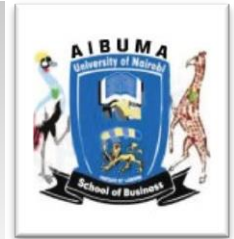




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**PROJECT TEAM DEMOGRAPHIC DIVERSITY AND PERFORMANCE OF RURAL ROADS CONSTRUCTION PROJECTS IN KENYA**

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**ABSTRACT**

*Technology sustainability in organisations is enhanced through creativity and innovation. By so doing, organisations are able to compete in turbulent markets and risky environments. With advances of technology, demographic diversity among the workforce has quickly become the greatest engine in business growth around the world since it enriches the workplace through broadening employee perspectives, strengthening their teams, and offering greater resources for problem resolution. Today's workforce in organisations is a mix of different demographic factors. Most studies on demographic diversities among the workforce as well as emerging technologies have continuously resulted into inconsistent results on the direction and magnitude of their influence on performance of projects. The most affected include the construction of rural infrastructure projects especially roads due the role they play in supporting creativity, innovation and technology transfer in the rural areas and importantly demographic diversity is more pronounced. This paper therefore sought to establish the influence of age, gender, ethnicity and religion diversities of workers on performance of rural roads construction projects. The study was based on Kenya Rural Roads construction projects in Kenya. This paper adopted cross-sectional correlational survey design where structured questionnaire, interview guide and focussed group discussion were used in obtaining data from workers in rural roads construction projects. Descriptive and inferential analysis carried out indicated  $r= 0.788$ ,  $R^2 = 0.783$ , and  $F (1,195) = 319.256$  at level of significance  $p=0.000<0.05$ . The null hypothesis was therefore rejected and concluded that there is a significant relationship between project team demographic diversity and performance of rural roads construction projects in Kenya. These findings indicate a thoughtful need to consider demographic diversity when constituting the project team to enhance performance in rural roads construction projects. This is therefore a clear evidence for government to draft policies to reaffirm the importance of project team demographic diversity in all its projects. For organisations and business practitioners, this paper recommends that firms should establish a robust system that records, collates, analyses, evaluates and recommends the best practices on effective implementation of diversity initiatives. This study recommends further study that would identify all demographic*

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*variables (physical and cognitive) ranking them in importance and establishing their extent of influence on organisational performances by comparing more sectors.*

**Key words:** *Demographic diversity, Performance, Rural roads, Kenya*

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## 1. Introduction

Technology in organisations is enhanced through creativity and innovation. By so doing, organisations are able to compete in turbulent markets and risky environments. Richard, McMillan, Chadwick, and Dwyer (2003) established that firm level outcomes and performances were influenced by the interaction of racial diversity and growth strategy. Richard et al., (2003) also established that racial diversity was demonstrated to enhance performance for banks pursuing on technology and innovation strategy. In projects especially in road construction setup, project teams are formed by members with varying degrees of demographic diversities amongst them include age, gender, ethnicity, religion and marital status. How does then demographic diversity enhance performance? Jayne & Dipboye (2004) brings forth arguments that diversity enhances competition for the best talent when embracing a diverse work force that organisations are able to effectively deal with an increasing diverse customer base. Most importantly and in line with this paper they argue that demographic diversity unleashes creativity, innovation, and group problem solving which by extension enhances the competitiveness of the organisation. Demographic diversity can be described as differences among team members based on the observable biological characteristics (Horwitz 2007). Research that has been carried out in this area has not been conclusive enough on the direction and magnitude of the influence of project team demographic diversity on performance of organisations. Williams & O'Reilly (1998) had established that there is no consistent on main influence of team diversity on organizational performance. Proponents of

this thinking, argue that varying member characteristics such as age and ethnicity, which in this study were indicators of demographic diversity could easily be categorized by individual members and were negatively associated with team outcomes (Jackson et al., 1995; Milliken & Martins, 1996). Horwitz (2007) contends that the mixed and inconsistent empirical findings have perpetuated a lack of consensus on the influence of demographic variables on organisational performance. The argument here therefore is that probability of success is likely to depend on the situational factors (culture, environment, strategies) and sector and the level of interactions of the organisation workers and the organisation performance (Jayne & Dipboye, 2004). In a wider perspective the influence of diversity on performance is far from being over. This is why most studies continue to produce conflicting results (Choi & Rainey, 2010; Fieldhouse & Cutts, 2010; Jackson, Joshi, & Erhardt, 2003; Joshi et al., 2011; Mannix & Neale, 2005; Milliken & Martins, 1996; Williams & O'Reilly, 1998). Fieldhouse & Cutts, (2010) adds that as much as the results are inconsistent, diversity is a practical reality and remains one of the main challenges of project management. In attempting to explain the inconsistent of the results, other authors have examined how diversity was conceptualized and measured (Biemann & Kearney, 2010; Martinez, Ferris, Segrest, & Buckley, 2011). Others have also reviewed the moderating roles of research contextual factors such as task characteristics and group climate (Haas, 2010; Kaplan, Wiley, & Maertz, 2011). While all these approaches are important, this paper argues that the project context, sector and setup will determine the nature of results. As such and basing on the

extant information on the influence of demographic diversity on performance of organisation in Kenya, this study therefore sought to fill that gap.

