



Evaluation of urban transportation indicators with emphasis on sustainable development (Case study: Andisheh New City)

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ABSTRACT

This research aims on evaluation and prioritization urban transport sustainability indexes in Andisheh new city by descriptive-analytical methodology and application of factor analysis method. Surveying method was used in this research through questionnaire to collect data. Statistical population of this research was all citizens of Andisheh city. Sample volume was selected 383 persons by Cochran general formula, and simple random sampling and multistage clustering sampling methods were used to select sample population. Factor analysis statistics tests and T-test in SPSS software were used to analyze data to study the validity and reliability of questionnaire. After data analysis, two factors or indexes of “economic trip” or “green economy” with 0.61% cumulative variance in economic sustainability, two factors of “social welfare and justice” and “social security and health” with 0.61% cumulative variance in social sustainability, and one factor of “pure environment” factor with 0.62% cumulative variance in environment sustainability were extracted. Based on citizens ideas of Andisheh city and statistical analysis, economic trip index in economic sustainability, “social welfare and justice” index in social sustainability index and “pure environment” index in environment sustainability with values of -0.2549, -0.2488, and -0.3239, respectively didn’t have proper conditions and have higher priorities. Therefore, it is suggested to have more emphasis and attentions on planning to promote these indexes.

Keyword:

Urban transport, sustainability indexes, Andisheh new city, factor analysis

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1. INTRODUCTION

After passing 23 years of proposing sustainable development in *World Commission on Environment and Development* under Brundtland report (1987) and then the Agenda No. 21 in Rio Conference (1992), many definitions have been proposed about it. Although, these definitions relatively refer to the different cases, the basis of them has been the matter of today generation needs supplement without endangering future generations needs supplement (Brundtland, 1993). Comprehensive guidance of sustainable development are along with supplying the world people's essential and present needs as to guarantee supplement of future generations needs supplement and considerations of all-aspect economic, social, and environment models (Ostadi Jafari et al., 2010).

According to the significant role of transport in countries domestic gross production and its close relationship with the other economic and social sectors and also challenges such as air pollution, global warming, destruction of natural resources, environment destruction, sound pollution, and many matters, it seems necessary to think to change the present transport system toward pure and sustainable transportation seems essential. Using these definitions can be considered as a component to be able to satisfy today communities' transportation needs without endangering future generations' abilities to satisfy their transportation needs (Journal of Transport Geography, 1996). Sustainable transport has economic, social, and environmental aspects that similar attention to these aspects can bring sustainability (Mirzaaghaei et al., 2014). The used transport by urban communities hasn't had sustainable condition for occurrence of challenges and problems. This sustainability happened in the first step for extra usage of energy and fuels, then resources reduction, and eventually increasing air pollution even in its global level (Nijkamp, 2003). The importance of urban transport in sustainable development approach is the problematic being of today's urban transport system based on economic, social, and environmental issues (Turton, 2006).

Factor analysis is a general name for some multivariate statistical methods whose main objective is summarization of data. This method studies internal correlation of many variables and finally classifies and determines them as limited general factors. In addition, t-test, a parametric test, was used to determine the significance of difference between two means. Urban transport issues in sustainable development approach is important (Turton, 2006), because problematic being of issues and main defects in urban transport are involved to urban environment, society and economy as the main sustainability indexes that attention to the sustainability issues has shown this matter more essential than ever. These challenges in economic aspect include extra usage of energy resources particularly fossil fuels (Jomard and Nicholas, 2006), resulted costs by dependency and tendency to private transport instead of public transport, related costs to the construction of infrastructures, and protecting resources to their exhaustion (Stage and Gifford, 2005). Reduction in security and social safety in accident issues (Marin, 2009) in social aspects, financial and life cost increase by occurred incidents and loss of audio and visual comfort in cities that are resulted by traffic volume increase by vehicles (Fittelson, 2011).

Earth warming through greenhouse gas emissions, urban air pollution due to the high volumes of personal cars that use pollutants and the destruction of land use in cities for diverse and abundant communication pathways (US Environmental Protection Agency, 2008) are some of urban transport environmental challenges that all are included in a negative landscape in urban transport system and influence all economic, social, and environment aspects of lives in cities. The significant defects and problems in social, economic, and environmental aspects can be observed by focus on urban transport condition in Andisheh city which face the urban transport sustainability in Andisheh city with various challenges.

