



Szent István University

Doctoral School of Economic and Regional Sciences

**CREATIVITY AND INNOVATION EXPLORATION: MEASURING THE IMPACT OF  
CULTURAL DIVERSITY OF AN ORGANIZATION**

**The Thesis of the Ph.D. Dissertation**

**By**

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# 1 INTRODUCTION

## 1.1 Background and Motivation

Since the original theory of innovation was developed by Joseph Schumpeter hundred years ago (1912), innovation is in the centre of research of social, economic, and technical sciences. The changing business environment including globalization and increasing competition have made innovation the key element of strategy on macro and micro levels as well. Michael D. Intriligator, paper presented on 21-23 March 2002 to the conference organized by the Instituto Affari Internazionali on “Globalization of the world economy; potential benefits and costs a net assessment” wrote the concept of globalization as applied to the world economy and is a powerful real aspect of the new world system and with many dimensions.

Schumpeter’s book on “the theory of economic development” published in German language in 1912 and in English in 1934 defines innovation as a process of making new combinations and complementarities. This means, additional effort in one element increases the marginal returns of effort in the other element. The complementarities in innovation activities can refer to multiple objectives, development methods and different knowledge sources, where the diverse parts are integrated in a way that benefits the whole system. For firms, innovation associated to the knowledge base becomes more diverse and so does the cultural and ethnic background amongst employees. This increasing diversity in the knowledge bases increases the need for interaction and communication, while increased cultural diversity might lead to conflict within the organization. However, employee diversity might create a broader search space and make the firm more open towards new ideas and more creativity.

Cultural diversity is the act of recognizing, realizing and accepting the differences or multiplicity among people which may rise from their origin, religion, ethnicity, gender, age, education or race. Mullins, 2010: pg. 28 presented the study provided by Fons Trompenaars whose later work is co-authored with Charles Hampden – Turner. Trompenaars original research spanned 15 years and covered a database of 50,000 participants from 50 countries. It was supported by cases and narratives from 900 cross-cultural training programs, mainly questionnaires based on their

underlying norms, values and attitudes. Trompenaars resultant framework identified seven areas in which cultural differences may affect aspects of organizational behaviour and innovativeness.

In summary, the effects of cultural diversity in workplaces have increasingly demanding because of the foreign direct investment (“FDI”) and migration of workforce driven by globalization. The business world, especially the multinational corporations, starts to recognize the advantage of cultural diversity and uses as a key factor of business success in more and more areas of their activities, such as in marketing or customizing their products. The cultural diversity also effects on internal operation of firm. Hence, cultural diversity is one of the most crucial factors in the success of the organization. It is a sine qua non for a firm that moves towards innovation or creativity.

It is obvious in the world today; we witness cultural transformation and changes, competition and flexibility in the market. There are demands of new products and services, developments and mergers which can be seen as customers’ reactions towards the changes. This is the reason for organizational or business skills recruitment which is motivating force behind the success of any organization or firm. This is also the reason behind the changes in the World economic status. Also, the coming together of culturally diverse workers to achieve one goal has brought in innovation and creativity within the organizations and firms. There also need to manage such diversities to avoid conflict which might hinder the communication and networking within an organization or workforce.

The study pays more attention on enquiring if there is existence of cultural diversity and also if the act of managing cultural diversity can impact innovations and creativity in the company and also the methods and tools that can be use in the management of cultural diversity among the employees of the company.

Combined and intensive effort of workforce is required to achieve goals of an organization. All the attitudes, skills and efforts must be properly managed in a way they can efficiently and effectively overcome the day to day challenges. Since the world is becoming a village due to several reasons such as technological improvements, transport infrastructure development, and the ever increasing globalization and privatization of companies, the view in working places has been changing from different perspective such as age, profession, gender, religion, etc.

Identifying how majority of employees define diversity helps understand what really matters to enhanced institutional growth and innovativeness in workplaces. Therefore, the topic “Creativity and Innovative exploration” is very important from the perspectives of individuals, employees of labor, company management and governments. However, the research paper is focused mainly on the diversity of workforce and its contribution to the innovativeness to firms. Comprehending how different cultures interact within a given work environment, how networking and communication strategies of employees from different culture within the given companies, how the leader manages the diversity of culture in workplace, how cultural diversity increases the effectiveness and relationship among employees will enable national and multinational companies to understand the contribution of diversity of workforce and hence to focus on how to readjust their strategies to be fit in the growing competitive global economy.