To amicably address this gap, an appropriate context of rural roads construction projects in Kenya was chosen because of attractive reasons. First it is the biggest business industry in the country where by roads are the largest single element of public expenditure in Kenya, constituting about 15 percent of total development expenditure (Burgess et al, 2015). This industry has several workers of varied demographic diversities including internationals. Over time workers in this industry have coexisted and sustained execution of work in largely mechanised operations with the latest innovations in technologies. Further in this sector, performance is easily measurable.

Within the popular academic rhetoric, it is generally asserted that diversity would lead to a positive performance of organisations. However, Houkamau & Boxall (2011) argue that demographic diversity does not consistently lead to improved workplace outcomes. This is because some studies show that diversity has a positive effect while others show diversity has negative impacts on performance. While some sectors or organisations would be very sensitive, others would be more accommodating. Road construction in one of those business sectors that is accommodative but has not been empirically ascertained on the magnitude and direction of influence of demographic diversity.

It is also prudent to empirically ascertain the claims made by most authors in the literature that the influence of diversity is not consistent in all sectors and conditions. This is so because many of the claims and hypotheses about diversity's impacts have not been examined empirically, so it is not clear what effect, if any, diversity has on the overall functioning of organizations,

especially businesses (Herring, 2009). For this reason therefore, this study attempted to empirically investigate the extent to which project team demographic diversity influences performance of rural roads construction projects. The manifestation of the diversity was in the context of social categorizations and interactions of workers in a rural roads construction projects.

Based on Social Identity Theory as proposed by Tajfel & Turner (1986), people tend to select to interact with members who are similar to themselves based on various factors. The assumptions are that people would feel motivated when they look at themselves positively and that this is achieved through similarity-attraction theory where by members would identify with a group of people who are similar to themselves. The most common attractions are based on demographic factors. The extent to which demographic diversity among workers in rural roads construction setup and how it affects performance has not been empirically ascertained, hence this study. The objective of this study was therefore to establish the extent to which demographic diversity influence performance of rural roads construction projects in Kenya.

## 2. Literature Review

This section reviews some of the studies that have been carried out on demographic diversities and performance. These reviews provide the basis upon which this study was based. The study was carried out on Kenya Rural Roads Authority roads projects. The aim was to investigate the influence of demographic diversity on performance of rural roads construction projects in Kenya. Demographic diversity factors such as age, marital status, religion, tribe/ethnicity, affects relationship amongst employees and this is because informal grouping usually forms based on these factors. In a project setup, diversity aims to create an inclusive culture that value and uses the talents of all would be

members. Gellert & Schalk (2012) carried out a study on the influence of age and age-related attitudes on the relationship and performance at work among employees that affect performance in mentally and physically demanding work settings. They conducted a research in six residential homes for the elderly in Germany where by data was collected from 152 respondents using questionnaire and analysed data using multi-hierarchical regressions. They examined relationships at work, in-group cooperation, relationship with the leader and relationships with colleagues. Gellert & Schalk (2012) established that individual diversity in terms of training, experience, professional background and demographic attributes can influence the quality of the relationship among the workers hence affect performance. In other words age related attitudes encompassing the experience of the employee, the culture of the workplace and some values and beliefs for work which had developed over time. This argument though applicable in elderly homes, its applicability and generalization in a rural road construction context was rigorously assessed in this study.

Age related attributes in a rural road construction immensely contribute to how project control systems are implemented and hence directly correlates to performance of these projects. Contribution to the body of knowledge by Gellert & Schalk (2012) that age related attitudes influences the relationship among employees or supervisors and consequently influence on project performance was appreciated however corroboration of these finding in a different context in this case road construction was the aim of this study. The extent to which age related attributes influences the relationship between demographic diversity and performance of rural roads construction projects in Kenya, was rigorously assessed in this study.

Demographic diversity generates attitude to work and it can be either in form of age differences of employees, gender, ethnicity religion and other demographic factors. Gellert & Schalk (2012) from their study further argues that positive perceptions on experience, professional background, attitudes, age, genders shall result into high performance. This resonates well with Baumeister & Bushman (2010) who argues that individual and group interests should merge for higher performance and productivity. This means that individuals from different demographic diversity would merge their differences in age related experiences to emerge with high productivity and performance. Based on these postulations, this study sought to ascertain those claims by studying the influence of project demographic diversity on performance of rural roads project in Kenya.