It was tried in this research to follow, recognize, and prioritize sustainability issues in urban transport of Andisheh city based on the proposed elements and indexes for sustainability in three economic, social, and environmental fields through people landscape, and identifies and assesses the main disadvantages of Andisheh urban transport system based on the proposed sustainability indexes. Factor analysis models and t-test in SPSS* software frame and also questionnaire were used to reach this objective. SPSS is the name of a computer software family used for statistical analysis in this regard, valid resources were used and selected as a questionnaire to account to the research sample population of Andisheh new city citizens.

1- Research background

Many attempts have been in recent decades to determine various activities of urban sustainability indexes by national and international institutions such as the World Bank, European Society, Asian Development Bank, US Agency for international development, global urban observatory of United Nations center for human settlements and urban planners and thinkers. "Sustainable Seattle (3) forty indexes" is one sample on them. Sustainable Seattle formulated sustainable Seattle3 called S3. This plan focuses on the three main axes: 1- appearance of people, projects, and ideas, 2- social communications, 3- indexes in practice. The main of the first ax is development of people, ideas, thoughts, and creative projects about sustainability issues (sustainable Seattle, 1998).

Various research and studies have been conducted based on urban transport and determination of its indexes and elements. Domestic research in this field includes Ostad Jafari and Rasafi (2013) under the title of "assessment of sustainable development policies in urban transport using dynamic systems models, case Study: Mashhad city" and Amanpour and Alizadeh (2014) under the title of "assessment and prioritization urban transport sustainability indexes using Fuzzy logic, case study: Ahwaz city" who suggested a modern methods to optimize, formulate and landscape in urban transport to reduce cost and pollutions and increase traffic and density besides describing the made challenges and defects by urban transport in economic, social, and environmental issues.

Foreign research in this field was such as Zhao (2010) under the title of "urban sustainability development and transport in growing metropolises as a result of sustainability process in urban disperse growth and transport, case study: Beijing" and

* Statistical package for social science

Rockwood, Parks and Garmire (2014) under the title of “assessment of sustainable variables in transport process in urban” which refers to the necessity of following sustainable development principles in economic, social, and environmental elements in challenging urban transport sector, the necessity of participatory planning for sustainability fitting in this field, using methods of implementation, encouraging to use modern technologies in urban transport, and emphasized on the sustainability importance in transport field. Moataz et al. (2015) tried in 2013 to promote prioritization of sustainable transport indexes to find citizens’ priorities about sustainable transport indexes using AHP model in Egypt and Assiut case study, and using 144 citizens’ ideas using 20 indexes. Based on their results, users (citizens) of public transportation and active traveling modes are significantly important for them. In another research in India by Nidehi Vormia Arya and Prittivanti Sing (2016), Fuzzy logic combination method and AHP model were used to design sustainable transport. Regarding to the results of

this research, social indexes were preferred than environmental and economic indexes. Health is the most important social sustainability index that was important along with the caused death by accident. Then pollution has been the most important environmental index in this important greenhouse gasses group, and finally, high cost was the most important index in external costs in saving group.

2. Methodology

This research was conducted with applied objective by descriptive-analytical method. Valid resources and references were used to collect the related data to research subject, and factor analysis method and t-test as SPSS software and questionnaire were used to collect the related data to the research analytical part. In this regard, valid resources were selected and used in questionnaire form to respond to the research sample population who were from Andisheh new city after collecting the effective indexes on urban transport sustainability.

