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## Effects of consumer personal characteristics and psychological factors on nostalgia marketing

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**Abstract:** This study sought to establish the effects of nostalgia and marketing as outcome variables using consumer personal and psychological factors. First, loneliness had a significant positive effect on consumer self-esteem and social connectedness but did not directly affect the outcomes of nostalgia marketing. Second, the nostalgia function was affected significantly by personal innovativeness and loneliness but not by high price sensitivity. Highly price-sensitive consumers should be targeted with a nostalgia marketing strategy applying a high-quality personal value standard. Third, self-affirmation, which is a nostalgia function, had a significant effect on nostalgia marketing but did not support social connectedness. Nostalgia stimulation was effective in social connectedness, but consumers were not significantly influenced by nostalgia marketing. This study shed light on the importance of the concept of nostalgia in marketing. This is done by incorporating themes or products from the past to create a unique emotional feeling in customers.

**Keywords:** nostalgia; social connectedness; self-positivity; loneliness; personal innovation; price sensitivity.

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## 1 Introduction

Nostalgic appeals are popular in many fields, including movies, marketing, fashion, and food. People often have good memories of their past and enjoy looking back to happy times. They enjoy being reminded of happy memories with family and friends (Kwon, 2016). Contrastingly, since the middle of this 21st century, nostalgia has been viewed as a psychological problem related to homesickness and a desire to return home that cannot be fulfilled, which results in melancholy, depression, and loneliness (Rutherford and Shaw, 2011; Youn and Jin, 2017). In marketing, nostalgia as an individual characteristic was first defined by Holbrook and Schindler (1991) as a longing for or favourable affect toward things from the past. Holak and Havlena (1998) similarly defined nostalgia as a balanced, complex feeling, emotion, or mood produced by reflecting on objects, persons, experiences, and ideas associated with the past (Shields et al., 2016).

Some researchers have suggested that nostalgia includes both positive and negative emotions, which can occur separately or simultaneously. However, others hold that nostalgia is a positive emotion related to personal memory and experience (Havlena and Holak, 1988; Sedikides et al., 2006; Routledge et al., 2011). Often, nostalgia becomes a positive emotion when recollecting familiar or happy people or objects in childhood (Hepper et al., 2012). The characteristics of nostalgia include diverse responses such as peacefulness, comfort, warmth, gratitude, love, sorrow, and loss. Some researchers have found that, overall nostalgia is a positive and stable response (Holak and Havlena, 1998; Muehling and Sprott, 2004).

All such memories, pleasant emotions, and sad recollections can be of use in business (Kim, 2016a). When people face issues such as a slowdown in economic growth, unemployment, lack of preparation for aging, and concerns over health, they desire physical and psychological comfort, which can sometimes be achieved through nostalgia stimuli. In other words, to escape from an unstable reality, they long for warm memories and thus favour products and services that evoke nostalgia (Kim, 2016b).

Nostalgia is often a reaction to frustration, loneliness, and sorrow and an effort to change to a more peaceful state (Wildschut et al., 2006). According to psychology experiments, the part of the brain activated when recollecting the past is the same as the part activated when receiving pleasant rewards. In other words, recollecting the past is not only recalling a memory, but also arousing positive emotions like warmth, comfort, and stability to relieve stresses and is often an attempt to distance one's self from a present reality. The nostalgia effect changes an unpleasant emotion to a positive emotion through a combination of current and past life experiences and perspectives (Hertz, 1990).

One item that can cause nostalgia is a memory of a person (Holak and Havlena, 1992; Loveland et al., 2010). When recollecting special memories of family, friends, and loved ones, people feel a psychological stability as their desire for a sense of belonging and homogeneity is fulfilled (Mikulincer et al., 2003). This offsets the dissonance and unpleasant anxiety caused by social relationships and increases social connectedness (Routledge et al., 2011; Zhou et al., 2008). Owing to the influence of social connectedness as an effect of nostalgia, people seek closer relationships with others, prompting them to consider others' hardships and pains (Wildschut et al., 2006). According to Zhou et al. (2012), people who experience strong nostalgia empathise with others' pain and are more likely to show pro-social tendencies such as donating, performing social activities, and volunteering to help others in need. Through the improvement of social connectedness, nostalgia makes people feel loved and protected in social relationships, decreases their loneliness, and improves their confidence. These are some of the positive effects of nostalgia (Wildschut et al., 2006; Zhou et al., 2008). Loneliness reduces perceptions of social support and increases nostalgia. Nostalgia, in turn, increases perceptions of social support. Thus, the lonely may perceive social support in distinct ways. This restorative function of nostalgia has been particularly apparent among resilient persons. Nostalgia is a psychological resource that fosters mental health (Zhou et al., 2008).

