Diversity Inclusion in Silicon Valley Technology Companies

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ABSTRACT: 21st century companies and institutions realized the need of embracing diversity and inclusion in their workforce and recruitment plans. This paper addresses the issues of diversity in the case of Silicon Valley Technology Companies in the United States. The key concepts around which this paper is build are an extensive definition of diversity, the history of equality in the US education system and statistics regarding the degree of minority presence in the Silicon Valley, with a focus on the technology companies. The paper also outlines the correlation between the level of minority presence and the female graduates of technical educational institutions in Silicon Valley.

KEYWORDS: Equal Opportunities, Equality, Diversity, Education, Inclusion, Technology.

INTRODUCTION

A former fruits orchard at the beginning of the 20th century, Silicon Valley is located on San Francisco, California, and is bordered by San Francisco Bay in the East, Coast Range in the South-Eastern part and the Santa Cruz Mountains in the West. With a population of around 3 million, it hosts the headquarters of some of the most successful tech companies in the world, such as Yahoo and Google. According to the US Bureau of Labor Statistics, it has a high diversity of languages, with more than 50% of the employed force of Asian and Hispanic origin.

The majority of jobs are: computer design, semiconductor manufactures, scientific research, Internet, telecommunications, data processing, architecture, computer equipment manufacturing, control instrument manufacturing etc. The term 'Silicon Valley' was introduced in the media at the beginning of 1971 in 3-week series of articles written by Dan Hoefler for Electronic News as the name of an article about semiconductor industry.

Diversity refers to the coexistence of elements, including people with different characteristics or backgrounds within the same setting (Anthias 2011). In the human case, a diverse society or workplace contributes towards the realization of the general objectives that serve the interests of all the parties involved (Klarsfeld 2010). This means that diversity is not geared towards addressing the interests of selected members of society but aimed at going beyond the small interests of every one of its parts. The most important aspects of diversity are: gender, race, culture and disability. The definition of the term “Diversity” as such has “varied widely in the literature, displaying a spectrum ranging from the narrow definition based on the traditional categories of race, ethnicity and gender inclusion of a vast array of differences in age, sexual orientation and disability” (Klarsfeld 2010, 287). This paper aims to examine diversity in technical companies located in Silicon Valley, and how outreach efforts with in early technical education institutions and colleges may influence their diversity efforts.

CASE STUDY: WORKFORCE DIVERSITY IN SILICON VALLEY

The foregoing statistics are aimed to introduce the situation of the workforce diversity among companies in Silicon Valley, based on the results available at the local community level.

Although companies intensively supporting diversity, such as Apple, which has a dedicated program called diversity, recognize that there are still a lot of improvements to be made. The website of the company indicates that for the past year, only 20% of its technical hires were females, while Black and Latino made only a 13%.
According to the statistics quoted by the US Bureau of Labor, about 170,000 people are currently employed in technology related jobs in Silicon Valley. In the whole of San Jose and San Francisco markets part of the Silicon Valley market, a total of 25,815 tech jobs are being advertised any given time, meaning there is an average of 5 male and 1.5 female applicants per opening. Males and females combined.

Caucasians represent approximately 42% of workforce, while the Asians represent 45%. In comparison to nationwide diversity, statistical data, about 26% of the United States tech workforce is made women with a ratio of 2.3 female applicants per job, in comparison to 6.4 male applicants per opening.

At the national level, the Caucasians account almost 69% of the tech area, which is a far higher figure than ever seen in Silicon Valley (BLS 2011). The statistics shows that white people of are more represented than the representative of minority groups in the US. This does not mean that diversity is not facilitated, but considers the fact that the pace of diversity is supposed to be gradual. The diversity may thus manifest in a gradual given the fact that the status of job network was greatly influenced by the white dominance. This means that the changes that have been introduced are taking place but the results may be registered within the next years. The influence of diversity in Silicon Valley is taking place but the dominance of people of the Caucasian ethnic are still taking influential role in the markets (The University of Edinburgh 2013).

However, the dominance can only be explained by the fact that the trend is taking an upward turn, and the female applicants for tech jobs are becoming a reality on the market force.

The report of the US Bureau of Labor also makes a close examination of college diversity data within Silicon Valley, revealing that about 2,500 graduates completed college in 2013 with a degree in computer science. Out of these, only 729 graduates were women, representing about 28% of the total number of graduates. In the local universities and colleges, Asians represented about 50% of tech graduates, which is so far the largest ethnicity composition. According to the same source, the Silicon Valley market actually has had a slightly higher concentration of females graduating than national figures show. About 25% of those graduating in 2013 were females. Comparatively, at the level of the United States, a majority of graduates identified themselves as Caucasian – 66%. African-American represents 12% of recent graduates from all United States Universities and colleges, while Hispanics account for about 10% and Asians for 9% of 2013 graduates (Jennings & Stark 2011).