## **1.2 Research Objective**

The general objective is to bring this hot topic to forefront of business managers and policy makers. Also to test if creativity and innovation are primarily culturally driving factor and or have other input within an organization. There is significant attention on innovation achievement, but less attention is paid to measure to what degree different cultural interaction has within an organization in order to achieve innovative solutions and competitiveness.

Since globalization has made people from all over the world who share different races, culture and background to come together in a small setup and interact; and it has enabled interactions in the field of innovation and marketing aspects which makes organizations better than before through competitive advantages.

Definitions given to diversity in workplace are quite different across the globe such as diversity in geographic location, age, gender, race, professional qualification, religion, perception and attitude etc. yet, it is not well identified to how the majority perceives to how to define diversity in workplace. In addition to this, some of the European countries are still have anti-migrant policy. Besides, professional working opportunities are limited in many countries. Moreover, the level of intentional welcoming to diversity in working places is poor when looked to the reality. The importance of diversity in enhancing growth of a company is not well measured.

Leveraging growth potential requires various innovation tools such as patents, copy rights, new products and diversity of employees, ownership and managers. The problem is does some of these factor correlates in any form to give competitive advantage to organization and if so, what are the extent of the result.

Studies on cultural diversity such as skill complementarities and ethnic background of the employees didn't take into consideration in many studies. People carry their knowledge when they move from place to place. According to Poot (2008), employees knowledge acquisition and their mobility is affected by age, education, and cultural background. Cultural background of peoples affects their outlook even for the people with in the same occupational group. This indicates that cultural diversity in workplace have an impact on innovation and creativity of employees. This is strengthened by Efrat (2014) concluding that culture matters for innovation.

Although there is significant attention on innovation achievement, but less attention is paid to measure to what degree different cultural interaction has within an organization in order to achieve innovative solutions and competitiveness. Diversity at workplace can lead to enhanced decision making and problem-solving process, high creativity and innovation, improved product development (Cox, 1991; Harvey & Allard, 2012).

The presence of strong organizational culture enables the leaders to fascinating and powerful (Mehta and Krishnan, 2004). Yet, the contribution of organizational culture towards innovation is quite low (McLean, 2012; Valencia et al., 2010).

Several studies have been conducted and finding on the impact of diversity on innovation still unresolved (Stahl et al. 2010; Zhan, Bendapudi, and Hong 2015). There are studies supporting the importance of diversity towards innovation (Earley and Mosakowski 2000; Niebuhr 2010; Tadmor et al. 2012); while other research findings show the reverse or no relation at all (Bell et al. 2011; Harvey 2013; Østergaard, Timmermans, and Kristinsson 2011). Therefore, the main problem of this study is that several studies, as mentioned in the literatures above, have different opinions on the impacts of factors affecting innovation. This study will therefore try to examine the main factors that are assumed to affect innovation, especially the workplace diversity and its attributes and contribute to the existing literatures.

According to Christian et.al., (2009), the knowledge base becomes more diverse and so does the cultural and ethnic background among employees. Thus, increasing diversity in the knowledge base increases the need for interaction and communication within the firms, while increase cultural diversity might lead to conflict. However, employee diversity might create a broader search space and make the firm more open towards new ideas and more creativity. Ideally, diversity should increase a firm's knowledge base and increase the interaction between different types of competences and knowledge. This creates possibilities for new combination of knowledge and innovation. Therefore, it's worth researching and would help business managers and policy makers in nurturing and scooping talents in order to achieve optimal output of creativity and innovations solutions.

These solutions help free up resources and assets to be re-directed for revenue generating initiatives and make organizations more responsive to customers and market needs. In order words value-oriented creativity pinned into firms' capabilities and organizations management.

In an increasingly competitive marketplace, firms and organizations cannot afford to carry any additional weight that doesn't help them to succeed; therefore, the research paper would like to examine the relation between a diverse composition of the workforce and the innovation and creative performance of firms. In other words, to check the ability of diverse cultural workforce creativity and innovativeness measured against education, age, race, gender and organizational change criterion. Also, there is variance in performance pertaining productivity between the companies which chose to use cultural diversity as opposed those which do not. The thesis intends to find out and measure the impact of the cultural diversity in an organization with below four objectives;

Objective 1: To identify the effects of cultural diversity, mainly from perspectives of innovation, management and personality influence.

Objective 2: To examine the effect of organizational culture-lead-strategy influences on creativity and innovation.

Objective 3: to check what influences the employees of those companies to be creative and innovative in nature and to what extent does organisational culture support.