Previous studies show that nostalgic branding has effects on consumer behaviours and attitudes (Holbrook, 1993; Loveland et al., 2010; Kessous et al., 2015; Holak and Havlena, 1992; Baker and Kennedy, 1994; Holbrook and Schindler, 1994; Holak et al., 2008; Muehling et al., 2014). Nostalgia branding also has effects on brand heritage, brand attachment, and brand equity (Merchant and Rose, 2013; Grebosz-Krawczy, 2018) as well as effects on incomes and customer loyalty (Toledo and Lopes, 2016). Most of the preceding research has analysed personal differences in response to nostalgic stimulation (Batcho, 1998; Holbrook and Schindler, 1994) and the causes for emotional responses from individuals (Holbrook, 1993; Wildschut et al., 2006). There has also been research into the promotion of emotional healing and recovery of social relations with the mediation of nostalgic function (Hart et al., 2011). According to Loveland et al. (2010), consumers feel a sense of belonging and social connectedness through shared use of products that arouse nostalgic stimulation. Most of the preceding research related to nostalgia marketing has been limited in verification of the functions of nostalgia marketing on consumer purchase intention or brand preference using advertisements containing previous, well-remembered objects or specific past times to produce nostalgia (Shin, 2017).

## **2 Theoretical background**

### *2.1 Effects of nostalgia marketing*

Nostalgic marketing is a marketing strategy in which the company provides nostalgic elements in their marketing activities to stimulate the nostalgia of consumers, evoke deep memories of consumers, and ultimately to promote consumer buying behaviour (Cui, 2015). In addition, nostalgia affects consequential the purchase decision involves a lot of emotions between nostalgic product/brand and consumer (Preseren and Koklic, 2017).

The scientific literature on psychology and marketing views nostalgia as an emotional connection between an individual and an object, possession, brand, or experience from the individual's past, thus distinguishing it from homesickness. Recent literature tends to conceptualise nostalgia as a positive emotion linked to the memories of experiences (Shields et al., 2016). While the yearning or longing for past experiences can be bittersweet, the connection between an individual and an object toward which he or she feels nostalgia is generally viewed as being positive (Shields et al., 2016). Since the 1990s, marketing strategies and advertisements using nostalgic stimulation have increased (Pascal et al., 2002; Rindfleisch and Sprott, 2000). Pinterest has great potential to evoke nostalgia. Marketers archive and curate old ads and images of classic products on Pinterest. Owing in part to visual vividness, these images can evoke nostalgic thoughts and feelings linked with the 'good old days'. Consumers turn to Pinterest to seek inspiration, enhance self-expression, search branded content, and stay connected with others (Youn and Jin, 2017).

The reason why such nostalgic stimulation is used in marketing strategies and advertisements is that consumers aim to recreate a sense of the past by purchasing products and services that remind them of their previous experiences; thus, products can be connected to positive emotions (Baker Kennedy, 1994). Just as research has shown that consumers' stimulated nostalgia affects brand perception and brand loyalty, nostalgia marketing provides a stable feeling to consumers as they recollect the past. Thus, consumers are likely to react favourably to nostalgia marketing strategies (Pascal et al., 2002; Muehling and Sprott, 2004; Reisenwitz et al., 2004). An increase in evoked nostalgia should result in a more positive attitude toward a product and the associated brand and greater intention to purchase the brand (Youn and Jin, 2017). Kim (2006) revealed that consumers' emotional factors when exposed to nostalgic stimulation highly influence product preference, and another study showed that nostalgia marketing has positive effects on evaluation of corporate social responsibility (CSR) (Park, 2014). The positive emotions caused by nostalgia help form preferences for products related to the positive memories. When consumers cannot satisfy a desire caused by nostalgia marketing, as an alternative, they aim to consume a product that reminds them of their past. Nostalgia marketing has largely contributed to sales increases and better connectedness among consumers who recollect the past and the associated brands and has promoted the purchase of products by arousing nostalgia in the baby-boomer generation, who are facing retirement. Nostalgia marketing is effective for the following target audiences: people with positive emotions about their pasts, people who cannot meet physically with others as part of social relationships, and people who feel attached to brands associated with past acquaintances or experiences (Kim et al., 2016; Loveland et al., 2010; Muehling et al., 2014; Wang et al., 2014).

## 2.2 Personal characteristics of consumers

### 2.2.1 Personal innovativeness

A person with *personal innovativeness* has the ability to accept new products and technologies easily. According to Rogers (1962a), personal innovation is the degree of acceptance of innovation earlier than other consumers within the social system (Engel and Blakwell, 1982; Lee et al., 2001). Consumers open to new experiences or stimulation are *innovators*. Innovative consumers make independent decisions regardless of others'

opinions (Oakey, 2013). Jin (2014) verified that innovative consumers quickly select new experiences or stimulation. When the selection of innovative products increases, innovation also increases (Midgley and Dowling, 1978), and the information search for them is less than non-innovative consumers.

As consumer innovativeness influences the selection, speed, and acceptance of new products or technologies, corporate marketing strategies should take this quality into account (Kim et al., 2005). Innovative consumers have high cognitive absorption and show positive responses to ease of use or usefulness of information compared to consumers with lower innovation (Park, 2004). In addition, innovative consumers show different speeds of product acceptance, in accordance with product characteristics or marketing environments (Moon and Kim, 2015).

