monthly household income variable in the perceptions of the participants about the effect of viral marketing activities on brand equity.

H_{4a}. There is a significant difference in terms of monthly household income variable in the

perceptions of the participants about the effect of viral marketing activities on brand loyalty.

H_{4b}. There is a significant difference in terms of monthly household income variable in the perceptions of the participants about the effect of viral marketing activities on brand awareness.

H_{4c}. There is a significant difference in terms of monthly household income variable in the perceptions of the participants about the effect of viral marketing activities on brand association.

H_{4d}. There is a significant difference in terms of monthly household income variable in the perceptions of the participants about the effect of viral marketing activities on perceived quality

ANOVA test was conducted to test the H₄ hypothesis. The results are illustrated in Table 5.

Table 5. ANOVA Results for Monthly Household Income Variable

Dimensions	Monthly Household Income	N	\bar{x}	S	F	p
Viral Marketing	4.250 TL or less	57	3.28	.71	.623	.646
	4.251-7.500 TL	101	3.37	.68		
	7.501-10.000 TL	154	3.26	.59		
	10.001-15.000 TL	68	3.30	.58		
	15.001 TL and above	8	3.45	.48		
Brand Loyalty	4.250 TL or less	57	3.82	.92	.754	.556
	4.251-7.500 TL	101	3.93	.71		
	7.501-10.000 TL	154	3.93	.70		
	10.001-15.000 TL	68	3.97	.73		
	15.001 TL and above	8	4.25	.48		
Brand Awareness	4.250 TL or less	57	4.12	.74	3.54	.007*
	4.251-7.500 TL	101	4.31	.64		
	7.501-10.000 TL	154	4.38	.69		
	10.001-15.000 TL	68	4.56	.55		
	15.001 TL and above	8	4.41	.68		
Brand Association	4.250 TL or less	57	3.77	.96	4.56	.001*
	4.251-7.500 TL	101	4.12	.81		
	7.501-10.000 TL	154	4.12	.76		
	10.001-15.000 TL	68	4.35	.83		
	15.001 TL and above	8	4.50	.76		
Perceived Quality	4.250 TL or less	57	3.82	.75	3.66	.006*
	4.251-7.500 TL	101	4.13	.97		
	7.501-10.000 TL	154	4.19	.76		
	10.001-15.000 TL	68	4.34	.72		
	15.001 TL and above	8	4.25	.47		
Brand Equity	4.250 TL or less	57	3.78	1.00	.462	.453
	4.251-7.500 TL	101	4.00	.86		
	7.501-10.000 TL	154	4.13	.87		
	10.001-15.000 TL	68	4.39	.74		
	15.001 TL and above	8	4.43	.62		

When the results are examined, it is seen that there are no significant differences in terms of monthly household income variable in the perceptions of the participants regarding the effect of viral marketing activities on brand equity [$p = .453$ ($p > .05$)] and brand loyalty [$p = .556$ ($p > .05$)], one of the sub-dimensions of brand equity. On the other hand, it is seen that there are significant differences in terms of monthly household income variable in the perceptions of the participants about the effect of viral marketing activities on brand awareness [$p = .007$ ($p < .05$)], brand association [$p = .001$ ($p < .05$)], and perceived quality [$p = .006$ ($p < .05$)]. As a result of the Post-hoc (Tukey HSD) test carried out to determine between which groups there is a significant difference; It is seen that there is a significant difference between 1 and 4 groups in the brand awareness sub-dimension, between 1 and 3, 1 and 4 groups in the brand association sub-dimension, and between 1 and 3, 1 and 4 groups in the perceived quality sub-dimension. According to the results obtained, the H₄ and H_{4a} hypotheses were not supported, and the H_{4b}, H_{4c} and H_{4d} hypotheses were supported.

The Role of Preferred Airline Company Variable in The Effect of Viral Marketing Activities on Brand Equity:

H₅. There is a significant difference in terms of preferred airline company variable in the perceptions of the participants about the effect of viral marketing activities on brand equity.

H_{5a}. There is a significant difference in terms of preferred airline company variable in the perceptions of the participants about the effect of viral marketing activities on brand loyalty.

H_{5b}. There is a significant difference in terms of preferred airline company variable in the perceptions of the participants about the effect of viral marketing activities on brand awareness.