**RECENT STATISTICS OF MINORITIES AND FEMALES ENROLLED IN USA TECHNICAL INSTITUTIONS. RELEVANCE FOR SILICON VALLEY**

According to the National Centre for Education Statistics, between 1976 and 2008, the level of technical college enrollment increased in the case of females and minority groups, while the Caucasian advancement slowed down. The 2008 statistics show that approximately 32% of females and minorities enrolled in middle school technical education or high school technical education program. With a rate of 26% enrollment rate among Hispanics, this ethnic group registered an increased of 10% compared with the 1980 data. In 2008, the number of males enrolled in technical colleges was higher than females-the gender gap being larger for minorities, with females accounting almost 64% of minorities (NCES 2011).

The increase of the minority groups presence in high education institution is a result of the change of educational policies, focused on promoting equality during the different stages of the admission processes. Consequently, the job market recorded a higher diversity level reflecting the results of ongoing educational policies, encouraging and promoting females and representatives of various ethnic groups across the US. The employment policies in Silicon Valley realigned to these trends, some of them part of the globalization trends already mentioned before, an example being the programs initiated by some technical companies addressing technical education program's aimed to reflect diversity in employment (English-Lueck 2011). The readiness of the institutions in understanding the dynamics of the job market is a key concept supporting further diversification of the employees. Through dedicated programs aimed to promote equality on the market, the companies used the knowledge of professionals, independently of their gender or racial background (Batenburg and van Walbeek 2013). The implementation was done through the application of an effective curriculum, an extension of the usual high school and university programs aimed to enhance diversity, aligned with state standards. Basically, such programs were aimed to enable the students to cope with the changes of the school and furthermore working relations, following the application of the equality measures (Hanappi-Egger 2006). In the case of the job market, the conceptual framework was designed to accommodate those changes and programs were built following comprehensive revisions from experts, so as to provide measures ensuring equal opportunities based on professional abilities.

In order to make the transition from school to the working market smoothly, many technical colleges are working with companies to ensure that they promote educational principles based on the diversity encountered on a daily basis in the companies from Silicon Valley (Mazur 2010). Various specific initiatives and programs contributed to the promotion of various individual values of the specific persons, values who contributed to the overall improvement of the society as such.
Moreover, many technical companies have funded dedicated programs aimed to promote diversity, such as Negro College Fund Scholarships (Williams et al. 2014). A company like Bayer has a special focus on recruiting and promoting minorities and females in particular, also donating millions of dollars to technical programs designed at boosting the education and training of minorities and females. Other programs focus on mentoring such as Code2040 and Girls Who Code which helps in exposing tech power players to students (Koch and Gorges 2012). Through their fellows, these programs provide employees and experts for big companies such as Twitter, AOL, Facebook, Google, LinkedIn, Intel and Microsoft.

**STATISTICS OF MINORITIES AND FEMALES IN COLLEGE, TECHNICAL PROGRAMS**

The rate at which female and minority groups are joining institutions of higher learning has faced challenges in the recent past, especially due to the globalization processes, encouraging among others the competition for talent and the increased need of understanding the customer needs. Part of this trend shows that there are changes of demographic nature and the need to answer the diversified market demands, which need to be answered through programs promoting equality in schools (Bartlett and McLean 2006). Consequently, many colleges in Silicon Valley have embraced the spirit of equality aiming to educate children from an early stage in the spirit of equality of chances. Companies such as Google or Cisco encourage various programs aimed at recruiting young graduates, through the Cisco Networking, NetRiders or Citizens Schools.

On the other hand, the percentage of females and minorities in technical college programs has been on the downward trend in the last decade. This has laid down the critical conditions that have facilitated to equality with equal opportunities to all, but from the point of view of the achievements registered at the level of many successful high tech companies in Silicon Valley, the situation is still work in process. For instance, according to their own evaluations presented on the Twitter website, only 10% of the tech jobs were in 2014 occupied by women. Among the US employees, said the same source, only 4% of the lucrative positions were occupied by Black or Latino people.

The colleges have created an environment aimed at increasing the opportunities for all but the process of implementation as such may take time. Within educational institutions, the current statistics are as follows: In college technical programs, the minorities represent 12% of the entire student population. In 2009, colleges received about 7% of all students eligible for admission according to the National Center for Education Statistics. Females and minorities represented about 11% of college technical education students which is a fair percentage compared to previous statistics. Although the changes taking place are slow and reflected in the workforce distribution far from a steady improvement, the trends are towards diversification that starts from the school and continues later on, on the market.