H1-1 Personal innovation positively influences self-positivity.

H1-2 Personal innovation positively influences social connectedness.

### 2.2.2 Loneliness

Building a positive communicative relationship with others in the sociocultural environment is a basic human desire (Maslow, 1968). When lacking social relationships to express basic emotions, people feel a sense of isolation called *loneliness*, for which scholars have presented diverse definitions. Weiss (1973) emphasised the importance of the quality of relationships over the number of social relationships. Presence of many relationships does not always result in feeling less lonely. Peplau and Perlman (1982) defined loneliness as an unpleasant subjective emotion that occurs when the frequency of social relationships and their value are low. This unpleasant emotion can lead to a negative viewpoint on society (Duck et al., 1994). People recollect past memories at least once a week, looking back on people, such as friends or family, and recollecting the past from their current viewpoint. Essentially, they are their own main characters, and other people surround them in the memories. This phenomenon increases during times of conflict, stress, and situation isolation. To avoid the negative emotions of reality, people recollect and hang onto a joyful past (INews of Kookje, 2016). According to Telegraphy and the UK's Nationwide Building Society (NBS), 89% of people in their 10–30s who frequently used social media service experience regular loneliness, while 70% of people 55 and up report loneliness. Humans' social relationships are formed and maintained by dialogues and experiences, whereas relationships based on SNS focus on sharing information instead of communication and communion. According to an analysis of 16,000 people by Luhmann, published in *Developmental Psychology*, human loneliness noticeably is high in people in their 30s or 50s (Donga Science, 2017). People in their 30s feel anxiety about duty and the responsibility of taking care of their family, which can produce loneliness. People in their 50s feel anxiety about their children's education, their children's marriages, voluntary retirement, preparation for later years, and health, which can lead to loneliness. Wildschut et al. (2006) found that, when the UK university students were provided with situations arousing nostalgia, most experiencing nostalgia under negative conditions like sorrow, pain, and irritation reported an increase in mood. When feeling lonely, people are particularly susceptible to nostalgia, and those who feel greater loneliness experience higher levels of nostalgia than those who feel less lonely. Nostalgia dilutes negative emotions and leads to positive, hopeful emotions regarding the future, which can offset loneliness (Lee, 2015). According to Kaplan (1987), nostalgia

can help people recover their sense of value by positively restructuring the past through recollection of positive memories. In this way, people feeling lonely are able to use nostalgia to heal themselves and maintain their identity (Chaplin, 2000; Jeong, 2015). According to Zhou et al. (2008), people feeling lonely have a greater desire to return to the past and a deeper longing for positive memories and people and places of the past. Affected by nostalgic stimulation, they feel that they are receiving social support, which lessens their loneliness. Since people feeling lonely want to have relationships with others, they are likely to prefer products or services that arouse nostalgia (Lee, 2015; Loveland et al., 2010). Another study (Sedikides and Wildschut, 2016) confirmed earlier studies, showing that people feeling greater loneliness show higher nostalgia than people feeling less lonely, and that people feel more nostalgia when thinking of family and friends compared to other acquaintances.

H2-1 Loneliness positively influences nostalgia marketing.

H2-2 Loneliness positively influences self-positivity.

H2-3 Loneliness positively influences social connectedness.

### 2.2.3 Price sensitivity

As one of the '4 Ps' of modern marketing, *price* is defined as 'monetary expression of the value of an object' by the National Institute of the Korean Language. Price is the consumers' subjective judgement of the value of products or services. According to Kim and Choi (2009), consumer response to a price depends not on the actual price, but on consumer perception. If the perceived value of the item is greater than or equal to its price, then consumers consider the purchase of the item to be equitable (Kim, 2003). According to Yoo (2017b), consumers perceive price as an indicator of the quality of an item, so that high-priced items are perceived as having high quality, hopefully influencing the consumer to purchase the item. Consumers' subjective responses to high or low prices are referred to as their *price sensitivity*. Nam and Lee (2009) defined price sensitivity as an intention to pay a cheaper price based on personal subjective value. Using the concept of price sensitivity provides insight into the psychological effectiveness of price. As price sensitivity affects consumers' purchase intentions before recognition of the value of products and services, it is essential to select a price that can satisfy consumers' subjective cognition.

Currently, there is often very little difference in the quality of many products and services. Therefore, setting a price that can meet consumers' expectations and price sensitivity is essential in a campaign to hold a dominant marketing position (Yi, 1994; Yoo, 2017b). Consumers with high price sensitivity focus more on price than consumers who have low price sensitivity. Consumers with high price sensitivity are more sensitive to discount rates of high-priced products than of low-priced products (Mazumdar and Sung, 1993; Yang, 2013). According to Lasaleta et al. (2014), once consumers receive nostalgic stimulation, their psychology regarding money is affected because of the increased sense of belonging and social connectedness. A decrease of price sensitivity leads to an increase of intention to pay the price of an item under consideration and an increase in the desire to purchase the item (Lee, 2017).