There has been a debate on how age affects performance. While someone would raucously think that, performance is indirectly proportional to age, Peterson & Spiker, (2005) established that there is no significant difference in performance between older and younger employees and in some cases older employees performed better than their younger colleagues. Gellert & Schalk (2012), in trying to explain this phenomenon, they argued that experience in terms of age might be an important buffer to compensate for stress, where stress in this case is the negative response to constant, emotional, communicative, and contact intensive work that requires a high degree of interaction among employees. Other scholars like Peeters & Van Emmerik (2008) also argued in support of this analogy. However, Schalk et al., (2010), Streb & Voelpel (2009), Walker (2006) argue that older workers are in practice often considered as less flexible, less adaptable to new technology, less willing to cooperate and learn new skills, as well as more costly. In furtherance to this, this



study therefore sought to fulfil the important research gap that a study was required to determine the extent to which demographic diversity influence performance of rural roads construction projects.

Gender being the main factor in demographic category, it is broadly based on either sex role or gender role. Sex roles are biologically explained while gender roles focus on psychological, sociological and cultural differences (Claes, 1999). Gender with its inherent differences in personal qualities and attributes, affects how people perceive and explain leaders (Chow Hau-Siu, 2005). Mostly, men are explained as being aggressive, ambitious, dominant, forceful, independent, self-sufficient, self-confident, and prone to act as a leader while women are explained as being affectionate, helpful, kind, sympathetic, interpersonally sensitive, nurturing, and gentle (Eagly & Diekmann, 2003, Eagly & Karau, 2002). Project leadership has traditionally been associated with masculine characteristics, thus women who exhibit more feminine characteristics may not be seen as legitimate leaders. However, when women take on masculine characteristics, they are evaluated unfavourably because they are acting outside of the feminine gender role (Koch, 2005, Phelan and Rudman, 2010). Especially on lower level of management such as in rural road construction projects. This calls for some power strategies on project team gender diversity and the extent that this is applicable in construction sector, was the motivation of this study.

Road construction projects as it were are a male dominant profession, and those women who adopt this as a profession, could be construed to intervene and get little support from the project team. The perceptions of the project team on these attributes would result to either cohesion or conflict within the workers. Egan

(2005) posits that gender diversity has been found to enhance employees' overall creativity and innovation because of the combination of different skills, perspectives and backgrounds that men and women tend to possess.

Empirical studies conducted by Frink et al. (2003) support these positive views of diversity by suggesting that an organization's optimal performance is achieved at maximum gender diversity of 50%. In another study but in the banking sector in US, Richard (2000) explored the relationship between racial diversity of the workforce and the firm's performance of a sample size of 63 banks. The dependent variables were productivity, return on equity and market share performance. The hypothesis that racial diversity would be positively linked to firm performance was not supported. While Richard (2000) looked at racial diversity in bank and the relationship did not relate to performance, still confirms the inconsistent of the study findings with other studies. This study was therefore timely to confirm the direction and magnitude of the influence of project team demographic diversity on performance of rural roads construction projects in Kenya.

The issues of inequality are widely spread in all public and private entities. Construction industry is worst hit. A study was carried out by Powell (2012) with an aim of reviewing six different ways of looking at sex, gender and leadership. The approach was to define the proportions of power and authority, leader preferences, leader stereotypes, attitudes towards women as leaders, linkages of leadership theories to gender stereotypes. The findings from the study indicated that managerial playing field continues to be tilted in favour of men and behaviours associated with the masculine gender stereotype, a phenomenon that occurs despite what leadership theories and field evidence would suggest. In addition,

another study by Brandt and Laiho's (2013), found out that female leaders were rated by their subordinates as being more enabling and rewarding than their male counterparts, and males were rated as being more challenging than females. Prejudice on gender roles and leadership is common in the construction industry. Further, in their discussion on the role of congruity theory on prejudice toward female leaders, Eagly & Karau (2002) proposed that perceived incongruity between the female gender role and the leadership role leads to two different forms of prejudice; perceiving women less favourably than men as potential occupants of leadership roles and evaluating behaviour that fulfils the prescriptions of a leader role less favourably when it is enacted by a woman. How these perceptions influenced performance was the interest of this study.

Women do not progress at the same rate as men in a men dominated working environment. Athena (2001) contributes to this argument by arguing that women's work is invisible hence are not given the same encouragement as men and usually assumed for promotion and other challenging jobs. Additionally, Bagilhole, (2002), also argues that women are found to be vulnerably disadvantaged and discriminated in male dominated occupations. Legally governments have put laws to address discrimination and representations. This study sought to establish how these situations affects performance of rural roads construction projects in Kenya. In UK women now form 45% of the work force (Labour Market Trends, 2001). In Kenya the constitution insists of a representation of 30% of either gender. Gender balance has several advantages such as removal of discriminatory employment practices, provision of equal opportunities, reduced staff turnover, reduced litigation fees, tapping skills to a wider talent, increased diversity, improved customer service and

enhanced staff morale (Dainty et al., 2004). The current study sought therefore to identify the extent to which the road construction industry in Kenya had adopted this system and the level of project team satisfaction and performance in rural roads construction projects.