Objective 4: To evaluate the leadership roles of the organizations, purely from relations, culture and diverse workforce.

### **1.3 Design of the Research**

Collecting the main guidelines and evaluate the connected literature regarding the later use of views and research. I checked organizational behavioral that could lead to diverse workforce that emerge innovativeness. The research paper used survey method through questionnaires to employees in order to check their trait working within diverse team. The sampling procedure was simple one-stage cluster sampling.

The research premise is tested by comparing literatures against questionnaires distributed to people of different nationalities and professional backgrounds. In order words, the paper tested if diverse cultural workforce could trigger innovation, subsequently a higher performance can be achieved which is crucial to continuing success of any organization.

The research paper used a combination of theoretical analysis to evaluate the behavior of the organization workforce in a diverse or non-diverse environment created by the organizational behavior. The theory are from many social scientist and the practical are from people who do their day-to-day work with people of different cultures brought together by the organizational culture.

The research paper used large population samples to summarize the research. As a result, case study was developed to access the research hypothesis. This is surveying people to establish their views of what they think, believe, value or feel through interviews and questionnaires. Survey method will help discover these views for their sake and to observe the argument of the research work and generalize conclusions more widely.

The research paper applied 10 questions that are multi-dimensional in nature, in order to get multi-dimensional answers from respondents. The question targets diverse cultural workforce in aspects of gender, age, education, communication, race and ethnicity. This approach is to get respondents view on cultural diversity impacts while working in a diverse cultural group.

## 1.4 Research Hypothesis

The subject of organizational culture leading to innovativeness is a hot topic of the era of globalization. The world is becoming a global village. Almost everyone has a social media account, have used internet to check through Google and other apps. These technological adventures are driving the way forward of our life and also making life easier and thus, these companies requires constantly to be innovative. When taking into consideration of consumer awareness of today, in other words consumer behavior to have many preferences to choose from, companies are hiring everybody in order to move into every direction in search of growth and profit. Companies are becoming more and more innovative.

Therefore, the research has set the following hypotheses:

Hypothesis 1: HO: There is no outstanding difference in the study's perception between the male and female with regards to cultural diversity.

H1: There is an outstanding difference in the study's perception between the male and female with regards to cultural diversity.

Hypothesis 2: HO: There is no outstanding difference in the study's objective among the age group with regards to communication.

H1: There is an outstanding difference in the study's objective among the age group with regards to communication.

Hypothesis 3: HO: There is no outstanding difference in the perception of the study's objectives among the various race groups.

H1: There is an outstanding significance difference in the perception of the study's objectives among various race groups.

Hypothesis 4: HO: Significant differences in years of experience can not affect the flow of innovation in an organization.

H1: Significant difference in years of experience can also affect the flow of innovation in an organization.

Hypothesis 5: HO: The diversity of religious beliefs among the employees can not affect their innovative and creative minds.

H1: The diversity of religious beliefs among the employees can affect their innovative and creative minds.

## 2 RESEARCH METHODOLOGY

The research used a combination of theoretical analysis to evaluate the behavior of the organization workforce in a diverse or non-diverse environment. The theories are from many social scientists and the practical are from people of different cultures brought together who do their day-to-day work.

The research used sample questionnaires for data collection and analysis. The main purpose of the questionnaire interview is to get a clearer impact of the effect of the diverse work force to the organization. In order to get the answers right from respondents, right questions are being asked. The survey questions checked the impact to innovativeness from the point of view of organizational culture, leadership role and diverse cultural group project. survey questionnaires distributed to employees of companies were mainly to check their trait working within diverse teams. The sampling procedure was simple one-stage cluster sampling. The questionnaire is to get the respondents observation on the impact of the organisational culture that would lead to innovation.

The questionnaire is also to get respondents ratings when working on a group project. The respondent will rate their contributions and rate other member contributions to the success of the project. In order to attain consistency, the other group member would need to be considered “other cultural group”, meaning a group member outside of your main cultural group in the project.

The questionnaire structure views each individual to evaluate the project success. In order words we measure the relationship between individual contribution and diverse team member contributions. If the respondents points out that the diverse team member contributions is high, then the hypotheses H1 and H3 are true. However, if the respondent rates the diverse team member is low, then H2 and H4 will hold and our hypothesis is negative. The measure of the innovation output is correlated to success or not of group projects.