H_{5c}. There is a significant difference in terms of preferred airline company variable in the perceptions of the participants about the effect of viral marketing activities on brand association.

H_{5d}. There is a significant difference in terms of preferred airline company variable in the perceptions of the participants about the effect of viral marketing activities on perceived quality

ANOVA test was conducted to test the H₅ hypothesis. The findings are depicted in Table 6.

Table 6. ANOVA Results for Preferred Airline Company Variable

Dimensions	Preferred Airline Company	N	\bar{x}	S	sd	F	p
Viral Marketing	Turkish Airlines	217	3.45	.62		7.85	.000*
	Pegasus	98	3.19	.67	4		
	Anadolu Jet	65	3.04	.45	383		
	Atlas Global	6	2.86	.58	387		
	Onur Air	2	3.08	.11			
Brand Loyalty	Turkish Airlines	217	4.19	.63		20.7	.000*
	Pegasus	98	3.64	.77	4		
	Anadolu Jet	65	3.58	.66	383		
	Atlas Global	6	2.91	.25	387		
	Onur Air	2	3.50	.70			
Brand Awareness	Turkish Airlines	217	4.64	.56		34.9	.000*
	Pegasus	98	4.15	.59	4		
	Anadolu Jet	65	3.84	.62	383		
	Atlas Global	6	3.44	.34	387		
	Onur Air	2	3.16	.23			
Brand Association	Turkish Airlines	217	4.51	.59		44.8	.000*
	Pegasus	98	3.76	.81	4		
	Anadolu Jet	65	3.53	.72	383		
	Atlas Global	6	2.88	.27	387		
	Onur Air	2	2.50	.70			
Perceived Quality	Turkish Airlines	217	4.45	.62		25.8	.000*
	Pegasus	98	3.87	.85	4		
	Anadolu Jet	65	3.72	.76	383		
	Atlas Global	6	2.83	.40	387		
	Onur Air	2	3.00	.00			
Brand Equity	Turkish Airlines	217	4.41	.73		21.9	.000*
	Pegasus	98	3.83	.90	4		
	Anadolu Jet	65	3.60	.86	383		
	Atlas Global	6	2.91	.49	387		
	Onur Air	2	3.00	.00			

When the results are examined, it is seen that the perceptions of the participants about the effect of viral marketing activities on brand equity in the context of the preferred airline company differ significantly in terms of both the main dimension of brand equity [$p = .000$ ($p < .05$)], and its sub-dimensions [brand loyalty; $p = .000$ ($p < .05$); brand awareness; $p = .000$ ($p < .05$); brand association [$p = .000$ ($p < .05$)], perceived quality [$p = .000$ ($p < .05$)]. As a result of the Post-hoc (Tukey HSD) test carried out to determine between which groups there is a significant difference; It is seen that there is a significant difference between 1 and 2, 1 and 3 groups in the brand loyalty sub-dimension; between 1

and 2, 1 and 3, 1 and 4, 1 and 5, 2 and 3, 2 and 4 groups in the brand awareness sub-dimension; between 1 and 2, 1 and 3, 1 and 4, 1 and 5, 2 and 4 groups in the brand association sub-dimension; between 1 and 2, 1 and 3, 1 and 4, 2 and 4, 3 and 4 groups in the perceived quality sub-dimension. According to the results obtained, the H₅, H_{5a}, H_{5b}, H_{5c} and H_{5d} hypotheses were supported.

The Role of Reason for Flight Variable in The Effect of Viral Marketing Activities on Brand Equity:

H₆. There is a significant difference in terms of reason for flight variable in the perceptions of the participants about the effect of viral marketing activities on brand equity.

H_{6a}. There is a significant difference in terms of reason for flight variable in the perceptions of the participants about the effect of viral marketing activities on brand loyalty.

H_{6b}. There is a significant difference in terms of reason for flight variable in the perceptions of the participants about the effect of viral marketing activities on brand awareness.

H_{6c}. There is a significant difference in terms of reason for flight variable in the perceptions of the participants about the effect of viral marketing activities on brand association.

H_{6d}. There is a significant difference in terms of reason for flight variable in the perceptions of the participants about the effect of viral marketing activities on perceived quality

ANOVA test was conducted to test the H₆ hypothesis. The outcomes are displayed in Table 7.