The debate on ethnicity is a hot potato in all spheres of development. It usually generates a heated debate when mentioned mostly negative debate. Nevertheless, and in this context ethnic minorities are usually underrepresented in terms employment in the construction industry. On a positive note, embracing ethnic diversity will improve the appeal of the organisation to a wider range of customers, suppliers and the local communities in which they operate. McKay et al., (2008) carried out a study using data from a sample of 6,130 workers employed in 743 stores of a large, U.S. retail organization. This study assessed whether diversity climate moderated mean racial ethnic difference in sales performance. Findings indicated that whites exhibited significantly higher sales performance than Hispanics as moderated by diversity climate. Applying McKay et al., (2008) logic to this study, it was expected that employees from ethnic minority working in rural roads construction projects were to expend a greater effort to perform otherwise their work and contribution to job performance was likely to be below par due to dominance from the majority. Further, in a study carried out by Richard (2000) found a positive relation between racial diversity and firm performance in organisations pursuing a growth strategy. However in this study, the extent to which ethnic diversity influences performance of rural roads projects was established. This study also considered other demographic variables such as gender and age. This is supported by Social Identity Theory (SIT) which says that social grouping shall be based among others factors such as ethnicity, age, sex and gender and these

groupings will largely contribute to levels of performance in terms of how they are being managed.

### 3. Methodology

To investigate the influence of project team demographic diversity on performance of rural roads construction projects started with a thorough literature review. Based on the findings from the literature review, a questionnaire was constructed with an aim of measuring demographic diversity indicators and performance of rural roads construction projects. Mixed mode approach was used whereby the questionnaire obtained information on the respondent's background and information on demographic diversity. Further in-depth interviews on the key informants who in this study were the site agents were carried out. Each interviews lasted on average of 20-25 minutes. Focused Group Discussions were also carried out which lasted averagely 45-50 minutes. The population of study was comprised of workers in rural roads construction projects that were funded by Kenya Rural Roads Authority (KeRRA) and were under construction during the period under study. The questionnaire was administered to workers who were randomly sampled. The targeted population was 3680 workers. A total of 361 questionnaires were distributed and 209 were completed and returned. This represented a response rate of 58%. The questionnaire requested the respondents to rate item statements which explained the demographic diversity in their work places. The ratings adopted the Likert type scale from 1= strongly agree, 2= somewhat agree, 3= neutral, 4=somewhat disagree and 5=strongly disagree. Workers of the rural roads contractors were regarded as best respondents on how diversity at workplace and how it affects their attitudes and behaviour. This was a divergent point from most other studies whose studies targeted

the top management. Questionnaires were administered by the research assistant. This allowed for contact with the respondents, some of whom due to illiteracy levels would not be able to read and fill the questionnaire.

The goal was to assess the extent to which project team demographic diversity influences performance of rural roads construction projects in Kenya. The choice of this focus was due to the need of more information on how project team demographic diversity manifests in project performance in developing countries. By carrying out this study at both the management and workers' level, the study offered a new perspective on how project team demographic diversity influences performance of rural roads construction projects and helped in corroborating the study findings. It also developed an understanding how workers and employers view project team demographic diversity in rural roads construction projects and hence enhance awareness of demographic diversity and performance of projects.

### 4. Results and Discussion

The purpose of this paper was to examine the extent to which project team demographic diversity influence performance of rural roads construction projects in Kenya. Project team demographic diversity was measured in terms of the age, gender, ethnicity and religion while performance of the rural roads construction projects was composed of completion within time, completion within quality, completion within schedule, client satisfaction, customer satisfaction and workers satisfaction.

Data was collected from the respondents who were asked to rate the extent to which 12 items composed of statements project team demographic diversity and how they were used in their organisation on a five point Likert type scale of 1= strongly agree to a scale of 5 = strongly disagree.

Likewise data was collected from the respondents by asking them to rate itemized statement P1 to P13 on a five point Likert type scale where 1= strongly agree to a scale of 5 = strongly disagree in measuring performance of rural roads construction projects.

The respondents had been asked to indicate the extent to which they considered themselves different in terms of demographic factors in their place of work. Project team demographic diversity was measured using twelve items based on 5 point Likert scale ranging from 1 = strongly agree to 5 = strongly disagree. The results are as tabulated in Table 1 below.

#### 4.1 Descriptive statistics

*Table 1: Means and Standard Deviation for Measures of Project Team Demographic Diversity*

Code	Item	N	Min	Max	Mean	Std Deviation
D1	In my place of work, I consider my gender as being different from the other gender	197	1.00	5.00	3.96	1.558
D12	Where I work people of different age groups get along well with each other age groups	197	1.00	5.00	1.38	1.045
D2	In my department, I think I am different from other project team members in terms of age	197	1.00	5.00	3.85	1.682
D3	In my place of work, I consider myself different from other project team members in terms of my ethnicity.	197	1.00	5.00	4.44	1.299
D4	At work I feel socially isolated because of my ethnicity	197	1.00	5.00	4.56	1.149
D4	Both gender is well represented in my department	197	1.00	5.00	3.66	1.706
D5	Where I work all people are treated the same, regardless of their ethnicity	197	1.00	5.00	1.59	1.281
D5	Where I work members of a particular gender are treated better	197	1.00	5.00	4.23	1.416
D6	At work place, people are intolerant of those from different ethnic backgrounds	197	1.00	5.00	4.49	1.202
D7	At place of work, I consider myself different in terms of my religion	197	1.00	5.00	4.86	.700
D8	At my present job, some people get better treatment because of their age	197	1.00	5.00	4.52	1.202
D9	At my work place people from a particular religion are treated fairly	197	1.00	5.00	4.88	.664



