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AIM AND SCOPE

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Host Perceptions of Tourism Impacts Across Demographic Variables

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A B S T R A C T

It is increasingly recognized that achieving the goal of favorable community support for the tourism industry requires an understanding of how residents formulate their attitudes/perceptions toward tourists and tourism industry. They may contribute to the well-being of the community through their participation in the planning, development and operation of tourist attractions and by extending their hospitality to tourists in exchange for the benefits (e.g. income) of tourism. Residents may also play an important role in discouraging tourism by opposing it or showing hostile attitudes toward tourism developers and tourists. Unless tourism development is more responsive to people"s needs over the long term, it may not be worth the social, cultural and environmental impacts and changes to host communities. In view of this well known belief, an attempt has been made in the present study to measure variation in residents" perception towards tourism impacts across demographic variablesin Kashmir Valley. The study is based on data gathered from three hundred and eighty four (384) respondents andthe results lead us to the conclusion thatthere exists insignificant variation ($p>0.05$) ontourism impacts on majority of demographic variables under reference, meaning that residents" perceive the tourism impacts alike and don"t differentiate them on demographic basis. Finally, the study also brought to light that there exists significant variation ($p<0.05$)on environmental impacts on some of the demographic variables under reference. An overall broad-based education and awareness campaigns needs to be launched on a large scale which can prove to be an important step towards enhancing local residents increased understanding/perceptions of the tourism industry and ultimately of fueling greater support and more positive views of what tourism can do for their communities.

KEY WORDS: Tourism Impacts, Demographic variables, Economic Impacts, Socio-cultural Impacts, Environmental Impacts and Kashmir Valley.

INTRODUCTION

It has been widely recognized that tourism development is a double-edged sword for host communities (Wang, et. al., 2006). Not only does it generate benefits, but it also generates costs (Jafari, 1994). Depending on the amount of benefits and costs that residents receive from tourism, they have different opinions about tourism‟s influence on their community. A number of tourism researchers (McGehee and Andereck, 2004; Wang, et. al., 2006; Gu and Wong, 2006) have found that residents‟ attitudes towards tourism impacts are heterogeneous, i.e. diverse and far from homogeneous. That could be interpreted as in certain destination tourism‟s costs are greater than its benefits while others feel that tourism‟s benefits are greater than its costs. In other words, when residents perceive the positive impacts of tourism, they are willing to support additional tourism development, but residents who perceive more costs than benefits will likely oppose tourism development (Long, 1983). Consequently, residents are key actors in planning for tourism development (Gunn, 1994) and without them; negative economic, social, cultural and environmental consequences for local communities would likely be greater (Sheldon and Abenoja,

2001). These negative influences of tourism on residents can reduce the attractiveness of a destination which can adversely affect the income potential and employment opportunities for the local tourism industry (Kwon and Vogt, 2010).

Therefore, in order to develop sustainable tourism community, support and inclusion of locals in tourism planning is crucial (Andereck and Vogt, 2000) i.e. residents‟ attitudes toward tourism development and their perceptions of the impact of tourism in their local communities are essential determinants of successful tourism (Yu, et. al., 2011). This is largely due to the fact that residents are affected directly by the tourism industry (Murphy, 1985; Ap, 1992). Moreover, residents not only have a significant influence in shaping tourists‟ experiences and the decision-making process, but also have an important voice regarding development and marketing of existing and future tourism programs (Gjerald, 2005).

Further, since tourism relies heavily upon the goodwill of the local residents, their support is essential for its development, successful operation and sustainability in the long term (Ap, 1992; Garrod and Fyall, 2000; Sheldon and Abenoja, 2001). In fact, the sense of residents‟ community attachment not only influences residents‟ perceptions of the impacts of tourism (Sheldon and Var, 1984; Um and Crompton, 1987; McCool and Martin, 1994) but also the relationship between residents and tourists (Brida, et. al., 2014). In this context, it is important to remember that tourists are more favorably attracted by destinations in which residents are more friendly, honest and hospitable (Fallon andKriwoken, 2003).

Therefore, the local community must increasingly be involved and given an active role, participating in the planning and management of local tourism policy in order to obtain its agreement and support (Dwyer, et. al., 2004; Simpson, 2009, Brida, et. al., 2014). Consequently, the primary aim of any destination manager should be to gain a thorough knowledge of the destination‟s characteristics that residents want to preserve and protect because understanding the residents‟ attitudes/perceptions towards the impacts of tourism implies to know the emotive relations between residents and their place (Brehm, et. al., 2004).

OBJECTIVES OF THE STUDY

In view of the growing importance of hostperception of tourism impacts, an attempt has been made in the present study, to measure variation in residents‟ perception towards select tourism impacts, across different demographic variables in Kashmir Valley. Such an analysis will provide tourism planners and policy makers an enhanced understanding of the residents‟ attitudes/perceptions and their relative influence on support for the tourism industrywith a view to make the overall tourism development more effective and efficient.

LITERATURE REVIEW

Demographic Factors

Demographic factors play an important role in order to understand the variance in residents‟ perception towards tourism impacts. Numerous research studies have focused on various demographic factors and residents‟ attitudes towards tourists and tourism development (Pizam, and Milman, 1984; Ross, 1992; Ap and Crompton, 1993; Johnson, et. al., 1994; Lankford and Howard, 1994; Lankford, 1994; Haralambopoulos and Pizam, 1996; Jurowski, et. al., 1997; Brunt and Courtney, 1999; Upchurch and Teivane, 2000; Andereck, et. al., 2005; Demirkaya and Çetin, 2010). Many researchers such as Murphy (1981); Brougham and Butler (1981); Murphy (1983); Tyrell and Spaulding (1984); Liu and Var (1986);

Um and Crompton (1987); Allen, et. al., (1988); Davis, et. al., (1988); Milman and Pizam (1988); Husband (1989); Perdue, et. al., (1990); Schroeder (1992); Lankford and Howard (1994); Lankford, et. al., (1994); McCool and Martin (1994); Jurowski, et. al., (1997); Fredline and Faulkner (2000) and Harrill and Potts (2003) have studied variation in the perception of residents‟ attitudes across different demographic variables. Although research has suggested that demographic variables are significant factors in forming the perception of residents towards different tourism impacts yet, there has been little direct analysis of those differences (Perdue, et. al., 1990 and Schroeder, 1992). Liu and Var (1986) in their study found that the length of residency was one of the most important socio-demographic variables explaining attitudinal differences in the perception of residents‟ towards tourism impacts. Similarly, Sheldon and Var (1984) in their study also found that the lifelong residents are more sensitive to the social/cultural impacts of tourism than are short-term residents. Other researchers (Pizam, 1978; Um and Crompton, 1987) suggested that longer the residents live in an area, the less positively residents perceive the impacts of tourism development in their community. Husband (1989) in his study concluded that age and education were good predictors of residents‟ attitudes toward tourism. In other words, he asserted that the level of education attained and the respondents‟ age were the most important variables associated with the perception of tourism effects. This opinion was supported by Tyrell and Johnston (2007) who observed that resident with higher levels of education has more positive attitudes towards tourism development. Further, Harvey, et. al., (1995) in their study on gender and community found that while tourism may provide employment for young people, men may perceive that tourism provides them livelihood. Similarly, Harrill and Potts (2003) too in their study reported that gender and economic dependency are significant predictors of perceived economic benefits of tourism.

Further, emphasizing the significance of demographic factors, many studies found out that the respondents (or their relatives, friends and neighbors) who depend upon a tourism-related job had a statistically significant positive relationship with the positive tourism factors (Murphy, 1981; 1983; Tyrell and Spaulding, 1984; Milman and Pizam, 1988; Lankford, 1994) meaning thereby that the residents who are economically related to tourism industry are more likely to recognize the benefits of the tourism development. In other words, these residents perceive the economic impacts of tourism positively. Tourism studies also suggested that the level of contact with tourists by residents might affect residents‟ attitudes towards tourism (Rothman, 1978; Brougham and Butler, 1981; Murphy, 1985; Lankford and Howard, 1994; Martin, 1995). Martin (1995) in his study concluded that the more contact people had with tourists, the more favorable their attitudes are towards the positive dimensions of tourism vice-versa (Yoon, 1998). In light of the above-mentioned research studies, it can safely be argued thatresident attitude/opinions towards tourism development are important as a tool for successful and sustainable tourism destinations improvement as well as overall development.

Sample Design

Keeping in the view the paucity of time and financial resources the present study was confined to three zones of Kashmir Valley viz;North, Central and South. These three zones were further divided into various districts and out of these districts; two districts from each zone were selected for the present study namely, District Baramulla and Bandipura from North Kashmir, District Srinagar and Budgam from Central Kashmir and District Anantnag and Pulwama from South Kashmir. The selected districts have significant relationship with the sampled residents‟ in terms of important tourist spots, maximum tourist arrivals, business operations, tourist facilitation centers etc (official records of JKTDC). The questionnaires were distributed among the residents at different tourist attractions like: Mughal Gardens, Pahalgam, Gulmarg, Sonamarg, Daksum, Aribal etc. so as to ensure that the sample would be

representative of the population and to search a range of views from the residents living in various parts of Kashmir Valley. Also, residents in these districts were likely to have more interaction with the tourists and may have more distinct perception than people from other districts. The size of the sample was limited to three hundred and eighty four (384) respondents selected from six (6) districts of Kashmir Valley.Proportionate stratified random sampling method was, however, followedfor the present study. All-important demographic characteristics like age, gender, level of education, annual household income, length of residency, zone and tourist contact, was taken into consideration while seeking the response from the residents regarding their perception of perceived tourism impacts. All these aspects have an important bearing on the user‟s evaluation of perceived tourism impacts. The effort was made to give a balanced representation to above demographic characteristics to make the sample representative.

The present study constitutes a sample where majority of the respondents fall in the age group of 26-50 years (40%) followed by the age group of 18-25 years (38%) and above 51 years (22%). In terms of gender, the sample comprises (35%) males and (65%) females.The data further shows that secondary level were heavy participants (56%)followed by graduates (28%) and post- graduates (16%). Respondents with annual household income of up to 2, 00, 000 lakhs were highest in number (44%) followed by the respondents having annual household income 2, 00, 001- 5, 00, 000 lakhs (35%) whereas respondents having annual household income of above 5, 00, 001 were least in number (21%). Further, respondents whose length of residency was above 21 years (46%) were in majority followed by respondents whose length of residency was 11-20 years (37%) and up to 10 years (17%). Further, majority of the respondents in the sample belonged to high contact group (55%).

RESEARCH INSTRUMENTON TOURISM IMPACTS

On the basis of literature review, three main tourism impacts viz; economic impacts, socio-cultural impacts and environmental impacts were selected for the present study in order to measure the perceived impacts of tourism by the sampled residents.

Economic impacts were measured in the form of employment opportunity, revenue from tourists for local business and government, standard of living, and cost of living, etc. Socio-cultural impacts were measured in the form of social problem, local service, preservation of the local culture, deterioration of the local culture, and cultural exchange between residents and tourists, etc. Further environmental impacts were measured in the form of pollution, solid waste, wild life and ecology. The scale items for tourism impacts were identified from the literature review. These items were borrowed from the studies conducted byMaethieson and Wall(1982);Sheldon and Var(1984); Liu and Var (1986); Lankford and Howard (1994); Ap and Crompton (1998); Weaver and Lawton (2001); Tosun (2002); Kim (2002) and Chen and Chiang (2005). In other words, the development of the measurement scale for this study followed the procedures recommended by Churchill (1979) and DeVellis (1991) for developing a standardized survey instrument. This led to the development of 40 initial scale items that related to the both positive and negative statements on the core construct i.e. the tourism impacts.However, the measurement scale was refined and modified to assess the construct proposed in the study. Therefore, reliability of the measurement scale was assessed.

The questionnaire was divided into two parts. The first part was designed to measure the perceived tourism impacts and the second part of the questionnaire contained questions relating to socio-demographic data about the respondents. The researchers introduced the tool of measurement in such a way that it briefly illustrated the topic of the study and procedures of response. The measurement grades

were placed according to the 5-point Likert scale. The scale was ordered regressively as Strongly Disagree (1) to Strongly Agree (5). The study was conducted for six months during the year of 2017. A proportionate stratified random sampling method was employed in which five hundred(500) questionnaires were distributed to the residents who agreed to participate in the survey. The residents completed the questionnaires in the presence of the researchers.

The Statistical Package for the Social Science (SPSS-20 and AMOS-20) was used to analyze the data. To explore the dimensionality of the forty (40) item scale, the study used R-Mode Principle Component-Analysis (PCA) with a Varimax Rotation and Eigen Value equal to or more than 1, which extracted three factors with explained variance of 50.625 percent in the data. The results are presented in the Table 1.1. Most of the factor loading were greater than 0.50, implying a reasonably high correlation between extracted factors and the individual items. The communalities of a twenty-eight (28) items ranged from 0.499 to 0.714 indicating that a large amount of variance has been extracted by the factor solution. The three factors were labeled as F1- 'Economic Impacts' F2-'Sociocultural Impacts' and F3 - 'Environmental Impacts'. The first factor economic impacts followed by socio-cultural and environmental impacts contained most of the elements (14, 9 and 5 respectively) and explained most of the variance (20.164 percent, 16.699 percent and 13.762 percent respectively) are the three important determinants of perceived tourism impacts.

