The originality of the present study lies in that it examines generation Z residents’ engagement with the city’s social media during economic crisis in relation to city image, city brand personality and residents’ overall satisfaction. In order to test our hypotheses, 947 usable questionnaires were collected in Thessaloniki, Greece via the mall intercept technique. The findings reveal the significant impact city image and city brand personality have on generation Z residents’ engagement with city’s social media. The results also demonstrate a negative linkage between residents’ overall satisfaction and their engagement with the city’s social media. Lastly, the results support that the relationship between residents' overall satisfaction and their engagement with city's social media accounts is moderated by the effect of economic crisis on residents' personal daily routine. Implications for theory and practice are also discussed.

Keywords: City image; city brand personality; Generation Z; residents; social media engagement; economic crisis
1. Introduction

Cities of all sizes around the world compete for attracting greater numbers of tourists, new residents, and investors that would contribute to their growth and create a positive spiral of development (Dinnie, 2011). Within this context, city branding has become an emerging phenomenon in the academic world and a vital practice for city authorities worldwide (Green, Grace & Perkins, 2016; Kavaratzis & Hatch, 2013; Manyiwa, Priporas, & Wang, 2018; Sahin & Baloglu, 2014). Through city branding, a city attempts to promote its tangible and intangible attributes aiming to formulate the city image (Gilboa et al., 2015; Nallathiga, 2011). Gilboa et al. (2015) assert that the determination of a city’s image constitutes the first step in a branding city campaign. Image is considered valuable for city branding as a city’s aim is to create a “favourable place image and a general, positive place reputation to underpin development/regeneration efforts” (Ashworth, Kavaratzis, & Warnaby, 2015, p. 6). Previous studies have documented the crucial role residents play in city branding (see Braun, Kavaratzis, & Zenker, 2013; Manyiwa, Priporas, & Wang, 2018; Zenker, Braun, & Petersen, 2017). However, the perceived image of a place is rather subjective (Loureiro, Stylos & Miranda, 2019), and it can, thus, vary between individuals or different population groups, as in the case of, for example, of perceived images formulated by tourists and residents of a city (Manyiwa et al., 2018; Zenker & Beckmann, 2013). Residents who hold positive images for the place they live at, also tend to be more contend with their life there (Zenker & Seigis, 2012).

Furthermore, Sahin and Baloglu (2014) point out that besides image, brand personality should be also taken into consideration when formulating destinations’ (e.g. city) marketing. Brand personality is important to brand image as it mirrors the emotional side of brand image (Biel, 1997; Kaplan, Yurt, Guneri, & Kurtulus, 2010). Furthermore, city brand personality is meaningful for marketing communication in multiple ways (Amatyakul & Polyorat, 2016). Cities around the world use social media tactics as part of their city marketing to promote
themselves to diverse stakeholders (e.g. residents, visitors, local businesses, travel trade and
government). Similar to organizations, places (i.e. countries, regions, and cities), need to focus
on the social media tactics implemented, such as the content shared, as it will impact consumer
engagement with the place brand (Homburg, Ehm, & Artz, 2015). Systematic involvement
with potential audiences on social media platforms is considered to be necessary in order to
ensure the longevity of a strong city brand (Ketter & Avraham, 2012; Sevin, 2013, 2016).

The focal point of this study is generation Z residents’ viewpoint. This generation
consists of people who were born from 1995 to 2009. A report conducted by Barclays bank
(2018) highlights generation’s Z key role in the future economic development of nations, since
by 2020 the so-called Zers will represent 40% of consumers in the United States, Europe and
BRIC (Brazil, Russia, India and China). Another important element to be noted is that between
the chronological boundaries of the Generation Z era mentioned above, two financial crises
have broken out (namely, the dot-com bubble and the global financial crisis of 2008), which
have largely affected individuals’ financial standing and aspects of well-being (Myers, 2017;
Rees, 2018).

Against this background, this study attempts to investigate generation Z residents’
engagement with the city’s social media in terms of city image, city brand personality and
residents’ overall satisfaction during an economic crisis era. This group of people attracts very
vividly marketers’ interest, as they form the youngest adult consumer and city-resident group,
and according to Kavaratzis (2004) locals are significant for city branding and marketers of a
city, and for so directly targeted.

The findings of this study will contribute to the literature in the following manner: First,
it explores city image from residents’ point of view as well as its influence on social media
engagement where not considerable research exists (Gilboa et al., 2015). Secondly, it attempts
to fill a gap in the literature by examining city brand personality and its potential effect on the
frequency of sharing views via city’s’ social media—an area where a limited number of studies exist (Amatyakul & Polyorat, 2016), especially from the residents’ point of view. Thirdly, it focuses solely on Generation Z residents (i.e. consumers), where a dearth of studies on Generation Z in the marketing field has been attested (see Kamenidou, Mamalis, & Dimitriadis, 2018; Priporas, Stylos, & Fotiadis, 2017; Stavrianea, Siomkos, Kamenidou, & Bara, 2018). To our knowledge, this is the first study of Generation Z on city branding context. This generation seems to pose the biggest challenge for future marketing research (Morgan, 2016), and their preferences of life are much different from the previous generations (Ozken & Solmaz, 2017). Furthermore, they are heavy users of social media platforms in terms of consumption and engagement (Duffett, 2017). Fourthly, social media usage and engagement both generally and specifically by residents in the city branding context has been understudied (Cleave, Arku, Sadler, & Kyeremeh, 2017; Sevin, 2016; Uchinaka, Yoganathan, & Osburg, 2019). Finally, we have included in our study other social media platforms (Instagram, YouTube and LinkedIn) beyond Facebook and Twitter as suggested by Uşaklı, Koç, & Sönmez (2017).

