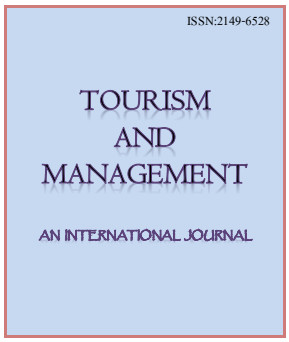

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Determining the Development Level of Cappadocia Tourism

Abstract
The aim of this study is to determine the perceptions of local people living in Cappadocia towards economic, socio-cultural and environmental impacts of tourism and to group them according to their perceptions. Another aim of the study is to reveal the stage of tourism development in Cappadocia by utilizing the Doxey's Irritation Index Model and Butler's Tourism Area Life Cycle Model (TALC) in conjunction with data on local perceptions. For this purpose, questionnaire technique which is one of the quantitative research methods were applied to the local population. The population of this research is the local people living in Urgup, Goreme, Avanos and Uchisar, where tourism intensity is high in Cappadocia. 394 data were obtained with convenience sampling method. In the analysis of data, central tendency measures and clustering analysis were used. As a result of the study, the local people are divided into 5 groups according to their perception of the tourism impacts. The perception average of the local residents shows that they are at the stage of "*apathy"* in tourism in the Irridex Model. It is also concluded that Cappadocia is in the *"development"* stage of the Tourism Area Life Cycle.
Keywords: *Life cycle, Irritation index, Local people, Tourism development, Cappadocia.*
JEL Classification: L83, Q01, R11.
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ORIGINAL SCIENTIFIC PAPER
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1. Introduction

Many of the tourism impact studies have been carried out to determine the attitude of the local people towards tourism and the perceived impacts by them (Zhang et al., 2006). Their perception and attitude towards the development have been the subject of research for nearly 50 years (Andereck and Vogt, 2000). There are many studies on the perception of local people in the international literatüre (Choi and Sirakaya, 2005; Gürsoy et al., 2010; Ko and Stewart, 2002; Sirakaya et al., 2002; Teye et al., 2002; Zamani-Farahani and Musa, 2012). Most of these studies have revealed that their attitudes are shaped by perceived impacts. These are evaluated as economic, socio-cultural and environmental impacts in academic studies.

Tourism development is frequently coordinated with the local people's perception of tourism (eg. Andereck et al., 2005; Andriotis and Vaughan, 2003; Harrill and Potts 2003; Horn and Simmons, 2002). Researches on this subject mostly focus on associating tourism with its economic, environmental, social and cultural impacts, or a stage coinciding with tourism development in developed and developing countries. Researches studying the attitudes and perceptions of local people are important evaluations for the successful development, marketing and running of current and future tourism programs (Akbar et al., 2020). In addition, classifying them by their perceptions and analysing the differences between groups can provide tourism policy and planning developers with more useful information than other methodological approaches that measure the public perception (Fredline and Faulkner, 2000).

Cappadocia is the name of the region which is formed as a result of volcanic eruptions. It is thought that the formation of these ground formations began 10 million years ago with caldera explosions. The cultural accumulation that gives meaning to the architectural structure and, unique natural formations make tourism possible in the region. For nearly 50 years, Cappadocia's inhabitants have experienced both the advantages and disadvantages of tourism. Within that period, it is thought that there are changes in the economic structure of the society, as well as in its social, cultural and environmental structures. Reserches that reveal the locals' perception and the effects of tourism in Cappadocia have been carried out for about 15 years (Keskin and Çontu, 2011; Özel and Kozak, 2017; Tayfun, 2002; Ünlüönen and Tayfun, 2003). Butler (1980) and Doxey (1975) are the models that are most frequently used in the field to explain the locals' perceptions. As stated in Butler's (1980) Tourism Area Life Cycle Model (TALC) and Doxey's (1975) Irritation Index Model, locals' perception of tourism changes depending on how tourism develops differently in different time periods. The absence of a study assessing the development stage of tourism in Cappadocia using the TALC and Irridex models demonstrates this study's originality. This research determined the host community's level of irritation with tourism based on the TALC, Cappadocia's tourism development stage, and the Irridex Model. Additionally, the applicability of the TALC and Irridex models has been demonstrated, which conceptually explain the tourism development stage.

In consequence of the literature review, although there are studies evaluating tourism development in Cappadocia with the perception of locals, no studies determining the tourism development and irritation level of locals for tourism have been found with concrete data. The results of this research will be useful for tourism policy makers and authorities who want to provide community support in the tourism sector in Cappadocia. Besides this, the findings of this research can serve as a resource for tourism professionals and contribute to providing non-profit organizations with a comprehensive understanding of the effects of tourism in the region.