### **3 OTHER RESULTS FROM THE QUESTIONNAIRES**

It is obvious in the world today; we witness cultural transformation and changes, competition and flexibility in the market. There are demands of new products and services, developments and mergers which can be seen as customers' reactions towards the changes. This is the reasons for organizational or business skills recruitment which is motivating force behind the success of any organization or firm. This is also the reason behind the changes in the World economic status. Also the coming together of cultural diverse workers to achieve one goal has also brought in innovation and creativity within the organizations and firms. There is also need to manage such diversities to avoid conflict which might hinder the communication and networking within an organization or workforce.

The study on some of the Banks and Companies in Luxemburg and beyond, pays more attention on enquiring if there is existence of cultural diversity and also if the act of managing cultural diversity can impact innovations and creativity in the company and also the methods and tools that can be use in the management of cultural diversity among the employees of the company. Questionnaires were sent to collect date and information from some banks and companies. Also in each of these companies, there are nationalities form Nigeria, Poland Nederland, Belgium, Hungary, USA, Germany, Congo, Ukraine, Spain, Ghana, Rwanda, South Africa, India, Russia, Brazil, Romania, Chile, United Kingdom, Ivory Coast, Serbia, Cameroun, Portugal, Canada, China, Ireland, France, Cameroun, Ukraine, Lithuania and Luxembourg. With this we can know that there is high level of cultural multiplicity among the employees of various Banks and Companies. The study also advocates the importance of team building schedules and social gathering which can increase the rate of interactions among the workers, also putting into practice cultural diversity programs and rules and enhancing multicultural team work.

#### **3.1 Aim and Objective of the Questions**

The purpose of this research work was to appreciate the impact of cultural diversity on work especially and specifically in these banks and companies. The research was guided by some objective. They are:

- Comprehending how different cultures interact within a given work environment.

- Understanding networking and communication strategies of employees from different culture within the given Banks and Companies.
- Understanding how the leader manages the diversity of culture in workplace
- Comprehending how cultural diversity increases the effectiveness and relationship among employees.

These objectives helped in the development of questions in the questionnaire sent to the participants.

### **3.2 Location and Participants of the Research**

The study was conducted in Luxembourg and Belgium, in particular at some banks such as Bank GPB International S.A, European Investment Bank, Citco Bank. Furthermore, survey was carried out at Allianz Insurance, Lalux Assurance. The information and data was gathered from the permanent workers. This is because they are culturally interacting with different cultural group in several projects as the company's major workforce.

### **3.3 The Patterns of the Data Collection**

The questionnaire method was selected as the primary information collector. A questionnaire is a research/ study tool which is made up of set of guided questions used by the researcher in order to get information from the research samples. In the case of the data collected, some company's employees at Luxembourg main city, (the world second largest financial center) are selected.

### **3.4 Sample Size and Population**

Those big companies who have high number of diversified employees were purposively selected with multi-stage sampling techniques in order to meet the objectives of the research. First, all companies with more than 100 employees were purposively selected. Accordingly, 5 companies from Luxembourg and 5 companies from Belgium were chosen. Among these companies, the researcher selected three companies from each country using simple random sampling which then proportionally allocation has been implemented in order to reach out the companies.

Finally, according to the proportion, respondents from each of the six companies were randomly selected and obtained the data.

In order to determine the Sample size, the researcher took the simplified formula sample size determination formula suggested by Cochran's formula:  $n=N/(1+Ne^2)$

Where N is the population size and e is the level of precision. Accordingly, for a 96% confidence level and  $e. = 0.04$ , size of the sample we get the sample size as:  $n=1050/(1+1050*0.04*0.04)=391.7\approx 392$

And proportionally we selected the following number of respondents from each company.

### **3.5 Validity and Reliability of the Data**

Validity can be said to be a test of how well and precise an instrument that was used on the research measures a particular concept that it intends to measure. The validity of the questionnaire was done using pilot survey.

Assumptions of ANOVA include the followings:

Example 1: The data follow the normal probability distribution.

Example 2: The variances of the two populations are equal.

Example 3: The two samples are independent. There is no relationship between the individuals in one sample as compared to the other (as there is in the paired t-test).

Example 4: Both samples are simple random samples from their respective populations. Each individual in the population has an equal probability of being selected in the sample

Accordingly, quantitative methods were used to analyze the data output generated using R-program. The descriptive statistics by the means of percentage and frequencies was used to show the features of the samples and both t- test and Analysis of Variance (ANOVA) were used to statistically test the Hypothesis and the assumptions of the tests are fulfilled.