- H3-1 Price sensitivity positively influences self-positivity.
- H3-2 Price sensitivity positively influences social connectedness.

### *2.3 The functions of nostalgia*

#### *2.3.1 Self-positivity*

Nostalgia increases positive feelings in the present by reminding a person of positive feelings from the past, when s/he was a member of groups such as a family, a neighbourhood, or a town. The literature has verified the effects of positive emotions aroused by nostalgic stimulation. In an experiment based on recollection of past perspectives related to friends and/or family through nostalgic stimulation, Wildschut et al. (2006) showed that nostalgia helps people to judge themselves positively, working as a repository of positive emotions. Remembering the past means that the current life is based on a positive and negative psychology. Thus, people experiencing nostalgic stimulation can increase their self-positivity and self-esteem.

Nostalgia can cause both positive and negative responses at the same time. However, positive emotions tend to occur more frequently (Hwang, 1999; Kim, 2017). If a marketing message based on nostalgic stimulation induces pleasant, happy, or romantic responses, the positive emotion toward the brand can lead to a positive evaluation of additional products from the same brand (Han, 2014). Such positive emotions as joy, happiness, and stability caused by the influence of the sociocultural environment increase consumer desire to retain the positive emotions, which are significantly related to consumer purchase intention (Baker et al., 1992; Kim, 2010). According to Yoo et al. (1998), positive emotions from nostalgic stimulation while shopping have a significant effect on consumer shopping intentions, and the temporary emotion has significant effects on the maintenance of consumer brand satisfaction and brand loyalty.

When purchasing products, consumers can appease their desire for social relationships by talking and sharing opinions with others, such as other consumers or the staff in stores, and they increase the value of their experience by expressing their opinions (Kwon, 2016; Tauber, 1972). Thus, the product purchase experience gained by the positive value stimulated by nostalgia marketing is the motive for the formation of positive ego. As a positive emotion, nostalgia activates self-positivity (Wildschut et al., 2006). Individuals exposed to nostalgic stimulation are favourable toward the brands in accordance with their egos, resulting in increases of self-positivity (Kim et al., 2016). According to the literature, nostalgia has significant effects on social connectedness (Yoo, 2017a).

- H4 Self-positivity positively influences nostalgia marketing.

#### *2.3.2 Social connectedness*

According to the literature, nostalgia positively affects one's sense of belonging and social connectedness (Gwak, 2012). The positive effects of nostalgia improve people's social relationship ability and lead them to feel social connectedness and affection (Wildschut et al., 2010; Zhou et al., 2008). According to Wildschut et al. (2006), when the ego is exposed to nostalgic stimulation, the person feels as if s/he is surrounded by friends. Many studies have used social connectedness as an element of social

composition because nostalgia exists within a sociocultural environment, and they have thus focused on people's recollections related to memorable moments or memories with acquaintances, family, or friends (Gwak et al., 2012; Wildschut et al., 2006). Park (2013) saw nostalgia as a concept reflecting the ego within society such that people feel connected to others; it decreases their anxiety within social relationships and produces social connectedness, love, and a sense of belonging (Routledge et al., 2011; Wildschut et al., 2010). People who are experiencing nostalgia have a stronger perception of and affection for social support and the associated psychological stability than people who are not experiencing nostalgia (Ji et al., 2004; Ng and Houston, 2006). In social nostalgic stimulation research, empathy and social contribution have significant effects on social connectedness, which is an essential element of brand identification (Kwon, 2016).

Braun-LaTour et al. (2007) said that previous personal experience directly affects consumption tendency and preference throughout life. Personal tendencies formed in early childhood or adolescence influence those of adulthood. Consumers experience a sense of connectedness with people consuming similar products or services. Thus, the consumption of products prompted by nostalgic stimulation makes consumers feel as if they are connected to the past through a tangible recollection. Lee (2017) argued that consumers of products arousing nostalgia feel they are being connected to the past, and the psychological connectedness with people enjoying the same experience increases the purchase intention. Gwak (2012) similarly found that consumer purchase intention is significantly influenced by the improvement of social connectedness shown in nostalgia-friendly content. Nostalgia improves interpersonal influence within social relationships through feelings of social connectedness and a sense of belonging through emotional stability and peacefulness (Wildschut et al., 2010; Zhou et al., 2008). The proximity afforded by nostalgia is psychological rather than physical; nostalgia is as an indirect compensatory strategy; it relies on mental representations of social bonds as a source of social connectedness (Gardner et al., 2005). The findings of Wildschut et al. (2010) showed that, if nostalgia is a response to deficiencies in relational connectedness, then it is reasonable to consider homesickness and nostalgia to be contiguous in time. Wang et al. (2017) said that the effects of high nostalgia on preference for indulgent foods could be explained by high social connectedness. Based on this discussion, we propose that social connectedness positively influences nostalgia marketing.