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2. Literature Review

2.1. Perception of Tourism Development

It has been observed that tourism development is measured by some quantitative data in studies. These are the number of hotels, restaurants and recreation businesses, as well as the community's tourism-related sales rates (Royer et al., 1974). Impacts resulting from development can also be determined by measuring tourist satisfaction or the perceptions and attitudes of the local community towards tourism (Butler, 1980; Doxey, 1975; Williams, 1979). The perception and attitude of the local people and positive and negative impacts have been evaluated together in literature. In many studies, economic, social and environmental issues are handled together with general attitudes and perceptions towards tourism (eg. Brougham and Butler, 1981; Liu and Var, 1986). Few of them have related these factors to the development stage. Many have evaluated the locals' perception of community life.

There are three reasons why the interest in research on tourism perception of the locals still does not decrease (Sirakaya et al., 2002). The first of these, it is important to assess their perception and attitude towards tourism for a successful tourism development. Because it is difficult to generate sustainable tourism without the cooperation, support and participation of them (Eshun and Tichaawa, 2020). The second is that their perception varies at different stages of development (Butler, 1980). Doxey (1975) states that their perception is positive in the initial stages of development and negative as the period of stagnation is reached. The third is that perception differs in different locations (Faulkner and Tideswell, 1997).

2.2. Models and Theories

There are some theories explaining the local people's perception of tourism. In Irridex Model developed by Doxey (1975), the first stage in which a destination where new tourism investments have started and the tourism planning and marketing is low is welcomed by the locals, is called the *euphoria* stage. The *apathy* stage begins with the realization that economic stability is established and that visits are an ordinary situation. With the progression of tourism development and the acceleration of mass tourism, residents are worried about cultural, social and environmental changes. This stage is called *annoyance*. In the regions tourism peaks, the number of tourists increases enormously, mass tourism becomes widespread and residents are saturated with tourism and tourists. They can evaluate tourism more easily in terms of advantages and disadvantages. In this *antagonism* stage, hostile attitudes towards tourism and tourists are displayed. However, some research findings (Brougham and Butler, 1981; Rothman, 1978) show that there are different perceptions and attitudes in a society at the same time.

Butler (1980) created the Tourism Area Life Cycle (TALC) Model, which suggests that positive and negative perception can also occur in a society and that it can be expressed through active or passive support or rejection. According to him, there are few tourists in the beginning of cycle, due to the reasons such as lack of transportation, facility, and information. With the start of marketing activities, the dissemination of information and the increase of facility opportunities, the familiarity of the destination is rapidly increasing. However, over time, the attractiveness of the destination and the number of tourists decreases with the excessive use. The stages of a destination are divided into six headings by him: exploration, involvement, development, consolidation, stagnation and decline or rejuvenation.

In the exploration stage, the few tourists who travel individually draw attention. At this stage, the physical structure of the destination and the social environment are not affected by tourism, and tourists have little effect on social life and economy. With the increasing number of tourists, local people start the involvement stage by establishing facilities. Local people are starting to take part in tourism by providing food and beverage services to tourists and promoting the destination to attract tourists. During the development stage, the tourist market is defined and effective promotions are made in potential tourist areas. Local businesses are

giving way to larger, more elaborate and modern, externally connected businesses. At this stage, the number of tourists is equal to or partially exceeded by the local population. In the consolidation process, although the total number of tourists is noticeably higher than the number of local people, the rate of increase in the number of tourists start to decrease. Marketing and advertising activities are carried out more broadly and comprehensively. During the stagnation, the number of tourists reaches its peak. In many activities, the capacity limit, which reveals environmental, social and economic problems, is reached or even exceeded. There has been an overabundance of bed capacity, so great effort is made to maintain the level of visitation. In the decline process, the destination cannot compete with the newly popular destinations and regresses both in terms of quality and quantity. At this stage, the destination is used only for weekend and day trips. However, a revival can also occur by making a radical change in tourism in the destination (Butler, 1980).

3. Methodology

Survey data was used to measure and assess the variables in the study. These are tourism impacts and various demographic items. To properly assess the variables a survey instrument was developed based on previously tested and reliable measurement items and valid constructs. The tourism impacts questionnaire consists of 3 sub-dimensions and 47 closed-ended statements as socio-cultural impacts (SCE), environmental impacts (ENV) and economic impacts (ECO). The statements of this scale have been adapted from the studies of Akis et al. (1996), Ap and Crompton (1998), Johnson et al. (1994), Long et al. (1990), Madrigal (1995), McCool and Martin (1994), Pizam (1978) and Yıldız et al. (2011). In the research, the forced choice scale was used with 4-point Likert. Accordingly, the local people were asked to evaluate statements as 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Completely Agree. This type of scale means that the neutrality / indecision option corresponding to the midpoint is not included in the scale, using an even number of categorized scales. In this case, the respondents are removed from their indecisiveness and forced to take sides (Karagöz, 2018).