A t-test is an inferential statistical test that is used to test the hypothesis if there exist a significant difference between means of two groups which might be related to some features. It is often used

in hypothesis testing to determine whether there is a significant difference among the two groups with the assumption of independence of the sample observations from their respective population and normality of the population distribution. Whereas Analysis of Variance (ANOVA) is a hypothesis-testing technique used to test if the means of two or more groups are significantly different from each other by examining the variances of samples that are taken. ANOVA checks the impact of one or more factors by comparing the means of different samples. If the between variation is much larger than the within variation, the means of different samples will not be equal. If the between and within variations are approximately the same size, then there will be no significant difference between sample means. It allows one to determine whether the differences between the samples are simply due to random error (sampling errors) or whether there are systematic treatment effects that cause the mean in one group to differ from the mean in another.

### **3.6 Summary of the Hypothesis and Test Results**

The following are the results for the hypothesis set for this research and are stated as follows:

#### **Hypothesis 1:**

HO: There is no outstanding difference in the study's perception between the male and female with regards to cultural diversity.

H1: There is an outstanding difference in the study's perception between the male and female with regards to cultural diversity.

The t test conducted to test the difference in the attitude of male and female towards working in multicultural work environment shows that there is no significant difference in the attitude of male and female towards working in multicultural work environment as the t statistics is less than the critical value.

Gender issue is one of the global problems because sometimes cultural diversity is determined by gender differences. The result from the research reveals that in these organizations, the idea on cultural diversity between men and women of all cultures are similar. This affirms that the female share the same views on cultural interaction, networking and communication with their male colleagues. The literature found addresses some issues like gender differences and stereotypes as an outcome of different cultures, where some would prefer to do transaction with



same gender. When there are such challenges, there would be a setback on innovations and creativity within the organization.

The possible reason to this might be because these companies have gone through a change over the years in terms of recognizing and admitting gender differences and equality. An organization that is not influenced by gender differences will eventually bring in creative personals with visionary view on challenges and solutions and open to change. Hence females may get similar opportunities and treatment just like the males do and this will lead to great innovation and creativity within the organisation.

### **Hypothesis 2:**

HO: There is no outstanding difference in the study's objective among the age group with regards to communication.

H1: There is an outstanding difference in the study's objective among the age group with regards to communication.

The ANOVA test results for the Luxembourg show that there is a significant difference across age groups in their attitude towards communication in a multicultural environment. The mean value of those in the age group 55 years and above seem to be much higher than the other groups implying that they tend to have problems with communication as compared to the other groups. The trend observed here is that the mean value increases as the age increases indicating that the employees belonging to higher age groups are having difficulties in communication in a multicultural environment. This might be due to the previous history of the world and Europe in particular where diversity was a hot topic.

The ANOVA test results for the Belgium show that there is a significant difference across age groups in their attitude towards communication in a multicultural environment. The mean value of the age group 4 (55 years and above) is higher than the other age groups indicating that they find it difficult to communicate in a multicultural environment as compared to the other age groups. Like in Luxembourg, the mean value for age group (1) is the lowest age group showing

that young people in Belgium also comfortable in communication in a multicultural environment.

The ANOVA test results for the combined data for two countries also shows similar result as in the two countries that there is significant difference across age groups in their attitude towards communication in a multicultural environment.

The ANOVA test result indicates that there is significant difference in understanding the importance of diversity and in level of communication ability across different age groups. The result indicates that in these companies the communication and networking patterns of the employees in the workplace is influenced by the age differences. This implies that with different age categories and groups, there are differences of communication among the employees within the organization or company. This also implies that a generation that belongs to one age group will find it easier to communicate and interact with the same age group, notwithstanding the culture. Darshana, (2014) also affirmed this hypothesis through his discussion on Generation Diversity. He posited that ever there is a considerable age difference among or between employees in a workplace; managers must deal with authority and communication order than work/ life balance and royalty issues.

This is because communication is one of the critical issues towards cultural diversity. If there is a smooth means of communication among the employees in the workplace, there will be a smooth road to innovation and creativity in the workplace. If the reverse is the case, then there will be a hindrance to innovation and creativity. Furthermore, Zemke et al., (2013) defined generation group and categorized them according to their core values. For them, the old generation always wishes to be superior and more cultural but sometimes they are not flexible. These are some of the communication issues that deeply influence and affect the younger group. These also require effective management skills because it affects how employees communicate in a company or organization Zamke et al, (2013).

### **Hypothesis 3:**

HO: There is no significant difference in the perception of the study's objectives among the various race groups.