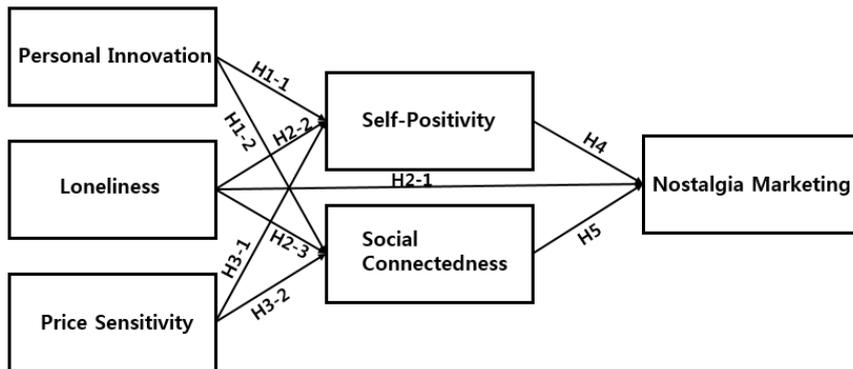
H5 Social connectedness positively influences nostalgia marketing.

### **3 Research model and hypotheses**

#### *3.1 Research model*

In accordance with the literature, this research model was established to explore the effects of consumers' personal characteristics (such as personal innovation, loneliness, and price sensitivity) on the functions of nostalgia, including self-positivity, social connectedness, and marketing.

**Figure 1** Hypothesised model to explore relationships between personal characteristics, self-positivity, social connectedness, and nostalgia marketing



#### 4 Method and research

In this study, statistical processing of collected data was performed through data coding and data cleaning. Structural equation modelling was performed using the STATA/SE 12.0 program. Exploratory factor analysis was performed, and Cronbach's alpha value was calculated to measure the reliability. Finally, the hypotheses were tested by applying the refined model to the structural equation model. STATA/SE 12.0 is a model that combines confirmatory factor analysis and path analysis, and it can simultaneously analyse various statistical methods such as regression analysis, factor analysis, and correlation analysis (Lee, 2017).

**Table 1** Description of the sample (N = 232)

Categories		N	%	Categories		N	%
Sex	Male	111	47.84	Education	High school	69	29.74
	Female	121	52.16		Some undergraduate	1	0.43
Age	30~39	47	20.26	Bachelor's degree	129	55.60	
	40~49	155	66.81	Some postgraduate	26	11.21	
	50~59	24	10.34	Master's degree	7	3.02	
	60~	6	2.59	Salary	~1 mil. won	25	10.78
Occupation	Office clerk	97	41.81	1~2 mil. won.	40	17.24	
	Specialist	47	20.26	2~3 mil. won.	56	24.14	
	Self-employed	46	19.83	3~4 mil. won.	37	15.95	
	Other	42	18.1	4 mil. won.~	74	31.89	

##### 4.1 Date collection and sample

This study was conducted via a survey of people over the age of 30, because they were likely to feel nostalgia. An online survey was conducted to verify research assumptions.

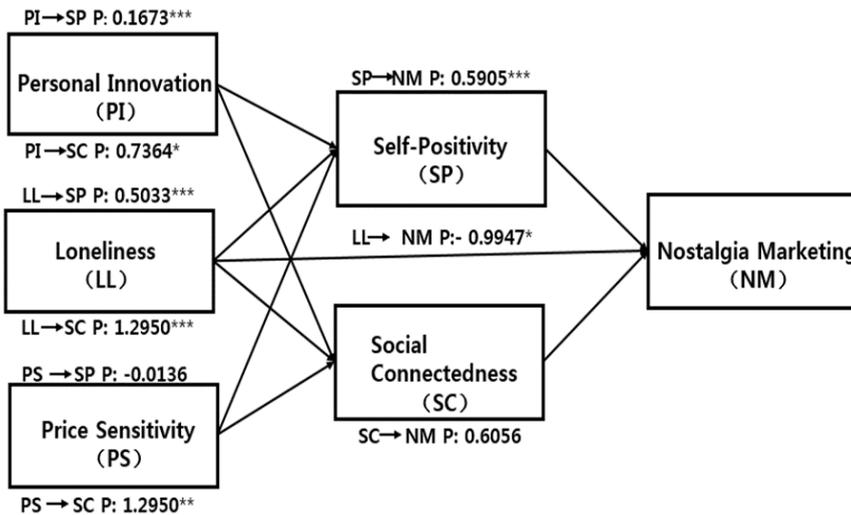
This questionnaire was issued for 15 days, from September 11–15. Of the collected questionnaires, the ones with obviously insincere answers were excluded. As a result, 232 copies were selected as effective responses.