The population of the study consists of residents aged 18 and over who live in Nevsehir. Nevsehir is the center of Cappadocia, visited by hundreds of thousands of people a year. The research was carried out in Avanos, Urgup, Goreme and Uchisar, the districts and towns where tourism is more intense and impacts occur more in Cappadocia. The population of Nevsehir consists of 292.365 people. The population of Avanos consists of 32.742, 3630 of Uchisar, 35.352 of Urgup and 2113 of Goreme. The locals to whom the survey will be applied were determined by convenience sampling technique, one of the non-random sampling methods. It was conducted face to face with residents. In total 420 questionnaires were distributed, 26 of them were not used for reasons such as missing and incorrect filling. 394 of them were valid for analysing.

4. Analysis and Results

The data obtained were computerized and analyzed in the statistical programme. Firstly, the validity and reliability of the tourism impacts scale were tested. Then, exploratory factor analysis was conducted to reduce the number of variables, to reveal and classify the structure between variables. Mean and standard deviation values of the variables were determined and these values were used to specify the tourism development stage. In order to classify the data according to their similarities, cluster analysis, a multivariate statistical method, was performed. Ward's technique, one of the hierarchical clustering techniques, and K-Means, one of the non-hierarchical techniques, were applied together.

4.1. Measurement Model: Exploratory Factor Analysis (EFA)

Factor analysis was used to test the construct validity of the scale. The purpose of factor analysis is to reduce the number of variables and to reveal and classify the structure in the relationships between variables (Kalaycı, 2008). As a result of the analysis, 6 factors were identified. They were named based on the statements loaded on them. The distribution of the items of the factors, factor loads, eigenvalues and the explained variance ratio are given in Table 1.

Table 1: The tourism impacts scale factor analysis results arithmetic mean and standard deviation distributions.

Statement	Factor loads	Eigen value	Variance (%)	Mean**	Std. Dev.
Factor 1: "Negative Socio-Cultural Impacts"		8.924	16.721	2.18	
Tourism activities negatively affect the attitudes and behaviors of young people. *	0.750			2.18	0.872
Tourism causes the lifestyle of the local people to change negatively.*	0.739			2.19	0.842
Tourism degenerates traditions and customs.*	0.735			2.01	0.831
Family life is negatively affected by tourism.*	0.729			2.26	0.880
The tourism development affects moral values negatively.*	0.726			2.14	0.853
The tourism development causes the weakening of religious feelings.*	0.714			2.18	0.874
Tourism changes the local people's sense of entertainment negatively.*	0.709			2.18	0.811
Tourism creates a negative change in the clothing style of the local people.*	0.686			2.22	0.887
Tourism causes an increase in prostitution in the region.*	0.682			2.11	0.867
Tourism causes an increase in bad habits (alcohol, drugs, etc.). *	0.626			2.36	0.880
Tourism increases the crime rate in the region.*	0.573			1.95	0.812
Tourism affects spoken language negatively. *	0.572			2.04	0.813
Some tourists exhibit disrespectful and rude behavior in hotels, restaurants and elsewhere.*	0.529			2.19	0.846
Factor 2: "Negative Environmental Impacts"		4.889	9.577	2.17	
Tourism causes noise pollution. *	0.722			2.03	0.823
The tourism development causes a decrease in cultivated areas.*	0.661			2.41	0.902
Tourism creates overcrowding.*	0.598			2.04	0.824
Tourism development disrupts the natural environment. *	0.573			2.23	0.881
Tourism causes degradation of the ecosystem (plants, wildlife, etc.).*	0.548			2.17	0.802
Factor 3: "Positive Economic Impacts"		1.846	8.176	3.13	
Tourism provides diversification of shopping opportunities.	0.765			3.19	0.647
Tourism generates more employment areas in the region.	0.727			3.18	0.748
Tourism is one of the sectors that make the most contribution to the local economy.	0.713			3.24	0.664
Tourism provides increase in the personal income of the local people.	0.702			3.12	0.756
Tourism attracts more investments in the region.	0.592			3.11	0.628
Tourism contributes to the development of the souvenir industry.	0.532			3.25	0.671
Tourism takes an important place in the development of the construction sector.	0.508			2.90	0.755
Factor 4: "Positive Socio-Cultural Impacts"		1.531	7.020	3.09	
Knowledge of local people about other cultures/ countries increases.	0.674			3.06	0.753
Arts, crafts, folklore and other elements of the local culture come alive and gain value thanks to tourism.	0.664			3.20	0.778
New friendships are made due to tourism.	0.655			3.09	0.738
Tourism is effective in increasing women's participation in	0.615			3.07	0.754