H1: There is a significant difference in the perception of the study's objectives among various race groups.

The ANOVA test results assessing the difference among different race groups in their attitude towards innovativeness in a multicultural work environment show no significant difference as the p value is more than 0.05. The mean value for All respondents is almost similar implying that the employees think that innovation is mainly brought through by setting a clear objective and better management and culture has the most important role to play in fostering innovation.

In the case of Belgium, no significant difference was found across the employees belonging to different race in their attitude towards innovativeness in a multicultural environment. The mean values show more or less similar results ranging from 1.67 to 1.97.

The ANOVA test results shown below for combined data assessing the difference among race in the attitude towards innovativeness in a multicultural work environment also indicates that there is no significant difference among the different races on their opinion whether work place cultural diversity have an impact on innovativeness as the p value is higher than 0.05.

This implies that in a company or organization where there is a mixture of race and culture, there is a high and sure road to innovation and creativity which will push the company or organization higher more than others. As noted in the literature review of this research, the innovation and creativity coming from different race groups are vitally important to the success and growth orientation of an organization. Also, innovative, creative individuals are essential and are put into action by organisational action pack (PPS), meaning people, process and strategy. PPS is organisational making or referred to organizational strategy (Mullins, 2010). It entails the appliance of inventive thoughts that can give room to new ideas which can serve as a remedy to some problems facing the organization.

Adler, (2002) proves this when he noted that diversity in multicultural teams is associated with positive group outcomes such as increased levels of innovation, creativity and problem solving. Cultural diversities of people of different race, when initiated into business settings bring in new

ideas, skills and pattern of work. Also it helps in stimulating innovation and creativity. The result shows that in this organization, the interactions of various cultures, the management of cultural diversity and its effect on employee performance, networking and communication between the workers are not influenced by race. This may be because the organization has a higher percentage of workers who can speak various languages, individuals who are able to communicate to each other without any cultural boundaries or because of the change that this organization has through in terms of cultural awareness. This implies that workers are able to work in multiracial group and help one another to put in their best abilities in their jobs. In this case the negative hypothesis turns out to be true.

Zamke et al, (2013) in culture and diversity seems to disagree with this findings, it says that race classification still does exist in communities and organizations and have a great impact and influence on how people view and work with one another. The literature says that where there is different races working together, conflicts and issues of seniority and superiority and dislike will surely come in and this can go a long way to affect the proper functioning of the organization or the company.

#### **Hypothesis 4:**

HO: Significant differences in academic qualification cannot affect the flow of innovation in an organization.

H1: Significant difference in years of experience can also affect the flow of innovation in an organization.

The ANOVA test results to check for the difference in attitude towards multicultural work environment across employees with different academic qualifications seem to be significant in Luxembourg as the p value is less than 0.05. From the mean scores, it could be seen that employees with masters degree have the highest score indicating their positive experience in working in a multi-cultural environment. The lowest mean score is for employees with bachelors degree.

For Belgium, the ANOVA results show that there is a significant difference across employees with different educational qualifications towards working in a multicultural environment. The mean score ranges from 1.37 to 1.93 implying that the employees have differences in their attitudes.

The ANOVA test results for the combined data to check for the difference in attitude towards multicultural work environment across employees with different academic qualifications seem to be significant as the p value is lower than 0.05.

This means that in these companies, the academic rank (qualification) of an employee influences the level of his or her innovative and creative mind. This can be linked up to the study by Tung, (1993), who states that people that works and share similar years of work experience will tend to share common views and can easily interrelate and intermingle in their work places. Also, it states that experience is linked to age. This implies that workers of same experiences in an organization view and react to issues and conflicts in the same way. And thus can bring in innovations. This also seems to have countered the literature on Zamke et al., (2013), which says that newly employed or newly recruited workers are very innovative, advanced in technology, not scared of authority and willing to take risk in order to prove they are capable of the job. This in the other hand, it makes it hard for them to fit in with the most experienced workers who happens to be older in age. In this case it can be difficult to manage the older group and also for them to perform effectively because they may feel that the younger group is more enlightened. Also, the younger group might feel intimidated by the years of experience of the older ones. The positive hypothesis seems to support this.

#### **Hypothesis 5:**

HO: The diversity of religious beliefs among the employees doesn't affect their innovative and creative minds.

H1: The diversity of religious beliefs among the employees affects their innovative and creative minds.