Item D1 sought to establish whether at the respondent's place of work, s/he considered his/her gender as being different from the other gender. The mean score was 3.96 while the standard deviation was 1.558. This result indicates that the majority of the respondents disagreed that in their place of work, s/he considered his/her gender as being different from the other gender. Item D2 sought to establish whether in their department, s/he thought that s/he was different from other project team members in terms of age. The mean score was 3.85 while the standard deviation was 1.682. This result indicates that the majority of the respondents disagreed that in their department, s/he thought that s/he was different from other project team members in terms of age.

Further the study in Item D3 sought to establish whether in the place of work, s/he considered him/herself different from other project team members in terms of his/her ethnicity. The mean score was 4.44 while the standard deviation was 1.299 indicating that the majority of the respondents' disagreed that in their place of work, they considered themselves different from other project team members in terms of their ethnicity. Item D4 sought to establish whether in a department, both genders were well represented in their department. The mean score was 3.66 while the standard deviation was 1.706. This result indicates that the majority of the respondents disagreed that in their department, both gender were well represented.

Item D5 sought to establish from the respondents whether in their place of work all people were treated the same, regardless of their ethnicity. The mean score was 1.59 while the standard deviation was 1.281, indicating that the majority of the respondents agreed that where they work all people are treated the same, regardless of their ethnicity. Item D6 sought to establish whether where they work, they

feel socially isolated because of their ethnicity. The mean score was 4.56 while the standard deviation was 1.281. This result indicates that the majority of the respondents disagreed that where they work they feel socially isolated because of their ethnicity.

Item D7 sought to establish whether where the respondents work, members of a particular gender are treated better. The mean score was 4.23 while the standard deviation was 1.416. This result indicates that the majority of the respondents disagreed that where they work members of a particular gender are treated better. Item D8 sought to establish whether where they work, people are intolerant of those from different ethnic backgrounds. The mean score was 4.49 while the standard deviation was 1.202. This result indicates that the majority of the respondents disagreed that where they work, people are intolerant of those from different ethnic backgrounds.

Item D9 sought to establish whether at their place of work, they consider themselves different in terms of their religion. The mean score was 4.86 while the standard deviation was 0.700. This result indicates that the majority of the respondents disagreed that at their place of work, they consider themselves different in terms of their religion. Item D10 sought to establish whether at their present job, some people get better treatment because of their age. The mean score was 4.52 while the standard deviation was 1.202. This result indicates that the majority of the respondents disagreed that at their present job, some people get better treatment because of their age.

Item D11 sought to establish whether at their work place people from a particular religion are treated fairly. The mean score was 4.88 while the standard deviation was 0.664. This result indicates that the majority of the respondents disagreed that at their work place people from a

particular religion are treated fairly. Item D12 sought to establish whether where they work people of different age groups get along well with each other age groups. The mean score was 1.38 while the standard deviation was 1.045. This result indicates that the majority of the respondents agreed that where they work people of different age groups get along well with each other age groups.

#### 4.2 Inferential statistics

The objective of this study was to establish the extent to which project team demographic diversity influence performance of rural roads construction projects in Kenya. Project team demographic diversity was measured in terms of age, gender, ethnicity and religion while performance of the rural roads construction projects was measured in terms of completion within time, completion within quality, completion within schedule, client satisfaction, customer satisfaction and workers satisfaction.

In testing the hypothesis, data was collected from the respondents who were asked to rate the extent to which the 12 itemized statements on project team demographic diversity were used in their organisation on a Likert type scale of 1= strongly agree to a scale of 5 = strongly disagree. Likewise data was collected from the respondents by asking them to rate 13 itemized statements on performance of rural roads construction projects on a Likert scale where 1= strongly agree to a

scale of 5 = strongly disagree. The objective was tested using simple linear correlation model.

#### Hypothesis

H<sub>0</sub>: There is no significant relationship between project team demographic diversity and performance of rural roads construction projects in selected counties in Kenya.

H<sub>1</sub>: There is a significant relationship between project team demographic diversity and performance of rural roads construction projects in selected counties in Kenya.