business life.					
Tourism makes the local people more tolerant.	0.611			3.02	0.734
With the tourism development, the awareness of protecting the historical and touristic values of the local people increases.	0.548			3.09	0.766
Tourism improves the foreign language skills of the local people.	0.528			3.09	0.796
Factor 5: "Negative Economic Impacts"		1.369	4.883	2.51	
Tourism creates inequality in income distribution of local people.*	0.674			2.53	0.882
Investments made for tourism are insufficient for the development of the region.*	0.639			2.70	0.850
Tourism encourages local people to spend more. *	0.611			2.46	0.791
The tourism development causes a decrease in agricultural products.*	0.572			2.35	0.887
Factor 6: "Positive Environmental Impacts"		1.352	4.682	2.95	
Tourism ensures the development of infrastructure.	0.797			2.89	0.741
Tourism ensures the protection of natural resources.	0.674			2.88	0.791
The tourism development is positive for the restoration of historical buildings.	0.521			3.10	0.742

**Items with reverse coding (recoded from 4 to 1).*
*** Mean of scale; 2.82*

Principal component analysis and Varimax rotation were used. Factors with an eigen value above 1.00 were evaluated. In study, the lowest factor weight was accepted as 0.50 in determining whether the item remain on the scale (Hair et al., 1998). The items below this value were removed from the scale and the number of items was reduced from 47 to 39.

All sub-dimensions together explain 51.058 % of the total variance. Negative SCI (Socio cultural impacts) sub-dimension explains 16.721% of the total variance. Negative SCI and Positive EI (Economic impacts) sub-dimensions together explain 26.297% of the total variance. Negative SCI, Positive EI and Positive SCI sub-dimensions together explain 34.473% of the total variance. Negative SCI, Positive EI, Positive SCI and Negative ENI (Envirenmental impacts) sub-dimensions together explain 41.493% of the total variance. The sub-dimensions of Negative SCI, Positive EI, Positive SCI, Negative ENI and Positive ENI together explain 46.376% of the total variance.

As a result of the reliability analysis of the factors, it is viewed in Table 2 that the negative SCI sub-dimension consisting of 13 items was highly reliable (α=0.855). The negative ENI of 5 items (α=0.741), the positive EI of 7 items (α = 0.796), the positive SCI of 7 items (α = 0.791), the negative EI of 4 items (α = 0.723), and the positive ENI of 3 items (α = 0.674) are quite reliable.

Table 2: Reliability analysis results.

Factors	Number of items	Cronbach's Alpha
Negative socio-cultural impacts	13	0.855
Negative environmental impacts	5	0.741
Positive economic impacts	7	0.796
Positive socio-cultural impacts	7	0.791
Negative economic impacts	4	0.723
Positive environmental impacts	3	0.674

It is resulted that the "positive economic impacts" factor mean is the highest with 3.13 among factors. The "negative environmental impacts" factor mean is the lowest value with

2.17. When looking at the scale in general, it is noteworthy that positive economic impacts items have the highest and negative economic items have lower means.

4.2. Findings Related to Tourism Development Stage in Cappadocia

Diedrich and Garcia-Buades' study (2009) has revealed that there is a strong relationship between tourism development and perception. In this study, the tourism development stage in Cappadocia was tried to be determined through the perceptions of the local people.

In figure 2, looking at the positive ($\bar{x}$ = 3.08) and negative ($\bar{x}$ = 2.22) perception averages, it is assumed that the average of positive perception can be a maximum of 4 until *consolidation stage*. And the average of negative perception is assumed to be a maximum of 4 until the end of the *stagnation stage*. In the model, the period of tourism development in a destination is considered to be the period in which the difference between perceived positive and negative impacts is greatest. In line with all suppositions, it is concluded that tourism is in the middle of the *development stage* in Cappadocia. Both the perception of local people and the number of tourists and the rate of change in the number coincide with the *development stage*.