#### 4.2 Measures

The variables used to measure the constructs were generated from the existing literature; where necessary, wordings of variables were adjusted to aid respondent understanding. The study adopted 24 variables to measure the six constructs of personal innovation (Parasuraman and Grewal, 2000; Tsueng and Lam, 2008), loneliness (Russell, 2009), price sensitivity (Goldsmith and Newell, 1997), self-positivity (Kim, 2016c; Watson et al., 1988), social connectedness (Kim, 2016c; Zimet et al., 1988), and nostalgia marketing (Wildschut, 2006). All the variables were measured using a seven-point Likert-type scale (1 = strongly disagree, 7 = strongly agree). Table 2 provides the details.

Using the STATA/SE 12.0 program, path analysis was performed, as shown in Table 3. Results of the structural model fit were analysed as shown in Table 4.

**Figure 2** SEM results for hypothesised relationships



This study analysed the characteristics of innovative consumers who readily accept new information and technology, independently make innovative decisions, value product scarcity, value purchasing their preferred products (Verhallen and Robben, 1994), and highly value self-positivity. When consumer innovativeness was analysed in the corporate dimension, rather than on the basis of products, the result showed it to be very positively connected to corporate sales profit (Subramanian, 1996) and positively affected acceptance speed and acceptance of a product or service (Midgley and Dowling, 1978). This study is meaningful in that firms can use its results for nostalgia marketing to stimulate self-positivity in their marketing strategy of a new or existing technology. In addition, this study follows Mowen and Minor (1995), in that innovators significantly influence opinion leadership based on social connectedness (Jin, 2014; Suh et al., 2008). Because innovators have strong individualism rather than collectivism, it is possible to

take advantage of such a tendency and apply it to a marketing strategy to draw positive results.

**Table 2** Details of observed variables and results of validity tests

<i>Constructs and their measures</i>	<i>Factor loading</i>	<i>Cronbach's alpha</i>
Nostalgia marketing (Wildschut, 2006)		
I greatly feel nostalgic.	0.7829	0.8514
I have a sense of nostalgia right now.	0.8516	
I feel nostalgic at this moment.	0.7426	
Personal innovation (Parasuraman and Grewal, 2000; Lam et al., 2008)		
I tend to use a new technology or a new service before others.	0.8419	0.8796
I am aware of the development of the latest technology related to my interest.	0.6946	
I enjoy using tools with cutting-edge technologies.	0.8664	
I have a lot of curiosity regarding new products that I want to use right away.	0.7616	
Price sensitivity (Goldsmith and Newell, 1997)		
I actively try to find inexpensive products.	0.7063	0.8712
I am influenced by a price discount.	0.7094	
I think it is worthwhile to visit various shopping malls to find a product or service at low cost.	0.8742	
I think it is worthwhile to spend time finding a product or service at low cost.	0.8320	
Loneliness (Russell, 2009)		
I don't feel that I am alone.	0.4391	0.7919
I belong to a group of friends.	0.6217	
I don't think my acquaintances share my interests and thinking.	0.7062	
I feel that I am often alone.	0.7449	
I have people to rely on.	0.7585	
Social connectedness (Zimet et al., 1988; Kim, 2016c)		
Nostalgia marketing stimulation makes me feel that I have a lot of character.	0.8479	0.8712
Nostalgia marketing stimulation makes me feel good.	0.7765	
It makes me feel that I am more valuable.	0.8449	
It makes me feel that I am connected with my loved ones.	0.7702	
It makes me feel that life is worth living.	0.7257	

Lee (2017) found that, in persons who highly perceived nostalgia through stimulation of character nostalgia, the purchase intention of very lonely persons showed a significant effect. In this test, the empirical causes and results suggested in previous studies were

reckoned backward. Therefore, it was found that, if loneliness was the independent variable, the dependent variable of nostalgia marketing was not influenced. This result was found in the same context as the study result that consumer satisfaction of lonely people the expression of their opinions regarding products significantly influenced their self-positivity. The study also found that loneliness had a partially mediated effect on the relationship between desire for psychological wellness and the nostalgia function of self-positivity (Baron and Kenny, 1986). This result can be meaningfully applied in designing a marketing strategy to satisfy self-positivity.

**Table 3** Results of hypotheses testing

<i>Hypothesis</i>	<i>Path name</i>	<i>Standard coefficient</i>	<i>p-value</i>	<i>Result</i>
H1-1	Personal innovation → self-positivity	0.1673	0.001***	Supported
H1-2	Personal innovation → social connectedness	0.7364	0.07*	Supported
H2-1	Loneliness → nostalgia marketing	-0.9947	0.068*	Not supported
H2-2	Loneliness → self-positivity	0.5033	0.000***	Supported
H2-3	Loneliness → social connectedness	1.2950	0.000***	Supported
H3-1	Price sensitivity → self-positivity	-0.0136	0.84	Not supported
H3-2	Price sensitivity → social connectedness	0.1306	0.013**	Supported
H4	Self-positivity → nostalgia marketing	0.5905	0.000***	Supported
H5	Social connectedness → nostalgia marketing	0.6056	0.112	Not supported

Note:  $p < 0.1^*$ ;  $p < 0.05^{**}$ ;  $p < 0.01^{***}$ .

