SOCIAL CAPITAL AT THE WORKPLACE: UNDERSTANDING THE MULTIPLE EFFECTS OF MULTIRACIAL AND MONORACIAL ORGANIZATIONAL GROUPS ON SOCIAL CAPITAL (THE CASE OF SINGAPORE)

BUSINESS, GOVERNMENT AND SOCIETY

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ABSTRACT

Globalization has led to an increased influx of labour resources in Singapore. On top of this, Singapore has been a multicultural and multiracial hub where immigrants once fled to in the past. It is said that social capital is a bag of resources pooled together by the people you know, and not what you know. Does having a multi-racial network in your department then leads to a richer social capital? Does this in turn lead to better work performance? Our findings overwhelmingly suggest so. Should organizations increase the racial composition of their staff then?

INTRODUCTION

The rapid pace of globalization has brought about increased interconnectedness of the world and an increase in tourism and migration in many cities. In such a society, there will be a convergence of different ideas and beliefs due to the unique social and cultural construct of the population. This is particularly true for a multi-cultural society like Singapore, a melting pot of various ethnicities and races. As organizations globalize their operations and operate in a multinational and multicultural environment it is likely that the frequency which employees interact and work with people from different cultural background will increase.

Such a trend could be extremely relevant to the success or failure of corporations, where foreign and local talents of diverse cultural and racial background come together and work as a group. Understanding how such diversity in the composition of organizational group affects social capital is imperative for success.

BACKGROUND

In our paper, we concern ourselves with corporate social capital and the relation to racial diversity in an organization within a department. Corporate social capital is the set of resources, tangible or virtual that accrues to a corporate player through the player's social relationships, facilitating the attainment of goals (Leenders & Gabbay, 1999).

Is diversity detrimental to social capital? This claim seems to be rooted in history where racial discrimination and segregation occurs in countries with minority groups or populations with diverse ethnic background.

Nevertheless, we are motivated to identify whether this differential characteristic of increased racial diversity within a group of an organization would affect corporate social capital negatively at the workplace.

Social Capital

A multitude of perspectives have developed as to what exactly is social capital. Social capital is the investment in social relations with expected relations (Lin, 2001). Embedded resources in social network enhances the outcomes of actions through four various ways. Firstly, it facilitates flow of information. Secondly, these social ties may exert influence on the agents who play a critical role in decisions involving the actor. Some social connections, due to their strategic locations and positions, carry more valued resources and exercise greater power and weight in the organizational agents' decision making. Thirdly, social-tie resources may be conceived by the organization as certifications of the individual's social credentials and reflect the individual's accessibility to these resources through the social networks and relations. Lastly, social relations reinforce identity and recognition (Lin, 2001).

It is much appreciated that as a capital, it provides utility. It is an investment in relationships and social networks with an expected economic, social, emotional and political return.

Social Capital within networks

In an increasingly competitive world, it is essential that companies need to have a competitive advantage over others in order to survive and thrive in the market. This competitiveness could come in varying forms; it could be a new technology due to the investment in research and development or a more efficient way of management. The question is whether social capital facilitates or hinders this business change.

According to Tan (2008), "social capital in the form of networks can be helpful to business transformation if the networks provide access to information about the needed change, access to relevant resources, access to markets, technology or talent."

The essence of social capital is the embedded resources that could possibly be captured from social networks amongst people that facilitate attainment of goals.

These resources ("capital") are accessible in and through these relationships ("networks"). The structure of a network –who interacts with whom, how frequently, and on what terms– thus has a major bearing on the flow of resources through that network (Grootaert, Narayan, Jones & Woolcock, 2004). Social capital develops out of networks of people who associate and communicate with one another, forming and transforming relationships in the process.

Besides individual benefits like landing a job through connections, social capital is critical to the acquisition of venture capital (Baker, 2000). This is especially true for small and medium companies that require financing. Thus it is not what you know but who you know that matters in this case.

Networks also provide a platform for knowledge exchanges and generation of new ideas, which can lead to innovative ideas (Liebowitz, 2007) that give companies a competitive edge over others. For instance, companies that build social capital as their organizational competence, have organizational cultures that promote sharing of good ideas and best practices, and emphasis on cooperation and collaboration (Pfeffer & Sutton, 2000).