Table 7. ANOVA Results for Reason for Flight Variable

Dimensions	Reason for Flight	N	\bar{x}	S	sd	F	p
Viral Marketing	Business trip	30	3.48	.71		.709	.586
	Family visit	131	3.27	.58	4		
	Holiday	176	3.30	.64	383		
	Religious tourism	23	3.27	.72	387		
	Other	28	3.33	.60			
Brand Loyalty	Business trip	30	4.06	.66		1.57	.182
	Family visit	131	3.87	.71	4		
	Holiday	176	3.94	.76	383		
	Religious tourism	23	4.19	.70	387		
	Other	28	3.76	.76			
Brand Awareness	Business trip	30	4.57	.61		2.65	.083
	Family visit	131	4.25	.65	4		
	Holiday	176	4.42	.68	383		
	Religious tourism	23	4.46	.60	387		
	Other	28	4.17	.80			
Brand Association	Business trip	30	4.30	.76		2.66	.079
	Family visit	131	3.97	.83	4		
	Holiday	176	4.19	.79	383		
	Religious tourism	23	4.36	.54	387		
	Other	28	3.96	.94			
Perceived Quality	Business trip	30	4.25	.70		1.33	.255
	Family visit	131	4.04	.84	4		
	Holiday	176	4.22	.77	383		
	Religious tourism	23	4.21	.70	387		
	Other	28	4.01	.83			
Brand Equity	Business trip	30	4.25	.86		2.89	.094
	Family visit	131	4.03	.86	4		
	Holiday	176	4.19	.85	383		
	Religious tourism	23	4.13	.75	387		
	Other	28	3.64	1.10			

When the results were examined, it was seen that the perceptions of the participants about the effect of viral marketing activities on brand equity did not differ in terms of either the main variable [$p = .094$ ($p > .05$)] or sub-variables [brand loyalty: $p = .182$ ($p > .05$)], [brand awareness: $p = .083$ ($p >$

.05)], [brand association: $p = .079$ ($p > .05$)], [perceived quality: $p = .255$ ($p > .05$)] of brand equity. According to the results obtained, H₆, H_{6a}, H_{6b}, H_{6c} and H_{6d} hypotheses were not supported.

The Correlation Levels Between The Participants' Perceptions of Viral Marketing, Brand Equity and Covid 19:

H₇. There is a positive relationship between the participants' perceptions of viral marketing activities and their perceptions of brand equity.

H₈. There is a positive relationship between the participants' perceptions of viral marketing activities and their perception of Covid 19.

H₉. There is a positive relationship between the Covid 19 perceptions of the participants and their brand equity perceptions.

Correlation analysis was conducted to test the H₇, H₈ and H₉ hypotheses. The results are presented in Table 8.

Table 8. Correlation Analysis Results

	Viral Marketing	Brand Equity	Covid 19
Viral Marketing	1		
Brand Equity	.461	1	
Covid 19	.458	.712	1

According to the results obtained, it is seen that there is a positive correlation between all variables. The strongest correlation was found between brand equity and Covid 19 ($r=.712$). There is a moderate correlation ($r=.461$) between viral marketing and brand equity. Similarly, the correlation between viral marketing and Covid19 ($r=.458$) is moderate. According to the results obtained, the H₇, H₈ and H₉ hypotheses were supported.

The role of participants' perceptions of viral marketing activities on their perceptions of brand equity:

H₁₀. Perceptions of participants regarding viral marketing activities significantly affect their perceptions of brand value.

An analysis of regression was performed to examine the hypothesis H₁₀. The findings from this analysis are summarized in Table 9.

Table 9. Regression Analysis Results for H₁₀ Hypothesis

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
Constant	2.290	0.154		14.849	0,000*
Viral Marketing	0.553	0.046	0.524	12.091	0,000
R			0.524		
R ²			0.275		
Adjusted R ²			0.273		
Std. Error			0.569		
F			146,18		0,000

According to the results obtained, it was concluded that the model established for the participants' perceptions of viral marketing activities and their brand equity perceptions was significant ($p<.05$). Perceptions of the participants regarding viral marketing activities explain 27.5% of the variance. In other words, it was seen that viral marketing predicted brand equity by 27.5%. According to the model,

a one-point increase in viral marketing activities increases participants' brand equity perception levels by 0.553 points. According to the results obtained, the H₁₀ hypothesis was supported.