In this study, the coefficients of loneliness and social connectedness were 1.2950 and  $p = 0.000$  ( $p < 0.01$ ), respectively, with statistical significance at the level of 1%. Accordingly, hypothesis 2–3 was accepted. This result was consistent with the finding from another study, which showed that the greater was one’s loneliness in social relationships, the greater was the desire for friendly relationships (Weiss, 1973), as well as the finding that, to heal loneliness, the deficiency of social emotions and social connectedness increased (Segrin and Terry, 1995).

This result was quite similar to a study result that showed that consumers who valued materialism showed undesirable attitudes such as impulse purchasing and over-consumption, rather than self-satisfaction and positive emotions regarding purchasing (Paik, 1995). This result agrees with the finding that increased engagement in social relationships undervalued money, lowered price sensitivity, and thereby expanded product purchase desire (Lee, 2017), as well as the finding that social relationships influenced consumer purchase behaviour. Therefore, it is possible to apply the result to a marketing strategy.

This result was consistent with the finding that activation of self-positivity as a consumer psychological factor positively influenced the effectiveness of nostalgia advertising and marketing (Hwang, 1999; Kim, 2017). In addition, it matched the following finding; because nostalgia helped people to view their past as positive and successful, the positive emotions created by nostalgia positively influenced consumer purchase intention and brand preference (Merchant et al., 2013; Pascal et al., 2002).

Gwak (2013) showed that, if nostalgia was an independent variable, the dependent variable of consumer purchase intention had a significant influence on mediation of social connectedness. A study by Lasaleta et al. (2014) also revealed that social connectedness caused by nostalgia weakened the desire for money, so that nostalgia marketing was effective in times of economic depression. However, according to research on the interaction between social connectedness and idealistic self-consistency level, Kim (2017) showed that nostalgia stimulation did not influence social connectedness. The results from this study showed that, if social connectedness was an independent variable, the dependent variable of nostalgia marketing was not significantly influenced.

**Table 4** Structural model fit

	<i>Categories</i>	<i>Fit index</i>	<i>Categories</i>	<i>Fit index</i>	
Likelihood ratio	$\chi^2$ _model vs. saturated (243)	432.880	Information criteria	AIC	17,751.236
	$p > \chi^2$	0.000		BIC	18,030.422
	$\chi^2$ _baseline vs. saturated (276)	3,152.159	Baseline comparison	CFI	0.934
$p > \chi^2$	0.000	TLI		0.925	
Population error	RMSEA	0.058	Size of residuals	SRMR	0.079
	90% CI< lower bound	0.000		CD	0.999

	<i>Fit index</i>	<i>Fitness standard (good)</i>	<i>Fitness standard (acceptable)</i>	<i>Fitness result</i>
$\chi^2/df$	1.781	<2	<3	Good
RMSEA	0.058	<0.08	<0.10	Good
SRMR	0.079	<0.05	<0.10	Acceptable
CFI	0.934	>0.90	>0.80	Good
TLI	0.925	>0.90	>0.80	Good

According to Sharma et al. (2005), if the number of samples in the goodness-of-fit analysis of the structural equation model is greater than 200, goodness-of-fit indexes such as the comparative fit index (CFI), Tucker Lewis index (TLI), and root mean square error of approximation (RMSEA) are desirable (Altanzul, 2017). Therefore, given the result from the analysis on the overall goodness-of-fit of the structural model of nostalgia marketing, personal innovation, price sensitivity, loneliness, self-positivity, and social connectedness in this study, the model is considered a good fit. First, in terms of the chi square<sup>2</sup> ( $\chi^2$ ) model vs. saturated (243) in a likelihood ratio-test, the ratio was 0.000, indicating that the model had goodness-of-fit. With a confidence interval of 90%, the RMSEA of the population error was 0.058, and the lower bound was 0.000, which was lower than the recommended 0.08 of the reference model. The CFI for baseline comparison was 0.934, and its TLI was 0.925; both were close to 1. The SRMR was 0.079, close to the 0 of the reference model. The CD was 0.999, which was close to the 1 of the reference model. Therefore, the model showed goodness-of-fit (Jeong, 2016). Based on the analysis results, the hypotheses set up in this study were examined.

## 5 Results and discussion

### 5.1 Results

In the field of consumer psychology, nostalgia marketing is a viable trend. Nostalgia is an emotion generated differently depending on each individual's personality. However, it occurs regardless of age or sex (Sedikides et al., 2004; Zhou et al., 2008).