In the context of business firms which main purpose is to maximize profit, it is in their vested interest that social capital contributes to economic development (Putnam, 1993; Evans, 1997). The theoretical justifications for these mechanisms are lower transaction costs, lower turnover rates, sharing of knowledge and innovation, risk-taking and improved quality of output (Aspin, 2004).

Humphrey, Nahrgang, & Morgeson (2007) found that a socially supportive workplace was related to greater job satisfaction, lower feelings of exhaustion, and strongly reduced the likelihood of wanting to leave the job. The *emotional* support provided by social networks could be a possible source of social capital where greater social support through bonding networks at the workplace increased job satisfaction and reduced stress.

Networks at various levels

Relationships in corporations can be recognized examined at four levels. First, the individual level where an individual is recognized as the building block of the corporation. Next, is the group level where interactions of various individuals within a small group in an organization facilitate completion of tasks. This can be analogous to a department in a corporation.

Moving up is the organizational level where various groups/department interact in an organizational level to achieve common organizational goals like profit maximization. Beyond that, is the inter-organizational network level.

Our primary data collection would be focused on the corporate social capital at a group level (department) due to our limited resources. However analysis of the nature of the social capital

is useful as it runs through all organizational level and would provide some insight on how this could affect the organization as a whole.

Singapore's History

Singapore has a unique history of embracing racial diversity. Initially, it was a homogenous society consisting of only the indigenous ethnic group- Malay. However, the first waves of immigration started to take place as immigrants from China and India flocked to the island in search of jobs in the 1800s. She became a society comprising of immigrants of diverse racial and ethnic backgrounds.

Racial tensions due to language barriers were frequent amongst the various racial groups, resulting in the Maria Hertogh riots of 1950 where Muslim rioters attacked Europeans, Eurasians and Christians and the Sino-Malay riots in 1964, instigated by outside forces with substantial causality.

Having realized the negative impacts of racial tensions that could arise due to Singapore's multicultural construct, the Singapore government has spent decades creating programs and laws, which are essential to integrate the various races. Educational efforts from the government has also raised our awareness of the possible negative impacts of racial tension and inculcated a culture of embracing diversity and increased tolerance for foreign cultures. Also, meritocracy is practiced in Singapore instead of priorities given to a specific race like Malays in Malaysia have special privileges. As such, there is one less barrier to racial integration in our society.

Multiracial groups and social capital (Singapore)

Some [societies] show a markedly greater proclivity for association than others, and the preferred form of association differs (Fukuyama, 1995). Thus, cultural differences amongst individuals may affect the level and degree of socializing and emphasis on social ties.

When society is built by large-scale immigration, research has shown that individuals retain certain social behavior that correlates strongly to their country of origin. In comparison with Anglo-Whites, African Americans are slightly less active and Latinos are significantly less active in political and non-political organizations (Verba, Schlozman & Brady, 1995). These observations mirrors that in another research, where US respondents' scores across a number of civic culture variables are strongly correlated with the scores of respondents from their country of origin (Rice & Feldman, 1997).

These researches point to a strong possibility that in multi-racial groups, individuals still retain their social behavior that is the norm of their immigrant country of origin. Hence the implications are that within a work group of diverse racial background in Singapore, these individuals will still remain certain values, mindset and behavior that is similar to their immigrant country of origin. This could lead to a certain amount of disagreement between individuals.

Studies have point to strong evidence on the correlation between reasonable disagreement and productivity. Kratzer, van Engelen & Leenders (1998) discuss how the structure of various types of relationships among members of R&D team affects success. They found that R&D teams that agree on their basic product development goals- but are characterized by a reasonable disagreement on how to achieve these goals- tend to develop products with a much higher probability of market success than teams whose members fully agree on these

issues. The nature of the relationships at the group level affects the level of consensus and group performance and outcomes at the firm levels.

In another study of workers it was reported that individuals who were not Dutch tended to be less satisfied with their jobs as compared to their Dutch counterparts. Nevertheless, the greater the amount of time spent with colleagues of similar ethnic backgrounds, the higher their level of satisfaction (Netherlands, Verkuyten, de Jong & Masson, 1993). Job satisfaction has been shown to have a strong correlation to greater productivity and better performance at work. Social capital in multi-cultural groups could be lower during to less job satisfaction at first but overtime, the higher levels of satisfaction could be harnessed to provide greater social capital in the form of higher levels of productivity.