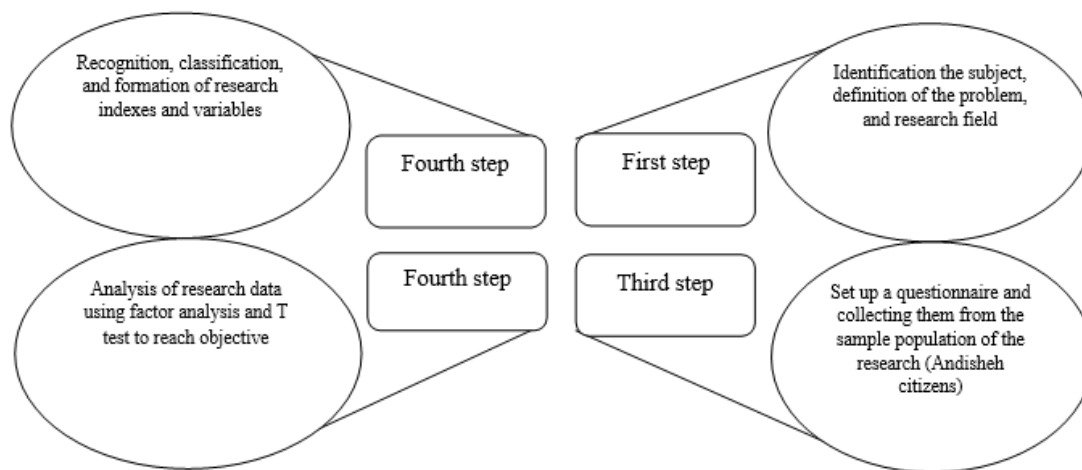


Fig. (1) – conceptual model of research process

Various divisions of urban transport sustainability elements and indexes have been made in various research. This research was divided to three main sustainability of economic, social, and environmental indexes based on the comprehensiveness in definitions and involvement of the secondary indexes which somehow eclipse these definitions in the main and secondary indexes of other similar divisions

about this subject and; on the other hand, using 20 experts’ ideas for proper classification and comprehensiveness of indexes. As 13 variables for social sustainability, 12 for economic sustainability, and 9 for environmental sustainability were considered. The offered indexes in this research about social, economic, and environmental objectives of sustainable transport are shown in tables (1), (2), and (3).

Table (1) – social indexes of sustainable transport

Indexes	Variables
Social sustainability	<ul style="list-style-type: none"> - accessibility of able and disable people - ability of supplement for poor and low income social classes - supporting social health - social equal accessibility -supporting social security and safety -supplement abilities for society - supporting children and women’s travel - supporting walking and social freshness - supporting varieties of social selection - supporting quality of social life - supporting social economy -accessibility to relief and survival services

Table (2) – economic indexes of sustainable transport

Indexes	Variables
Economic sustainability	<ul style="list-style-type: none"> - ability of walking from service providing centers (schools, stores, etc.) to homes - promoting consumers' satisfaction -encouraging to use mix applications -setting up resources and facilities for electronic communications -varieties in type of transportation vehicles - reduction of consumers' costs -planning for green transportation (walking-cycling) -reduction of daily traffic and resulted delay by it for every one - reduction of the resulted costs by road accidents - supporting railway and underground transportation - promotion of infrastructures quality

Table (3) - environmental indexes of sustainable transport

Indexes	Variables
Environmental sustainability	<ul style="list-style-type: none"> - reduction of air pollutants -reduction of sound pollutants - prevention of acidic and chemical pollutants emission - prevention of soil and water pollutions -prevention of soil erosion - prevention of the negative effects on applications -prevention of fossil resources consumption - protection of environment and landscapes - usage of renewable resources

Statistical population of research was Andisheh new city citizens that simple random and multistage clustering sampling method was used to determine research sample among them. Sample volume was determined 383 by Cochran formula through proper allocation method. Then its constitutional structures and validity and reliability of questionnaire were determined. Research selected experts' ideas were used to evaluate research tool validity, and

Cronbach's alpha coefficient was used in form of SPSS software to evaluate questionnaire reliability after pre-testy data was an analyzed using factor analysis models and t-test in form of SPSS software.

3- Research Findings

3-1- Economic sustainability

The related results to 12 variable of economic sustainability are reported in tables (4)-(5). KMO was 0.89 that is very good and Bartlett test of sphericity is rejected in 95%.

Table (4): results of the related sizes to KMO and Bartlett test of sphericity

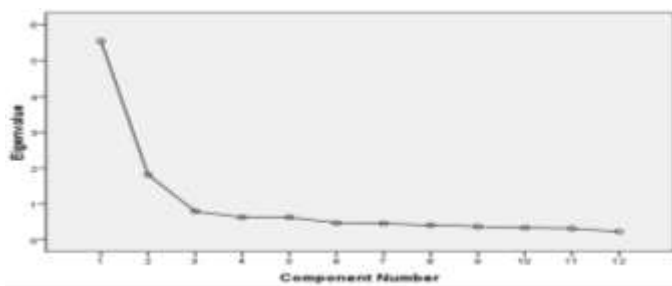
KMO	Chi-square of Bartlett test of sphericity	Degree of freedom	Sig. level
0.889	$10^3 \times 2.004$	66	0.006

Extracted factors are based on its specific values higher than 1. In addition, based on test diagram (fig. 2), discernable factors determine 0.615 of variance. Therefore the appeared

variables in research results are efficient to reach to the objective.