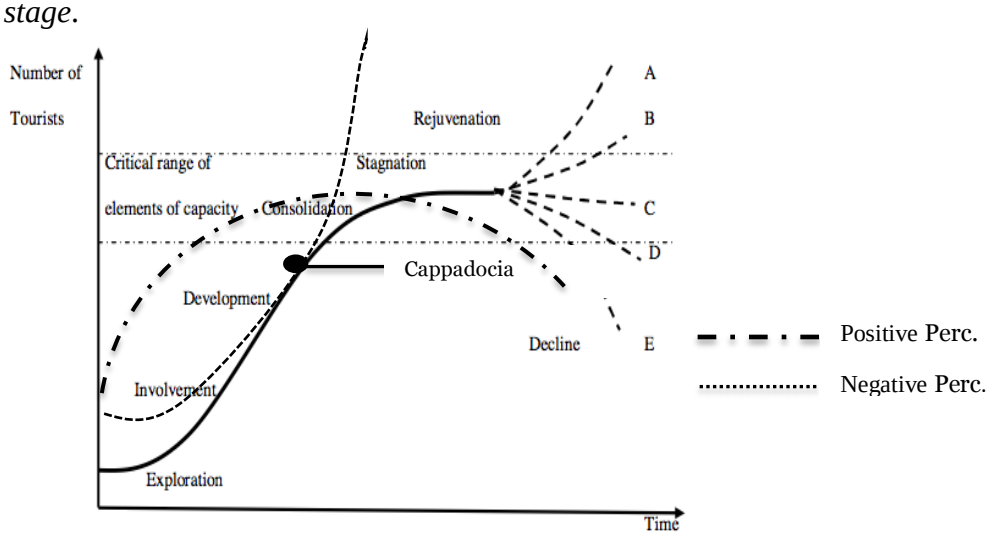

Figure 2: The relationship between TALC and local people's perception of tourism in Cappadocia (Diedrich and Garcia-Buades, 2009).

Increasing number of tourists, the employees in tourism mostly come from outside of the destination, and the conversion of local structures into commercial buildings (Bramwell, 2003) are the characteristics of *development* stage. In Irridex model, in such a destination it has been revealed that local people support tourism due to their economic advantages, start to accept tourists as commercial instruments and are in the *apathy* stage. In this study, it has been determined that residents in Cappadocia support all the positive impacts of tourism as well as more support positive economic impacts ($\bar{x}$ = 3.13). At the same time, when they evaluate all negative impacts, they are more reactive to negative economic ones ($\bar{x}$ = 2.51). However, the negative impacts of tourism have not exceeded those of positive. In this sense, the critical range of elements of capacity specified by Doxey has not yet been reached in Cappadocia. When all findings are evaluated, it is thought that the residents prioritize the economic returns of tourism, either tolerate the negative impacts or are not yet aware. Therefore, local people are at the *apathy* stage.

4.3. Cluster Analysis

As a result of Ward's technique and Square Euclidean Distance applied in the hierarchical clustering analysis, the agglomeration coefficients and dendrogram were examined and observations and the number of clusters were determined. Then, using the K-Means

technique, the same number of clusters were created, the distances of the observations to the clusters and the distances of the clusters to each other were examined.

As a result of all analyses, the most appropriate cluster number was determined to be 5. One Way ANOVA was applied to determine the degree of participation of each cluster in each variable (Table 5). All mean differences are significant at 95% confidence level ($p < 0.05$). The first cluster averages for the positive and negative impacts carry close values. Responses to positive variables are slightly more supportive than those of negative. The second cluster has conflicting responses and all averages are below 3 (agree). The third cluster is similar to the 4th cluster. The difference is that those in cluster 3 are more sensitive to environmental and some social impacts than cluster 4. The 4th and the 5th cluster consist of people who agree with all the statements regarding with the positive and negative impacts. The difference between these clusters is that cluster 4 has relatively lower averages for the positive impacts compared to cluster 5, and relatively higher averages for negative ones. As a result, both clusters agree with the positive and negative impacts.

Table 4: Distances between clusters.

Clusters	1	2	3	4	5
1		3.796	3.200	4.926	6.282
2	3.796		3.053	3.117	5.662
3	3.200	3.053		3.200	3.438
4	4.926	3.117	3.200		2.390
5	6.282	5.662	3.438	2.390	

When comparing differences between clusters, it is noticed that the highest difference is between clusters 1 and 5, and at least between 4 and 5.

Table 5: Average response of clusters to statements.

Statements	Clusters						
	1	**2**	**3**	**4**	**5**	**F**	**Q**
SCE2 Tourism improves the foreign language skills of the local people.	3.16	2.30	3.16	3.08	3.48	22.873	0.00
SCE3 Tourism affects spoken language negatively.	2.58	2.11	2.04	1.68	1.44	32.611	0.00
SCE4 Tourism causes an increase in bad habits (alcohol, drugs, etc.).	3.12	2.26	2.19	2.05	1.80	44.015	0.00
SCE6 Family life is negatively affected by tourism.	2.97	2.37	2.22	1.84	1.51	53.915	0.00
SCE7 The development of tourism causes the weakening of religious feelings.	2.83	2.26	2.05	1.92	1.54	37.951	0.00
SCE8 Tourism increases the crime rate in the region.	2.61	2.24	1.88	1.32	1.30	64.141	0.00
SCE9 Tourism causes an increase in prostitution in the region.	2.88	2.15	2.13	1.53	1.32	74.380	0.00
SCE10 Tourism causes the lifestyle of the local people to change negatively.	2.90	2.31	2.11	1.79	1.46	59.733	0.00
SCE12 New friendships are made due to tourism.	3.07	2.52	3.21	2.74	3.53	22.055	0.00
SCE13 Tourism makes the local people more tolerant.	2.97	2.20	3.03	2.95	3.68	34.446	0.00
SCE14 Tourism activities negatively affect the attitudes and behaviors of young people.	2.97	2.35	2.04	1.84	1.37	74.686	0.00
SCE15 Tourism creates a negative change in the clothing style of the local people.	3.03	2.41	2.05	1.71	1.52	66.593	0.00
SCE16 Arts, crafts, folklore and other elements of the local culture come alive and gain value thanks to tourism.	3.17	2.26	3.31	3.16	3.75	43.885	0.00