With the innovations of science and technology, there is less difference in product quality among enterprises. Thus, firms must understand consumer needs and design appealing marketing techniques to compete successfully with other firms. Accordingly, stimulating intelligent consumers' emotions in a way that increases sales depends on understanding their personalities and psychological factors. This is necessary to provide consumers with positive perceptions of the product or brand, which will in turn induce purchase behaviour. To analyse how consumer personality and psychology influence nostalgia marketing, this study referred to previous studies, drew relevant factors from them, and setup a research model along with several hypotheses. For the empirical survey, this study conducted an online questionnaire with black and white photos of adult men and women aged 30 or older to recall childhood scenes where they played with friends. First, according to the path analysis, personal innovation significantly and positively influenced the nostalgia function. A previous study showed that purchase intention was significantly influenced by the loneliness of consumers, who were stimulated by nostalgia depending on the intensity of loneliness (Lee, 2017). In this study, if loneliness as a consumer psychological factor was an independent variable, nostalgia marketing was not positively influenced. Accordingly, there was a different analysis outcome depending on the reverse reckoning of the loneliness cause and the result of nostalgia stimulation. This result was the same as that of a previous study, which showed that the lonelier was a consumer, the greater was her/his tendency to be active in social relationships, and that self-positivity was improved by consuming nostalgia products.

Third, price sensitivity positively influenced social connectedness but did not influence self-positivity.

Fourth, self-positivity enhanced nostalgia marketing. This result was consistent with Kim's (2017) finding that self-positivity enhanced nostalgia stimulation. Last, social connectedness negatively influenced nostalgia marketing. This result was the same as that of a previous study on interaction between social connectedness and idealistic self-consistency level, in which nostalgia stimulation did not influence social connectedness (Kim, 2017).

The effects of nostalgia are summarised in a study by Kantola (2018). The effects are divided into two main categories: psychological effects and physiological effects. Psychological effects can be divided into social and person-level effects. The person-level effects come from both self-positivity and social connectedness (Hart et al., 2011; Wildschut et al., 2010). In this study, we found that personal innovation, loneliness, and price sensitivity are important factors in terms of self-positivity and social connectedness.

## 5.2 Discussion

First, this study expanded previous research that focused on nostalgia influence and consumer reaction to nostalgia stimulation and thereby set consumers' characteristics and psychological factors as causes to analyse their influence on nostalgia functions and nostalgia marketing. This study divided consumer characteristics into psychological factors, price sensitivity, and personal innovation (which has rarely been done in previous studies) and then examined nostalgia functions. The study is academically meaningful in that it contributed to establishing a differentiated marketing strategy to respond to consumers' characteristics.

Second, in previous literature on nostalgia functions and nostalgia marketing, nostalgia stimulation was set as an independent variable, and purchase intention and brand attitude were set as dependent variables for empirical analysis. In this study, consumers' characteristics and psychology were set as independent variables and nostalgia marketing as a dependent variable, so that it was possible to change from the general perception of previous studies. In this aspect, this study drew more advanced results. For instance, based on the results of previous studies, in which the greater was consumer loneliness, the greater was the positive influence of nostalgia stimulation materials, the study showed a positive correlation between loneliness and nostalgia stimulation. However, this study also revealed that loneliness negatively influenced nostalgia marketing. In this way, this study secured a different viewpoint from previous studies and advanced theoretical development.

Third, it is hard to obtain a competitive edge only on the basis of product quality and function. In this circumstance, nostalgia stimulation in emotional marketing urges consumers to recall memories, and so a marketing approach using consumers' characteristics and psychology can become a good strategy in terms of corporate cost saving and profit increase.

These results suggest the importance of paying attention to nostalgia in marketing. Positive experiences in the past often arouse people's nostalgic feelings. Those memories counteract loneliness and strengthen social connectedness and self-positivity. To take advantage of this, firms are incorporating themes or products from the past into their current marketing strategy to evoke a unique emotional feeling in customers. Nostalgia marketing strategies consist of character nostalgia, event nostalgia, and collective nostalgia (Cui, 2015). Using nostalgia as a marketing tool can bring not only considerably higher performance to the business, but also establish a cadre of loyal customers (Toledo and Lopes, 2016). This is very advantageous for sustainable development of the company.

## 5.3 Research limitations and future research directions

The results of this study led to a variety of theoretical suggestions. This study had some limitations but also introduced future research directions.

First, the study subjects were limited to those in their 40s. Therefore, it was impossible to secure differentiation and diversity of nostalgia stimulation in terms of the personal characteristics and psychological factors of different age groups. Second, the survey was conducted online, so respondents unfamiliar with online environments had poor completion rates. If both online and offline questionnaire surveys were conducted, a more accurate and diverse set of results could be drawn. Humans can be inconsistent and

unreasonable because of limited knowledge and cognition. Thus, they may give higher evaluations when feeling optimistic and may act without self-control and with severe bias in decision-making if they are overconfident (Yoo, 2017b). Therefore, it is necessary to analyse data concerning preferences and tastes with a psychological understanding of personal characteristics and then apply the data to marketing. Previous studies have focused on increases in consumer purchase intention and brand preference in response to marketing with nostalgia stimulation. In the future, it will be necessary to research how consumer memory of corporate messaging influences nostalgia marketing.

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