Table: 1.1- Summary of Results from Scale Purification: Dimensions, Factor Loadings, Communalities, Eigen Value and Explained Variance

Factor/ Dimension	Item no.	Elements	Factor loading	Communalities	Eigen Value	Explained variance
F1 Economic Impacts	V1	Tax revenues from tourism used to improve roads,highways, and public services for residents.	.673	.593	7.347	20.164
	V2	Benefits of tourism to the community outweighing its costs	.643	.648		
	V3	Bringing more investment to the community's economy	.547	.616		
	V4	Creating more employment opportunities for local residents	.655	.499		
	V5	Generating tax revenues for local governments	.625	.595		
	V6	Helping national governments to generate foreign exchange earnings	.513	.522		
	V7	Increasing living standard of local residents	.609	.575		
	V8	Benefiting most local businesses	.631	.538		
	V9	Creating more jobs for non-locals than for locals	.587	.557		
	V10	Giving economic benefits to only a few people	.524	.537		
	V11	Increasingcost of living	.589	.544		
	V12	Increasing real estate prices	.584	.565		
	V13	Increasing the prices of many goods and services particularly essential commodities	.583	.569		
	V14	Leading to seasonal employment	.506	.545		

F2/ Socio-cultural Impacts	V15	Contributing to social problems such as crime, drug use, prostitution, and so forth in the community.	.660	.604	2.076	16.699
	V16	Encouraging residents to imitate other cultures which distorts traditional behavioral patterns	.710	.589		
	V17	Encouraging a variety of cultural activities for local residents.	.501	.609		
	V18	Improving the image of the host community	.591	.598		
	V19	Increasing social conflicts in the community	.509	.589		
	V20	Increasing the availability of recreational facilities (like swimming pools, tennis courts, ski slopes, etc.) for local people	.651	.572		
	V21	Leading to increased traffic congestion.	.678	.555		
	V22	Leading to the revitalization of traditional arts, crafts, and heritage/historical buildings	.690	.610		
	V23	Resulting in unpleasantly overcrowded shopping places for local residents	.556	.554		
F3/ Environmental impacts	V24	Hotels, airlines, attractions, and other related tourism businesses produces large quantities of waste products.	.712	.637	1.443	13.762
	V25	Causing environmental pollution like noise, littering and congestion	.679	.700		
	V26	Contributing to the preservation of the natural environment and the protection of the wildlife in the community	.684	.714		
	V27	Producing serious water pollution in lakes, bays, or the ocean.	.740	.614		
	V28	Tourists' littering destroying the beauty of the landscape	.677	.593		
TOTAL					10.866	50.625

In order to prove the internal reliability of the research instruments used i.e. tourism impacts scale, the researcher performed Cronbach‟s Alpha Test of Reliability on each variable, which was extracted from principal component analysis by following Caramine and Zeller(1979) approach. This approach calls for relationship of an item score across the item specified, item to total correlation and overall Cronbach‟s alpha score. This aspect was measured by the correlation matrix depicted in the below mentioned Tables (1.2-1.4) complemented by the application of Cronbach‟s alpha score depicted alongside of the correlation matrix table.

Table 1.2: Economic Impacts

Inter –item Correlation															
Item label	Eco1	Eco2	Eco3	Eco4	Eco5	Eco6	Eco7	Eco8	Eco9	Eco10	Eco11	Eco12	Eco13	Eco 14	Cronbach's alpha
Eco1	1														
Eco2	.378	1													
Eco3	.264	.452	1												

Eco4	.237	.390	.428	1											
Eco5	.226	.313	.411	.458	1										
Eco6	.100	.187	.222	.276	.406	1									
Eco7	.125	.247	.261	.278	.380	.371	1								.830
Eco 8	-.013	.181	.252	.180	.234	.378	.224	1							
Eco 9	.136	.230	.224	.236	.273	.158	.308	.176	1						
Eco 10	.137	.269	.252	.268	.268	.239	.220	.261	.324	1					
Eco 11	.140	.188	.261	.185	.272	.230	.288	.190	.264	.302	1				
Eco12	.127	.247	.196	.253	.318	.187	.255	.319	.210	.353	.317	1			
Eco 13	.139	.222	.245	.226	.238	.314	.242	.249	.197	.193	.312	.341	1		
Eco 14	.128	.182	.228	.252	.365	.298	.318	.246	.333	.217	.306	.339	.347	1	

Note: ECO1-ECO14= Economic Impacts

Table 1.3: Socio-Cultural Impacts

Item label	SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9	Cronbach's alpha
SC1	1									
SC2	.263	1								
SC3	.179	.237	1							
SC4	.194	.281	.299	1						
SC5	.246	.173	.251	.256	1					.724
SC6	.092	.047	.259	.131	.186	1				
SC7	.199	.108	.243	.226	.277	.269	1			
SC8	.077	.139	.290	.357	.169	.294	.423	1		
SC9	.290	.178	.208	.244	.201	.263	.317	.265	1	

Note: SC1-SC9= Socio-cultural Impacts

Table 1.4: Environmental Impacts

Item label	ENV1	ENV2	ENV3	ENV4	ENV5	Cronbach's alpha
ENV1	1					
ENV2	.467	1				
ENV3	.297	.320	1			.735
ENV4	.316	.407	.341	1		
ENV5	.320	.394	.255	.452	1	

Note: ENV1-ENV9= Environmental Impacts

The construct validity was tested by applying Bartlett‟s Test of Sphericity and The Kaiser–Mayer–Olkin Measure of sampling adequacy to analyze the strength of association among variables. The Kaiser–Mayer–Olkin measure of sampling adequacy (KMO) was first computed to determine the suitability of using factor analysis. The result of the Bartlett‟s Test of Sphercity is 0.000, which meets the criteria of value lower than 0.05 in order for the factor analysis to be considered appropriate. Furthermore KMO measure for sample adequacy for tourism impacts scores is 0.858 which exceeds satisfactory value of 0.6 (Tabachnik and Fidell, 1989) and revealed a Chi-Square at 3403.515, ($P \leq 0.000$) which verified that correlation matrix was not an identity matrix, thus validating the suitability of factor analysis (Table 1.5).

Table: 1.5- KMO and Bartlett's test

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin measure of sampling adequacy	0.858
Bartlett's Test of Sphercity (Approx. Chi- Square)	3403.515
p-value	0.000*

**Significant at 1% level.*

ANALYSIS OF DEMOGRAPHIC FACTORS

The descriptive analysis of variance in residents" perceptions across different demographic factors such as age, gender, level of education, annual household income, your zone, length of residency and tourist contact with regards to economic, socio-cultural and environmental impactsare presented in the below mentioned Tables.

Tourism Impacts Variance across Age

With a view to measure tourism impacts variation in the perception of residents", if any, among different age groups, respondents were categorized in three age groups viz., 18-25 years (group 1st) 26-50 years (group 2nd) and above 51 years (group 3rd). Mean scores were calculated for each age group and for each impact separately followed by ftest, post-hoc test and the effect size test which are presented in the Table 1.7. The data in the below mentioned Table (1.7) shows that there exits insignificant difference ($p>0.05$) in the perception of residents on economic impacts as reported by the different age groups.

Further, analysis of the data reveals relatively higher mean scores (3.78) as reported by the respondents belonging to the age group of above 51 years followed by the age group of 26- 50 years (3.64) while as, relatively lower mean scores (3.58) were reported by the respondents belonging to the age group of 18-25 years. On socio-cultural impacts of tourism there exists insignificant variance ($p>0.05$) in the perception of residents as reported by the respondents belonging to different age groups. Comparatively higher mean scores (3.74) were reported by the respondents belonging to the age group of above 51 years followed by the respondents belonging to the age group of 18-25 years (3.65) and 26–50 years (3.62). In other words, the result of the study suggests that the respondents of higher age groups perceive that the socio-cultural impacts of tourism have a positive influence upon their quality of life.

Significant variance ($p<0.05$) have been reported in the perception of residents belonging to all age groups under study, regarding environmental impacts of tourism. Relatively higher mean scores (3.84) were reported by the respondents belonging to the age group of above 51 years followed by the respondents belonging to the age group of up to 26-50 years (3.67) and 18- 25 years (3.51) on the said impacts which explains that the respondents belonging to higher age groups perceive that environmental impacts of tourism has negative impact upon their quality of life as is evident by higher mean scores. Further, effect size to the extent of .026 signifies small differences in the perception of residents towards environmental impacts of tourism as per their age groups (refer Table 1.6 for Threshold Limits). The finding of the study is in line with the research findings of Husbands (1989) and Faulkner and Tideswell (1997) who reported significant differences in the perception of residents towards environmental impacts of tourism as per their age groups.

Table 1.6: Threshold Limits for the Effect Size

Range	Cohen's D (t-test)	Eta^2 (f-test)
Small	0.20	.01
Medium	0.50	.06
Large	0.80	0.14
Very Large	Above 0.80	Above 0.14

Source Cohen (1988) and Pallant (2001)

Table 1.7: Tourism Impacts Variance across Age

Tourism Impacts	Age (in Years)	Mean Scores	f-Value	p-Value	Effect Size Eta^2
Economic Impacts	18-25 Years	3.58	2.93	.054**	-------
	26-50 Years	3.64			
	Above 51	3.78			
Socio-cultural Impacts	Up to 25 Years	3.65	1.08	.338**	-------
	26-50 Years	3.62			
	Above 51	3.74			
Environmental Impacts	Up to 25 Years	3.51	5.08	.007*	.026
	26-50 Years	3.67			
	Above 51 Years	3.84			

Note: *Significant (p<0.05) at 5% level; **insignificant (p>0.05) at 5% level

Table 1.7.1: Shows homogeneity based on Age Groups Turkey B (Environmental Impacts)

Age	Subset for alpha = 0.05	
	1	2
18-25 Years	3.5137	
26-50 Years	3.6629	3.6629
Above 51 Years		3.8448

To gain more insight of differences among the different age groups on environmental impacts, Turkey B Post hoc test was conducted. The results (Table 1.7.1) clearly identified two homogenous subsets for all the categories of age groups and the data in the subsets clearly shows significant variances among the different age groups offered by two subsets. Moreover, respondents belonging to 2nd age group (26-50) years fall between two heterogeneous subsets.

Tourism Impacts Variance across Gender

The impact of gender differences, if any, in the perception of residents towards tourism impacts under study, was also studied. The gender-wise mean scores on each tourism impacts are presented in the Table 1.8 followed by t-test and effect size test to determine the level of significant differences. The analysis of the data on the said Table (1.8) brings to light insignificant variance (p>0.05) in the perception of residents on economic impacts as reported by the gender group meaning thereby that residents based on gender have similar observations of tourism impacts. However, male respondents reported relatively higher mean scores (3.73) on economic impacts of tourism as compared to female respondents (3.57).

On socio-cultural impacts of tourism, respondents have reported insignificant (p>0.05) differences. Relatively male respondents have reported high mean scores (3.72) followed by female respondents (3.61) on the said dimension. On environmental impacts of tourism, insignificant (p>0.05) difference was observed as reported by the gender groups. Relatively higher mean scores (3.63) were reported by the male respondents as compared to their female respondents (3.61). The research finding is consistent with the research findings of Mason and Cheyne (2000) and Harrill and Potts (2003) who in their studies have reported insignificant difference of tourism impacts based on gender.

Table 1.8:Tourism Impacts Variance across Gender

Tourism Impacts	Gender	Mean Scores	t-Value	p-Value	Effect Size Cohen's D
Economic Impacts	Male	3.73	2.72	.966**	-------
	Female	3.57			
Socio-cultural Impacts	Male	3.72	1.98	.055**	-------
	Female	3.61			
Environmental Impacts	Male	3.63	.228	.948**	-------
	Female	3.61			

Note: *Significant (p<0.05) at 5% level; **insignificant (p>0.05) at 5% level

Tourism Impacts Variance across Level of Education

With a view to study variances in the perception of residents if any, at different levels of education, respondents were divided into three levels viz., level 1st (up to higher secondary) level 2nd (Graduation) and level 3rd (Post-Graduation). Mean scores for different levels of education were calculated for each group and for each tourism impacts separately which are presented in Table 1.9. The analysis of the Table (1.9) clearly reveals that there exists significant difference (P<0.05) in the perception of residents on economic impacts, as per their level of education. In other words, it brings to light that while evaluating the economic impacts, residents‟ perception or attitude do vary/differ according to their level of education with the medium effect size of .060 (refer Table 1.6 for threshold limits). The analysis moreover, brings to light that the respondents who are Post-graduates reported relatively higher mean scores (4.03) followed by graduates (3.61) while as, relatively lower mean scores (3.57) have reported by the respondents belonging to higher secondary level education group. Further, the data on socio-cultural impacts of tourism evidences that there exists significant variance (p<0.05) in the perception of residents while evaluating the said dimension with the small effect size of (.023). However, respondents who were post graduates have reported relatively higher mean scores (3.89) followed by respondents who were graduates (3.65) while as, relatively lower mean scores (3.61) were reported by the respondents belonging to up to higher secondary level education group. On environmental impacts of tourism, there exits significant variance (p<0.05) in the perception of residents with the small effect size of .036. Relatively higher mean scores (4.03) were reported by the post-graduate respondents followed by the higher secondary level education group (3.58) while as, lower mean scores (3.55) were reported by the graduate level respondents on the said dimension. This research finding of the study is in line with the research findings of Husbands (1989); Faulkner and Tideswell (1997); Teye, et. al., (2002); Andriotis and Vaughan (2003).

1.9: Tourism Impacts Variance across Level of Education

Tourism Impacts	Level of Education	Mean Scores	f-Value	p-Value	Effect Size Eta2
Economic Impacts	Up to higher secondary level	3.57	12.06	.000*	.060
	Graduation	3.61			
	Post-Graduation	4.03			
Socio-cultural Impacts	Up to higher secondary level	3.61	4.54	.000*	.023
	Graduation	3.65			
	Post-Graduation	3.89			
Environmental Impacts	Up to higher secondary level	3.58	7.06	.001*	.036
	Graduation	3.55			
	Post-Graduation	4.03			
	Graduation	3.60			

***Significant (p<0.05) at 5% level; **insignificant (p>0.05) at 5% level**

Table 1.9.1: Shows homogeneity based on Education Levels Turkey B (Economic Impacts)

LEVEL OF EDUCATION	Subset for alpha = 0.05	
	1	2
Up to Higher Secondary level	3.5753	
Graduation	3.6115	
Post - Graduation		4.0367

The above findings are complemented with the effect size (.060) (see Table 1.6) which signifies medium differences in the mean values across all educational groups. Nevertheless, results from the Turkey B Post hoc test, distinguishes respondents having educational qualification as graduates and post-graduates for the underlying causative differences.

Table 1.9.2: Shows homogeneity based on Education Levels Turkey B (socio-cultural impacts)

LEVEL OF EDUCATION	Subset for alpha = 0.05	
	1	2
Up to Higher Secondary level	3.6125	
Graduation	3.6573	
Post - Graduation		3.8979

The effect size (.023) calculated on the mean scores of socio-cultural impacts across all level of education indicates small differences (refer Table 1.6 for Threshold Limits for the Effect Size) in the perception of residents while evaluating the said dimension. However, to gain more insight of differences among the different levels of education on the bases of socio-cultural impacts, Turkey B Post hoc test was conducted and the results of the above mentioned Table (1.9.2) clearly identified two homogenous subsets for all the three levels of education and the data in the subsets clearly distinguishes respondents having educational qualification as graduates and post-graduates for the underlying causative differences.

Table 1.9.3: Shows homogeneity based on Education Levels Turkey B (Environmental Impacts)

LEVEL OF EDUCATION	Subset for alpha = 0.05	
	1	2
Up to Higher Secondary level	3.5533	
Graduation	3.5842	
Post - Graduation		4.0378

The above findings are complemented with the effect size of .036 (see Table 1.6) which signifies small differences in the mean values across all educational groups.