SCE17 Tourism changes the local people's sense of entertainment negatively.	2.86	2.30	2.12	1.95	1.40	65.217	0.00
SCE18 Some tourists exhibit disrespectful and rude behavior in hotels, restaurants and elsewhere.	2.72	2.26	2.11	1.82	1.74	22.471	0.00
SCE19 Tourism is effective in increasing women's participation in business life.	3.08	2.51	3.17	2.79	3.52	23.882	0.00
SCE20 Tourism degenerates traditions and customs.	2.86	2.43	1.81	1.68	1.31	85.780	0.00
SCE21 The development of tourism affects moral values negatively.	2.84	2.44	2.04	1.82	1.32	68.576	0.00
SCE22 Knowledge of local people about other cultures / countries is increasing.	3.06	2.20	3.13	2.95	3.60	39.679	0.00
ENV2 Tourism development disrupts the natural environment.	2.82	2.22	2.34	1.61	1.58	36.167	0.00
ENV4 Tourism creates overcrowding.	2.55	2.00	2.13	1.55	1.49	29.662	0.00
ENV6 Tourism causes noise pollution.	2.61	2.09	2.12	1.53	1.33	47.320	0.00
ENE7 Tourism development is positive for the restoration of historical buildings.	3.00	2.56	3.16	3.11	3.53	17.181	0.00
ENE8 With the development of tourism, the awareness of protecting the historical and touristic values of the local people increases.	2.98	2.44	3.06	3.03	3.74	32.902	0.00
ENV9 The development of tourism causes a decrease in cultivated areas.	2.83	2.17	2.68	1.89	2.02	23.437	0.00
ENV11 Tourism ensures the development of infrastructure.	2.80	2.54	2.96	2.82	3.23	8.802	0.00
ENV12 Tourism causes degradation of the ecosystem (plants, wildlife, etc.).	2.63	2.31	2.26	1.74	1.56	32.320	0.00
ENV13 Tourism ensures the protection of natural resources.	2.83	2.42	2.80	2.89	3.39	15.408	0.00
ECO2 Tourism encourages local people to spend more.	2.92	2.18	2.43	2.42	2.28	15.905	0.00
ECO3 Tourism creates inequality in income distribution of local people.	2.92	2.47	2.59	2.44	2.03	13.753	0.00
ECO4 Tourism takes an important place in the development of the construction sector.	2.98	2.28	2.99	2.79	3.15	13.874	0.00
ECO5 Tourism contributes to the development of the souvenir industry.	3.21	2.70	3.31	3.08	3.69	22.764	0.00
ECEO Tourism is an important factor in the development of the clothing industry.	2.94	2.48	2.58	2.84	2.63	6.635	0.00
ECO8 The development of tourism causes a decrease in agricultural products.	2.96	2.04	2.50	2.15	1.74	37.523	0.00
ECO10 Tourism attracts more investments in the region.	3.08	2.63	3.13	2.79	3.58	25.464	0.00
ECO11 Tourism is one of the sectors that make the most contribution to the local economy.	3.13	2.74	3.35	3.00	3.73	26.889	0.00
ECO12 Tourism generates more employment areas in the region.	3.16	2.59	3.29	3.03	3.53	15.824	0.00
ECO13 Tourism provides diversification of shopping opportunities.	3.17	2.74	3.18	2.76	3.78	37.577	0.00
ECO14 Tourism provides increase the personal income of the local people.	3.13	2.57	3.13	2.47	3.79	42.453	0.00

When naming clusters, the statements that make up the clusters have been regarded. Below are the characteristics of 5 clusters.

Cluster 1 Realists: This cluster intuitively thinks that tourism has negative impacts as well as positive. It consists of 109 people who constitute 27.6% of total sample. In general, they agree with the positive and negative effects. They think that tourism negatively affects local culture and lifestyle. They also agree with the environmental effects such as 'tourism creates overcrowding', 'tourism creates noise pollution' and 'tourism causes ecosystem degradation'. In addition, this is the cluster the most indicating that tourism has negative socio-cultural and economic effects compared to other clusters. When the demographic characteristics of the cluster are examined, it is revealed that the majority (44%) is between the ages of 26-35 and consists of the most (34.8%) high school graduates. Half of the people who make up the cluster work in a tourism-related job.