Table (5) – determination of factors in factor analysis of economic sustainability variables

Factors no.	Specific values	Variance %	Accumulative variance%
First factor	4.23	0.35	0.35
Second factor	3.12	0.26	0.61

**Fig. (2) – test factors (scree plot diagram) economic sustainability**

According to the results, 2 factors from 12 economic sustainability variables were extracted

Using factor analysis technic. Based on the indicted factors, the loaded variables were analyzed based on the obtained correlation for each one. The basis of the loaded variables selection based on the obtained factor load (the obtained correlation) is in analysis of factor for each of them that the loaded ones with higher than 0.5 correlation makes one factor. Such variable with more than on load in two factors is considered as the factor component in which it has more load.

Table (6): loaded variables in the first factor

	Identified variables	Factor load
First factor	diversity in the type of transportation vehicles	0.8
	Reduction of costs for consumers	0.63
	Reduction of energy consumption	0.77
	Daily traffic	0.72
	Reduction of caused costs by road accidents	0.77
	Supporting railway and underground transportation	0.77
	Promotion of the quality of infrastructure	0.56

As it is seen in table (6), 7 variables were loaded in the first factor that contains 0.35 of data variance based on table (2-4) and its specific value is 4.23. This factor can be named as economic travel index based on the type of data and amount of factor load of each one. In addition, 5 variables were loaded in the second factor based on table (4-4) by which the obtained correlation for them is in data factor analysis process. This factor determines 26% of data variance based on the results of table (2-6) and has specific value of 3.12. Based on type of variables and their factor loads, it is better to name this factor as green economy index.

Table (7) – loaded variables in the second factor

	Identified variables	Factor load
Second factor	Encouraging the usage of mixed applications	0.78
	Increasing consumers' satisfaction	0.69
	Setting up resources and facilities for electronic communications	0.54
	Planning for green transportation	0.81
	Ability of walking from the services providing centers to homes	0.8

Later, data was analyzed using t-test in form of SPSS software to describe and discern the identified double factors prioritization based on citizens' view. In this test, the loaded variables for each factor were analyzed in form of the same factor, and finally factors were prioritized based on the citizens of Andisheh new city. Therefore, all variables were analyzed in form of the valuated factors by calculation of mean, standard deviation, and deviation from mean value.

Table (8) – prioritization of the first factor variables (economic travel index)

Variables	mean	St.dev.	Diff. mean
The diversity in the type of means of transportation	1/2646	1/35970	-./23538
Reduction of costs for consumers	1/9722	1/14872	-./52778
Reduction of energy consumption	2/2583	1/08801	-./24167
Daily traffic	2/4167	1/24840	-./08333
Reduction of caused costs by road accidents	2/2745	1/22600	-./22549
Supporting railway and underground transportation	1/9930	1/27281	-./50700
Promoting the quality of infrastructure	2/4609	1/15343	-./03911

Based on research findings in table (9) and citizens' ideas, reduction of consumers' costs and supporting railway and underground transportation as economic travel index obtained weak scores and are the main concern of the citizens

of Andisheh new city. This process has been made for the second factor.

Table (9) - priority of the second factor variables (green economy index)

Variables	mean	St.dev.	Diff. mean
Encouraging the usage of mixed applications	2/2410	1/23607	-./25900
Increasing consumers' satisfaction	2/5014	1/03839	./00138
Setting up resources and facilities for electronic communications	2/3992	1/19506	-./10083
Planning for green transportation	2/9662	1/42970	./46620
Ability of walking from the services providing centers to homes	2/8469	1/28030	./34691

Analysis of the prioritization of the second factor variables shows that encouraging of using mixed applications and setting up resources and facilities for electronic communications are more mentioned from citizens' view. Prioritization of the identified factors from citizens' view was analyzed in the final step by statistical t-test, the obtained mean differences, and significance of indexes based on prioritization in economic sustainability.

Table (10) - statistical t-test to discern prioritization of economic sustainability indexes

Dimension	Basic mean value = 2.5					
	T	df	Sig (two-sided)	Mana diff	Sig level 95% min	max
First factor	-5.279	381	0.000	-0.25491	-0.3499	-0.16
Second factor	1.864	382	0.063	0.09196	-0.0051	0.189

The obtained results from statistical t analysis to identify the known economic sustainability factors show that the first factor didn't have proper conditions based on the obtained difference from negative and high mean. In contrary, it is prioritized than the other factor from citizens' view. As it is observed, statistical t- value of this factor is -5.279. Therefore, based on results, the main setting up and planning toward urban transport economic sustainability of Andisheh city must be focused on promoting the related variables and indexes to the first factor, economic travel index.