One of the measures of social capital is interpersonal trust. Interpersonal trust may be conditional upon attributes of the larger society. Fukuyama lists the correlation between Japan as a high trust society and that of interpersonal trust between corporations in Japan (Fukuyama, 1995). Findings have shown that a country's year of experience with democracy correlates positively to the average score of interpersonal trust measure (1994). Singapore has also had years of experience with democracy, where equality is emphasized. Democratic citizens have a reasonable tolerance for diversity (Shively, 2008) and this helps to develop a platform for cooperation despite differences from diversity. These echo Levi (1996) and Rothstein (1998) who argue that justice in overarching institutions is the key to cooperation in local settings.

Our contribution

We focused on increasing existing knowledge of social capital in multiracial networks and how it could be crucial for success in the business environment. Focusing on the interactions between individuals (relationship) at a group level, we studied how this could affect social capital. Using surveys, we measured social capital in multi-racial networks within Singapore. Our results showed that social capital in multi-cultural network is lower as opposed to mono-cultural networks. Using a Z-test, we concluded that the difference between social capital in multi-cultural population and mono-cultural population is statistically significant.

Seeking an explanation for our survey results which contradicted our hypothesis, we reexamined the complex interplay of factors that could influence social. Building on previous research done on social capital and group processes whilst tying in our knowledge from multiple fields such as history, organization behavior and social psychology, we managed to provide possible explanations for our survey results which were contrary to expectations.

But, as opposed to showing evidence that supports our hypothesis, we brought in both studies and works that could contradict or support our hypothesis this time. We elucidate why this might support our hypothesis, and analysis how studies that contradicts our hypothesis might influence our survey results.

In addition, we have used studies done in countries like Netherlands and America as we can draw a parallel between these countries and Singapore in terms of our multi-racial ethnic construct. These studies provide a useful tool for cross-examination.

We understand the limitations as to the effectiveness of our approach in dissecting this complex thesis question due to the dynamic nature of social capital with respect to reliability and thoroughness of our primary and secondary research. Henceforth, we have provided

further recommendations and a comprehensive list of our limitations. We hope that this would prepare further studies done on this topic for a more throughout dissection with regards to the dynamic nature of our research to improve the quality of research.

HYPOTHESIS

Multiracial networks within a department in Singapore produces more social capital compared to mono-racial networks in terms of closeness of networks, trust and solidarity, collective action and co-operation and social cohesion.

DATA METHODOLOGY AND ANALYSIS

Towards proving our hypothesis, we carried out the following *two* forms of data collection and analysis:

Primary Data: Surveys

Purpose: to measure social capital in multiracial departments and mono-racial departments and to how multiracial diversity could lead to richer social capital.

Action: A survey consisting of 4 components *(Appendix A): **Trust and Solidarity, Collective action and cooperation, Perceived Closeness of Networks and Social Cohesion*** was carried out. The questions were framed in a manner to enable us to 'calculate' the level of social capital among the departments in various organizations.

Data Collection:
- o Sample Size:
  - 78 employees from 14 multiracial departments
  - 68 employees from 12 mono-racial departments

• Total of 146 employees from 26 departments of various organizations

o We adapted "Measuring Social Capital: An Integrated Questionnaire" by Christiaan Grootaert, Deepa Narayan, Veronica Nyhan Jones and Michael Woolcock (2004) to our context of social capital within (office) departments in organizations operating in Singapore.

o Robert Putnam and his co-authors defined social capital as "intricate webs of voluntary involvement in organizations that bind people together and give them the political resources and mutual trust that are needed to make any cooperative form of government work" in a study of what makes democratic government effective.

o In our context, it is a pattern of community interaction that produces desirable attitudes of efficacy and <u>trust</u>, and that gives people practical experience in persuasion and <u>collective action</u> that helps them to function well in the department.

<u>Data Methodology:</u>

The statements made indicated that they had strong social capital and if they strongly disagreed to it, 1 point is allocated (indicating weak social capital). On the other hand, if they strongly agreed to the statement, 7 points will be allocated. With this measurement, we are able to see if the department with racial composition leads to stronger or weaker social capital.