Cluster 2 Contradictory ones: This cluster consists of 54 people who make up 13.7% of total sample. Respondents have varying opinions about the positive and negative impacts. While responding at a moderate level to positive economic impacts, they accept positive socio-cultural impacts such as 'new friendships are made due to tourism', 'tourism is effective in increasing women's participation in business life', and they do not accept other positive socio-cultural impacts. Likewise, they agree with some of the environmental and economic positive impacts, but not with others. They state that they do not agree with all negative socio-cultural effects except the statements that "tourism creates a negative change in the clothes of the residents" and "the tourism development affects moral values negatively". It is noticed that the people involved in this cluster have complex thoughts about the positive impacts. There is no variable the respondents are highly opposed to. Almost half (40%) of the people in the cluster are between the ages of 26-35. 40% are high-school graduates and more than half (61%) are working in a tourism-related job.

Cluster 3 Moderate supporters: The moderate supporters constitute 28.4 % of the respondents, and is similar to the 4th and 5th clusters that support tourism. But they are more sensitive to negative environmental effects. Clusters 4 and 5 indicate that tourism has no negative environmental effects, while cluster 3 seems more cautious about environmental issues. Likewise, they have relatively high means compared to clusters 4 and 5 on negative socio-cultural and economic effects. By looking at the responses given to socio-cultural, economic and environmental positive effects, it appears that this cluster supports tourism and this situation is similar in three clusters. Education variable draws attention in the demographic structure of the cluster. 30.7% of total undergraduate graduates and 44.2% of total postgraduate graduates involved in the research are included in this cluster. There are respondents mostly in the 26-35 age group (41%) in the cluster. In addition, 58.9% of the people in this cluster work in a tourism-related job.

Cluster 4 Economically concerned: The economically concerned cluster consisting of 38 people constitutes the smallest group. In general terms, it is similar to the 5th cluster in terms of supporting tourism, but there are differences between them, especially based on several economic statements. The means of the responses of this cluster to the statements regarding negative socio-cultural and environmental impacts is below 2 (disagree). It is noteworthy that the means of responses to positive socio-cultural and environmental impacts is high. However, while supporting the statements such as 'tourism contributes to the development of the souvenir industry', 'tourism is one of the sectors that make the most contribution to the local economy' and 'tourism generates more employment areas in the region', their responses to other economic impacts reflect their economic concerns. Especially the difference between the effects of tourism on the region and on personal income reveals the characteristics of this cluster. They think that the regional economy benefits from tourism, but not personal income is gained from tourism. The majority of the cluster is undergraduate (34.2%) and high school graduates (34.2%). Almost half of the cluster work in the tourism sector.

Cluster 5 Full supporters: The cluster, constitutes 20.5% of the total sample, fully supports tourism. When compared with other clusters, they agree with all positive statements by the highest mean, except for 3 statements. These 3 statements mentioned are particularly aimed at economic effects, but do not include responses that contradict their support for tourism. Their responses to the statements "The development of tourism causes a decrease in cultivated areas", "Tourism encourages the local people to spend more" and "Tourism is an important factor in the development of the clothing industry" are in direct proportion to other answers, but the mean of the statements differs from other clusters by a little difference. 38.2% of the cluster is between the ages of 26-35 and the majority (33.3%) is high school graduates. The most distinctive feature of the cluster's demographic structure is that it is the cluster with the highest proportion (26%) of total shopkeepers in the profession group compared to all other clusters. When evaluated within the cluster, 28% of sample are

shopkeepers and approximately 36% are private sector employees. Another feature that distinguishes this cluster from other clusters is the working rate in the tourism industry. While the percentage of those who say yes and no to the status of working in tourism in other clusters is close to each other, approximately 65% of this cluster work in tourism.

Table 6: Clusters' frequency and percentage.

		Frequency	**%**
Clusters	Realists	109	27.66
	Contradictory ones	54	13.70
	Moderate supporters	112	28.42
	Economically concerned	38	9.4
	Full supporters	81	20.55
Total		**394**	**100**

The largest group in terms of quantity among the clusters is the moderate supporter cluster. This cluster consists of 112 people and corresponds to 28.42% of the total. The second largest group is the realists cluster. This group consists of 109 people and represents 27.66% of the total frequency. The full supporters group consists of 81 people, the contradictory ones group consists of 54 people, and the economically concerned group consists of 38 people.

5. Conclusions, Implications and Limitations

Local people have been in the tourism sector for nearly 50 years in Cappadocia. In this process, it is thought that there is a change in the economic, social and cultural structure of the society and its physical environment. Studies that demonstrate the tourism impacts with the perception of locals have been carried out for about 15 years. However, there is no comprehensive study that reveals the Capadocia region's tourism development stage or the locals' perceptions of tourism.