Nevertheless, results from the Turkey B Post hoc test, distinguishes respondents having educational qualification as graduates and post-graduates for the underlying causative differences.

Tourism Impacts Variance across Annual Household Income

To analyze variances in the perception of residents towards tourism impacts under study based on their varying income levels, respondents were categorized into three income groups viz., (group 1st) up to 2, 00,000 lakhs, (group 2nd) 2, 00, 001- 5, 00,000 lakhs and (group 3rd) above 5, 00, 001 lakhs followed by the f-test, to determine the degree of significant difference, if any, among varied income groups. This was again followed by post-hoc test and effect size test to analyze precisely variance in the perception of residents‟ in different income groups, under study and the size of such variance. The data in the below mentioned (Table 1.10) clearly shows that on economic impacts insignificant variance ($p>0.05$) in the perception of residents has been observed for all the categories of income groups. However, respondents belonging to the 3rd income group have reported relatively higher mean scores (3.78) followed by the 1st income group (3.63). As far as the respondents belonging to the 2nd income group are concerned, they have reported relatively low mean scores (3.56). Further, analysis of the said Table (1.10) brings to light insignificant variance ($p>0.05$) in the perception of all the income groups on socio-cultural impacts. Relatively higher socio-cultural mean scores (3.73) have been reported by the respondents belonging to the 3rd income as compared to the respondents belonging to the 1st income group (3.66) while as, lower mean scores (3.66 and 3.61) have been observed by the respondents belonging to the 1st and 2nd income groups respectively.

On environmental impacts, respondents of all the income groups have reported significant variance ($p<0.05$) in their perceptions while evaluating the said dimension. Further, effect size of (.026) (refer Table 1.6 for Threshold Limits) shows small differences in the perception of residents as reported by different income groups. However, higher mean scores (3.95) were reported by the respondents belonging to the 3rd income group followed by the respondents belonging to the 1st income group (3.59) while as, relatively lower mean scores (3.55) were reported by the respondents belonging to the 2nd income group meaning thereby, that the respondents belonging to the higher income group (group 3rd) firmly believes that the environmental impacts of tourism negatively influences their quality of life as compared to the respondents belonging to the other income groups (group 1st and 2nd).The finding of the study was in consensus with the research findings of Murphy (1981; 1983); Tyrell and Spaulding (1984); Milman and Pizam (1988) and Lankford (1994).

1.10: Tourism Impacts Variance across Annual Household Income

Tourism Impacts	Annual Household income	Mean Scores	f-Value	p-Value	Effect Size Eta2
Economic Impacts	Up to 2, 00,000 Lakhs	3.63	2.40	.091**	-------
	2,00,001-5,00000 Lakhs	3.56			
	Above 5,00001 Lakhs	3.78			
Socio-cultural Impacts	Up to 2, 00, 000 Lakhs	3.66	.79	.452**	-------
	2,00,001-5,00000 Lakhs	3.61			
	Above 5,00001 Lakhs	3.73			
Environmental Impacts	Up to 2, 00, 000 Lakhs	3.59	.51	.006*	.026
	2,00,001-5,00000 Lakhs	3.55			
	Above 5,00001 Lakhs	3.95			

***Significant (p<0.05) at 5% level; **insignificant (p>0.05) at 5% level**

Table 1.10.1: Shows homogeneity based on Annual Household Income Turkey B (Environmental impacts)

ANNUAL HOUSEHOLD INCOME	Subset for alpha = 0.05	
	1	2
Up to 2, 00, 000 Lakhs	3.5597	
2, 00,001- 5, 00, 000 Lakhs	3.5938	
Above 5,00,001 Lakhs		3.9561

Moreover, the importance of variation in the perception of residents belonging to different income groups can be tested by conducting Turkey B Post hoc test and the results in the above mentioned Table (1.10) signifies that there exist small differences in their perceptions. In other words, the differences in the assessment of environmental impacts by respondents belonging to different income groups were affirmed by small effect size (.026). Also, the results of the Table (1.10.1) clearly identified two homogenous subsets for all the categories of income groups and the data in the subsets clearly shows significant variances among the different income groups offered by two subsets.

Tourism Impacts Variance across Zone

To study the variances in the perception of residents‟ towards tourism impacts with regard to different zones, the respondents were categorized into three zones viz., North, Central and South Zone. Mean scores for each zone and for each tourism impacts were calculated separately which is presented in the Table 1.11 followed by f-test, post-hoc test and the effect size test. The analysis of the data in the said Table (1.11) clearly reveals that there exists significant variation (p<0.05) in the perception of residents as far as economic impacts dimension is concerned with a very large effect size (.236) (refer Table 1.6 for Threshold Limits). Relatively higher mean scores (3.93) were reported by the respondents belonging to the south zone followed by respondents belonging to the central zone (3.65) whereas respondents belonging to the north zone have scored lower mean scores (3.25) on the said dimension which suggests that the tourism leads to economic upgradation of south zone respondents followed by north and central zone respondents.

Data on socio-cultural impacts evidences that there exists significant variation ($p<0.05$) in the perception of residents with respondents belonging to south zone reporting relatively higher mean scores (3.78) followed by respondents belonging to central zone (3.64). However, respondents belonging to north zone are reporting low mean scores (3.50) on the same dimension. Further, effect size of .041 signifies small differences in the perception of residents belonging to different zones.

Respondents of all the zones shows significant variances ($p<0.05$) on environmental impacts with a very large effect size (.217). However, the respondents belonging to south zone have reported relatively higher mean scores (3.95) followed by central zone respondents (3.71) while as, relatively lower mean scores (3.10) were reported by the respondents belonging to the north zone. Thus, the finding supports the research studies of Brougham and Butler (1981); Um and Crompton (1987); Davis, et. al., (1988) and Lankford and Howard (1994) who suggested that while evaluating the tourism impacts, residents‟ zone have a significant influence on their perceptions.

1.11 Tourism Impacts Variance across Your Zone

Tourism Impacts	Your Zone	Mean Scores	f-Value	p-Value	Effect Size Eta2
Economic Impacts	North	3.25	58.71	.000*	.236
	Central	3.65			
	South	3.93			
Socio-cultural Impacts	North	3.50	8.18	.000*	.041
	Central	3.64			
	South	3.78			
Environmental Impacts	North	3.10	52.69	.000*	.217
	Central	3.71			
	South	3.95			

***Significant ($p<0.05$) at 5% level; **insignificant ($p>0.05$) at 5% level**

Table 1.11.1: Shows homogeneity based on your Zone Turkey B (Economic Impacts)

Your Zone	Subset for alpha = 0.05		
	1	2	3
North	3.2477		
Central		3.6512	
South			3.9355

The effect size (.236) calculated on the mean scores of economic impacts across all zones indicate a very large differences (refer Table 1.6 for Threshold Limits for the Effect Size) in the perception of residents while evaluating the economic impacts. However, to gain more insight of differences among the different zones on the bases of economic impacts Turkey B Post hoc test was conducted. The results of Table (1.11.1) clearly identified three homogenous subsets for all the zones and the data in the subsets clearly shows significant variances among the different zones offered by three subsets. Moreover, respondents belonging to 2nd zone i.e. central zone fall between three heterogeneous subsets.

Table 1.11.2: Shows homogeneity based on your Zone Turkey B (Socio-cultural Impacts)

Your Zone	Subset for alpha = 0.05	
	1	2
North	3.5057	
Central	3.6450	3.6450
South		3.7895

Moreover, the importance of variation in the perception of residents belonging to different zones can be tested by conducting Turkey B Post hoc test and the results in the above mentioned Table (1.11) signifies that there exist small differences in their perceptions. In other words, the differences in the assessment of socio-cultural impacts by respondents belonging to different income groups were affirmed by small effect size (.041). Also, the results of the Table (1.11.2) clearly identified two homogenous subsets for all the zones and the data in the subsets clearly shows significant variances among the different zones offered by two subsets. However, respondents belonging to 2nd zone i.e. central zone fall between two heterogeneous subsets.

Table 1.11.3: Shows homogeneity based on your Zone Turkey B (Environmental Impacts)

Your Zone	Subset for alpha = 0.05		
	1	2	3
North	3.5057		
Central		3.7117	
South			3.9545

The effect size (.217) calculated on the mean scores of environmental impacts across all zones indicates a very large differences (refer Table 1.6 for Threshold Limits for the Effect Size) in the perception of residents while evaluating the environmental impacts. Turkey B Post hoc test results of the above mentioned Table (1.11.3) clearly identified three homogenous subsets for all the zones and the data in the subsets clearly shows significant variances among the different zones offered by three subsets. Moreover, respondents belonging to 2nd zone i.e. central zone fall between three heterogeneous subsets.

Tourism Impacts Variance across Length of Residency

To study the tourism impacts variances based on length of residency, respondents were categorized into three groups" viz., up to 10 years (1st group) 11-20 years (2nd group) and above 21 years (3rd group). Mean scores for each group and for each tourism impacts was calculated separately which is presented in Table 1.12 followed by f-test, post hoc and the effect size test. The data in the below Table (1.12) clearly reveals that there exists insignificant difference ($P>0.05$) in the perception of residents on economic impacts.

However, higher mean scores (3.75) were reported by the residents whose length of residency was up to 10 years followed by residents whose length of residency was 11-20 years (3.64) while as, relatively lower mean scores (3.57) were reported by the residents whose length of residency was above 21 years which clearly reveals that longer the length of residency, relatively less are economic benefits of tourism perceived by the community.

Data on socio-cultural impacts brings to light that there exists insignificant difference ($P>0.05$) in the perception of residents while evaluating the said dimension. However, higher mean scores (3.70) were reported by the residents whose length of residency was 11-20 years followed by the residents whose length of residency was up to 10 years (3.68) while as, lower mean scores (3.59) were reported by the sampled residents whose length of residency was above 21 years. The data clearly shows that respondents belonging to the second group perceive positive socio-cultural impacts of tourism. However, on environmental impacts, data shows significant variance ($p<0.05$) in the perception of residents belonging to different residency groups with the small effect size (.018) (refer Table 1.6 for Threshold Limits). However, higher mean scores (3.74) were reported by the respondents whose length of residency was 11-20 years followed by the respondents whose length of residency was above 21 years

(3.57) whereas, respondents whose length of residency was up to 10 years reported relatively lower mean scores (3.48) on the said impact. Results of the present study are in line with the research findings of Lankford, et. al., (1994) and Allen, et. al., (1998).

1.12: Tourism Impacts Variance across Length of Residency

Tourism Impacts	Length of Residency	Mean Scores	f-Value	p-Value	Effect Size Eta2
Economic Impacts	Up to 10 Years	3.75	2.74	.065**	-------
	11-20 Years	3.64			
	Above 21 Years	3.57			
Socio-cultural Impacts	Up to 10 Years	3.68	1.70	.183**	-------
	11-20 Years	3.70			
	Above 21 Years	3.59			
Environmental Impacts	Up to 10 Years	3.48	3.54	.030*	.018
	11-20 Years	3.74			
	Above 21 Years	3.57			

***Significant (p<0.05) at 5% level; **insignificant (p>0.05) at 5% level**

Table 1.12.1: Shows homogeneity based on your Zone Turkey B (Environmental Impacts)

Length of Residency	Subset for alpha = 0.05	
	1	2
Up to 10 years	3.4879	
11-20 Years	3.5708	3.5708
Above 21 Years		3.7429

The above finding of environmental impacts are complemented with the small effect size (.018) (see Table 1.6 for Threshold Limits) which signifies small differences in the mean values across all groups. Nevertheless, results from the Turkey B Post hoc test, distinguishes respondents having residency periods of 11-20 years and above 21 years for the underlying causative differences.

Tourism Impacts Variance across Tourist Contact

With a view to study variances in the perception of residents towards tourism impacts, under study, as per their contact with tourists is concerned, respondents were categorized into two groups‟ viz., (group 1st) high contact; (group2nd) low contact. Mean scores for each group and for each dimension was calculated separately (Table 1.13) followed by t-test. The analysis of the Table (1.13) reveals that there exists insignificant difference (P>0.05) in the perception of residents while evaluating the economic impacts.

In other words, it brings to light that the perceptions of respondents do not vary/differ as per their contact with tourists is concerned while evaluating the said dimension. However, respondents who had low contact with tourists have reported relatively higher mean scores (3.66) as compared to high contact tourists (3.58). Data on socio-cultural impacts brings to fore insignificant variances (p>0.05) in the perception of residents as reported by the tourist contact group. Relatively higher mean scores (3.67) were reported by the respondents who had low contact with tourists followed by the respondents who had high contact with the tourists (3.64). Further analysis of the said Table evidences that on environmental impacts respondents reported significant variances (p<0.05) for both the tourist contact group with the large effect size (.100) (refer Table 1.6 for Threshold Limits). However, higher mean scores (3.65) on the said impact were reported by the respondents who had low contact with tourists as compared to respondents who had high tourist contact with tourists (3.57). The finding of the study was in contradiction with the research findings of Rothman (1978) and Martin (1995) who hold the view that residents who had a high contact with tourists were associated with positive attitudes.

Table 1.13:Tourism Impacts Variance across Tourist Contact

Tourism Impacts	Tourist Contact	Mean Scores	t-Value	p-Value	Effect Size Cohen's D
Economic Impacts	High contact	3.58	-1.37	.115**	-------
	Low contact	3.66			
Socio-cultural Impacts	High contact	3.64	-.374	.444**	-------
	Low contact	3.67			
Environmental Impacts	High contact	3.57	-.980	.005*	.100
	Low contact	3.65			

***Significant (p<0.05) at 5% level; **insignificant (p>0.05) at 5% level**

Conclusion and Managerial Implications

In this study, a scale for measuring the residents‟ perception towards select tourism impacts was proposed through exploratory factor analyses resulting in three factors namely: „Economic Impacts‟, „Socio-cultural Impacts‟ and „Environmental Impacts‟. The first factor economic impacts followed by socio-cultural and environmental impacts contained most of the elements (14, 9 and 5 respectively) and explained most of the variance (20.164 percent, 16.699 percent and 13.762 percent respectively); this clearly indicates that the most important factor in predicting perceived tourism impacts is economic impacts followed by socio-cultural and environmental impacts. These research findings are in harmony with the research findings of Sheldon and Var (1984); Liu and Var (1986); Milman and Pizam (1988);Dogan (1989); Brayley, et. al., (1990); Inskeep, (1994); Gee, et. al., (1997) and Tosun (2002).