The remainder of the paper is organized as follows: firstly, the relevant and most recent literature is being presented, and hypotheses development is provided. Then, the research methodology design is described, followed by the presentation of the findings. In the last part, the main conclusions, limitations and implications of the study are discussed.

2. Theoretical background

2.1. Generation Z

Generation Z (or Gen Z) is the youngest and largest consumer group across all generations from 2017 through to 2030 (Euromonitor, 2018). Although various sources provide different start dates for Gen Z, it is generally acknowledged to begin in 1995 (Bassiouni & Hackley, 2014; Kamenidou et al., 2018; Priporas et al., 2017). Members of this generation are highly
educated, technologically savvy, innovative and creative (Priporas et al., 2017). They are characterized as digital natives, individualistic, pragmatic, open-minded and socially responsible (Euromonitor, 2018). Given that this generation was actually the first one born into an entirely digital world (Bernstein, 2015), they use technology and digital devices extensively, and they strongly engage through social media which, inevitably, more or less shape their lives (Yussof et al., 2018). As a result, it makes them more digital in nature and socially connected than previous generations (Ruangkanjanases & Wongprasopchai, 2017). Gen Z constitutes a challenge, since it appears that they behave differently than previous generations and this behavior may lead to changes in consumer behavior (Barclays, 2018; Schlossberg, 2016), especially taking into account that they are characterized as economically conservative and social activists (Barclays, 2018), thinking about personal satisfaction, but also being more sensitive to social effects (Abdullah, Ismail, & Albani, 2018).

2.2. Social media engagement and cities

Social media (SM) are still considered a relatively new marketing communication tool (Duffett, 2017), although its usage rises tremendously among individuals, organizations, and governments. However, in the city context (i.e. at municipality level) social media are used sporadically and have not yet developed fully as a tool for promotion (Cleave et al., 2017). Social media are increasingly important for the promotion of a city since it has an unprecedented potential to change the city branding (Björner, 2013; Ketter & Avraham, 2012; Sevin, 2016; Zhou & Wang, 2014), because it has an impact on city branding campaigns through communication and co-creation (Cleave et al., 2017). Social media communication facilitates and promotes direct interaction between users, such as municipalities and residents or visitors (Ketter & Avraham, 2012; Mangold & Faulds, 2009) as well as the generation of content (Allen, 2009) since residents are co-creators of the city brand campaign (Braun et al.,
The latter is crucial, as residents form not only the most important target audience of city branding, but they are also become the most significant marketers of a city (Kavaratzis, 2004).

Solis (2011) emphatically asserted that organizations, including municipalities, must “engage” or “die” within the social media environment. As Ketter & Avraham (2012), and Sevin (2013) rightly point out, engagement with diverse audiences via social media constitutes a key factor for the creation and maintenance of a strong city brand, without which local authorities would not be able to promote and foster a positive interaction with targeted populations. Within that context, cities may inevitably harm their brand if citizens or visitors believe that they remain antiquated or lacking in creativity, which may eventually be detrimental in terms of its reputation (Cleave et al., 2017).

Empirical studies (i.e., Cleave et al., 2017; Gümüş, 2016; Haro-de-Rosario, Sáez-Martín & del Carmen Caba-Pérez, 2018; Mainka et al., 2014) show that the social media platforms used mostly by cities are Facebook, Twitter, and YouTube, although there are obvious differences between the respective popularity of social media services for each city. Additionally, past studies (Agostino, 2013; Bonsón, Royo, & Ratkai, 2017; Haro-de-Rosario et al., 2018) indicate that citizen engagement with city social media platforms is usually quite low, and this engagement may differ in terms of the various social media.

2.3. City image

Cities are considered multifaceted entities perceived from a range of perspectives (Laaksonen, Laaksonen, Borisov, & Halkoaho, 2006), and several different factors can influence image of a city. Past studies indicate that city image is a multi-dimensional construct (Cassia, Vigolo, Ugolini, & Baratta, 2018), which can offer people a better perception of cities. Following Kotler’s definition of image, city image can be described as the set of beliefs, ideas
and impressions people hold regarding any city (Kotler, 1997, p. 607). City residents or visitors can shape the city image via “association chains or networks that are built up over a period of time, as a result of the stimuli aggregated” (Motamed & Farahani, 2018, p. 26). Similarly, Lynch’s (1960) seminal work has demonstrated that the formation of city image can be generated through a bilateral process led by both people and their environment. In other words, it has the form of a mental picture that people create about the specific city, which relies on objective knowledge (related to city facilities, for instance), and at the same time on more emotional elements (Manyiwa et al., 2018; San Martín & Del Bosque, 2008; Stylidis et al., 2017). Familiarizing oneself with these pictures is critical since “people’s attitudes and actions toward a city are highly conditioned by that city’s image” (Kotler, 1997, p. 607; Jaffe & Nebenzahl, 2006, p. 15). Therefore, one may claim that the construct of city image is a collective representation held by a great number of its inhabitants; it forms a common ground due to the inter-relation of a unique physical reality, a common culture and basic physiological nature (Luque-Martínez, Del Barrio-García, Ibáñez-Zapata, & Rodríguez Molina, 2007).

Many cities are, therefore, committed to creating a positive image to raise the awareness and interest of people in these cities. A positive and distinctive city image is the first step towards successful city branding (Merrilees et al., 2012; Paskaleva-Shapira, 2007). As a result, gaining a better understanding of city image is very crucial from a city management or marketing viewpoint, as it helps to recognize the benefits and flaws of a city (Luque-Martínez et al., 2007), and also facilitate dealing with the most problematic aspects to improve the overall city image. City image has two research streams: from tourists’ perspective and from residents’ perspective. However, the vast majority of the studies on the topic have focused on tourists’ perspective. Hence, it is of great importance to investigate the image from residents’ point of view, aspiring that examining residents’ city image can help policy makers and local authorities to understand how to improve their quality of life and welfare in them (Luque-Martínez et al.,
Moreover, citizens’ actions, traits as well as status could possibly make the city more appealing to potential investors, new businesses, and tourists (Choo & Park, 2009).