CONCLUSION

The competitive environment, which is becoming more intense day by day, shows that businesses attach more importance to branding in order to differentiate themselves from their competitors. As a result of this, businesses are in a race to be the most valuable in the eyes of consumers with the brands they create. When creating a brand, businesses are now developing different strategies not only in financial terms, but also in line with the preferences of consumers and taking into account their wishes (Bişkin et al., 2023). In this context, most of the companies carry out viral marketing activities in order to present messages about their products, services or brands to consumers more quickly and at lower costs. This type of marketing, in which consumers are willing to spread the message, allows companies to reach the most accurate target audience on the basis of trust. Viral marketing also provides companies with an accurate and meaningful interaction environment. If the interaction with viral marketing activities can be managed successfully, it is expected that positive perceptions of the brand will be formed in the minds of the customers. It can be said that airline companies that use the internet extensively have a great potential for viral marketing activities. As a matter of fact, the interaction between users and airline websites enables the creation, development and dissemination of successful online content (Camilleri, 2018). With the birth of viral marketing, airline companies have started to give more importance to the use of online content. In this context, they started to develop strategies to use in viral marketing activities in promoting brand awareness and product/service types (Zelenka & Hruska, 2018).

Failure to develop privileged applications for regular customers who are loyal to the brand, or conflicts in reservations, etc., cause airline companies to lose their advantages over their competitors. On the other hand, airline companies with a consumer-based approach and a strong brand equity have a privileged place in the brand preferences and purchasing decisions of potential customers (Chen and Chang, 2008). Indeed, research has indicated that there exist favorable associations between consumer-based brand equity, purchasing choices, and brand preferences. Consequently, when airline companies possess strong brand equity, it leads to a higher preference among customers, and when combined with intermediation, it significantly influences their purchasing decisions. Many passengers who receive service from airline companies share a lot of information on social media about the airline they have experienced. This shared information is considered as important data for the evaluation and recognition of airlines. Social media, whose importance is increasing day by day, also plays an important role in determining factors such as brand awareness and brand value of airlines (Seo & Park, 2018).

Following the difference tests conducted as part of this study, the following results were achieved:

- Significant and moderately strong relationships were found between “viral marketing” and brand equity and Covid-19 variables. On the other hand, the relationship between "brand equity" and the Covid-19 variable is significant and strong.
- Viral marketing exerts a notable influence on brand equity, explaining approximately 27.5% of the variance in brand equity.

In addition, as a result of the difference tests;

- Significant variations were observed among all groups with respect to the 'gender' variable, except for the 'brand loyalty' variable.
- No statistically significant distinctions were found among any of the groups concerning the 'age' variable.
- In relation to the 'education level' variable, no noteworthy differences were identified across any of the groups. The only exception is the brand awareness variable.

- Dimensions that differ between groups in terms of the income level variable; brand awareness, brand association and perceived quality.
- Substantial variances were identified among all groups when considering the 'preferred airline company' variable.
- No statistically significant distinctions were detected among any of the groups in relation to the 'reason for flight' variable.

The findings of this study closely align with those of previous research in the literature. In fact, a study conducted by Liu and Wang in 2019 reached the conclusion that viral marketing initiatives have a positive impact on both brand equity and purchase intent. The study conducted by Seo & Park (2018) also showed that airline-related e-WOM activities carried out through social media increase brand equity. As a result, competition in the air transport sector is quite high. Companies compete to offer their customers the best flying experience. Many airline companies also aim to increase their brand value with viral campaigns using their social platforms.

In light of the constraints of this study, here are some recommendations for future research:

- This study is a cross-sectional study. More comprehensive longitudinal studies can be conducted in different studies to be conducted.
- In this study, data were collected online due to the pandemic period. A similar study can be conducted where data are collected face to face.
- The study can be repeated in different sample groups.
- The research employed a quantitative approach, utilizing a survey methodology.
- Different studies can be carried out with qualitative research methods.
- In future research, the moderator effect of demographic variables between viral marketing and brand equity can be investigated.

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