The analysis of perceived tourism impacts reveals that demographic variables played a significant role in forming the perception of residents while evaluating the different tourism impacts. The findings reported no significant difference in the perception of residents‟ according to their age groups, while evaluating the tourism impacts under study, except environmental impacts where significant difference existed ($p<0.05$). As per gender group, insignificant differences ($p>0.05$) were reported on all the impacts of tourism under study, while as, significant difference ($p<0.05$) was reported by the sampled respondents on all the impacts of tourism as per their level of education. As per annual household income insignificant variance ($p>0.05$) existed except environmental impacts where significant difference existed ($p<0.05$). Moreover, the perceptions of residents was found to be significant ($p<0.05$) as per their zones with all the impacts of tourism, under study,while as, insignificant differences ($p>0.05$) were reported on all the perceived tourism impacts except on environmental impacts where significant differences existed ($p<0.05$) in the perception of residents‟ based on their length of residency and tourist contact.

As the directly affected group and immediate participants, residents are more sensitive to tourism‟s impacts and benefits. They could make a relatively proper assessment of the current tourism development. In other words, long-term and successful development of tourism is dependent on the local community‟s attitude/perception towards tourism and tourists and is essential for visitor satisfaction and repeat visitation (Swarbrooke, 1993; Sheldon and Abenoja, 2001) i.e. tourism planners and community developers should consider residents‟ standpoints when they develop travel and tourism programs and help residents realize their higher order needs related to social esteem, actualization, knowledge and aesthetics. At the same time, the modified questionnaire instrument used in the present study, if implemented in the right perspective, will surely go a long way in providing valuable input for tourism planners for dealing with the strategic managerial decisions, marketing and operation of existing and future programs and projects in order to make the overall tourism development in the Valley more effective and efficient.

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Impact of Audit Rotation on Audit Quality: A Case Of Masvingo

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A B S T R A C T

The aim of the study was to determine how audit rotation impacts on audit quality. The research objectives were to examine how audit rotation enhance audit quality in Masvingo and establish the extent to which audit rotation improve auditor independence. In carrying out the research quantitative and qualitative research methodologies were used. Questionnaires were distributed to seven audit partners and interviews were conducted with ten audit clients. Results drawn from data indicated that audit rotation enhances audit quality because audit rotation strengthen auditor independence since the auditor would be objective. The results found that objectivity of the auditor implies that his or her decisions are not influenced by the long auditor-client relationship which in turn results in a positive impact on audit quality. Research findings stated that to ensure auditor independence, the audit partners in Masvingo should be rotated after a period of ten years to give them fresh engagements. Rotation of audit partners implies that the auditors perform all necessary tests and work hard to produce a high quality audit report. It is recommended that clients have to seek non-audit services from other firms and not from audit partners who would be auditing their work to enhance auditor independence.

Key words: auditor, auditor-client relationship, auditor independence, audit rotation, audit quality,

1. INTRODUCTION

Long tenure of auditors usually impact negatively on audit quality, because auditors may develop a close relationship with the management and they will lose their objectivity and independence and may not be willing to question or challenge management claims when necessary (Ouyang and Wan, 2013:23). Proponents of mandatory rotation of auditors are concerned about the risks that long-term auditor-client relationships pose to the auditor's mind set. By limiting that relationship, rotation will ostensibly improve audit quality by helping ensure that auditors remain professionally skeptical and do not become overly trusting of their clients' assertions.

Some companies raised concerns worldwide about auditor independence and audit quality. To improve audit quality, mandatory audit firm rotation was advocated in different countries. It is argued that audit quality is diminished with long audit tenure, that mandatory rotation will reduce familiarity threat, ensures auditors independence and provides a greater skepticism and a fresh perspective that may be lacking in long-standing audit or client relationship. In order to enhance the perceptions of auditor independence and the credibility of their function, regulators have established measures designed to ensure that auditors remain independent of their audit client. These measures include rotation of audit engagement partners and mandatory audit firm rotation. This was triggered by the collapse of Enron, an energy trading company that relied on dubious accounting practices to hide poor performance to its shareholders during hard times. The accounting practices included the mark- to- market accounting which allowed the company to write unrealized future gains from some trading contracts into current income statements, thus giving the illusion of higher current profits. Another practice was to transfer

troubled operations of the company to Special Purpose Entities (SPEs) so as to keep the troubled assets off Enron's books, making its losses look less severe than they really were. During its operation the firm relied on only one auditor named Arthur Andersen (Bandarenko 2009).

Cameran, Dopuch, Gietzmann and Sen, Catanach and Walker (2005) claim that the introduction of mandatory audit partner rotation is a means of strengthening independence, reducing the incidence of audit failure and improving the quality of audits. Long association with the client may increase potential threat to professional competence and due care and will resultantly leads to a negative audit quality. This is due to the fact that an overreliance on historical knowledge of the business and trust of directors could cause senior audit staff to overlook key issues. Audit rotation encourages fresh perspectives and ideas, which ensures a constantly high quality of service since information is generated from scratch rather than from knowledge of the business due to a long relationship.

In order to enhance the audit quality, different countries require companies to change their audit firms under mandatory audit firm rotation. For instance, Brazil and Italy requires its public listed companies to rotate their auditors after a period of five and nine years correspondently (Jackson, Moldrich and Roebuck, 2008:421). In Spain, from 1991-1995, audit firm rotation was required.A study was done that compared all the audits performed in that time period to all audits performed five years after firm rotation was recalled. There was a positive impact on the quality of the audits that were done during audit firm rotation as compared to audits that were done after firm rotation ended (Barbadillo, Aguilar & Carrera, 2009).This showed that audit rotation impacts positively on audit quality. South Africa has also had its fair share of corporate financial failures and scandals, perhaps most Africa has also had its fair share of corporate financial failures and scandals, perhaps most recently the demise of African Bank. Many of these failures have partly been blamed on the failure to rotate its auditors. The collapse of LeisureNet in 2000 was as a result of poor auditor behaviour stemming from a lack of independence due to long auditor to client relationships. In this regard, the Independent Regulatory Board for Auditors of South Africa announced its plans to pursue mandatory audit firm rotation for the audits of public interest entities to enhance audit quality. The motivation for this decision was firstly due to concerns raised about independence issues due to long auditor to client relationships.

In Zimbabwe, it has been observed in the recent past that the same auditing firms are auditing the same organisations for periods of more than ten years without rotating. For example, auditing firms in Masvingo town have been auditing the same companies for more than ten years. Their reason for clinging to the same companies for long periods are as a result of the current economic hardships where companies are folding up and the audit firms have to compete for the few available clients. As a result the companies have been forced to have long-term relationships of over ten years. Auditing firms in Masvingo town argue that it is better to audit the same company for over the stipulated time due to the prevailing economic hardships. It is very difficult to engage new clients due to competition for clients and the scarcity of companies in the market.

The Zimbabwean Accounting Policy on auditing ethics and Section 139 (2) of the Companies Act, 2013 has mandated all listed companies and certain categories of unlisted public companies and private companies to mandatorily rotate their auditors once their firm has served office for a period of 10 or more consecutive years. The accounting policy was introduced to maintain audit quality work because it is argued that if the same audit firms serve for more than 10 years they slowly lose their objectivity and their decisions may be influenced by the long audit to client relationship. The Companies Act also

stipulate that no listed company shall appoint or re-appoint an individual as auditor for more than one term of five consecutive years. The Act was introduced to enhance audit quality because it is believed that if the auditor changes, the incoming auditor start from scratch with their client, which means no longstanding relationship is intact thereby enhancing auditor independence which leads to audit quality.

However, according to professional ethics and conduct policy, it is unethical to have a long-term auditor-client relationship of more than ten years as it tends to harm actual and perceived auditor independence and hinder fresh ideas that improve audit quality. Report on the observance of standards and codes (ROSC) Auditing and Accounting Zimbabwe (2011) highlighted that Audit firm rotations are mostly taking place in bank audits at the insistence of the Reserve Bank of Zimbabwe. The insistence was done after the collapse of financial institutions like Interfin bank, Trust bank, CFX bank and others due to auditors who failed to report the shenanigans they would have seen in their client's banks during audits because of long tenure with their clients. Audit rotation has resulted in the enhancement of audit quality in banks. However, there are some locally listed companies in Zimbabwe that have been audited by the same audit firm for over 30 years and companies in Masvingo have also not been spared. Some stakeholders expressed concern over close relationships between some companies and their auditors in different forms that compromise auditor independence (ROSC A&A, 2011) Many believe that the longer the audit tenure, the lower the audit quality due to the closer relationship between auditors and management (Chaney &Philipich, 2002; Firth, Rui & Wu, 2010). This closer relationship creates more flexibility for the management to produce financial statements in the auditor's favour (Davis, Soo, &Trompeter, 2002). It is against this background that this study seeks to investigate the impact of audit rotation on audit quality in organisations and establish the extent to which audit rotation improve auditor independence in Masvingo.

2 RESEARCH METHOD

The study employed a cross sectional descriptive survey design in which data is collected from a population at one specific time (Gray, 2009:575). The researchers chose the cross sectional descriptive survey in this study for example they are inexpensive and allow the researchers to collect a great deal of information quite quickly. This study focused on the perceptions on non- audit rotation's impact on audit quality in Masvingo. Thus, all the Accounting Services Firms in Masvingo became the target population, but it was not feasible to carry out a study which covers such a larger population. For the purpose of feasibility the researchers chose to work with Chartered Accounting Firms namely AMG and TAM and their clients in Masvingo only. The researchers used purposive sampling in selecting the firms which were used in the study. As such 2 firms were selected. From the 2 firms the researchers used convenience sampling to select the audit partners which were used in the study. Therefore, a total of seven partners were selected. The researchers then used simple random sampling to select clients from the firms. Thus, a total of ten clients. This sampling technique was used on the Audit Firms (AMG Chartered Accountants and TAM Chartered Accountants of Zimbabwe), because they are the only two Chartered Accounting Firms doing audits in Masvingo, the researchers hand- picked them deliberately/purposively in order to work with them in this study. Data from the clients was collected using interviews and data from the audit partners was collected using questionnaires. In this study, the 10 clients responded to the interview. This study employed a closed ended itemised questions which were derived from the research questions to form a structured questionnaire. In this, case 7 questionnaires were distributed to the clients.

The researcher observed ethical principles like informed consent, privacy, nonmalfeasance (need to do no harm), beneficence (need to do good), right to anonymity and confidentiality. Informed consent

means participants should understand that they are taking part in research and what the research requires of them. The researchers allowed the participants freedom to choose to participate or to withdraw during the course of the research. Qualitative data was analysed using thematic approach and quantitative data was analysed using Statistical software to produce graphs and tables.

3. RESULTS AND ANALYSIS

Results of the study are presented following the two objectives which were formulated earlier on. Results presented in Table 1 show effects of audit rotation on audit quality.

3.1 Effects of audit rotation on audit quality

Findings in Table 1 show that all the audit partners and more clients either strongly agreed or agreed that audit rotation enhances audit quality. Results from the clients show that most of the clients agree that audit rotation affects audit quality. However, it was also noted that few respondents disagreed with the view that audit rotation affected audit quality. This shows that a total of 82% of the respondents agreed that audit rotation enhances audit quality whilst 18% disagreed. From the above results it can be argued that audit rotation enhances audit quality.

Table 1 Effects of audit Rotation on audit quality

Respondent	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total	%
Audit Partners	5	2	0	0	0	7	41
Clients	4	3	0	2	1	10	58
Total	**9**	**5**	**0**	**2**	**1**	**17**	**100**

Results of this study showed that both audit partners and clients agree that audit rotation enhances audit quality. These findings are in line with Zawawi (2007), who indicated that the concept of mandatory audit rotation was introduced as a result of the highly publicized corporate failures that resulted in litigations and low quality work by audit firms.

Mandatory rotation is viewed as improving auditor independence both in fact, relating to the auditor's independent, mental attitude, and in appearance to, relating to others' perceptions of auditor independence, which in turn results in a positive impact on audit quality (Daugherty, (2013). Mandatory auditor rotation has frequently been suggested as a means of strengthening independence and reducing the incidents of audit failure (Catanach and Walker, 2010). It is argued that the length of the auditor-client relationship constitutes a major issue in the auditor conflict of interest, because long auditor- client relationships may cause auditor complacency about management decisions regarding the firm's financial statements. Following this view, mandatory rotation of external auditors has been suggested.In a similar way, it was suggested that long auditor tenure is not desirable because it gives the audit firm time to develop a close relationship with the auditee' (Whittington, 2005: 177). Thus, the auditor's incentive to preserve independence declines over time. Resultantly audit quality is compromised.

Catanach and Walker (1999) state that charging the auditor is an instrument used to reinforce the auditor's independence and improve the audit quality. Audit rotation is suggested as a means of improving audit quality through maintained independence and new "fresh eyes" on audits. This enhances audit quality.

3.1.1 Audit Partners- Clients assessment of confidence with impact of audit rotation on audit quality.

The results presented in table 2 show audit Partners- Clients assessment of confidence with impact of audit rotation on audit quality. From the table 2 it can be noted that all audit partners (100%) are either very confident or confident with the impact of audit rotation on audit quality.

Table 2 Audit Partners- Clients assessment of confidence with impact of audit rotation on audit quality

Respondent	Very Confident	Confident	Not confident	Not very confident	Total
Audit Partners	5	2	0	0	7
Clients	7	1	1	1	10
TOTAL	**12**	**3**	**1**	**1**	**17**

Results from the findings on clients reveals that 80% of the respondents were either very confident or confident with the impact of audit rotation on audit quality leaving a 20% of the respondents who were not confident in relation to the subject matter. Those who supported audit rotation argued that new auditors normally have a questioning mind that brings a "fresh look" to detect problems in a client's financial reports, audit rotation may improve audit quality as provided for by Lu and Sivaramakrishnan, 2009). Those who were against audit rotation argued that it takes years for new auditors to get familiar with the client's business and accounting practices, thus audit quality may suffer from audit rotation.