A successful city branding is achievable through residents’ meaningful participation (Uchinaka et al., 2019), since any branding effort of a city must be congruent with the perceived city image by city users, such as residents (Kemp, Childers, & Williams, 2012). Residents are co-creators of the city brand image (Braun et al., 2013; Kavaratzis, 2004) and they can ultimately act as city brand ambassadors, (Braun et al., 2013; Zenker et al., 2017) or as online city brand ambassadors (Uchinaka et al., 2019).

Ketter and Avraham (2012) highlight that social media allow users to create, as well as engage with place marketing campaigns that were previously initiated solely by the local authorities. Moreover, the study of Bonsón, Royo & Ratkai (2015) on official Facebook accounts of local authorities (city councils) reveals that content type (e.g. environment, housing) as well as media type (e.g. video, text) affect the level of citizens' engagement on Facebook.

Thus, we expect that:

\[ H_1: \text{City image has a significant and positive effect on Gen Z residents’ engagement with the social media channels of their city.} \]

2.4. Residents’ overall satisfaction

Attracting and retaining residents has always been a critical and challenging issue for cities (Insch, 2010), which are often regarded as bundles of services provided to citizens (Insch & Florek, 2010). The importance of residents’ satisfaction with the city they live in has been repeatedly highlighted in the relevant literature (e.g. Insch & Florek, 2008; Insch & Walters, 2018; Zenker, Petersen & Aholt, 2013; Zenker & Rütter, 2014). Citizens satisfied with their place of living develop a strong positive place identity (Insch & Walters, 2018), and they are
more likely to be generally satisfied with life in that city (Węziak-Białowolska, 2016). Along similar lines, based on a range of marketing studies, satisfied customers are more likely to exhibit a favorable response to firm-generated content in social media (Kumar et al., 2016). Therefore, it can be hypothesized that:

\[ H_2: \text{Gen Z residents’ overall satisfaction of living in a given city has a significant and positive effect on their engagement with the social media channels of the city.} \]

2.5. City brand personality

In a similar way to humans, brands can demonstrate specific and diversified ‘personality characteristics’ (Plummer, 2000). Aaker (1997), for example, has defined brand personality as “the set of human characteristics associated with a brand” (p. 347) in a study where she used forty-two traits and five constructs—namely sincerity, excitement, competence, sophistication and ruggedness. Adopting this definition signifies that a brand personality is perceived by external parties (consumers, for instance) by assigning to it certain traits, rather than being a construct on its own which already exists in the branded goods or services. According to Keller (2003), “brand personality reflects how people feel about a brand as a result of what they think the brand is or does, the manner by which the brand is marketed, and so on” (p. 86). As a result, brand personality can serve as a point of distinction for a brand and make it more competitive in its respective industry, especially limited diversification applies among similar products specifically in that market (Aaker & Joachimsthaler, 2000).

Adopting Aaker’s definition of brand personality, Kaplan et al. (2010) defined city brand personality as “the set of human characteristics associated with the city brand” (p. 1293). A critical review of previous research on the application of brand personality in the city context mainly from tourists’ point of view (see, for example: Ahmad, Abdullah, Tamam, & Bolong, 2013; Ekinci, Sirakaya-Turk, & Baloglu, 2007; Hosany et al., 2006; Kaplan et al., 2010; Sahin
& Baloglu, 2011) indicates a number of differences in the number and content of brand personality dimensions (Amatyakul & Polyorat, 2016; Tugulea, 2017). One possible explanation could be that the research samples were collected from different groups and, thus, they may have acknowledged different personality dimensions of the same city (Sahin & Baloglu, 2011). Despite different results of city personality dimensions being reported in each study, such results confirmed that the brand personality concept can be employed also in the city context, which does not constitute, however, a traditional product (Hosany et al., 2006).

Cities with a clear brand personality can attract consumers, such as residents and visitors (Ahmad et al., 2013), influencing their preferences and patronage (Selby, 2004; Sirgy & Su, 2000). Moreover, various scholars (i.e. Berthon, Pitt, Plangger, & Shapiro, 2012; Tussyadiah & Zach, 2013) point out that there is a need to integrate User Generated Content (UGC) as strategic knowledge to understand consumers’ experience, and to innovate marketing business models. Pine & Gilmore (1999) claim that the value proposition has to include the user experience for deriving value. Marketing literature suggests that in order for brands to achieve consumer engagement in online communities they need to initiate relevant activities and provide offerings to increase consumer's participation (Vivek, Beatty & Morgan, 2012); the higher the consumers value the potential outcome, the more engaged they become (Brodie, Hollebeek, Juric, & Ilic, 2011; Higgins & Scholer, 2009). Considering the above, it is expected that:

\[ H_3: \text{City brand personality has a significant and positive effect on Gen Z residents’ engagement with the social media channels of their city.} \]