Each category was assumed to have equal weightage in determining social capital. Points per category were totaled and mean percentages were obtained. The mean percentage across the four categories gave us the numeric expression for social capital.

Data representation and results

The following results were obtained from the raw data collected via surveys:

We calculated each individual's average result of the various dimensions of social capital and

based on the average of each dimensions, results were obtained.
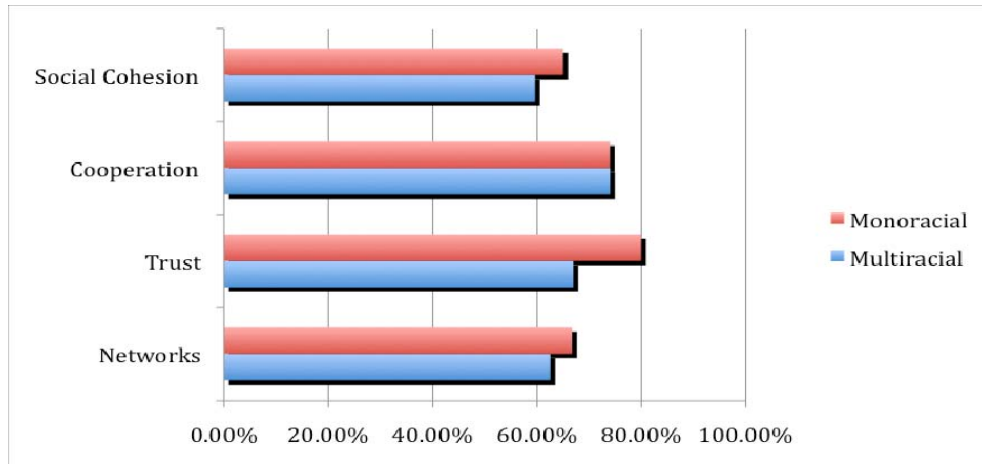
Using the mean percentages per category obtained, we calculated the mean level of social

capital in both multiracial and monoracial departments. The results are as follows:
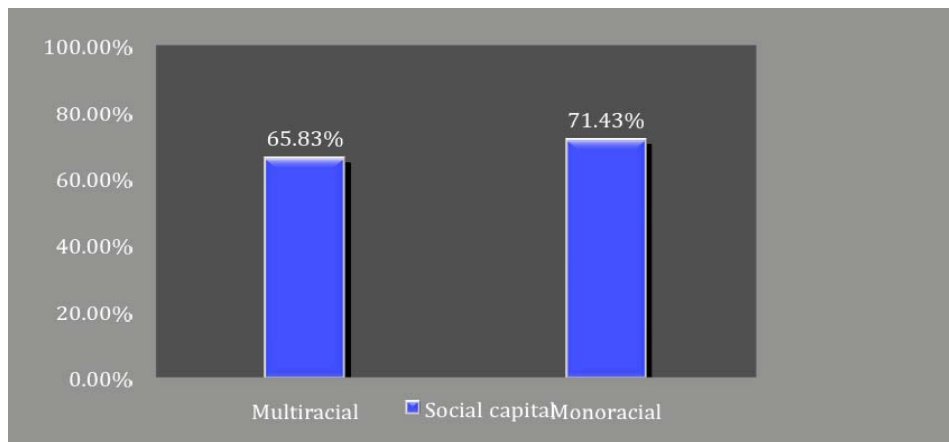
Data Analysis

To strengthen our findings, we carried out statistical hypothesis testing on the data obtained

through surveys.

a. F- test to calculate whether the two populations (multiracial and monoracial department) have equal variances.

Variable 1 : Mean social capital in multiracial departments.

Variable 2 : Mean social capital in monoracial departments.

H_o: $\sigma^2_{multi} = \sigma^2_{mono}$

H_1: σ^2_{multi} NOT EQUAL σ^2_{mono}

The result yielded from F-test *(refer to Appendix B)* was that null hypothesis is not rejected, thus the two populations have equal variances.

b. T- test for two sample populations with unknown but equal variances

Variable 1 : Mean social capital in multiracial departments.

Variable 2 : Mean social capital in monoracial departments.

H_o: Multiracial and monoracial departments have *equal* social capital(based on mean).

H_1: Multiracial and monoracial departments have un*equal* social capital(based on mean).