3.2 Response on the effects of audit rotation on auditor independence

Seven audit partners and ten clients were asked about the effects of audit rotation on auditor independence and their responses are indicated by the histogram below:

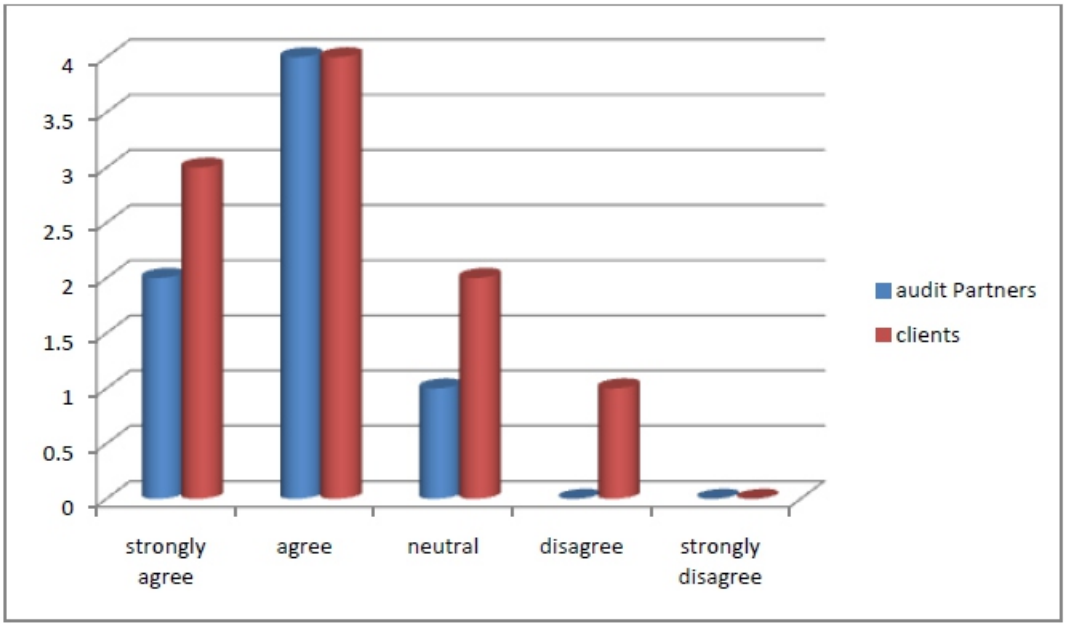

Figure 1: Effects of audit rotation on auditor independence

The above histogram shows the opinions of the respondents on whether audit rotation enhances auditor independence. Those who agreed that audit rotation enhances auditor independence constituted 76% of the respondents, 18% were neutral and 6% disagreed that audit rotation enhances audit independence.

Results of the study show that most of the respondents agree with the view that audit rotation has an effect on auditor independence. The results are supported by Daugherty, (2013) who indicated that mandatory rotation, improves auditor independence both in fact, relating to the auditor's independent, mental attitude, and in appearance to, relating to others' perceptions of auditor independence, which in turn results in a positive impact on audit quality. The findings are further supported by Catanach and Walker, (2010), who stated that mandatory auditor rotation has frequently been suggested as a means of strengthening independence and reducing the incidents of audit failure. In a similar way, it was suggested that long auditor tenure is not desirable because it gives the audit firm time to develop a close relationship with the auditee' (Whittington, 2005: 177). Thus, the auditor's incentive to preserve independence declines over time which resultantly audit quality is compromised.

3.2.1 Level at which Audit Rotation improves Auditor Independence

Audit partners and clients under investigation were asked about the level at which audit rotation improves auditor independence. The levels for rating was as follows ranged from levels - 5 Lowest to 1 Highest. The responses are presented in Figure 2.

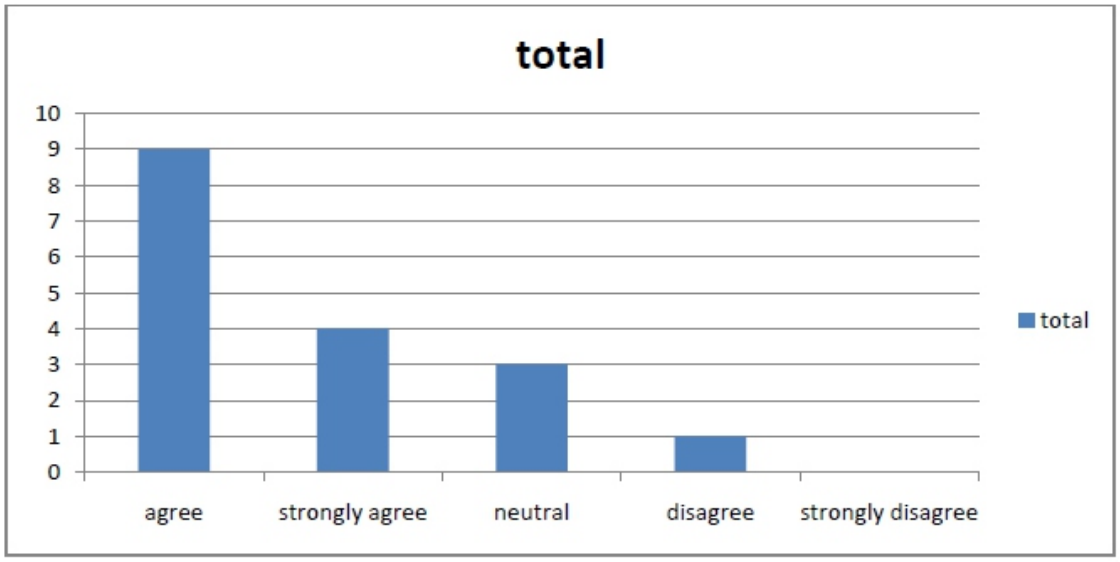

Figure 2: Level at which audit rotation improves audit quality

The findings from the research in the bar graph above was a rating in terms of the levels at which audit rotation improves auditor independence ranging from the highest level 1 up to the lowest level 5. Thus, 9 respondents from both audit partners and clients were rated first as agreed respondents. Those respondents who strongly agreed that audit rotation improves auditor independence were rated second with a minimum number of 4 respondents. The findings also reveal that 3 participants from the research neither agrees nor disagree that audit rotation improves auditor independence. However, only 1 respondent from clients disagreed that audit rotation improves auditor independence while none of the groups of respondents strongly disagreed with the above view in question.

Most audit firms in Masvingo are auditing the same organisations for more than 10 years. According to Chan et al (2014), audit rotation is a specified time that an audit firm is given by policy to audit a firm. After such period another firm/auditor should come in despite the efficiency, quality, and independence of the audit firm, the willingness of the shareholders and the management to keep the audit firm.

4. CONCLUSIONS

The main purpose of the study was to establish the perceptions on non-audit rotation's impact on audit quality. Results drawn from data proves that audit rotation enhances audit quality because audit rotation strengthen auditor independence since the auditor would be objective and his or her decisions may not be influenced by the long auditor-client relationship which in turn results in a positive impact on audit quality. Auditing firms in Masvingo town have been auditing the same companies for more than ten years in violation of policies and this has resulted in negative audit quality since long auditor-client relationships reduces auditor independence. Audit rotation cycle in Masvingo can highly be improved by ensuring that firms adhere to the policies, rules and regulations pertaining to auditor- client relationship. Based in the findings the study recommends that the firm must put in place necessary controls and review functions to monitor audit engagements in order to improve audit quality. The firm must also consider rotating key partners of audit engagement in order to improve audit independence. It can be further recommended that firms should restrict provision of non-audit services since this forms a bond between the audit firm and client hence reduces audit independence which results in adverse audit quality.

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New Uzbekistan: Prospects of the Further Improvement of the Global Innovation Index

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A B S T R A C T

Current rapid period requires comprehensive use of the achievements of innovations in the world economy. In this regard, the issues of evaluating the level of innovation development of countries are becoming crucially important. This article is devoted to the analysis of the dynamics of innovation development in the Republic of Uzbekistan, its role in the Global Innovation Index and system-related positive solutions to current problems, as well as advantages of enhancing its prestige in the international arena. In reliance upon the analysis held, relevant proposals aimed at promoting the factors that will enhance the status of Uzbekistan in the international arena, as well as necessary index indicators, have been developed.

Key words: economy, innovation, rating, innovation environment, Global Innovation Index, GDP, World Bank.

INTRODUCTION.

The COVID-19 pandemic has imposed major negative barriers to innovation's long-term growth strategy throughout the world. This trend is alleviating some types of innovation, however, meanwhile, results in the increase in human ingenuity in other areas, primarily in the health sector. The country is implementing large-scale comprehensive activities aimed at creating an innovation-oriented economy in the short term and working out conditions for the widespread introduction of innovations. In particular, formulation of a single state policy body in the field of innovation and research, as well as technological development of the Republic, establishment of the Fund for Support of Innovative Development and Innovative Ideas has become one of the major and significant steps in this area.

Herewith, comprehensive and large-scale reforms being implemented at the current stage of the country's development demonstrate necessity to improve public administration mechanisms in research and innovation, raise transparency in the formation of state programs for research activities and accelerate the introduction of research achievements and innovative technologies. In reliance upon the objectives set in compliance with the Action Strategy to enhance the role of the national research and innovation system in socio-economic development, development of innovation in the regions, as well as in terms of the five priority areas of development of the Republic of Uzbekistan in 2017-2021, the following has been determined as essential points (Decree, 2017):

- improving organizational and legal mechanisms of public administration for the development of science, research and innovation;
- introduction of a system of management of research and innovative activities in the regions and development of regional innovation infrastructure;

- creation of a system of wide introduction of innovations at enterprises and entities of the economy in reliance upon advanced foreign experience;
- gradual increase in the amount of funds allocated from the state budget for science and research;
- introduction of new financing mechanisms in the field of research and innovation, expansion of private sector participation in the implementation of scientific and innovative projects;
- ensuring transparency and efficiency of the system of preparing the people claiming for the academic degrees and enhancing the responsibility of organizations of preparing the people claiming for the academic degrees and scientific councils;
- introduction of the national rating system of research agencies and enhancing efficiency of scientific organizations, introduction of new mechanisms of their management and coordination;
- training of qualified personnel for the management of research and innovation activities, development of innovative entrepreneurship in reliance upon supply of innovation managers.

LITERATURE REVIEW.

In issues of the analysis of innovative processes and factors, which make an impact on the socio-economic development of the country, activation of factors that enable to raise innovation potential and the position of Uzbekistan in the international arena have been considered in the research papers of such foreign scholars and economists, as Y. Shumpeter, G. Mensh, K. Freeman, P. Druker, B. Santo, Sh. Tatsuno, R. Robinson, D. Sahal, M. Porter, B. Tviss, K. Kh. Oppenlender, A. Hamilton, P. White, E. Mensfield and others. A number of domestic scholars-economists such as F.M.Matmurodov, B. Abdullaev, N. Alimova, Z. Gaibnazarova, D. Kokurin, M. Maxkamova, Z. Muqumov, O. Nazarov, R. Nazarova, N. Namazova, Sh. Otajanov, Sh. Sindarov, T. Toshpulatov, G. Khamdamova, B. Kholikov have studies theoretical and practical issues of the innovation activity development and efficient use of the innovation potential taking into account the peculiarities of our country (Schumpeter, 1912).

The dynamics of innovation development indicators in the Republic of Uzbekistan, its place in the Global Innovation Index and a systematic analysis of the current problems demonstrate that there are a number of factors that prevent innovation development in our country, including:

- inefficient system of research funding, reduction of funding;
- problems of commercialization of inventions;
- low level of innovation infrastructure development (especially Free Economic Zones, business incubators);
- inadequate development of the telecommunications infrastructure;
- problems with statistics;
- fundamental science is unorganized and isolated from the world scientific community.

In addition, Uzbekistan has a negative trade balance on high-tech and research products, and the fact that the share of high-tech imports is growing, is featured by a low level of development of innovative infrastructure, which, in turn justifies the urgency of the research topic.

The aim of the research is development of proposals and recommendations on modernization of the innovation system of Uzbekistan, ensuring efficiency of national competitiveness and economic diversification in the global market through the activation of innovation factors, creating and developing a stable chain of innovative products on the international market, as well as enhancing Uzbekistan prestige in the Global Innovation Index.

RESEARCH METHODOLOGY.

The methods such as complex study of historical, systemic-structural, exact sociological, scientific sources, induction and deduction, analysis of statistical data, have been widely used in this research.

DISCUSSION AND ANALYSIS.

The Global Innovation Index is a large-scale study that ranks countries around the world according to their level of innovation development. It is calculated by the method of the INSEAD - French International Business School. It should be noted that in order to ensure full transparency, the statistics and other information required for inclusion in the GII ranking of countries, are not obtained directly from the listed countries. The data are provided by international organizations such as the World Intellectual Property Organization (WIPO), the International Energy Organization (IEA), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Industrial Development Organization (UNIDO), the International Trade Organization (WTO), the International Organization for Standardization (ISO), HIS Markit, Bureau van Dijk, ZOOkNIC Inx, Thomson Reuter and the Wikimedia Foundation.

It is annually compiled by Cornell University (USA), INSEAD Business School (France) and a consortium of the World Intellectual Property Organization. The index is calculated as the relative amount of the two groups of indicators. The first group includes the available resources and conditions for innovation (Innovation Input), development of institutions, human capital, research, infrastructure, domestic market and entrepreneurship. The second group is the Innovation Output, which is the result of the development of technology and science, as well as the results of creative activity.

Digital Indicators		
	2017	**2035**
Global Innovation Index (ranking)	-	Top 50
Expenditures on Research and Development	0,2%	1%

Figure 1. Ranking of Uzbekistan in the Global Innovation Index (Global Innovation Index, 2019)

The Global Innovation Index consists of 82 indicators that demonstrate innovation development of countries at various stages of economic development. In particular, such indicators as the investment level in research and development, and a variety of other different indicators from the number of international applications for patents and trademark registration to more modern indicators, such as the number of mobile applications created and the level of exports of high-tech products are taken into account.

Changes in the Global Innovation Index ranking, top 10 [7]

	1	2	3	4	5	6	7	8	9	10	
2019	CH	SE	US	NL	GB	FI	DK	SG	DE	IL	In 2019 IL joined the top 10 of the Global Innovation Index for the first time
2018	CH	NL	SE	GB	SG	US	FI	DK	DE	IE	In 2018 SG joined the top 5 of the Global Innovation Index for the first time
2017	CH	SE	NL	US	GB	DK	SG	FI	DE	IE	In 2017 NL was in the top 3, and SG was ranked the second
2016	CH	SE	GB	US	FI	SG	IE	DK	NL	DE	In 2016 DE returned to the top 10 position
2015	CH	GB	SE	NL	US	FI	SG	IE	LU	DK	SC has been ranked the first since 2011
CH-Switzerland, GB – Great Britain, SE – SWEDEN, NL – Netherlands, US – USA, FI – Finland, SG – Singapore, IE – Ireland, LU – Luxembourg, DK – Denmark, DE – Germany, IL – Israel. Annex: Amendments in the GII model and availability of the relevant data make an impact on the annual comparison											

Figure 2. Amendments in the Global Innovation Index rating, top 10 (Global Innovation Index, 2019)

According to the press service of the Ministry of Innovative Development of Uzbekistan, Uzbekistan last ranked 122nd out of over 140 countries in this international ranking in 2015. For the first time since 2016, the Republic has been re-included in the Global Innovation Index. In 2015, the country had inadequate peculiarities on 11 indicators according to the methodology used in the Global Innovation Index, taking into account the insufficient data in this ranking among 141 countries (Economy of Uzbekistan, 2018) Furthermore, Uzbekistan ranks high in the following indicators: simplicity of starting a business (ranked 55), simplicity of settling insolvency (recognition of bankruptcy) (ranked 72), the ratio of scholars and teachers in secondary education (ranked 47), the number of graduates in science and technology (ranked 47), gross capital accumulation (ranked 19), loan portfolio of microfinance institutions (ranked 39), applications for receiving patents (ranked 48), utility model application (ranked 24), GDP growth rates per capita (ranked 6), created national feature films (ranked 49) (Economy of Uzbekistan, 2018).