2.6. The moderating effect of the economic crisis

The economic crisis that has struck Greece has affected significantly the life of the vast majority of Greek citizens since 2010. The austerity measures imposed by the Greek
government and its international creditors led to dramatic consequences for the Greek economy, society and citizens, which has influenced overall the everyday life in the country. Decrease in the GDP, salary and pensions reductions, increase in taxation, increase of poverty level (Kamenidou, Rigas, & Priporas, 2017; Priporas, Kamenidou, Kapoulas, & Papadopoulou, 2015), and at the same time brain drain, increase in unemployment rates among young people, who seek work in other countries (Farad, 2017) are only some aspects of the aftermath of this severe economic crisis. Additionally, the public sector (e.g. health, education) has been experiencing a squeeze on public funding, tighter financial controls, non-replacement of employees that retire. Also, municipal authorities have faced similar financial problems (Tsekos & Hlepas, 2019) which have negatively influenced residents’ daily routine. Regarding city residents’ daily routines, Panagopoulos et al. (2018) claim that the economic crisis has forced citizens to quit driving their privately-owned cars and walk more instead. In their everyday life, people are called to make decisions about events that will take place, either in the relatively near or distant future (Liberman & Trope, 1998). From the psychological perspective of the Construal Level Theory (Liberman & Trope, 1998), the effects of the economic crisis could be expected to impact residents’ perceptions (e.g. about city image) when these effects become close. With respect to daily routines, the closeness from a social, psychological and probabilistic perspective (Liberman & Trope, 1998) may affect perceptions and behaviors (Pizzi, Scarpi, & Marzocchi, 2014; Marzocchi, Pizzi, & Scarpi, 2016). Therefore, it may be hypothesized that:

**H4:** The perception of economic crisis on personal daily routine (ECPD) moderates the effect of city image on Gen Z residents’ engagement with the social media channels of their city, in a manner that this effect will be stronger for residents with high ECPD.
*H5:* The perception of ECPD moderates the effect of Gen Z residents’ overall life satisfaction on their engagement with the social media channels of their city, in a manner that this effect will be stronger for residents with high ECPD.

*H6:* The perception of ECPD moderates the effect of city brand personality on Gen Z residents’ engagement with the social media channels of their city, in a manner that this effect will be stronger for residents with high ECPD.

*H7:* The perception of economic crisis impact on city infrastructure (ECCI) moderates the effect of city brand personality on Gen Z residents’ engagement with the social media channels of their city, in a manner that this effect will be stronger for residents with high perception of ECCI.

*H8:* The perception of ECCI moderates the effect of Gen Z residents’ overall satisfaction of living on their engagement with the social media channels of their city, in a manner that this effect will be stronger for residents with high perception of ECCI.

*H9:* The perception of ECCI moderates the effect of city image on Gen Z residents’ engagement with the social media channels of their city, in a manner that this effect will be stronger for residents with high perception of ECCI.

Figure 1 illustrates the proposed model and the hypotheses.

**[Figure 1 Here]**

### 3. Context of the study

This empirical study is based on the city of Thessaloniki, one of the oldest cities in Europe located in the north of Greece, on the northern fringe of Thermaikos Gulf. The population of its greater metropolitan area exceeds 1,000,000 inhabitants. Thessaloniki is the second largest city in Greece, after capital city Athens (Gemenetzi, 2017). It is a major economic, industrial, commercial, cultural, and political center of the Balkans, also included in
the UNESCO’s World Heritage List (Gemenetzi, 2017; Lantitsou, Anastasiadis, & Anastasiou, 2017). Considering the positive side of the city image, Thessaloniki regularly hosts many intellectual and cultural events, such as The International Film Festival, while it is also one of the largest academic and educational centers in South-eastern Europe (Lantitsou et al., 2017) with a student community that amounts to 10% of the total population of the city (Polyzou, 2018). However, the lack of greenery and cleanliness, as well as the overburdened atmosphere are on the negative side of the city image (Lantitsou et al., 2017).

4. Methodology

4.1. Context and research procedures

A pilot study with 206 local Gen Z Thessalonians was conducted in March 2018, prior to the main survey, aiming to (a) verify that the respondents understand the questions, and (b) check the reliability of the measurement items. No problems were detected in relation to the wording or measurements of any of the items, and also the Cronbach’s alpha values for all constructs were found higher than 0.74, thus exceeding the threshold of 0.70 proposed in the literature (Hair, Black, Babin, & Anderson, 2010). Consecutively, we proceeded with the main survey.

Proper sample size considerations have been made to fulfil relevant prerequisites for applying covariance-based structural equation modelling and, ultimately, reach meaningful outcomes (Wolf et al., 2013). Both rules of thumb and power analysis were implemented, and the most conservative sample size estimation was adopted (Hair et al., 2010). Based on a common rule of thumb, sample size should be 800 (10*80, where 80 is the number of observed variables). Additionally, power analysis via G*Power 3.1 has indicated a minimum sample of 940 responses, based on effect size = 0.5; a = 0.05; power = 0.95; df = 2322; critical
\(\chi^2 = 2435.217\), which was adopted as final a-priori sample size estimation (Faul, Erdfelder, Lang, & Buchner, 2007).

Appropriate research procedures were followed prior to, during, and after the main survey, to enhance the reliability and validity of survey measurements, and avoid response bias, minimizing coverage, sampling, non-response and measurement errors (Neuman, 2013). Coverage error has been controlled by targeting only residents of Thessaloniki. Moreover, a series of measures were taken to avoid systematic bias; first, all data were collected under the same conditions and all respondents were provided with identical information regarding the study. Second, the survey instrument was articulated in the respondents’ native language, and also field researchers were qualified to run the data collection process (Bryman & Bell, 2015). A double back-translation process was also adopted to ensure the accuracy of scales while translating from English to Greek, and vice-versa. A balanced formulation of measurement scales (7-point Likert or semantic differential scales) was implemented to hinder any possible measurement errors. More specifically, acquiescence was restricted by avoiding using vague or ambiguous wording in the statements (Elson, 2017). In an effort to control for midpoint responding and extreme response style, we have included additional items for measuring constructs (for those ones that this could actually happen, e.g. city image), as well as including a “0 = I cannot answer” option (Stylos et al., 2016; Stylos et al., 2017).