**CASE STUDY FOR DIVERSITY: APPLICANTS FOR THE TECH COMPANIES**

According to Huselid et al. (2009), a pipeline of qualified applicants for tech companies refers to applicants for job vacancies that you regularly communicate with. The term can also refer to an arrangement that enables companies to easily contact and engage in discussion of the possibility of hiring when a job opening shows up. Therefore, to maintain a qualified pool of pre-screened applicants ready to be hired within a short notice, it is desirable to follow certain guidelines. To begin with, active job seekers may not remain available for long thus, pro-active measures are aimed to attract the interesting work force. Secondly, the attrition rate could be very high, such that the amount of time needed to keep the pipeline stocked with qualified applicants would be very inefficient and most likely cost-prohibitive (NCES 2010). Thus, the best solution to this kind of pipeline dilemma is for hiring managers to keep updated on applicant pipelines. The situation has been created by allowing candidates from all races and gender to undertake courses in the higher institutions. The institutions are released many graduates who are ready to work. The training of the employees is of such a nature that it has prepared the students so as to face the need to promote diversity.

Silicon Valley benefited of a variety of flexible and innovative environment that encouraged applicants to outline their skills and experience. The functional nature of the Silicon Valley has been based on the fact that there are equal opportunities for everyone (Suedekum et al. 2014) and such a standpoint is encouraging on the medium and long term the chances on the market place where what it matter is the professional qualification. This has come with the side effects of workers pool being created while there are no jobs but this has to do rather with the nature of globalization of the work force, without any direct connection to ethnicity or gender. The diverse nature of the whole process is based on the fact that there are other extraneous forces that have worked towards changing the direction of the process (Huselid et al., 2009).

Therefore, it is important to educate human resources managers to be well informed of the process of developing applicant pipelines. For instance, by ensuring that these managers and employees are well acquainted with the process, such who are top performers and who are our competitors. When the answers to these questions are given, the hiring managers can further proceed with the identification of potential candidates, by investigating their professional achievements and
eventual downsides. The process of identifying candidates, verifying skill sets, maintaining contact with them, and building lasting relationships may take time (Bartlett and McLean 2006). It leads to the development of a data-driven approach in creating applicants’ pipelines based on customer demand. The higher the demands for jobs, the more relevant are the professional qualities of the candidates. Diversity is reflected through the need of employers in identifying the right candidates for their job based on a list of features that leaves a small amount of place, if any, to subjective considerations such as gender and race. The high competition on Silicon Valley and the slow but steady changes of the work force selection criteria may offer directions of the changes encompassing the national market as well.

MINORITIES AND FEMALE GRADUATES. THE RELEVANCE FOR SILICON VALLEY

Gender discrimination is also an issue that may deter career development and the situation is just getting more complicated when combined with race. According to the evaluations of the US Bureau of Labor, more women are graduating college than men, with women beginning to earn higher wages and becoming the main income provider of the household. Although the discrimination based on gender is decreasing in the last years, according to the official statistics of the Bureau of Labor, the diversity embraces the work force at a slow pace. Especially the women on the job market are being treated discriminatory though the rate has slightly gone down. For instance, when applying for jobs, the women applicants although in big number, may be disadvantaged compared to men. The values that ought to be promoted as part of the diversity process – such as primacy of professional qualifications, professional achievements, cultural differences are not always present at the practical level on the market, hence it is a critical draw back (Suedekum et al. 2014; Michalle and Barak 2010).

According to the 2011 report of the International Labor Organization in 2011, the United States were found to have scored highly in terms of promoting equality and gender pay and employment, alongside with many EU countries. The report noted that the gender pay gap had decreased significantly in the US since the 1970’s. In particular, the report noted that the pay difference in the United States on the basis of gender had significantly reduced from 62% to 81% in 2010. The level of women employment has also increased in the United States compared to other countries in the world, including industrialized countries like Japan. The report highlighted the fact that 60% of the labor force in the United States is made of females. This figure is the highest in the world. It pointed to the fact that many states are putting in place aimed at ensuring that women have equal opportunities in employment opportunities in the United States as their male counterparts (Bartlett and McLean 2006). The same applies to the level of wages. Based on such evaluations, it was predicted that “by the end of the 21st century, the female gender will own half of all United States’ small businesses” (Kusiolek 2012, ix).