#### Correlation Model

The mathematical model used for testing this hypothesis was as follows:

Performance of rural roads construction projects = f (Project team demographic diversity)

$$Y = f (X_2)$$

$$Y = \beta_0 + \beta_2 X_2 + \varepsilon$$

Where  $X_2$  = Project team demographic diversity

$\beta_0$  = Constant term

$\beta_2$  = Beta coefficients

$\varepsilon$  = Error term

The correlation results for the influence of project team demographic diversity on performance of rural roads construction projects in selected counties in Kenya are presented in Table 2

*Table 2: Correlation Results for the Influence of Project Team Demographic Diversity on Performance of Rural Roads Construction Projects*

Model		Unstandardized coefficients		Standardized coefficients		
		B	Std Error	Beta	t	Sig.
1	(Constant)	-.374	.138		-2.715	.007
	Project Team Demographic Diversity	.597	.033	.788	17.868	.000

Predictors: (constant), Project Team Demographic Diversity  
 Dependent Variable: Performance of Rural Roads Construction Projects

F (1,195) = 319.256 at level of significance  $p=0.000<0.05$ ,  $r= 0.788$ ,  $R^2 = 0.783$

Results in Table 2 above indicates that the Pearson's Product Moment Correlation coefficient (beta)  $r = 0.788$  implying a strong correlation relationship between project team demographic diversity and performance of rural roads construction projects in selected counties in Kenya.  $R^2$  was 0.783 meaning that the influence of project team demographic diversity explains 78.3% of the variation in performance of rural roads construction projects in Kenya. Since the p-value ( $p = 0.000$ ) was less than 0.05, the null hypothesis was therefore rejected and it was concluded that there is a significant relationship between project team demographic diversity and performance of rural roads construction projects in selected counties in Kenya.

## 5. Discussion

Based on the objective of this study that was intended to establish the extent to which project team demographic diversity influence performance of rural roads construction projects in Kenya. To address this objective, a hypothesis was formulated which stated that there is a significant relationship between project team demographic diversity and performance of rural roads construction projects in selected counties in Kenya. The findings from both descriptive and inferential analysis indicated a positive correlation

relationship between project team demographic diversity and performance of rural roads construction projects.

The study findings were in line with Gellert & Schalk (2012) who established that positive perceptions of demographic factors resulted into high performance. He further argued that experience in terms of age is an important buffer to stress hence improved performance. In this study demographic diversity in terms of gender, age, ethnicity and religion was found to influence positively on performance. Results obtained from the interviews and focus group discussion on age differences, concurred with the study finding by Peterson & Spiker, (2005) who established that there is no significant difference in performance between older and younger employees and that in some cases older employees performed better than their younger colleagues.

Findings from the interviews and focus group discussions also differed with the finding of other scholars such as Schalk et al., (2010), Streb & Voelpel (2009) and Walker (2006) who argue that older workers in practice are often considered as less flexible, less adaptable to new technology, less willing to cooperate and learn new skills, as well as more costly. From the interviews, it was found out that both the old and the young were flexible,

adaptive to new technology and were willing to advance their training so as to learn new skills. However this study was in synch with a study by Baumeister & Bushman (2010) who found out that merging individual and group interests on demographic factors resulted into higher performance and productivity.

Considering gender diversity, this study finding contradicted those by Bagilhole (2002), who established that women are found to be vulnerably disadvantaged and discriminated in male dominated occupations such as construction. In this study the descriptive studies established that it is the women who don't seek for jobs in the construction field since it was presumed difficult, some were cautioned by their husbands not to, however the few who were interviewed ruled out discrimination but accepted the fact that where other opportunities existed, they were assigned comparatively lighter menial tasks. Owing to the above reasons, representation of the female gender in this study was 9% which was way below the Kenyan constitutional requirement of 30% representation of either gender on employment in organisations. The 9% who were employed were given less difficult jobs such as traffic control, administrative jobs and surveying while there were few who had ventured into male dominated careers such as vehicle drivers and operators of machines.

In contrast to McKay et al., (2008), whose study established that ethnic minority contribution to work performance was below par, this study established that there was minimal ethnic considerations in recruitment and in job tasking and performance was above par from all and sundry that were interviewed.

The results obtained from the interviews and focused group discussions established that demographic diversity variables were fairly handled within the construction companies and that little conflict from the

workers was being witnessed from such issues. The workers felt that issues such as ethnicity, religious preferences, age and gender were not a factor considered during recruitment and no fair treatment was accorded to such traits however some felt such practices existed.

## 6. Conclusion

The research objective was to establish the extent to which project team demographic diversity influence performance of rural roads construction projects in Kenya. The extent of influence of project team demographic diversity on performance of rural roads construction projects was at 78.8% which was impressive. Indicators for project team demographic diversity were adopted from previous studies and included in the research instrument. Indicators for project team demographic diversity included age, gender, religion and ethnicity. Descriptive statistics showed that majority of the workers tolerated those from different ethnic tribes and different age groups got along well with each other. It can therefore be concluded that demographic factors of workers in majority of the construction companies significantly influence their performance.

The results from inferential statistics indicated that project team demographic diversity had a strong positive influence on performance of rural roads construction projects in Kenya. It can therefore be established that there is a positive influence of project team demographic diversity on performance of rural roads construction projects in Kenya hence generalization to all businesses that leverage technology.