Common method variance was also tested via a common latent factor test (CLF) to investigate respondents’ tendency to put less effort while responding to a long series of questions appropriately (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). As the chi-squared difference tests revealed that the difference between the fully constrained and unconstrained models is not significant (\(\Delta \chi^2 = 26.425, df=17\), and \(p = 0.134 > 0.05\)), it can be concluded that any common method bias effects could not seriously distort our findings (Podsakoff & Organ, 1986).
4.2. Sampling and data collection

The current field research study took place at the outskirts of Thessaloniki metropolitan area, in Greece, by using the mall-intercept technique (Bush & Hair, 1985). The survey was conducted at the largest shopping centre (closed-type mall) of Thessaloniki covering all four main gates. The selected shopping centre is the most popular one in the area attracting numerous youngsters on a daily basis. The survey was run from April 14th to May 13th in 2018, and it was supported by eight trained field researchers. Young people were approached while exiting the shopping centre, and they were asked a qualifying question about their age, for a decision to be made on their eligibility to participate in this study. Those people that were coming under Generation Z category were handed out copies of the self-administered questionnaire, a pen and a clipboard. From a total of 1121 Gen Z shoppers that were approached, 957 agreed to participate in the study, yielding an 85.37% response rate. Within this context, 947 usable questionnaires were collected resulting in a final response rate of 84.47%.

4.3. Measures

City image: It was measured on a 26 items-aggregate scale, based on Gilboa et al.’s (2015) 18 item scale for residents, 7 items originate from Zenker et al. (2013) study, and 1 item (CI26) from Mišič and Podnar (2019).

City brand personality: For this construct we employed the 42 traits suggested by Aaker (1997). The items were evaluated on a 7-point Likert type scale with “1= Strongly Disagree” to “7= Strongly Agree.”

Residents’ overall satisfaction: It was measured through the scale proposed by Lin, Chen and Filieri (2017) and adapted to the context of this study. The scale consists of 5 items
and each statement was measured on a 7-point Likert scale, anchored with 1= “Strongly Disagree” and “7= Strongly Agree.”

Economic crisis on personal daily routine: It was measured as a unidimensional construct through the question “To what extent has the financial crisis impacted your daily routine?” on a 7-point semantic differential scale anchored with “1= Very little” and “7= Very much.”

Economic crisis on city infrastructure: It was measured via the item “To what extent has the financial crisis impacted your perception about Thessaloniki’s infrastructure?” on a 7-point semantic differential scale anchored with “1= Very little” and “7= Very much.”

Social media engagement: It was assessed on the basis of a set of 5 items inquiring Gen Z residents about the frequency of following the city’s social media channels (i.e. Facebook, Twitter, Instagram, Linkedin, and Youtube). This was adopted from Przybylski, Murayama, DeHaan, & Gladwell (2013), and Uşaklı, Koç, & Sönmez (2017). The items were measured on a 6-point semantic differential scale, ranging from “1=Never follow this account” to “6=Daily”. Appendix A presents the items employed for all constructs comprising the proposed model.

4.4. Data preparation and analysis

Missing Values Analysis and estimations of skewness and kurtosis were also conducted (Hair et al., 2010) prior to factor analysis and structural equation modeling, and the results support the complete randomness of missing values and univariate normality of data. With respect to the random sampling error, a large sample was targeted to moderate this type of error (Schmidt & Hunter, 2014). The final size of the usable sample of questionnaires was 947, suggesting a maximum sampling error of 3.0%, which is considered acceptable. Then, we checked internal consistency and performed Principal Components Analysis (PCA-promax rotation with Kaiser normalization) in order to examine the dimensionality of some of the
proposed scales that were produced as the combination of scales as these originate from various elements. Moreover, we ran multivariate normality tests and found out that there were not any significant deviations (McDonald & Ho, 2002).

The Cronbach’s coefficients (alpha) were 0.83 for city image scale, 0.72 for city brand personality, 0.84 for residents’ overall satisfaction, and 0.87 for social media engagement, which in all cases exceed the minimum standard of 0.70 (Hair et al., 2010). Then, all latent constructs present statistically significant values of Bartlett’s test of sphericity for all latent construct dimensions (Bartlett, 1954). Next, PCA revealed that all items should be kept for both city image and social media engagement, as they were all presenting factor loadings higher than 0.45.

Both city image and social media engagement have undergone Exploratory Factor Analysis, as the proposed scales constitute aggregates of previously published scales. EFA revealed five factors for city image, and one factor only for social media engagement, explaining 65.39% and 71.05% of total variance, respectively. The number of factors for those two constructs was confirmed by implementing a parallel analysis.

Confirmatory Factor Analysis (CFA) was then applied. This resulted to the confirmation of the theoretical factorial structure and corresponding loadings of the indicators on the latent constructs, except for the fifth factor of city image due to having a factor loading below 0.50 (Janssens et al., 2008) which was, therefore, excluded from further analysis.

5. Results

5.1. Demographic profile

Since the respondents belong to Generation Z, the age of the participants in the sample vary between 18 and 24. All participants were between 18 and 23 years old (all of them having been born after 1995), with more than 40% of the sample being 19-years-old (200, 23.6%) and
20-years-old (174, 20.5%). Male participants were 530 (62.6%), and females 317 (37.4%). Finally, 72% were university/college students, with 14% of them working part-time, 23% full-time employees, and 5% unemployed.

5.2. Measurement and Structural model results

IBM SPSS Statistics 24 and AMOS 24 software packages were utilized to apply a series of quantitative analysis techniques, including factor analysis and structural equation modelling. Construct reliability and convergent validity measures have been calculated and were found to be over the minimum rates, i.e. CR > 0.70 and AVE > 0.50. Then, the square root of AVE for each latent construct was found in all cases to be greater than the estimated correlations of pairs of factors, supporting discriminant validity of the proposed structures (see Table 1). Moreover, model fit indices revealed that the model is satisfactory as it fits the data well. A representative set of fit indices is reported (e.g. Normed Chi-Square = 3.142 and 3.530; CFI = .923 and .916; RMSEA = .055 and .060 for measurement and structural models, respectively), with all of them clearly satisfying the established criteria (Hair et al., 2010), as demonstrated in Table 2.