2. Social sustainability

Related results to 13 variable of social sustainability are reported in table (11)-(13). KMO size was 0.94 that is very good. In addition, Bartlett test of sphericity in 0.95 sig. level is rejected.

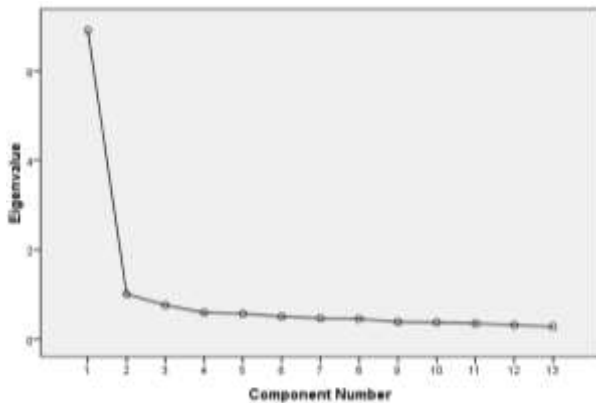
Table (11) - results of related sizes to KMO and Bartlett test of sphericity

KMO	Chi-square of Bartlett test of sphericity	Degree of freedom	Sig. level
0.945	2.202×10^3	78	0.000

Extracted factors are based on its specific values higher than 1. In addition, based on test diagram (fig. 3), discernable factors determine 0.61 of variance. Therefore the appeared variables in research results are efficient to reach to the objective.

Table (12) – determination of factors in factor analysis of social sustainability variables

Factors no.	Specific values	Variance %	Accumulative variance%
First factor	4.5	0.35	0.35
Second factor	3.4	0.26	0.61

**Fig. (3) – test factors (scree plot diagram) social sustainability**

According to the results, 2 factors from 13 economic sustainability variables were extracted using factor analysis technic. Based on the indicted factors, the loaded variables were analyzed based on the obtained correlation for each one.

Table (13): loaded variables in the first factor

	Identified variables	Factor load
First factor	Accessibility to the social equity	0.69
	Supporting social development and integrity	0.66
	Accessibility for able and disable people	0.55
	Capability of supplement for low income and poor people	0.61
	Supporting children and women	0.68
	supporting varieties of social selection	0.72
	Accessibility to relief an survival	0.81
	Supporting social life quality	0.67
	Supporting social economy	0.67

As it is seen in table (13), 9 variables were loaded in the first factor that contains 0.35 of data variance based on table (12) and its specific value is 4.5. This factor can be named as social welfare and justice index based on the type of data and amount of factor load of each one. In addition, 4 variables were loaded in the second factor based on table (14). This factor determines 26% of data variance based on the results of table (9-4) and has specific value of 3.4. This factor can be also called social security and health.

Table (14) – loaded variables in the second factor

	Identified variables	Factor load
Second factor	Supporting social health	0.76
	Supporting social security and safety	0.7
	Capability of supplement for society	0.67
	Supporting walking and having social freshness	0.85

Later, data was analyzed using t-test in form of SPSS software to describe and discern the identified double factors prioritization based on citizens' view. In this test, the loaded variables for each factor were analyzed in form of the same factor, and finally factors were prioritized based on the

citizens of Andisheh new city. Therefore, all variables were analyzed in form of the valuated factors by calculation of mean, standard deviation, and deviation from mean value.

Table (15) – prioritization of the first factor variables (social welfare and justice index)

Variables	mean	St.dev.	Diff. mean
Accessibility to the social equity	2/4218	1/26945	-·/07821
Supporting social development and integrity	2/3792	1/19601	-·/12079
Accessibility for able and disable people	2/0871	1/14363	-·/41292
Capability of supplement for low income and poor people	2/2045	1/21793	-·/29552
Supporting children and women	2/2270	1/18032	-·/27298
supporting varieties of social selection	1/9628	1/19207	-·/53725
Accessibility to relief an survival	2/1470	1/12961	-·/35303
Supporting social life quality	2/3448	1/13957	-·/15517
Supporting social economy	2/3592	1/21956	-·/14080

Based on table (15) variables such as varieties in social selection, accessibility of able and disable people, and accessibility to services of relief and survival in average have the minimum scores from citizens. This process has been made for the second factor.