This means that to a larger extent, project team demographic diversity plays a key role on performance of projects. This is therefore a clear evidence for government to draft policies to reaffirm the importance of project team demographic diversity in all its projects. This is so because evidence



from the study has provided sufficient empirical support to this effect. By so doing, this is likely to improve performance of not only rural roads construction projects but also all construction projects in Kenya.

The study has immensely contributed to knowledge by indicating that implementation of reforms by incorporating demographic diversity in project implementation teams, would revamp project management systems to a greater extent. Project practitioners, contractors, consultants, planners and various government agencies will benefit from the findings of this study in confidently defining the way forward.

## 7. Recommendations

Based on the conclusions reached in this study, it is therefore recommended that the project practitioners and government should outline and impose policies on project team demographic diversity in all projects carried out in the country and establish an evaluation criterion based on team demographic diversity in awarding tenders and also in measuring performances of the organisations and businesses.

This paper enunciates that demographic diversity of the work force often requires flexibility, creativity and innovation so as to reap maximum benefits. It is therefore recommended for organisations to have a clear and implementable policy on demographic diversity of the workforce tied to the business strategy so as to benefit from the positive influence of demographic diversity on performance of projects. Encouraging and incorporating diversity issues into regular intercourses within the organisations through interviews, focus group discussions, meeting and during team building or bonding activities will demonstrate and leverage the organisation towards a culture that cuddles diversity.

This paper also recommends that firms should establish a robust system that records, collates, analyses, evaluates and recommends the best practices on effective implementation of diversity initiatives.

The results of this study are therefore in conformity with statistical research directions and are comparable with research findings in similar studies. It therefore clearly articulates the role of project team demographic diversity on performance of rural roads construction projects in Kenya. However, it is limited to rural roads construction sector, but in principle it provides a framework on which a recommendation is hereby made for future researches to cover other tiers of government, the private business sectors of the Kenyan economy or other developing economies.

## 8. Future Studies

Although the current research study was able to fully accomplish its objective, a number of additional research directions have been identified when performing this research task. This includes identifying and ranking in importance all the demographic variables and their extent of influence on organisational performance by comparing more sectors. Further it would be interesting to categorically study separately the influence of physical demographic factors and cognitive demographic factors and how they influence organisational performance.

## 9. References

- Athena Project (2001). *Encouraging Applications from Women Scientists*, University of Oxford, Report 12, Athena Project, Universities UK.
- Bagilhole, M., Dainty J., Ansari, H. K., & Jackson. (2004). *Creating equality in the construction industry. Agenda for change for women and ethnic minorities.*
- Baumeister, R.F. & Bushman, B.J. (2010). *Social Psychology and Human Nature*. Wadsworth, Belmont, CA.

- Biemann, T., & Kearney, E. (2010). Size does matter: How varying group sizes in a sample affect the most common measures of group diversity. *Organizational Research Methods*, 13(3), 582.
- Brandt T., & Laiho, M, (2013). Gender and personality in transformational leadership context: An examination of leader and subordinate perspectives. *Leadership & Organization Development Journal*, Vol. 34 Iss 1 pp. 44-66.
- Burgess, Robin, Jedwab, Remi, Miguel, Edward, Morjaria, Ameet and Padró i Miquel, Gerard (2015). The value of democracy: Evidence from road building in Kenya. *American Economic Review*, 105 (6). pp. 1817-1851.
- Choi, S., & Rainey, H. G. (2010). Managing diversity in US federal agencies: Effects of diversity and diversity management on employee perceptions of organizational performance. *Public Administration Review*, 70(1), 109-121
- Chow Hau-Siu, I., (2005). Gender differences in perceived leadership effectiveness in Hong Kong. *Women in Management Review*, Vol. 20 No. 4, pp. 216-33.
- Claes, M.T. (1999). Women, men and management style. *International Labour Review*, Vol. 138No. 4, pp. 431-46.
- Dainty, A.R.J., Cheng-Mei, I. & Moore, D.R. (2004). A Competency-based Performance Model for Construction Project Managers, *Construction Management and Economics* 22 (1), 877-886.
- Eagly, A.H. & Diekmann, A.B. (2003). The malleability of sex differences in response to changing social roles in Aspinwall, L.G. and Staudinger, U.M. (Eds), *A Psychology of Human Strengths: Fundamental Questions and Future Directions for a Positive Psychology*, American Psychological Association, Washington, DC, pp. 103-15.
- Eagly, A.H. and Karau, S.J. (2002). Role congruity theory of prejudice toward female leaders, *Psychological Review*, Vol. 109, pp. 573-98.
- Egan, T. M. (2005). *Creativity in the context of team diversity: Team leader perspective*. *Advances in Developing Human Resources*, 7: 207-25.
- Fieldhouse, E., & Cutts, D. (2010). Does diversity damage social capital? A comparative study of neighbourhood diversity and social capital in the US and Britain. *Canadian Journal of Political Science*, 43(02), 289-318.
- Frink, D. D., Robinson, R. K., Reithel, B., Arthur, M. M., Ammeter, A. P., Ferris, G. R., Kaplan, D. M., & Morrisette, H. S. (2003). Gender demography and organizational performance: A two-study investigation with convergence. *Group & Organization Management*, 28, 127-147.
- Gellert J.F. & Schalk R., (2012). Age-related attitudes: the influence on relationships and performance at work. *Journal of Health Organization and Management*, Vol. 26 Iss 1 pp. 98 - 117
- Haas, H. (2010). How can we explain mixed effects of diversity on team performance? A review with emphasis on context. *Equality, Diversity and Inclusion: An International Journal*, 29(5), 458-490.
- Horwitz, S. K. (2007). The effects of team diversity on team outcomes. A meta-analytic review of team demography. *Journal of management*, Vol.33 No 6, 987-1015
- Houkamau, C., & Boxall, P., (2011). The incidence and impacts of diversity management. A survey of New Zealand employees. *Asian Pacific Journal of Human Resources* 49(4) 440-460
- Jackson, S. E., Joshi, A., & Erhardt, N. L. (2003). Recent research on team and organizational diversity: SWOT analysis and implications. *Journal of Management*, 29(6), 801-830.
- Jackson, S. E., May, K. E., & Whitney, K. (1995). Understanding the dynamics of diversity in decision-making teams. In R. A. Guzzo & E. Salas (Eds.), *Team effectiveness and decision making in organizations*. San Francisco: Jossey-Bass.
- Jayne M. E. A., & Dipboye, R. L., (2004). Leveraging diversity to improve business performance: Research findings and recommendations for organizations. *Human Resource Management*, Vol. 43, No. 4, Pp. 409-424
- Joshi, A., Liao, H., & Roh, H. (2011). Bridging domains in workplace demography research: A review and