If we analyze the Global Innovation Index in terms of expenditures on research and development in our country, the number of patents, the number of scientists (researchers), the evidence of research, we can see the following trend as it is shown in Figure 3.

In reliance upon Figure 3, it is obvious that Uzbekistan lags far behind the leading countries in terms of patent activity, and the number of existing patents is declining.

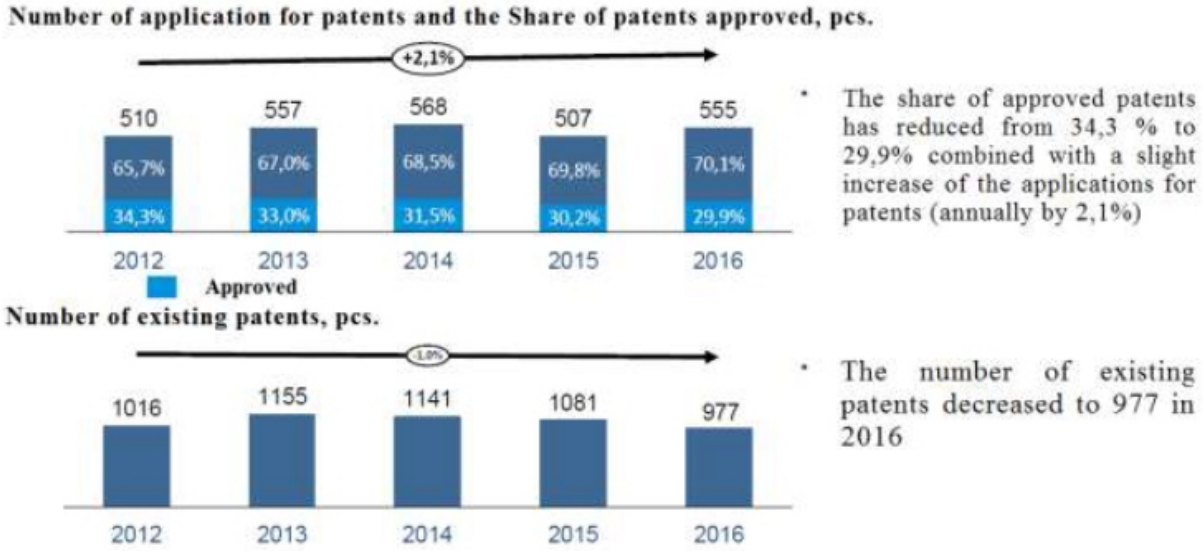

Figure 3. Indicators of the patent activity level in 2012-2016 (Economy of Uzbekistan, 2018)

In addition, in terms of GII rankings in 2015, the position also ranked lower in indicators related to innovation and funding for research developments. In this regard, the Ministry has introduced a new efficient mechanism for holding competitions and selection of research and technical projects within the state research and technical programs.

Herewith, the practice of regularly announcing competitions on topical subject areas aimed at scientific solutions to specific problems of the economy and social sphere has been introduced.

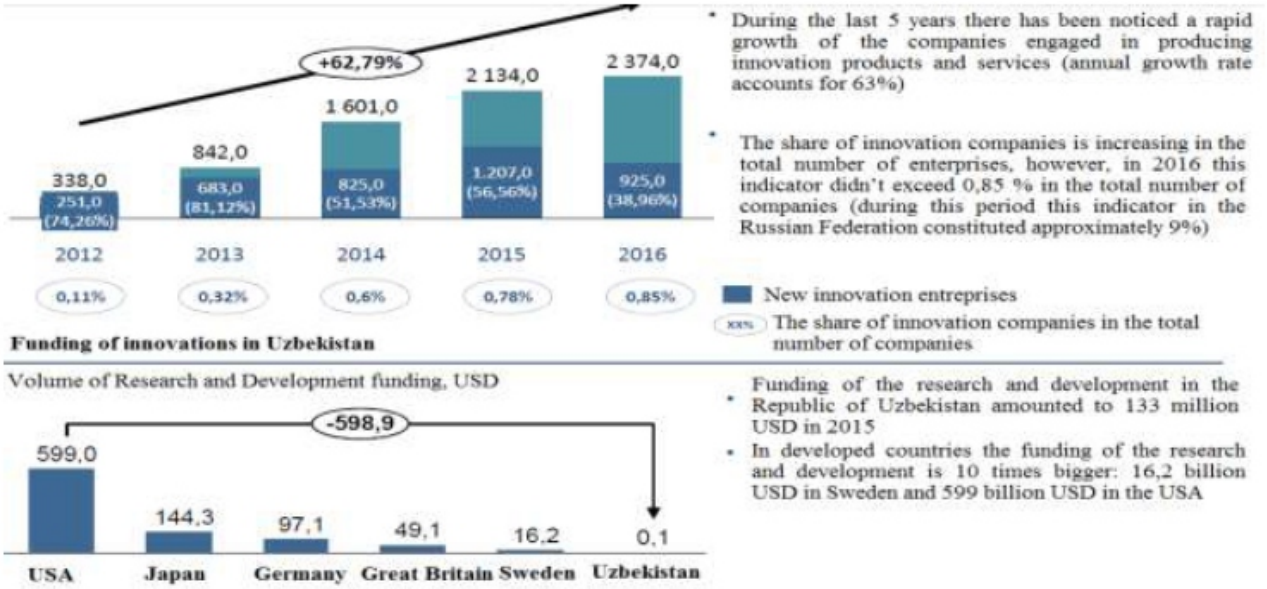

Figure 4. Number of innovation companies and the share of new innovation companies, number and % (Economy of Uzbekistan, 2018)

Thus, in the final index there is a correlation between costs and results, which in turn enables to conduct an objective assessment of the efficiency of expenditures on the development of innovations in a particular country. According to the results of contests by the new mechanism in the 1st half of 2019, 95 research and technical projects were financed for the total amount of 78,6 billion UZS. A total of 1480 fundamental, practical projects and innovative developments worth 349,3 billion UZS are being

implemented within the framework of state research and technical programs. In July of 2020 in reliance upon the agreement with the British group of companies PETROMARUZ, it was the first time when in Uzbekistan the investment was made to finance grant projects on research and science of the private sector. All this will increase public spending on research and development to 0.8% of the GDP by 2021 (Socio-economic situation, 2020)

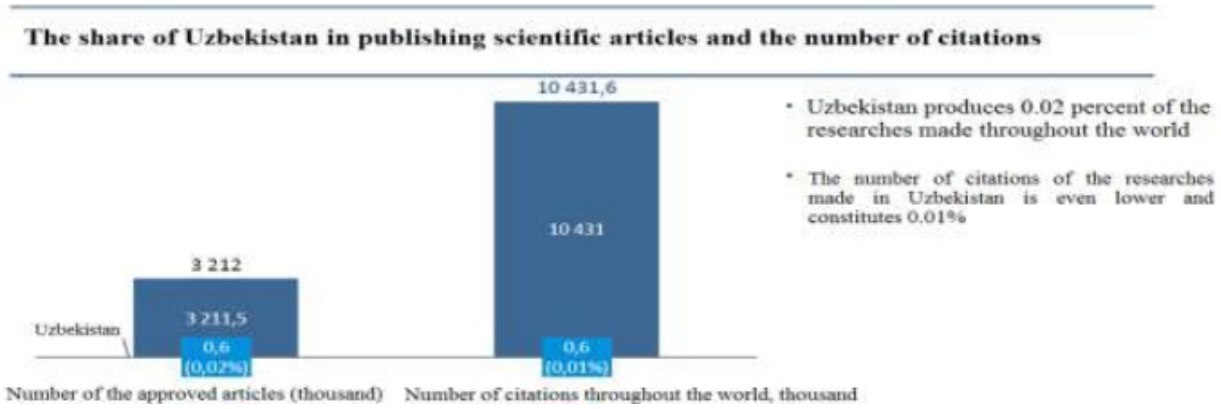

Figure 5. The share of Uzbekistan in producing scientific articles and their citations in 2016 (Economy of Uzbekistan, 2018)

In this regard, there has been commenced publishing of scientific journal "Science and Innovative Development" for publication of research papers in the field of innovative development and periodic promotion of innovations throughout the world to the general public and youth, popular scientific-technical, spiritual-educational journal "Technologies of the XXI century" for schoolchildren and the publication of the popular analytical journal "QVANT" for the general public. In addition, promotion and widespread of innovations make a positive impact on indicators, thus enabling to open competitive infrastructures and new areas in science.

Uzbekistan does not have an ecosystem that promotes innovation and ICT. In particular, technoparks, business incubators, crowdfunding platforms and other necessary elements of innovative infrastructure are currently in the early stages of development. Furthermore, the ICT use of is at the early stages of development as well.

The statutory framework in the field of innovation, which is one of the most essential issues in the formation of the innovation ecosystem and the GII ranking, is being improved. A number of laws and other statutory acts have been adopted in order to provide a legal foundation for the regulation of research and scientific-technical activities in the country, to ensure legal guarantees for those engaged in research activities, as well as the quality and efficiency of research and innovation. In this regard such laws and resolutions should be mentioned, as the Resolution "On additional measures to create conditions for the development of active entrepreneurship and innovation" (Resolution, 2018) and drafts of the laws "On the science and research activities" and "Innovation activity". In addition, over 20 legal acts have been adopted at the initiative of the ministry (National database of the statutory acts, 2018).

This, in turn, will solve the problems that hinder the inclusion of Uzbekistan in the Global Innovation Index rating. Another important issue that can contribute to the formation of an innovative ecosystem and a high position in the GII rating is inadequate development of these infrastructures (technoparks, business accelerators, etc.). In recent years, a number of technoparks, research centers, startup

accelerators and incubators have been established in Uzbekistan, all of which promote formation and development of the national innovation system. In particular, "Yashnabad" innovation technopark was transferred to the disposal of the Ministry and received 3.1 million UZS from 23 residents of the technopark. Investments in the amount of the USD have been used for the production of chemical technologies, machine building materials. It is noteworthy that such centers are being established not only in the capital, but also in remote areas of the country. In particular, "Khorezm" technopark, established a short period of time ago in Urgench, will serve to enhance scientific, technical and innovative potential of Khorezm region. In order to provide the population with access to the information resource database offline, 100 Q-Box devices have been installed in schools, universities and public places in remote areas of the country (https://mininnovation.uz/uz/activities/09-07-2019).

The measures, specified above, constitute a part of the Ministry of Innovation Development's performance to include the country in the GII rating. One of the prior objectives of the Innovation Development Strategy of Uzbekistan is the results of rapid positive reforms in recent years, close cooperation with relevant ministries and agencies and international organizations. It will be the basis for its inclusion in the GII rating and its place among the advanced countries.

Each year, Bloomberg analyzes the economies of 200 countries to determine which of them is the most innovative. For the past five years, our country has not been included in the ranking due to lack of data. Currently, the Ministry of Innovative Development in cooperation with the State Statistics Committee and the Ministry of Foreign Affairs is working on the inclusion of the Republic of Uzbekistan in the GII. In particular, through a series of meetings and negotiations with the founders of the GII international rating and the above-mentioned international organizations, the problems that hinder the inclusion of Uzbekistan in the ranking have been researched and relevant measures are being taken to solve them. The list of non-submitted and outdated data for inclusion in the ranking of the Global Innovation Index of Uzbekistan has been compiled due to the above cooperation and the issues of submission in compliance with the established international requirements have been successfully resolved.

In order to improve its position in the Global Innovation Index, Uzbekistan is studying the methodology for calculating index indicators. As a result, the mechanisms for cooperation with international organizations that compile the index have been developed and the process of information provision has been determined.

First of all, particular attention has been paid to improving the situation on the indicators that previously did not contain data in the index and Uzbekistan ranked low. Radical positive changes and improvements in innovation in the country are regularly recognized by international organizations. In particular, this year 's edition of the Global Innovation Index takes into consideration changes in the country's innovation activity. As a result of continuous and systemic reforms in recent years Uzbekistan was included in the Global Innovation Index in 2020 and ranked fourth among Central Asia and South Asia (WIPO, 2020).

Table 1

GLOBAL INNOVATION INDEX RATING OF THE WORLD COUNTRIES INSEAD, WIPO, Cornell University: The Global Innovation Index 2020.		
RATING	ECONOMY	INDEX
1	Switzerland	66.1
2	Sweden	62.5
3	United States of America	60.6
4	Great Britain	59.8
5	the Netherlands	58.8
6	Denmark	57.5
7	Finland	57.0
8	Singapore	56.6
9	Germany	56.5
10	South Korea	56.1
93	Uzbekistan	24.5
122	Zambia	19.4
123	Mali	19.2
124	Mozambique	18.7
125	Togo	18.5
126	Benin	18.1
127	Ephiopia	18.1
128	Niger	17.8
129	Myanmar	17.7
130	Guinea	17.3
131	Yemen	13.6

Analyzing the data in the table above, it is obvious that Uzbekistan last ranked 122nd out of over 140 countries in this international ranking in 2015. In 2020, Uzbekistan ranked 93rd out of more than 131 countries in the world as a result of comprehensive performance of the Ministry of Innovative Development in close cooperation with relevant government agencies and organizations aimed at enhancing the image of Uzbekistan in the international arena and its inclusion in the Global Innovation Index.

In the ranking of the Global Innovation Index, which consists of 80 indicators in 2020, Uzbekistan demonstrates favorable performance in such indicators as institutional development (Institutions), Human Capital & Research, Infrastructure, Knowledge and Technology Outputs and Creative Outputs. In addition, it can be seen, that Uzbekistan occupies leading positions in such indicators as "Graduates in science & engineering, %", "Ease of starting a business", "Cultural & creative services exports, % total trade", "Expenditure on education, % GDP" (WIPO, 2020).