[Table 1 Here]

[Table 2 Here]

With regards to the paths examined in the structural model, the following findings have been reported. Hypothesis H1 cannot be rejected as the effect of city image on social media engagement is positive and significant ($\beta = .37$ for $p < 0.01$). Moreover, the effect of residents’ overall satisfaction on social media engagement is strongly significant but negative ($\beta = - .44$ for $p < 0.01$), and, as a result, H2 is partially supported as the effect has reverse direction. Then, there is strong evidence that the influence of city brand personality on social media engagement is also positive and significant ($\beta = .45$ for $p < 0.01$); consequently, hypothesis H3 gains support.
Regarding the hypothesized moderation effects, there is supporting evidence only for $H_5$, i.e. the moderation between overall satisfaction and social media engagement by ECPD construct ($\beta = -0.10$ for $p < 0.05$). Then, although the rest of the moderations do not gain any support from SEM – meaning that $H_4$, $H_6$, $H_7$, $H_8$ and $H_9$ are rejected –, two control effects emerge from both ECPD and ECCI constructs due to their direct influence on social media engagement. For detailed results on regression paths see Table 3.

In the proposed structural model, the squared multiple correlation $R^2$ value for social media engagement is 0.319 or explains 31.9% of engagement variance, signifying that this structural arrangement has a high predictive power and degree of usefulness, as this exceeds the 25% benchmark for large effects (Cohen, 1988).

Overall, three out of nine hypotheses tested have gained full support (two direct effects and one moderating effect; one hypothesis has been partially supported; and, finally, five hypotheses that represent the rest of moderating effects, have been rejected. Also, there are two emergent and strongly significant effects, those of ECPD and ECCI on social media engagement with a positive and a negative valence respectively. Thus, ECPD acts (in one case) as a moderator, and ECCI is a control variable of the whole model conceptualization (see Figure 2).

[Table 3 Here]

[Figure 2 Here]

6. Discussion and conclusion

The purpose of this study was to investigate the city image and city brand personality based on Gen Z residents’ engagement with a city’s social media in an economic crisis era. The findings of the current study highlight: i) the positive and significant role of city image and city brand personality on Gen Z residents’ engagement with city’s social media; ii) the
negative association of residents’ overall satisfaction with their engagement with the city’s social media; and iii) the relationship between residents’ overall satisfaction and their engagement with city's social media accounts which is moderated by the effect of economic crisis on residents’ personal daily routine.

The findings of this study enrich existing marketing knowledge by providing empirical findings from the prism of Gen Z residents on city branding context as well as on city’s social media engagement, where limited studies exist. Particularly this study forms the first attempt to take into account a combination of understudied areas, namely city image from residents’ point of view, Gen Z, city brand personality and economic crisis. Moreover, the finding that the less satisfied residents are, the more engaged with the city’s social media they are, could be translated as a concern by the residents regarding the city’s everyday situation. The findings already presented are largely in line with previous studies regarding the usage of city social media and respective residents’ engagement at both national (e.g. Lappas et al., 2018) and international level (del Mar Gálvez-Rodríguez et al., 2018; Graham & Avery, 2013).

From a practical standpoint, the city authorities should improve its image and brand personality. Undoubtedly, city image and city brand personality are of immense importance to a city's marketing and branding activities (e.g., Amatyakul & Polyorat, 2016; Gilboa et al., 2015; Merrilees et al., 2012; Sahin & Baloglu, 2014). Kavaratzis (2004, p. 67) characteristically points out “[e]verything a city consists of, everything that takes place in the city and is done by the city, communicates messages about the city’s image.” In order for marketing branding activities to be successful, these must consider the interaction that takes place among the main stakeholders who construct the place brand (Kavaratzis & Kalandides, 2015), and include the notion of the co-creation in their strategic approach (Theodoridis, Ntounis, & Pal, 2017). In such efforts, the focus must lie on fulfilling the needs of residents (Theodoridis et al., 2017),
who are considered the most important group in a city (Warnaby, 2018) being the co-creators and ambassadors for a city (Braun et al., 2013; Zenker et al., 2017).

Also, it could prove beneficial for the city if local authorities made systematic efforts to improve their social media strategies and to encourage greater engagement of citizens with city-related media accounts and channels. The tremendous rise in social media’s popularity dictates that municipalities (cities) should make the most of them as a communication tool and engage residents. Following Solis’s (2011) idea that municipalities need to “engage or die” this is vital for their attempts to successfully present a strong self-image and attract resources (Cleave et al., 2017). As the use of social media augments, it is important for cities to develop well-considered strategies to analyse engagement and its impact on city’s marketing actions. This could further advance the customization of content to foster interaction and communication between the local authorities, citizens and organizations, as well as among citizens themselves, to enhance local governance and human well-being. Social media engagement of critical importance, since residents’ key role as ambassadors and co-creators in city brand, their quality of life and welfare is well supported in the existing literature (Braun et al., 2013; Luque-Martinez et al., 2007; Manyiwa et al., 2018). For city’s authorities it is vital to engage young adults who are considered to exhibit from ‘apathy’ about citizenship (Dong & Ji, 2018).

Regarding the significant moderating effect of ECPD on the relationship between residents’ overall life satisfaction and their engagement with the social media channels of Thessaloniki, as Figure 3 reveals, ECPD strengthens the negative relationship between residents’ satisfaction and social media engagement. This is a very important finding as it proves the claim that the effect of economic crisis makes less satisfied residents to engage even more with city’s social media channels, possibly to complain, share ideas, receive information on city authorities’ initiatives to solve or address problems, or even to respond to new
challenges they encounter. This may be closely related to crisis management with social media body of literature (e.g. Graham, Avery, & Park, 2015; Lin et al., 2016; Maresh-Fuehrer & Smith, 2016), although this finding in this particular context has not been presented and discussed in any of the previous studies.