The ANOVA test results show that there is a significant difference in view in creativity and innovativeness across workers professing different religious beliefs. The mean value for workers professing Muslim and other religious beliefs seem to be higher than the workers professing other beliefs in Luxembourg indicating they believe religious difference in working environment have a positive impact on creativity. Christian Catholic also has higher mean value as compared to other the Christian Orthodox and Protestants. Higher mean value implies that the respondents do not think that multicultural work environment fosters innovativeness.

In the case of Belgium, there is a significant difference in opinions in creativity and innovativeness across workers professing different religious beliefs as the p value is less than the threshold of 0.05. This indicates that people with different religion tend to have different perspectives of what brings innovativeness and creativeness in a certain company.

The ANOVA test results for the combined data shown below strengthens the findings of the two countries under study indicating that there is significant difference across workers professing different religious beliefs in the perception if workforce diversity enhances creativity and innovativeness.

This indicates that in these companies, religion has an influence on the interaction of different communication, culture and networking pattern of workers. Also, this influences the cultural managements and the effects of cultural diversity on performance and towards innovations. This implies that religion plays a vital role in the communication and interaction of the workers and how they settle cultural diversity issues. Religion is a part of one's social and personal identity and it is a part of one's daily life. This is confirmed by the social organization view that people who share the same beliefs can spend more time together, understand each other better and also work effectively towards the initiation of innovation (Zamke et al, (2013).

Robbins et al., (2009) also supports these findings as they opined that most people that share a culture will seem to follow the same religion. Also, in social groups like religion, their different views about other groups can create a sought of barrier which might make it difficult for these other group to interact and work together with them. Hence, the positive hypothesis is true in this case.

## **4 CONCLUSIONS AND RECOMMENDATIONS**

This study tried to examine the impact of workplace cultural diversity on creativity and innovation performance of the employees. In doing so, review of several research works has been in relation to definition of cultural diversity, organizational culture, impact of innovation on economic growth and role of leadership in managing diverse workforce and their impacts. Moreover, the main attributes of diversity such as gender, age, race, religion and educational status (academic qualification) of the employees were taken into consideration to examine if there is a significant difference in their perception towards the impact of workplace diversity on their performance in generating novel ideas and developing them into innovation. Hence, descriptive statistics was used to analyse the demographic variables incorporating the workforce diversity and some of the responses from the questionnaire.

The average age size of the respondents was around 33 years old while the majority of the workers participated in this research have master's degree followed by bachelor's degree. There was different ethnicity in the workforce of the involved companies where the respondents were from more than 20 different nations. Majority of the respondents defined diversity in terms of gender and cultural difference while race was the last choice to define workforce diversity indicating race doesn't have significant impact. This is something the researcher found unique while many literatures do consider race as an attribute of cultural diversity. The respondents do respect the culture of others; mostly they are comfortable with other cultures while they interact. Those who have difficulties to cope up by accepting their difference and understanding/ learning from others culture. Cultural diversity brings people together and enables them to be creative and enhance their innovative performance. As they work to achieve common goal, most respondents have got a good experience from the diversity and it let them identify their weaknesses and strengths.

### **4.1 Conclusions**

Organizational culture can also lead to innovation through culture, clear objective and through management. A well-integrated organizational cultural program through a well functional leadership helps create certain personality traits which disseminate creative characteristics within

the diverse cultural teamwork, apparently leading to achieve innovativeness reflected on the responses gathered. Hence, the role of leadership in managing diversity and creating conducive working environment is vital to improve creativity and innovativeness of the employees.

Student T test and Analysis of variance were used to test if there is a significance different between factor and response variable for the hypotheses. Accordingly, the results were in line with the majority of review works done. The importance of gender has been greatly noticed in the last three decades although there are still challenges across countries and organisations. There was no significant gender-based difference in the perception that gender diversity has an impact on the flow of innovation affirming that female share the same views on cultural interaction, networking and communication with their male colleagues.

There is significant difference across age groups in their attitude towards the impact of diversity and level of communication in both the countries. As the age increases, easily adapting and integrating to diverse culture becomes difficult. There is no significant difference in the opinion of racial diversity towards innovativeness. The organization incorporating more ethnic groups leads to the success of the organizations concerning production due to sharing of knowledge and issues of marketing. Innovation is mainly brought through by setting a clear objective and better management and culture has the most important role to play in fostering innovation.