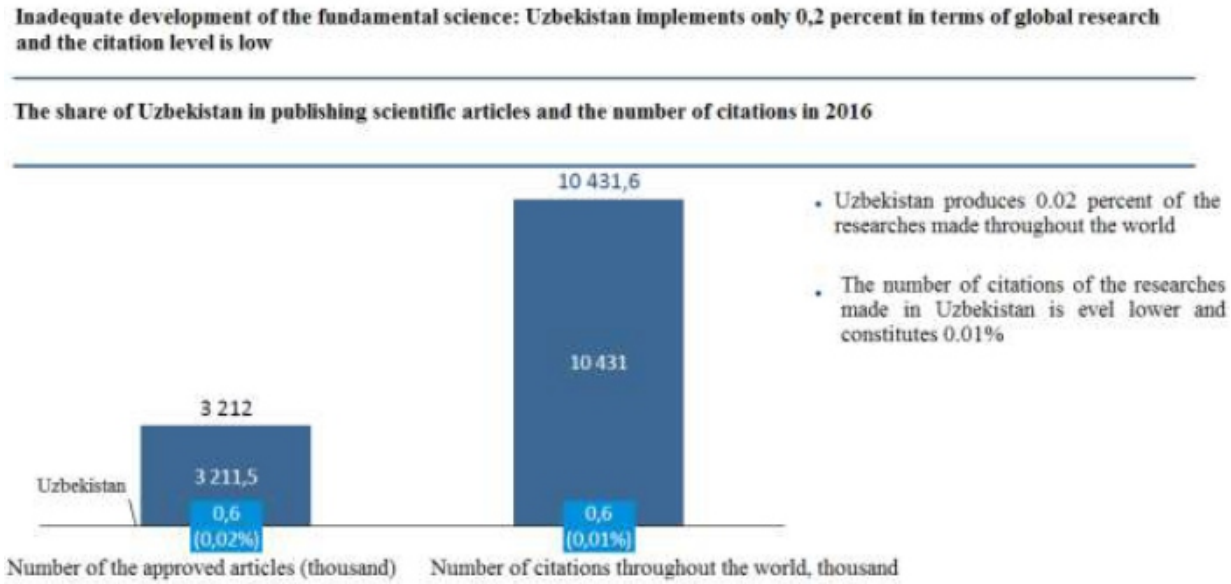

Figure 6. Development of fundamental science in Uzbekistan (Economy of Uzbekistan, 2018)

It should be noted that the Global Innovation Index depends on the level of economic development of the country and the level of exports. Companies of the Republic of Uzbekistan are not high-tech exporters, and their value and share of high-tech exports remain low. Consumer demand for high-tech products is limited by low incomes.

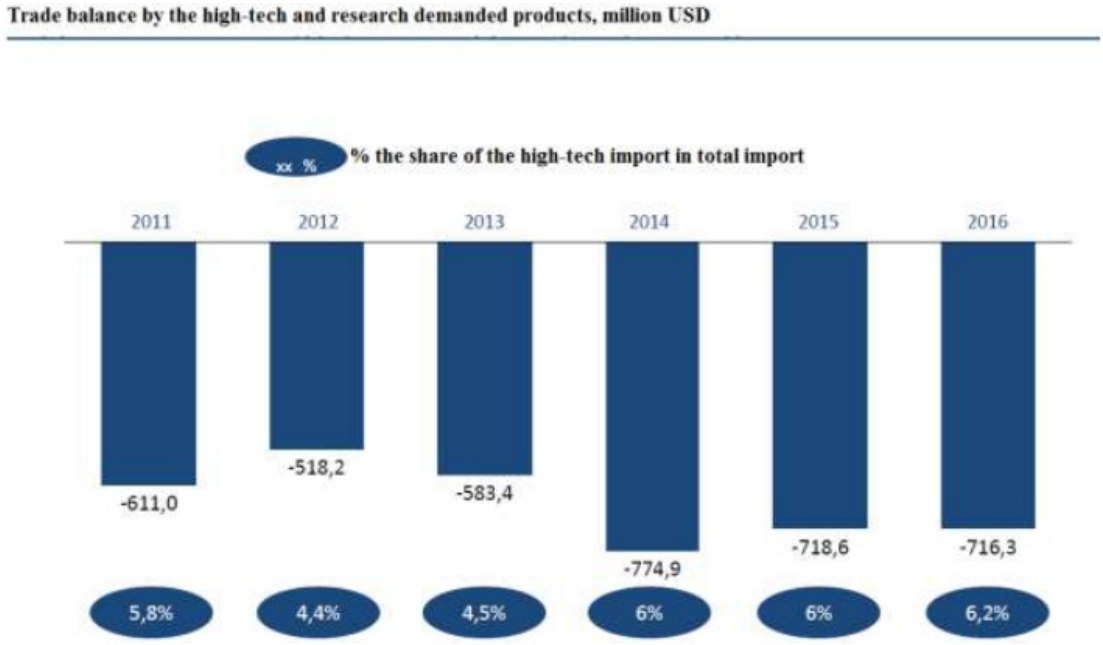

Figure 7. Trade balance by high-tech and research demanded products of Uzbekistan (Economy of Uzbekistan, 2018)

Uzbekistan is a net importer of high-tech and research-intensive products, but their share in total imports constitutes only 6.2%. Moreover, it is obvious that Uzbekistan occupies leading positions in such indicators as "Graduates in science & engineering, %", "Ease of starting a business", "Cultural & creative services exports, % total trade", "Expenditure on education, % GDP. It should be noted, that one of the top-target objectives of the Decree of the President of Uzbekistan PD-5544 "On the Strategy of Innovative Development of the Republic of Uzbekistan in 2019-2021" is to include the country in the top 50 countries in the Global Innovation Index by 2030 (https://www.norma.uz/).

Table 2

Republic of Uzbekistan in "Global Innovation Index"						
№	Structural units	2015		2020		Changes ↓↑
		Index	Rating	Index	Rating	
1	Number of institutions	49,0	106	55,1	95	↓6,1
2	Human capital and research activities	27,0	76	27,5	77	↓0,5
3	Infrastructure	29,0	101	38,5	72	↓9,5
4	Market development	44,4	85	54,9	27	↓10,5
5	Business development	20,0	138	15,2	127	↑4,8
6	Knowledge and technology output	27,2	61	14,1	90	↑13,1
7	Creative outputs	8,5	138	7,5	127	↑1,0

In compliance with the data provided in the table, according to the general criteria, in 2020 the Republic of Uzbekistan has gained 55.1 points in terms of Institutions (ranked 95), Human Capital & Research - 27.5 points (ranked 77), Infrastructure - 38.5 points (ranked 72), Market Development - 54.9 points, (ranked 27), Business Development - 15.2 points (ranked 127), Knowledge and Technology Output- 14.1 points (ranked 90), Creative Outputs - 5 points (ranked 127) (www.mininnovation.uz)

The long-term strategy of innovative development of our country reflects the goals until 2030. Herewith, short-term development measures have been determined to gradually achieve the targets set for the next 10 years. The Strategy of Innovative Development of the Republic of Uzbekistan for 2019-2021 sets a number of tasks aimed at fully mobilizing the efforts of the younger generation.

Institutional description of innovative development of the Republic of Uzbekistan in 2019-2021 (https://www.norma.uz/)

MAIN AREAS				
Development of transfers of science, inventions and technology	**Improving the system of innovation activity development**	**Development of the infrastructure and ICT**	**Improving the education system and human capital development**	**Competition development and reducing the number of administrative barriers**
Institutional measures				
With the aim of elaborating and introducing advanced technologies, to establish technopark hubs, free economic zones, free industrial zones, small industrial zones and scientific production clusters.	In terms of financing innovation activity to establish specialized institutions – innovation funds, innovation banks, venture funds.	Developing the network of developing software in our country through establishing technoparks for start-up projects.	Organizing short-term trainings at the professional colleges for the youth, who need retraining at the labor market.	Improving the anti-monopoly policy, in particular, due to the introduction of public-private partnership.
Measures implemented in 2019				
Technopark for children has been established in Akhangaran. Seed-raising clusters in "Peng-Sheng cluster" and "Bek cluster" have been established in Syrdarya region. 23 residents of "Yashnabad" technopark have invested the amount worth 3/1 million USD for chemistry technologies, machinery and manufacturing of construction materials.	Funds for supporting innovation development and innovative ideas have been established at nearly 20 entities and the amount of 45.46 billion UZS has been allocated. 2 investment companies – "Venture Capital Invest" and "Uzbek – Emirate Investment Company have been established.	19 innovation start-ups have been established by total 30 developments. 15 research agencies, 6 commercial banks and 6 investors participated in this project. 33 start-up projects have been approved in "Start-up Initiative" contest.	Education and Practical Centre "Business-accelerator" in Syrdarya region has been established in cooperation with the companies from India and China. Establishment of such kind of centres has been scheduled in other regions as well.	LLC "Kokand seed-raising cluster" in Fergana region, "Fluffy towels" in Namangan region, "Peng-Sheng" seed-raising cluster in Syrdarya region have been established in reliance upon public-private partnership.

CONCLUSION.

The implementation of the following measures, modernization of the innovation system of Uzbekistan, ensuring efficiency of the national competitiveness and economic diversification in the global market, as well as improving living standards of the population in 2020 will enhance the image of Uzbekistan in the international arena:

- Development of telecommunications for business, government and the population;
- Development of legislation in the field of intellectual property rights;
- Modernization of telecom infrastructure (broadband);
- Creation of state information systems;
- Raising attractiveness of the IT industry;
- Expanding (especially fundamental) government grant programs to support science and research;
- Involvement of foreign companies to create Research and Development centers;
- Attracting internationally-reputed specialists for the creation of private education and formation of new universities, as well as the development of engineering higher education;
- Creation and reform of innovative infrastructure in each region of the Republic of Uzbekistan (Free Economic Zones, innopolises, innovation centers, business incubators, etc.);
- Providing maximum tax and customs benefits to innovation centers;
- Creating an extension service;
- Creating an accelerated system of training personnel;
- Introduction of ethical bases of education;
- Renewal of the system of the Research and Development;
- Replacing outdated national standards with international standards;
- Development of the Fund for Support of Innovation Development and Innovative Ideas – raise funding and consulting;
- Protection of intellectual property rights: combating copying and plagiarism, piracy and copying of international trademarks.

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A Study on the Transformation of Consumer Relationships as a Combination of Human Interactions and Digital Transformations

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A B S T R A C T

In an age when customers have access to huge amount of information about a company, its competitors and its products, customer experience becomes highly important as it becomes an important source for a long-term competitive advantage. However, success for any company does not depend just on digital engagements and excellence. What is required is a digital-first attitude with a human touch. This study tries to focus on how these elements can be perfectly combined in order to give the maximum benefit to both the customers and the companies by taking in consideration variables like the level of adoption of technology and its satisfaction rate among customers by drawing relationships between the same.

Keywords—customerrelationship management; interaction levels; satisfaction levels; hybrid customer interaction; channel convergence; technology convergence;

I. INTRODUCTION

Technology is the sixth sense in this digital era. It assists humans in their professional as well as leisure work. According to several studies, the scale and the pace of technology would increase tremendously over the next 5-10 years. Customer relationships, business channels, conversations, social interactions are becoming digital [1]. Most of this technology would all be linked to the web which would have a strong impact on the current relationship between companies and consumers. Companies are now entering into phase of automation which will change the role of customer service, marketing and sales professionals forever [2]. This relationship would be completely digitally driven from the start to the end. The goal would be to minimize the difference between online and offline. Consumers are already adapting to the ways of self-service, intelligent data use, automation and a fast and adaptive customer service.

Digital transformation is often referred to as the integration of digital technology into all the areas of a business, which results in fundamental changes in how a business operates and the value it delivers to its customers. It is a phenomenon which is experienced in almost all the areas of a business including marketing automation, social collaboration initiatives, various CRM projects, and other business process optimization tasks [3]. It is no doubt that being digital is like a fuel for many sales organizations. Many companies who use digital in an effective way often enjoy five times the growth of their peers who are not yet adapted this digital transformation [4]. Companies now realize that whoever fails to make this transition would not be able to survive in the competition.

Many argue that with the wide acceptance of technologies such as artificial intelligence, data analytics, chatbots, selfservice, etc., the role of a human being in the corporate workplace is at risk, but at the same

time these companies also realize that winning the hearts and minds of its consumers via digitalization is not enough as they would have to transform their human relationships too [5]. Digital transformation requires companies to rethink about how they interact with their customers including sales, marketing and service. Companies often find it difficult and troublesome in putting a hybrid system of human and digital collaboration into practice. The objective of this study is to find out a relationship between the satisfaction level of customers and the various digital interfaces which they use in order to enable companies to create an optimized working set of customer relationship management including both technology and human interaction.

II. REVIEW OF LITERATURE

One of the best ways to view customer satisfaction as a result of fast-growing digital innovations is to look into banking and financial services industry as it contains the widest range of services for the customers along with one of the fastest changing technology structures. The research conducted by Cajetan Ikechukwu Mbama, Patrick Ezepue, LyubaAlboul and Martin Beer in the field of customer relationship in the banking sector was done in order to examine managers' perceptions towards digital banking's (DB) effect on customer experiences taking in consideration the banks' financial performance[6]. The research was done by taking reviews from senior manager on the impact of digital banking on the impact on consumer experience and financial performance. The research showed that The attributes affecting DB experience are as follows: service quality, functional quality, perceived value, service customization, service speed, employee–customer engagement, brand trust, Digital Banking innovation, perceived usability and perceived risk. They affect customer satisfaction, experience, loyalty and the financial performance.

The findings suggesteda number of important attributes to consider in order to improve both the Digital Banking customer experience and the company's financial performance. They show the relevance of an employee customer interaction, DB experience, value proposition service personalization and quality service offerings which will have strong implications for improving interactive marketing along with Digital Banking design. Shifting its focus from their primary operations, as competition intensifies and operational costs increase putting pressure on yields, airlines all over the world need to understand the significant importance of the secondary revenues and how they improve the profitability of an airline.

Because of new opportunities, for the now connected and digitally-savvy passengers, destination is longer of much importance, i.e. getting from point A to point B, but instead how the airline makes them feel welcomed all across the journey. In order to boost the experience of the travelers, companies have to look for the ideas to drive value even faster where technology building is an even bigger and greater engagement which would lead to increase in profits[7]. Taking into consideration the fact that majority of the passenger book their tickets online or using their mobiles, companies are now working to offer a customizable set of travel plans.