The results showed that the absolute value of t Stat (2.556) is greater than the value of t Critical (1.976), thus null hypothesis is rejected *(refer to Appendix C)*.

c. Two tail test and constructing a 95% Confidence Interval to test which sample has higher levels of social capital.
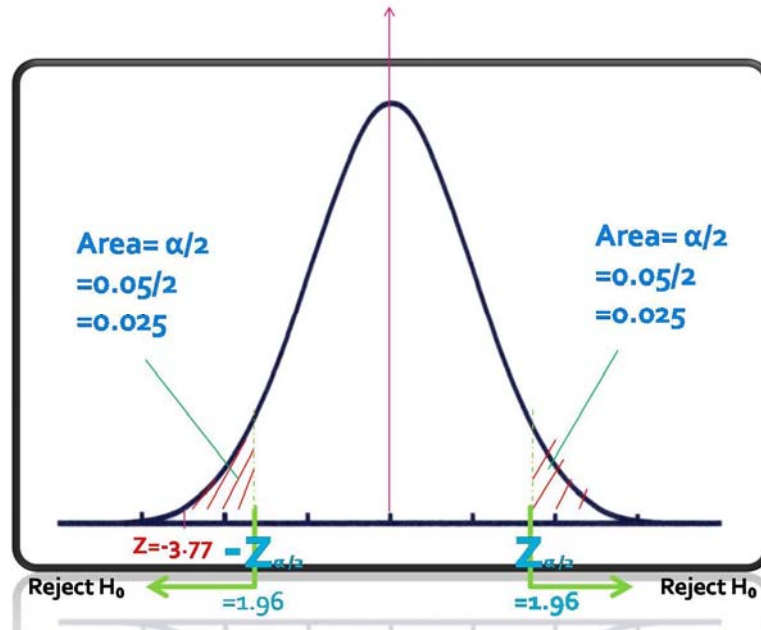
A sample of 68 people working in mono-cultural departments were surveyed. The average score was 5 for social capital. A sample of 78 people in multi-cultural departments surveyed. The average score for social capital was 4.60791667.

Can it be claimed at the α=0.05(=1.96) that multi-racialism had an effect on social capital? Alternative hypothesis is 2-sided because the possibility exists that multi-racism would lower social capital.

H_0:μ=5 H_1:μ≠5

Conclusion:

We reject H_0 if a) z≤-1.96 or b) z≥1.96. Since z= -3.773654853, we reject H_0 in favour of H_1:μ≠5 for multi-racial population. The difference between mean of social capital in multi-racial population and mono-racial population is statistically significant.

Secondary Data Analysis

To strengthen our research, we also backed up the 4 dimensions of social capital with secondary data.

<u>Measures of social capital:</u>

Closeness of Networks

According to the social identity theory, when we belong to a racial group, it creates a psychological state that confers social identity. These psychological processes generate distinct group behavior, such as solidarity within one's group and discrimination against out-groups i.e. people of another race. With this concept of in-group (people of your race) and out-group, it is hard for people in multi-racial network to feel intimate towards people of different races. Also, studies have shown that diverse groups have lower level of member satisfaction and higher rates of turnovers compared to homogenous group hence the implication is that the closeness of networks within multicultural networks is lower compared to that of mono-cultural networks.

Trust and Solidarity

Members of the same race share a similar heritage and culture. Having this common ground allows them to relate to one another better, and is the basis for the individual's higher level of identification with the group. This in turn influences their beliefs about the consequences of trust of the group and its members (Turner, 1999). So if a member does not identify with the group, he/she might perceive negative consequences as a result of trusting the people in that network thus it discourages trust within the multiracial network.

Collective action and cooperation

Collective action and cooperation in a multi-racial team comes about with less ease according to social identity theory since individuals would confirm to their own group norms. Hence when working together, they will need to adjust and adapt to each individual's practices/habits. Given the discrimination against out-groups i.e. people not of their own race

(Tajfel, 1982), it also makes it harder for a group with members of ethnically diverse races to cooperate.

Social Cohesion

Yet major reviews of the diversity literature conclude that the greater the demographic diversity in groups, the lower the social cohesion (Milliken & Martins, 1996; Tsui & Gutek, 1999; Williams & O'Reilly, 1998)

This ties in with our primary data collected that multi racial network has lower social capital compared to mono-racial network.