- reconceptualization. *Journal of Management*, 37(2), 521-552
- Kaplan, D., Wiley, J. W., & Maertz, C. P., Jr. (2011). The role of calculative attachment in the relationship between diversity climate and retention. *Human Resource Management*, 50(2), 271-287
- Koch, S.C. (2005). Evaluative affect display toward male and female leader. *Small Group Research*, Vol. 36 No. 6, pp. 678-703.
- Mannix, E., & Neale, M. A. (2005). What differences make a difference? *Psychological Science in the Public Interest*, 6(2), 31-55
- Martinez, A. D., Ferris, G. R., Segrest, S. L., & Buckley, M. R. (2011). A maladjustment and power conceptualisation of diversity in organisations: Implications for cultural stigmatisation and expatriate effectiveness. *International Journal of Human Resources Development and Management*, 11(2), 235-256
- McKay, P.F., Avery, D.R. & Morris, M.A. (2008). Mean racial-ethnic differences in employee sales performance: the moderating role of diversity climate. *Personnel Psychology*, Vol. 61, pp. 349-374.
- Milliken, F. J., & Martins, L. L. (1996). Searching for common threads: Understanding the multiple effects of diversity in organizations work groups. *Academy of Management Review*, 21: 402-433.
- Peeters, M.C. & Van Emmerik, H. (2008). An introduction to the work and well-being of older workers. *Journal of Managerial Psychology*, Vol. 23 No. 4, pp. 353-63.
- Peterson, S.J. & Spiker, B.K. (2005). Establishing the positive contributory value of older workers, a positive psychology perspective. *Organizational Dynamics*, Vol. 34 No. 2, pp. 153-67.
- Phelan, J.E. and Rudman, L.A. (2010). Prejudice toward female leaders: backlash effects and women's impression management dilemma. *Social and Personality Psychology Compass*, Vol. 4 No. 10, pp. 807-820.
- Powell, G N (2012). Six ways of seeing the elephant: the intersection of sex, gender, and leadership. *Gender in Management: An International Journal*, Vol. 27 Iss 2 pp. 119 – 141.
- Richard, O., McMillan, A., Chadwick, K., & Dwyer, S. (2003). Employing an innovation strategy in racially diverse workforces: Effects on firm performance. *Group and Organization Management*, Vol. 28: 107-126.
- Richard, O.C., (2000). Racial diversity, business strategy, and firm performance: a resource-based view. *Academy of Management Journal*. 43 (2), 164–177.
- Schalk, R. et al., (2010). Moving European research on work and ageing forward: overview and agenda. *European Journal of Work and Organizational Psychology*, Vol. 19 No. 1, pp. 76-101.
- Streb, C. & Voelpel, S. (2009). Analysing the effectiveness of contemporary aging workforce management. The case of Daimler AG. *Organizational Dynamics*, Vol. 38 No. 4, pp. 305-11.
- Walker, A. (2006). Active ageing in employment: its meaning and potential. *Asia-Pacific Review*, Vol. 13, pp. 78-93.
- Williams, K., & O'Reilly, C. A. (1998). Demography and diversity in organizations: A review of 40 years of research. *Research in Organizational Behaviour*, 20, 77-140.