Table (16) - priority of the second factor variables (social security and health index)

Variables	mean	St.dev.	Diff. mean
Supporting social health	5251/2	18732/1	02514·/
Supporting social security and safety	4571/2	23564/1	04286·/
Capability of supplement for society	5556/2	20974/1	05556·/
Supporting walking and having social freshness	8175/2	39762/1	31755·/

Analysis of the prioritization of the second factor variables of social security and health in social sustainability shows that supporting social security and safety in form of social security and health have been one of the main concerns from citizens' view.

Prioritization of the identified factors from citizens' view was analyzed in the final step by statistical t-test, the obtained mean differences, and significance of indexes based on prioritization in social sustainability.

Table (17) - statistical t-test to discern prioritization of social sustainability indexes

Dimension	Basic mean value = 2.5					
	T	df	Sig (two-sided)	Mana diff	Sig level 95%	
First factor	-5.326	378	0.000	-0.24882	-0.3407	-0.1569
Second factor	1.697	377	0.091	0.08912	-0.0142	0.1924

The obtained results from statistical to analysis to identify the known social sustainability factors show that the first factor that are social welfare and justice didn't have proper conditions based on the obtained difference from negative and high mean. In contrary, it is prioritized than the other factor from citizens' view. As it is observed, statistical t-value of this factor is -5.326. Therefore, based on results, the main setting up and planning toward urban transport social sustainability of Andisheh city must be focused on promoting the related variables and indexes of social welfare and justice index.

3- Environment sustainability

Related results to 9 variable of environmental sustainability are reported in table (18)-(19). KMO size was 0.94 that is very good. In addition, Bartlett test of sphericity in 0.95 sig. level is rejected.

Table (18) - results of related sizes to KMO and Bartlett test of sphericity

KMO	Chi-square of Bartlett test of sphericity	Degree of freedom	Sig. level
0.939	1.79×10^3	36	0.000

Extracted factors are based on its specific values higher than 1. In addition, based on test diagram (fig. 4-3), discernable factors determine 0.62 of variance. Therefore the appeared variables in research results are efficient to reach to the objective.

Table (19) – determination of factors in factor analysis of environment sustainability variables

Factors no.	Specific values	Variance %	Accumulative variance%
First factor	5.5	0.62	0.62

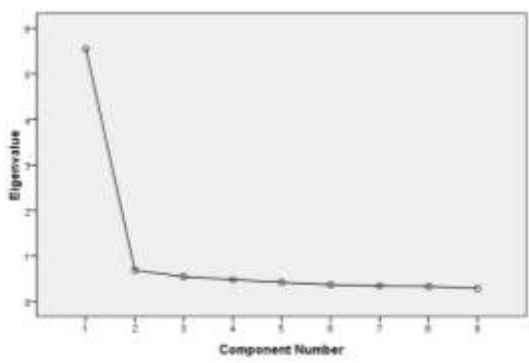


Fig. (4) – test factors (scree plot diagram) environment sustainability

According to the results, 2 factors from 9 economic sustainability variables were extracted using factor analysis technic. Based on the indicted factors, the loaded variables were analyzed based on the obtained correlation for each one.

Table (20): loaded variables in the first factor

First factor	Identified variables	Factor load
	Reduction of air and water pollutant	0.8
	Reduction of sound pollutant	0.82
	Prevention of acidic and chemical pollutants emission	0.8
	Prevention of water and soil pollutions	0.75
	Prevention of soil erosion	0.8
	Prevention of the negative effects on applications	0.75
	Reduction of fossil resources consumption	0.77
	Prevention of effect on environment reception	0.77
	Using renewable resources	0.8

As it is seen in table (19), 9 variables were loaded in the first factor that contains 0.62 of data variance based on table (12) and its specific value is 5.5. This factor can be named as pure

environment index based on the type of data and amount of factor load of each one.

Later, data was analyzed using t-test in form of SPSS software to describe and discern the identified double factors prioritization based on citizens' view. In this test, the loaded variables for each factor were analyzed in form of the same factor, and finally factors were prioritized based on the citizens of Andisheh new city. Therefore, all variables were analyzed in form of the valuated factors by calculation of mean, standard deviation, and deviation from mean value.