In the study conducted by Muslim Amin on the topic of the internet banking service quality and its impact on ecustomer satisfaction and loyalty, the results implied that all the four dimensions which are - organization of the site, personal needs of the customer, user friendliness, and the website efficiency and working are all distinct constructs. The results also indicate that the internet banking service quality which consists of the above four dimensions has an appropriate reliability and each dimension has a significant positive relationship with internet banking service quality. The efficiency of banking website is the one of the most important aspect for internet banking service quality[8]. The research thus found

that the relationship between internet banking service quality, e-customer satisfaction and e-customer loyalty are significant. It therefore implies that due to a higher level of internet banking service quality, the e-customer satisfaction tends to improve which consequently leads to an increased ecustomer loyalty and therefore, a lower intention of the customer to terminate a relationship with the bank.

The study highlights the various characteristics of the FMCG products which are often characterized by low involvement requirement, with low product differentiation and where customers take comparatively less time in their decision-making process as these products are majorly being purchased by consumers' out of their habit. Therefore, marketers should make sure that they create high brand awareness in order to invoke the presence of their brand consumer's mind. Based on this assumption, marketers should take into consideration the effectiveness, strengths and the power of the new methods of communication. Furthermore, the discussed benefits of new methods of communication such as e-mails, social networking, search engine optimizations, etc. are more than the traditional methods which were used[9].

Thus, FMCG manufacturers can enhance their brand awareness along with product differentiation efficiently by using these new interactive techniques. Moreover, the previously used traditional methods of interaction are becoming oldas they are not able to fulfil all the requirements of today's consumers' and marketers' needs. The traditional methods still have a number of advantages of their own as they are considered to be more reliable and credible but on the other hand, they need a constant push strategy and only create a one-sided communication. Moreover, they are not easily measurable as it is difficult for marketers to evaluate how effective a particular campaign was and what exact changes are required in the future. Though many FMCG manufacturers have not yet realized the benefits and effectiveness that comes with these new methods of communication, it is the reason why they still have not accepted to use these methods, otherwise these online methods of communication are able to generate a greater number of customized messages. Also, by using these interactive methods, marketers could also focus on their target markets and could save the extra cost which they pay in mass communication.

The focus of marketers will be to work with customers who will be treated as co-creators to build value-in-use. Therefore, it puts pressure on the market research methods used which must evolve from their current focus on objective analysis, that is validity towards interactive collaboration, that is usefulness. Those marketers who have both the desire and skills required to lead a collaborative Action Research work will be able to balance a number of roles as an expert, a consultant and a co-researcher, along with the knowledge needed to carry out traditional market research activities[10].

In today's economy, where the customers are the most important and the most active participants, innovation does not stop at new product development or line extensions which are often refined through detailed qualitative and quantitative testing. AR techniques enable any market researcher to engage more effectively with its customers by treating them as cocreators of innovative solutions.

The initial study indicates that popular apparel firms in Europe are focused less on advanced customization and mining, lifestyle connection and marketing, and community interaction, and more on fundamental commerce efficiency, communication, context and help, and content depth functionality, resulting in limited customer relationship management on the Web sites. To compete more effectively for an increased market share, the clothing companies need to invest more into innovation on their websites[11]. In other words, the clothing sites are effective in commercial interaction, facility for

dialogue, guiding the consumer, and in information. Such functionality enables the initiation of relationship. It was observed that proper customization and intelligent personalization of recommended products and services of customers were not available on the websites. Customer relationship management activities employed by the clothing retail shops include customer service, loyalty program, customization for customer, personalization and customer rewards program. The study was able to find out that clothing retails shops use a number of channels which try to solve specific needs and requirements of its customers.

These channels include the use of e-mails, voice call centers, lettersonline chats as well as online sites[12]. The retail garments and apparels industry is highly diverse all around the globe. In less developed countries like Zimbabwe, retail firms still rely upon electronic mails, voice call facilities, traditional letters and text messaging whereas in developed countries like in Europe, they are able higher levels of technologies for example highly interactive websites.

An efficient hybrid customer interaction system needs to consider all the strategic, organizational and system related areas. Channel convergence (strategy) is an idea which concentrates on the combination of various stationary and electronic/mobile channels. For example, in the banking industry, digitization and proximity to customers are two factors which do not exclude each other. In the future, hybrid products are expected to extend physical proximity to emotional proximity[13]. Thus, channel convergence aims to merge the electronic/mobile with the various stationary channels, therefore, connecting both the digital and the physical elements. Process convergence (organization) on the other hand gives the idea that customer processes and the companies' CRM processes should be integrated. From an organization's point of view, these two aspects are seen as key factors for an efficient hybrid customer interaction.

Technology convergence (system) gives the concept where single devices and single applications merge with one another. This implies to the possibility that every service can be used with any of the stationaries, mobiles or wearable devices. Therefore, for this too, hybrid customer interaction has to rely on a system of integrated devices and applications. Focusing on the market information processing literature and the relationship management streams, the authors have conceptualized and measured the relational information processes and many organizational routines that are often critical for customer relationship management (CRM)[14].

The authors in their research have examined the key drivers and outcomes of many relational information processes and the role which technology plays in successfully implementing CRM with the help of data collected from a diverse range of sample of firms. The results of the research show that the relational information process plays a key role in enhancing the customer relationship performance for a company. Thus, by moderating the scope of relational informational processes on the customer relationship performance, the technology which is used for CRM would perform a very crucial role for a company. On the other hand, if not used in a correct fashion, there may be situations where the use of such CRM technologies, might not always lead to the desired results expected by the company in relation to customer performance outcomes.

In a research conducted by Sunil Mithas, M.S. Krishnan and ClaesFornell about the impact of customer relationship management tools on the overall customer satisfaction stated that CRM application affect the level of customer knowledge as and when they are well integrated into the supply chain, i.e. when

firms are willing to share more information with their supply chain partners which resulted in an improvement in the customer satisfaction. The research also stated the mediatory role by customer knowledge while improving the customer satisfaction along with the importance of an integrated supply chain for a greater customer knowledge[15]. The research thus contributed to the empirically valid theory by synthesizing findings from the information systems and marketing literature and by analyzing the effect of organizational variables on the many CRM investments.

III. METHODOLOGY

A. Problem Statement

The review of existing literature in this field is based highly from a one-sided perspective which highlights many uses and advantages of digitalization but does not take into account the other aspects of this changing technology. A deeper study reveals that few factors could impact the adoption of technology by a customer which are not covered in the completed researches. The researches while focusing on the usage of technology, along with the advantages and the disadvantages which is derived from it to the customer fail to focus on the importance of the human element in the field of customer relationships as they tend to provide an equal and opposite force to the technological innovations. While previous researches focus on the benefits which the customers enjoy or the problems they face or might face after using technology as a source of interaction with companies, this study focuses on the level of adoption rate of technology and draws relationships between the adoption rate and the satisfaction rates.

B. Ojectives

- To identify the acceptability levels of technology by consumers.
- To identify how an optimized working set of technology and human interactions could be created in the field of consumer relationships.

C. Hypothesis

H0: There is no relationship between the level of digital interaction and the satisfaction level of the consumers after using the digital interfaces.

For testing of the hypothesis, the acceptance level by the customers will be considered as the dependent variable, whereas the level of digitalization accepted by the customer will be considered as the independent variable. Both these variables would be quantified by using weights for an easy comparison between the two.

D. Data Collection and Sampling

For the testing of the hypothesis, the research includes a survey of 104 people who were in the age-group of 15-60. The people in this age group are frequent purchasers and often use technology as a means of purchase. The area selection is done on the basis of the availability of technology present. Thus, Tier1 and Tier 2 cities are considered while taking the survey.

The questionnaire was structured into two different parts. The first part was focused upon determining the level of digital interaction which a customer is accustomed to, whereas the second part was focused upon the determination of the level of satisfaction which the customer derived.

E. Statistical Tools Used

Basic tool that were applicable for the study is correlation and regression analysis to find out dependency of one variable on another. In this case, the factors of change were evaluated against level of adoption to find out the results. Basic software like Microsoft Excel and SPSS were used to draw relations between the variables determined. The transcribed responses were fed into the system and results were drawn accordingly.

IV. ANALYSIS AND INTERPRETATION

A. Descriptive Statistics

1) Level of digital interaction: Table I shows the levels of digital interaction for the total sample from their usage of different digital tools. It can be seen from the data that the overall level of interaction is 2.56 which states that the level of digital interaction is above the normal rate (2.5), which therefore signifies that the population concerned regularly comes in contact with the digital channels used by the companies.

TABLE I LEVEL OF INTERACTION

	Min	Max	Mean	St. Dev.
Level of use of technology and computer interface while communicating with a brand	1	4	2.74	0.9
Preference of calling customer service or contacting through online portals.	1	4	2.48	1.05
Level of use of digital interface in a brick-and- mortar store	1	4	2.22	0.92
How often does the respondents respond to an online survey sent through an e-mail	1	4	2.09	0.88
Level of usage of augmented reality while purchasing	1	5	2.98	1.05
Level of frequency of coming in contact with a pre-recorded message in customer service	1	4	2.89	0.88
Level of usage of technologies like RFID and live tracking	1	4	2.55	0.93
Overall			**2.56**	**0.997**

Also, it can further be identified from the data that the highest level of digital interaction by the sample is with the function of customer service by way of pre-recorded messages (2.98), whereas the lowest level of digital interaction by the population is with the function of research by way of filling up of online surveys (2.09).

The standard deviation derived from the data can be seen as a basis of measurement for the consistency of the channel used. Thus, as seen in the descriptive analysis, both online surveys and pre-recorded messages have the least standard deviation (0.88) which further implies that the response that a company would receive by using these digital channels would be the most consistent. On the other hand, augmented reality and online customer forums have the highest standard deviation (1.05) which implies the response which the company receives from these channels would be far less consistent.

2) Level of Satisfaction: Table II shows the level of satisfaction which is experienced by the total sample population after using the various digital interfaces. It can be seen from the study that the average level of satisfaction of the total sample is 2.23 which is slightly below the normal rate, which signifies that the population hasn't accepted the change of digitalization.

TABLE II LEVEL OF SATISFACTION

	Min	Max	Mean	St. Dev.
Comfortableness whileinteracting with a company's digital support system	3	9	3.26	0.69
Requirement of a salesperson at a store	1	3	1.93	0.82
Choice between trying on the clothing or using augmented reality	1	4	1.8	0.76
Favorability of the product ifavailable online	1	3	2.19	0.85
Whether tracking services have made online purchasing reliable	1	3	2.48	0.72
Whether digital interface havemade products more accessible	2	5	3.92	0.94
Which is more personalized – digital interface or human contact	1	3	1.66	0.75
Comparison of decision-making time in physical stores online channels.	1	3	1.8	0.76
Whether online platforms sole post-purchase issues correctly	1	3	2.02	0.79
Whether simplicity has been reduced with digital platforms	1	3	2	0.82

Which adds more value – technology or human contact	1	3	1.77	0.69
Level of satisfaction if there is complete automation	1	8	1.92	0.78
Overall			**2.23**	**1.02**

Also, it can further be identified from the data that the level of satisfaction is highest when the products are made available on online forums which makes them more accessible to the consumers (3.92). On the other hand, the consumers are the most dissatisfied because of the fact that digital platforms do not provide personalized services (1.66).

The standard deviation of the data can be seen as the measurement of the consistency of the satisfaction levels of the consumers by using different digital interfaces. As seen in the data, the lowest standard deviation is for aspect of value addition and the degree of comfortableness while using digital interfaces (0.69), which further states that the satisfaction levels would be consistent. On the other hand, the highest standard deviation is noted for the consumer's viewpoint of whether digital forums have made the products more accessible (0.94), which further states that the satisfaction levels would not be consistent.

B. Pearson's Correlation Coefficient Test

Correlation and regression will be used in the analysis in order to determine the overall change in the level of satisfaction in relation with the level of digital interaction of the consumers. Thus, the two variables that would be used will be- a) averages of the satisfaction levels and b) average level of digital interaction.

The correlation test shows a value of 0.53 as shown in Table III, which denotes a moderate degree of positive relationship between the two variables. This states the fact a high degree of digital interaction by a consumer is associated with a high degree of customer satisfaction.

C. Linear Regression Test

The regression test was conducted by taking the level of digital interaction as the independent variable and the satisfaction level as the dependent variable. A R-squared value of 0.28 gives the explanation that a significant part of the variation in the dependent variable is caused due to the corresponding changes in the independent variable. The test would further conclude that the predictor variable 'level of digital interaction' explains a 28% of variance in the level of satisfaction. Thus, the Null Hypothesis is rejected.

TABLE III : LINEAR REGRESSION

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.467	0.121	12.065	0
Interaction	0.296	0.046	6.369	0

R-squared	0.286		Mean dependent var	2.229
Adjusted R-squared	0.279		S.D. dependent var	0.269
S.E. of regression	0.228		Akaike info criterion	-0.092
Sum squared resid	5.289		Schwarz criterion	-0.041
Log likelihood	6.748		Hannan-Quinn criter.	-0.071
F-statistic	40.571		Durbin-Watson stat	2.286
Prob(F-statistic)	0.00000			

V. CONCLUSION

Overtime, the choices of consumers are changing. The requirement of today's customers is a convenient and fast working digital customer relationship. With time, the digital customer interface will increase in importance due to the various benefit which it provides. Instead of only online, the digital customer interface will manifest itself in the offline world. Thus, a digital interface will become the basis of the modern customer relationship, partly because that is what the customer wants and partly because it strengthens the impact of the companies.

'Digital' will lead the world. But at the same time, it will soon absorb the characteristics of being a commodity. The world 'digital' as a distinguishing factor will eventually become obsolete. This is because when every company has succeeded in creating a quick and efficient digital customer relationship, the digital factor will no longer be a differentiating element. It will simply become the universal basis for the customer relationships. Companies will need to be extremely creative to make difference with its digital customer relationships. Thus, the digital transformation of customer relationship also requires a human transformation of that relationship.

As customer processes become increasingly digitalized, the question of the importance of human element comes into effect. It is imperative that as digitalization increases, the human contact will diminish. People will eventually become a scarce resource in the customer relationship. Human interface will still be able to make the difference when the digital interface becomes a commodity. This would lead to the purely digital interface becoming excessively rational. The important factor which will distinguish the human factor from the digital equation would be the emotional element which it provides.

The research conducted in fact stated that the level of satisfaction is always less than the level of digital interaction even if the digital channels are working perfectly. The customer relationships of the future will be both digital and human where innovation is still needed in both these dimensions simultaneously.

VI. IMPLICATIONS OF THE STUDY

This study can be used to derive the following implications and suggestions in order to optimize the customer relationship management:

- Companies should build a comprehensive model, where digitalization should be enabled in order to increase the value to the customers.

- Companies should try to develop a hybrid model of customer relationship where both the elements (digital and human) and balanced and which synchronizes with the existing business model of the company.
- Companies should focus upon those digital channels of marketing with which its customers interact the most in order to bring out the optimum satisfaction levels.

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