[Figure 3 Here]

7. Limitations and suggestions for future research

While this empirical study contributes to the existing literature on city branding and social media engagement and sheds a light on Gen Z residents view, it inevitably exhibits certain limitations. To begin with, only one major large city was surveyed, and thus future studies should explore a great synthesis of cities large and medium nationwide. Also, cross-country studies, especially form countries that have faced economic downturns, could expand the current findings. Secondly, the use of Gen Z residents’ sample is an undeniable advantage of the present study; however, it limits the generalizability of the research to residents who come under other generations. Forthcoming studies could include citizens from other generational cohorts too (i.e., Generations X and Y) to provide the research community with a more holistic picture. This would necessitate running segmentation of the samples with respect to social media engagement by using discriminant analysis to offer extra insights into the distinct groups of residents. Furthermore, there are some other interesting constructs associated with place branding and urban regeneration, which could be utilized as additional mediating or moderating variables to enhance the proposed model’s predictive capability. Finally, future studies could benefit from examining the concepts of immersion and online flow (Hamilton, Kaltcheva, & Rohm, 2016; Hoffman & Novak, 2009; Scarpi, 2012), to further address residents–social media interactions and, potentially, advance the current model.
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Table 1: Construct Reliability & Validity measures of measurement model.

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<tr>
<th></th>
<th>CR</th>
<th>AVE</th>
<th>MSV</th>
<th>ASV</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 City brand personality</td>
<td>.839</td>
<td>.617</td>
<td>.486</td>
<td>.452</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.785</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Res. overall satisfaction</td>
<td>.802</td>
<td>.642</td>
<td>.522</td>
<td>.491</td>
<td>.683</td>
<td>.801</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 City image</td>
<td>.868</td>
<td>.771</td>
<td>.706</td>
<td>.519</td>
<td>.629</td>
<td>.632</td>
<td>.878</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Social media engagement</td>
<td>.871</td>
<td>.779</td>
<td>.607</td>
<td>.549</td>
<td>.603</td>
<td>-.579</td>
<td>.634</td>
<td>.882</td>
<td></td>
<td></td>
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</table>

Table 2: Fit Indices of the measurement and structural models.

<table>
<thead>
<tr>
<th>Fit Indices</th>
<th>Measurement model</th>
<th>Structural model</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$/df</td>
<td>3.142 for p&lt;.001</td>
<td>3.530 for p&lt;.001</td>
<td>&lt;5.0</td>
</tr>
<tr>
<td>CFI</td>
<td>.923</td>
<td>.916</td>
<td>&gt;.90</td>
</tr>
<tr>
<td>TLI</td>
<td>.912</td>
<td>.908</td>
<td>&gt;.90</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.055</td>
<td>.060</td>
<td>&lt;.08</td>
</tr>
<tr>
<td>SRMR</td>
<td>.059</td>
<td>.061</td>
<td>&lt;.09 (CFI&gt;.92)</td>
</tr>
</tbody>
</table>

Note: $\chi^2$/df: chi-square normed, CFI: Comparative fit index, TLI: Tucker Lewis index, RMSEA: Root mean square error of approximation, SRMR: Standardized root mean residual.
Table 3: Results obtained for the structural model relationships tested

<table>
<thead>
<tr>
<th>Regression paths</th>
<th>St.RW</th>
<th>S.E.</th>
<th>C.R.</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social media engagement ← Brand Personality</td>
<td>.451</td>
<td>.08</td>
<td>7.617</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Social media engagement ← ECPD</td>
<td>.156</td>
<td>.03</td>
<td>3.119</td>
<td>.002</td>
</tr>
<tr>
<td>Social media engagement ← ECCI</td>
<td>-.142</td>
<td>.03</td>
<td>-2.835</td>
<td>.005</td>
</tr>
<tr>
<td>Social media engagement ← ECPD_x_Brand Personality</td>
<td>.075</td>
<td>.08</td>
<td>.884</td>
<td>.377</td>
</tr>
<tr>
<td>Social media engagement ← ECCI_x_Brand Personality</td>
<td>-.038</td>
<td>.04</td>
<td>-1.981</td>
<td>.326</td>
</tr>
<tr>
<td>Social media engagement ← City image</td>
<td>.371</td>
<td>.05</td>
<td>7.476</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Social media engagement ← Residents’ overall satisfaction</td>
<td>-.437</td>
<td>.07</td>
<td>-6.019</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Social media engagement ← ECCI_x_City Image</td>
<td>-.026</td>
<td>.09</td>
<td>-1.683</td>
<td>.095</td>
</tr>
<tr>
<td>Social media engagement ← ECPD_x_City Image</td>
<td>.019</td>
<td>.09</td>
<td>.332</td>
<td>.740</td>
</tr>
<tr>
<td>Social media engagement ← Residents’ overall satisfaction _x_ECPD</td>
<td>-.102</td>
<td>.03</td>
<td>-2.034</td>
<td>.042</td>
</tr>
<tr>
<td>Social media engagement ← Residents’ overall satisfaction _x_ECCI</td>
<td>.093</td>
<td>.02</td>
<td>1.853</td>
<td>.064</td>
</tr>
</tbody>
</table>

Figure 1. Proposed model under investigation with relevant hypotheses.
Figure 2. Structural model results.
Figure 3. Plot of significant residents’ overall life satisfaction × ECPD interaction for predicting their engagement with social media city’s channels.
### Appendix A: Constructs, Dimensions and Items.