Table (21) – prioritization of the first factor variables

Variables	mean	St.dev.	Diff. mean
Reduction of air and water pollutant	2.1490	1/20851	-·/35100
Reduction of sound pollutant	2.2443	1/23382	-·/25575
Prevention of acidic and chemical pollutants emission	2.1729	1/27461	-·/32709
Prevention of water and soil pollutions	2.1557	1/23785	-·/34429
Prevention of soil erosion	2.25	1/26326	-·/25000
Prevention of the negative effects on applications	2.2894	1/28795	-·/21060
Reduction of fossil resources consumption	2.057	1/25227	-·/44302
Prevention of effect on environment reception	2.1852	1/21298	-·/31481
Using renewable resources	2.0570	1/29930	-·/44302

Based on table (21) variables such as reduction of fossil fuel and using renewable resources in average have the minimum scores from citizens. It means these variables have more focus on urban transport environment sustainability. In addition, reduction of water and air pollutants and prevention of air and water pollution is the other main concerns of citizens.

Prioritization of the identified factors from citizens' view was analyzed in the final step by statistical t-test, the obtained mean differences, and significance of indexes based on prioritization in environment sustainability.

Table (22) - statistical t-test to discern prioritization of environment sustainability indexes

Dimension	Basic mean value = 2.5				
	T	df	Sig (two-sided)	Mana diff	Sig level 95%
					min max
First factor	-6.185	368	0.000	-0.32387	-0.4269 0.2209

The obtained results from t statistical analysis to identify the known social sustainability factors show that the first factor that is pure environment didn't have proper conditions based on the obtained difference from negative and high mean. As it is observed, statistical t- value of this factor is -6.185. Therefore, based on results, the main set up and plan toward urban transport environment sustainability of Andisheh city must be focused on promoting the related variables and indexes of social welfare and justice index.

Conclusion

Based on the environmental problems and threatening of sustainability dimensions, attention to the sustainability conception and its elements in urban transport have been mentioned. In this regard, it was tried to evaluate urban transport three economic, social, and environment sustainability indexes in this research to propose variables showing aspects and challenges of Andisheh new city view. Based on results, two factors of "economic travel" and "green economy" with total variance of 0.61 for economic

sustainability, “social welfare and justice” and “social security and health” with totally 0.61 for social sustainability, and one factor for “pure environment” with total variance of 0.62 for environment sustainability were identified and extracted.

It was tried in the next step to prioritize identified factors and evaluate their importance in urban transport sustainability process from citizens' view. It was indicated in this step from citizens' view in economic sustainability process that “economic travel” index had improper condition based on the negative and high mean difference of -0.2549. In contrary, it has high importance in urban transport economic sustainability path. In addition, it was indicated in social sustainability process that “social welfare and justice” had improper condition based on the negative and high mean difference of -0.2488. In contrary, it has high importance in urban transport social sustainability path. Moreover, it was indicated in environment sustainability process that “pure environment” had improper condition based on the negative and high mean difference of -0.3239, and the necessity of attention and focus to setting up and planning of promoting this index is observed. Research results showed that attention to factors and indexes such as “economic travel”, “social welfare and justice”, “pure environment”, and the related items and variables to each one are in urban transport bed.

It also reminds that in variables such as reduction of consumers' costs and supporting railway and underground transportation in economic sustainability process, and “economic travel” index and encouraging to use the mixed application, and setting up resources and facilities for electronic communications as a “green economy” index have weak score. Variables such as supporting the varieties of social selection, accessibility of able and disabled people, and accessibility to relief and survival as an index of “social welfare and justice”, and variable of supporting social security and safety as a “social security and health” index received weaker scores and need more mention.

Finally, variables such as reduction of air and water pollution, and prevention of air and soil pollution as “pure environment” index in environment sustainability are in lower levels according to citizens' view.

However, based on the final results of comparison the indexes condition of each economic, social, and environmental sustainability processes and extraction of weaker indexes among the mentioned ones, variables such as reduction of consumers' costs and supporting railway and underground transportation from economic sector that belongs to the weak index of “economic travel”, supporting the varieties of social selection, and accessibility of able and disabled people and accessibility to relief and survival services in social sector that are the weak index of “social welfare and justice”, and reduction of air and water pollutants and prevention from air and water pollution in environment sector based on “pure environment” index don't have proper conditions based on citizens' view and need more attention.

Therefore, it is suggested to focus on planning and attention to promote and improve the mentioned variables and index to promote social, economic, and environment components of urban transport to promote sustainable development objectives.

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