Silicon Valley firms often attributed their perceived lack of diversity in employment to the lack of qualified personnel among representatives of minorities and females. Diversity in Silicon Valley has had several hurdles, based on the fact that most representatives of the minority groups have not been up to date with the required qualifications. However, an examination of the levels of minorities and female graduates of technical education indicate that only 41 % of engineering and science graduates are females. Out of this number, fewer enroll in computer science; whilst only 20 % of high school females majoring in computer science in college. The qualifications of the persons are distributed among some careers while in other areas they are only a few. The diversity trend is meeting some of the real difficulties hence Silicon Valley will have to devise ways of neutralizing the said challenges (BLS 2011). The chart below represents the level of unemployment by race in the United States, indicating the higher incidence of unemployment among the representatives of the minorities, especially Blacks and Hispanic people, especially at age slots that usually are considered as the most productive ones. Correlated with the information regarding the problems of females on the market force, it gives an idea about the problems that continue to characterize the current work market trends.
A society following the diversity principles is able to overcome discrimination while ensuring that every one of its parts is offered equal opportunity, based on individual merits. This should be done only through the constant practice of the above mentioned principles and stakeholders in Silicon Valley started to understand the need to challenge old models (Mazur 2010). One of the many examples in this respect is initiative of Google that since 2012 has offered scholarships to high school and undergraduate female, Black, Latino and Native Americans students interested in computer science or engineering. The potential of Silicon Valley will truly be achieved though only when all the aspects related to discrimination will be addressed punctually. The focus should start early in life, by ensuring that the market where the graduates go after school has the right conditions to cater for their professional needs by allowing them to realize their professional potential regardless of their origin (Bartlett and McLean 2006).

Possible predictions about the further turns of the diversity process in Silicon Valley can be made based on the foregoing statistics. The trend is commendable, but much is desired if the concept of diversity must achieve its full status. The values essential in the creation of a reliable society are evident in Silicon Valley (Poster 2008), which means that a lot has been done in this respect but the process will take time. In order that all the parties are aligned in a way that they fully understand the essence of diversity, time is also needed. The educational institutions have shown the willingness to provide a great working environment which can be used as the bedrock towards implementing the strategy already in place. The span of time within which the concept will be fully implemented in Silicon Valley may take years. However, the expression of interest and the allowing of the key tenets in the process have provided a working step which calls for patience for full implementation to be realized. The creation of equal opportunities has portrayed key challenges which need to be seriously addressed (NCES 2010). The indicators of success in the diversity have been witnessed hence there is a need to cultivate the required environment. The value adding nature of the diversity can be misunderstood if its results are not weighed in consideration of the evident challenges. Due to the discrimination and other factors which may create several drawbacks, it is clear that the Silicon Valley approach to diversity should be altered considerably (Herring 2009).

According to Silicon Valley Index, 70 % of Silicon Valley startup founders from 2011 to 2013 do have the classical Silicon Valley connections: they graduated either from Stanford University, Massachusetts Institute of Technology (MIT), or Harvard University, went on to work at a well-networked small tech, before landing at a relatively big firm in a senior position.

The above mentioned report noted that the test prep classes, skill sets, and tuition levies needed to be admitted at Ivy League and other prestigious top-tier schools means that those tech recruiting firms are already decidedly working with the privileged. For example, at Harvard, about 45% of graduates are from families making well over $200,000 annually. This also means that the wealthy can afford to work without pay or low paying internships with startups. Approximately 35% of minorities and female computer science graduates are from (HBCUs) historically black colleges and universities, yet there’s no pathway in getting a job with companies like Google (The University of Edinburgh 2013). The table below shows the demographic characteristics of people in The United States and Silicon Valley, outlining the gender and ethnic gap on the market.

![Figure 1: The level of unemployment by race and age in the United States](Source: CAP 2013)
However, facing the challenges of the ethnic and gender gap is part of the social agenda of every developed society, including those openly praised for their achievements in terms of equality. At the Karolinska Institute in Sweden, a country considered the world leader in equality, there is also a gap in gender regarding the student body. In Sweden, this reverse gender issue has become an increasing problem, as a majority of degrees is earned by females. Karolinska Institute, however, has adopted a three year plan to aim at closing the gap between the genders (Mósesdóttir 2011). This plan aims to ensure that all places of the university, including professors, will equally employ representatives of both genders. In Sweden, gender equality regarding education is monitored from the early years of elementary school to ensure that all students have an equal chance of success, considering the fact that a vital key to professional success is the degree of satisfaction of minority students with their education (Mósesdóttir 2011).

**CONCLUSION**

Diversity is one of the aspects of the present-day business environment cannot be overlooked. The technical companies in Silicon Valley are the immediate employers of the students graduating from technical institutions. Companies such as Google or Apple have worked on facilitating a gender and ethnic flexible environment through the creation of programs helping the students upon graduating. The intervention of technical companies has been necessary for the good of these colleges and may play a key role in promoting equality on the market and diversity. Technical companies have closely followed the programs to ensure that their working environments as diverse as possible although much still can be done in terms of equal representations of genders and minorities. The cardinal principle in the regular functioning of the said institutions is to facilitate a friendly environment based on equality. By so doing, both the educational institutions and technical companies are working together, by setting up policies that play an essential role in maintaining a constant professional ground for all students irrespective of their race or gender. As part of the globalized world, the companies in Silicon Valley are playing a leading role in challenging the old business mindset and in promoting equality and diversity on the market.
REFERENCES