<table>
<thead>
<tr>
<th>Construct/dimensions</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>City image</strong></td>
<td></td>
</tr>
<tr>
<td>Municipal Services</td>
<td></td>
</tr>
<tr>
<td>CI1</td>
<td>Quiet</td>
</tr>
<tr>
<td>CI2</td>
<td>Safe</td>
</tr>
<tr>
<td>CI3</td>
<td>A low crime rate</td>
</tr>
<tr>
<td>CI4</td>
<td>Not crowded</td>
</tr>
<tr>
<td>CI5</td>
<td>Low air pollution</td>
</tr>
<tr>
<td>CI6</td>
<td>Well light at night</td>
</tr>
<tr>
<td>CI7</td>
<td>Good public transportation</td>
</tr>
<tr>
<td>CI8</td>
<td>Well maintained streets and sidewalks</td>
</tr>
<tr>
<td>CI9</td>
<td>Caring for older people</td>
</tr>
<tr>
<td>CI10</td>
<td>Cleanliness of the city</td>
</tr>
<tr>
<td><strong>Services</strong></td>
<td></td>
</tr>
<tr>
<td>CI11</td>
<td>Enough bank branches</td>
</tr>
<tr>
<td>CI12</td>
<td>Enough post-office branches</td>
</tr>
<tr>
<td>CI13</td>
<td>Enough medical facilities</td>
</tr>
<tr>
<td>CI14</td>
<td>Professional networks in the city</td>
</tr>
<tr>
<td><strong>Leisure</strong></td>
<td></td>
</tr>
<tr>
<td>CI15</td>
<td>Tourism facilities (restaurants, parks)</td>
</tr>
<tr>
<td>CI16</td>
<td>Near major city</td>
</tr>
<tr>
<td>CI17</td>
<td>Near major highways</td>
</tr>
<tr>
<td>CI18</td>
<td>Disco techs and night clubs</td>
</tr>
<tr>
<td>CI19</td>
<td>Youth clubs (scouts, etc.)</td>
</tr>
<tr>
<td>CI20</td>
<td>A wide range of cultural activities</td>
</tr>
<tr>
<td>CI21</td>
<td>A variety of shopping opportunities</td>
</tr>
<tr>
<td><strong>Environment and prosperity</strong></td>
<td></td>
</tr>
<tr>
<td>CI22</td>
<td>Availability of apartments and houses</td>
</tr>
<tr>
<td>CI23</td>
<td>The energy and atmosphere of the city</td>
</tr>
<tr>
<td>CI24</td>
<td>The general price level of the city / cost of living</td>
</tr>
<tr>
<td>CI25</td>
<td>General economic growth of the particular region</td>
</tr>
<tr>
<td>CI26</td>
<td>Positive citizenship behaviour</td>
</tr>
<tr>
<td><strong>City brand personality</strong></td>
<td></td>
</tr>
<tr>
<td>BP1</td>
<td>Down-to-earth</td>
</tr>
<tr>
<td>BP2</td>
<td>Family-oriented</td>
</tr>
<tr>
<td>BP3</td>
<td>Small-town</td>
</tr>
<tr>
<td>BP4</td>
<td>Honest</td>
</tr>
<tr>
<td>BP5</td>
<td>Sincere</td>
</tr>
<tr>
<td>BP6</td>
<td>Real</td>
</tr>
<tr>
<td>BP7</td>
<td>Wholesome</td>
</tr>
<tr>
<td>BP8</td>
<td>Original</td>
</tr>
<tr>
<td>BP9</td>
<td>Cheerful</td>
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<td>BP10</td>
<td>Sentimental</td>
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<tr>
<td>BP11</td>
<td>Friendly</td>
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<tr>
<td>BP12</td>
<td>Daring</td>
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<tr>
<td>BP13</td>
<td>Trendy</td>
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<tr>
<td>BP14</td>
<td>Exciting</td>
</tr>
<tr>
<td>BP15</td>
<td>Spirited</td>
</tr>
<tr>
<td>BP16</td>
<td>Cool</td>
</tr>
<tr>
<td>BP17</td>
<td>Young</td>
</tr>
<tr>
<td>BP18</td>
<td>Imaginative</td>
</tr>
<tr>
<td>BP19</td>
<td>Unique</td>
</tr>
<tr>
<td>BP20</td>
<td>Up-to-date</td>
</tr>
<tr>
<td>BP21</td>
<td>Independent</td>
</tr>
<tr>
<td>BP22</td>
<td>Contemporary</td>
</tr>
<tr>
<td>BP23</td>
<td>Reliable</td>
</tr>
</tbody>
</table>
BP24  Hard working
BP25  Secure
BP26  Intelligent
BP27  Technical
BP28  Corporate
BP29  Successful
BP30  Leader
BP31  Confident
BP32  Upper class
BP33  Glamorous
BP34  Good looking
BP35  Charming
BP36  Feminine
BP37  Smooth
BP38  Outdoorsy
BP39  Masculine
BP40  Western
BP41  Tough
BP42  Rugged

Residents’ overall satisfaction
ROS1  In most ways my life is close to my ideal in Thessaloniki
ROS2  The conditions of my life are excellent in Thessaloniki
ROS3  I am satisfied with my life in Thessaloniki
ROS4  So far, I have gotten the important things I want in life in Thessaloniki
ROS5  If I could live my life over in Thessaloniki, I would change almost nothing

Economic crisis on personal daily routine
ECPD  To what extent has financial crisis impacted your personal daily routine?

Economic crisis on city’s infrastructure
ECCI  To what extent has financial crisis impacted your perception about Thessaloniki’s infrastructure?

Social media engagement
If you follow Thessaloniki’s social media accounts/channels, how frequently do you do so for each of the following platforms?
SME1  Facebook
SME2  Twitter
SME3  Instagram
SME4  Linkedin
SME5  YouTube