Bridging capital

Putnam makes a distinction between 2 components of social capital, bonding and bridging social capital. Bonding social capital is developed through close networks of family and friends while bridging social capital forms through open networks that bridge different communities. Normal people are high in bonding capital (closely bonded groups where everyone know one another well) and low in bridging capital. Based on the similarity attraction theory, people would form mono-racial network groups high in bonding social capital given that people of the same race tend to hang out together.

If A meets B of another race who has an abundance of mono-racial network, then A becomes connected to all them through B, where the social capital harnesses itself through the potential for A to meet all of the individuals who
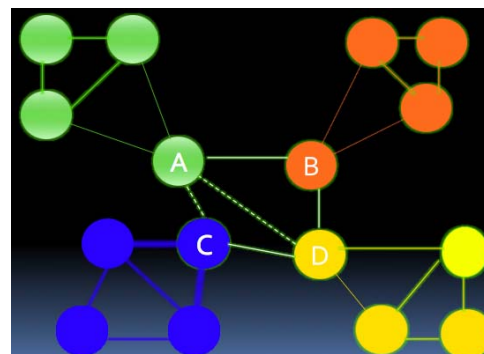
make-up the mono-racial network that B belongs to through B.

As A continues to meet individuals C and D of another race, a multicultural bridging network eventually forms for A, providing an individual more "access to information about the needed change, access to relevant resources, assess to markets, technology or talent (Tan, 2008)."

The complete picture: Both aspects of diversity

Positive aspect of racial diversity

The results of a couple of studies suggest that racial diversity may be positively associated with some group-level cognitive outcomes such as quality of ideas (Milliken & Martins, 1996). McLeod and Lobel (1992) found that groups that were heterogeneous with respect to the ethnic backgrounds of their members produced higher quality ideas in a brainstorming task than more homogeneous groups did, although they did not necessarily produce more ideas or a greater number of unique ideas. This could be explained by a research conducted by Leung, Maddux, Galinsky & Chiu (2008) which showed that individuals exposed to multicultural experiences enhance creativity and bicultural individuals possess flexibility in their thinking and more ability to use divergent thinking (McLeod & Lobel, 1992).

It could be attributed to the fact that members with diverse backgrounds & characteristics provide a wider range of ideas, alternatives, & solutions than teams with similar demographic characteristics (Bantel & Jackson, 1989; Jackson, 1992). Given differences in viewpoints, ideas and opinions, task conflict (disagreement among members about the content of the tasks being performed) results. However, task conflict contributes to a more complete analyses of the issues (Tjosvold, 1985) and consequently, improved decision-making & performance (Jehn, 1995; Pelled, 1996). It also improves financial performance & firm

growth (Schweiger, Sandberg, & Rechner, 1989; Eisenhardt & Schoonhoven, 1990). Ruhe & Eatman mentioned that group performance was the sum of individual contributions and concluded that racial diversity enhanced groups' performance.

Negative aspect of diversity

According to the social identity theory, the outgroup (i.e. people not of your race) is seen as deficient (Tajfel, 1982; Loden & Rosener, 1991). This triggers a process that results in increased stereotyping, polarization and anxiety. These effects have been shown to lead to negative consequences such as decreased satisfaction with the group, increased turnover, lowered levels of cohesiveness, reduced within group communication, decreased cooperation & higher level of conflicts (Croker & Major, 1989; Martin & Shanrahan, 1983; Moreland, 1985; Stephan & Stephan, 1985; Triandis, Kurowski, & Gelfand, 1993).

Also, similarity/ attraction & social categorization theories predict that racial diversity have negative effects on group process by decreasing interpersonal attraction and increasing cognitive biasing which in turn leads to less open communication and more conflict. Furthermore, it is supported by Tsui, Egan, & O'Reilly (1992)'s research, which found that individuals who were different from others in their work units in racial background tended to be less psychologically committed to their organizations, less inclined to stay with organization and more likely to be absent.

Pelled (1993) found that racial diversity was associated with higher levels of affective conflicts, which are likely to result due to interpersonal clashes characterized by anger, distrust & frustration. This is especially so if they perceive that subgroups were brought into organization through unfair system. Race is a highly visible characteristic and it fosters

categorization and intergroup bias. This, in turn, results in increased levels of affective

conflict, which is negatively related to productivity & satisfaction (Jehn, 1995; Pelled, 1996).