The effect of academic qualification one of the important factors that determine the level of creativity, innovation and cultural integration. The higher the academic rank, the greater creativity and innovativeness. In this situation, it can be concluded that as the number of years workforce and academic rank as the same time grow; there will likely have high skill of innovation. On the other hand, the older have difficulties in communicating to employees from other background. The importance of diverse religious group in a company is one of the key inputs to innovation. In this research, different religious group have different opinions on whether diversity is important for innovation skill of the employees. Hence, people with different religion tend to have different perspectives of what brings innovativeness and creativeness in a certain company.

The cultural diversity workforce becomes an essential factor to consider when setting up organization. Generally, diversity at workplace is seen as a key to improved creativity and



innovation of employees. It is vital to ensure diversity matters with proper leadership style, awareness creation and dialogue platform.

As the world becomes a global marketplace, organizations explore innovation for growth and profitability. The working places are increasingly becoming culturally diverse and if properly managed with capable leadership will increase performances and profits. Conversely, diverse cultural employees could initiate conflicts. Many conflicts have element of cultural issues. As many authors wrote that culture is multi-layered, and this means that what you see on the surface may mask differences below the surface. Various people were tested through questionnaires the effect of the organizational culture to attain innovation and competitiveness.

Innovation is main purpose of organizational creation and signifies the ability of the organization to utilize disposable resources and new opportunities available. In essence, deployment of new technology presents complex opportunities and challenges of organizations, leading to managerial approach and emergency of new organizational forms. Organizational innovations are intertwined. However, to be creative and innovative it requires organizational attitude and principle of inclusiveness, in order words diverse cultural workforce. This is because different cultures produce different personalities, different ways of solving problems. With this approach in mind, the research paper examines what drives what, in the sense that does it mean that different interaction of cultures are provoking creativity and innovativeness or organizational cultural tendencies. Theoretically, we could say yes because different interactions are provoking different capabilities which is the main point of innovation and creativity.

There are many limitations to the research paper mainly for the purpose of identifying contributively the effects of diverse cultural employees into the company's optimal innovation ratio and profit making on each products and services.

The people who filled the questionnaire have done so according to their understanding of diversity, therefore, they could be a probability of error in this data, therefore further research on these issues are to be conducted to reduce the error margin.

## **4.2 New Scientific Results and Achievements**

The definition given to workplace diversity has been different in different time. Assessing the definition given by the employees influenced with globalisation was very important in order to understand on what variables to focus. Accordingly, gender and cultural difference were the main defining attributes of diversity at workplace. In the previous research findings, racial difference was the main defining attribute.

Age differences have different impact of level of communication at workplace. The older somehow have difficulties in communication. Previous studies mainly focused on examining if age differences have a significant impact on innovation. This research came up with factors which may affect the innovation and creativity of employees such as the how people do communicate their jobs across the diverse workforce. Hence, the younger generation seems to better in communicating their jobs in the diverse working environment. On the contrary, the older employees face difficulties in easily communicating their jobs.

This research came up with evidence that gender difference does not have a significant impact on the opinion if diversity at workplace could lead to innovation. The researcher could not find studies which supports this finding.

The major contribution of this research is the presence evidence that either supports the previous research findings and new way of thinking that has developed over time.

## 5 SUMMARY

This study tried to examine the impact of workplace cultural diversity on creativity and innovation performance of the employees. In doing so, review of several research works has been in relation to definition of cultural diversity, organizational culture, impact of innovation on economic growth and role of leadership in managing diverse workforce and their impacts. Moreover, the main attributes of diversity such as gender, age, race, religion and educational status (academic qualification) of the employees were taken into consideration to examine if there is a significant difference in their perception towards the impact of workplace diversity on their performance in generating novel ideas and developing them into innovation. Hence, descriptive statistics was used to analyse the demographic variables incorporating the workforce diversity and the responses from the questionnaire and statistical test such as t test and Analysis of Variance were used to the hypothesises to analyse the data collected from 392 respondents from six national and multi-national companies from Luxembourg and Belgium. Simple random sampling technique was used to select the final three sample companies and the 392 respondents from each country.

Accordingly, the most important characteristics to define diversity are diversity in gender and culture. Participants of this research were very good at understanding the importance of diversity at workplace by smoothening the communication among one another. Workforce diversities have a positive impact on innovation and creativity in their jobs. Understanding cultural diversity enables people to look back into their own culture, compare and identify the most important culture and the weaknesses that exist among different cultures. Organizational culture is an important attribute that could lead to innovation and creativity. The role of leadership in managing diversity and creating conducive working environment could enable to improved creativity and innovativeness of the employees.

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