The overall mean of the tourism impacts scale is 2.82. The scale consists of positive and negative statements. As a result of the analysis, as positive and negative socio-cultural, economic and environmental impacts factors were obtained. Therefore, in order to comment on perceptions, it is necessary to examine factor means. It is noteworthy that the means of "negative socio-cultural impacts" and "negative environmental impacts" factors are low. In the direction of these findings, it can be said that the residents think that tourism has no negative socio-cultural and environmental impacts. This finding differs from a similar study (Özel and Kozak, 2017) using the interview method in the same region. However, the mean of "negative economic impacts" seems to be higher than other negative impacts. This means that local people are concerned about the negative economic impacts of tourism. When this factor is examined, it is observed that there is a high level of agreement on the inequality in the income distribution of the local people and the insufficient tourism investments. In general local people think that tourism has positive socio-cultural, environmental and economic impacts in the region. As a result of the research, the factor with the highest perception mean is the "positive economic impacts". There are some studies (Mason and Cheyne 2000; Ko and Stewart, 2002; Andriotis and Vaughan, 2003; Andriotis, 2006; Andereck et al. 2005) supporting this result. It comes out that local residents are more sensitive to the economic impacts of tourism. Özel and Kozak (2017) also reveal that local people focused more on economic impacts in parallel with the findings. Jurowski et al. (1997) states that economic benefits are directly related to the support and perception of local people. Gürsoy and

Rutherford (2004) express that individuals show a more supportive attitude towards tourism development when the benefits of tourism exceed costs. In Cappadocia, local people may not have felt or have neglected possible negative impacts due to the economic benefits of tourism.

In this study, the development stage has been determined in order to form a conceptual framework that reflects the future position of Cappadocia in tourism. By determining the perception of local people, touristic area stage in the TALC can be explained. When the relationship between TALC and perception is examined, it can be said that tourism is in the middle of the *development stage* in Cappadocia. In this study, the maximum positive perception mean of 4 (completely agree) is the indication that the *consolidation stage* has been reached, and the negative perception mean of 4 is the indication that the end of the *stagnation* phase has been reached. As stated before, the level of positive perception of the local people is higher than the level of negative one.

The results of the cluster analysis are similar to the results of other clustering studies in the literature for the perception of the impacts. The first cluster *realists* is similar to *realists* of Fredline and Faulkner (2000). The *contradictory ones* that make up the 2nd cluster are similar to *in betweeners* of Davis et al. (1988) and the *neutrals* of Brida et al. (2011). The *moderate supporters*, which are the third cluster, are similar to the cluster of *moderate enthusiasts* of Ryan et al. (1998). The *economically concerned* composing the 4th cluster is similar to the cluster of *economic sceptics* by Andriotis and Vaughan (2003). The *full supporters* group that composes the last cluster is similar to Weaver and Lawton's (2013) *supporters*, Ryan et al.'s (1998) *extreme enthusiasts*, Perez and Nadal's (2005) *development supporters*.

This research has been concluded with the data obtained in the 3-month period. But longitudinal studies can be conducted to compare the periods by obtaining the data in different periods. Another limitation of the research is that it was conducted in certain areas of Cappadocia. It can be carried out throughout Cappadocia. Moreover, a comparative research can be conducted on the touristic and non-touristic areas of Cappadocia.

Some suggestions about the structure of the research are as follows: in future studies, perception levels can be determined by comparing the factors affecting the perception such as long-term / short-term residence status of the local people, employment status in the tourism sector and income status. A comparative research can be conducted on touristic and non-touristic areas of Nevşehir. A comparative research can be conducted with different tourism destinations of Turkey.

The suggestions on the results of the research have been developed as follows: local people regard tourism as an economic tool and their awareness of impacts has been underdeveloped. Therefore, information and awareness activities such as tourism education programs, seminars and conferences should be organized for them. In the tourism policy and planning at the local level, the opinions of the local people can be examined in depth. Also the positive contributions of tourism can be further developed, and regulatory policies can be implemented against possible negative aspects. Local people think that the natural environment is not destroyed. For this, modelling and scenarios, showing the future deterioration if the region is not protected can be created for local people, operators and tourists. It can be said that local people have a perception that agricultural products and areas are decreasing. Promoting and encouraging viticulture and wine production, suitable for the conditions of the region, can facilitate the local people to take an active role in tourism. In this way, agricultural tourism will be supported by organizing tour programs including wine tastings. Finally for the development of tourism, it is suggested that local governments, other public institutions, non-governmental organizations, university and private sector representatives should be in coordination and cooperation and ensure the continuity of the local people's support to tourism.

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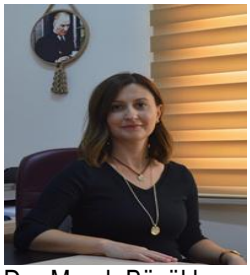

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