In addition, racial diversity was found to inhibit group performance (Fenelon & Megargee,

1971; Ruhe & Allen, 1977).

However, seeing that we have both positive and negative aspects of diversity, we attempt to

put these studies into a bigger picture to allow a deeper and broader understanding of racial

diversity and organizational effectiveness.

Level of diversity

•**Low levels of diversity (0 to .25):** At this point, affective conflict does not impede

organizational performance as the creative

results produced and higher quality decisions

made from heterogeneous group have a

positive impact on firm performance

•**Moderate (.26 to .5):** The most optimal

outcome of diversity is achieved due to a

variety of information sources, cognitive

resources and creative decisions. This

increases task conflict which in turn enhances

firm performance

•**High levels (.51 to 1):** Social identity and similar attraction theories begin to override

potential creative gains and social disintegration occurs. Small group dynamics are

significantly affected by racial composition. There is also a decrease in communication as a

result of high levels of affective conflict. Despite the fact that there is useful diverse
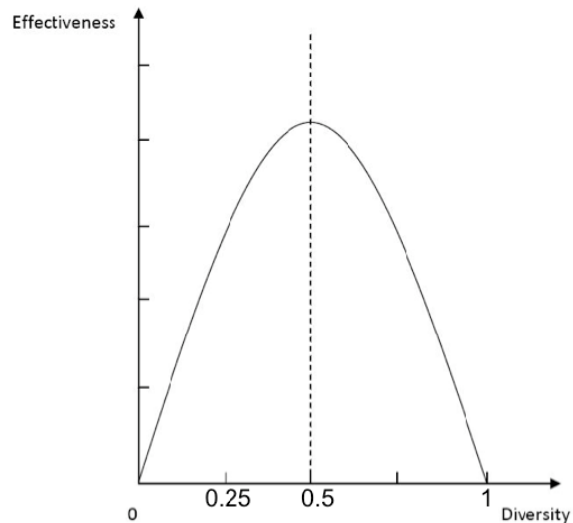
information (due to high levels of diversity), it is too difficult to process all the knowledge.

So this curvilinearity diagram could explain why there is a difference between results of the studies found, as it suggests that it is due to a difference in the level of diversity in each of these organizations that researchers have studied on.

Group longevity

Another factor that contributes to the difference in the effectiveness of firm as a result of racial diversity could be a result of group longevity i.e. the amount of time the group spent working together.
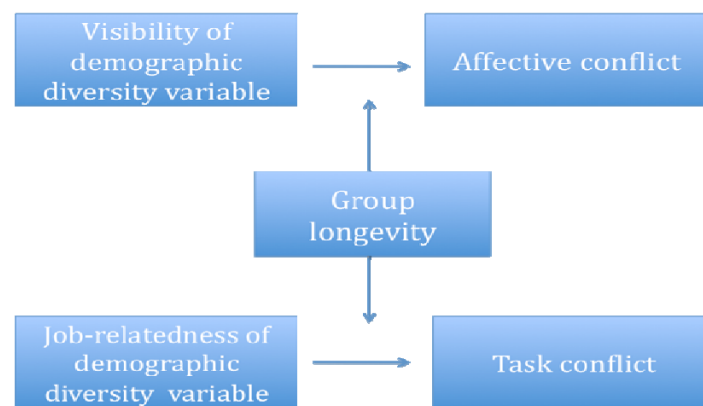
In this diagram, visibility of demographic diversity variables refers to differences in highly visible traits such as race which leads to affective conflict. Demographic diversity variable leads to differences in view-point as to how the task should be handled which results in task conflicts that may in turn enhances job performance. We receive further insight from Pelled (1996) where he suggests that conflicts that result from work group diversity variables' visibility and job-relatedness depends on group longevity.

Initially people rely on observable characteristics to classify others; however, longer periods of collaboration increases familiarity and reduce tendencies to categorize and stereotype

based on highly visible attributes such as race. Familiarity makes these categories less salient so that interpretations of the in-group & out-group change over time. As suggested by Kramer (1990), social categorization varies over time and across situations and decategorization actually occurs gradually over time (Allport, 1954). The category of group as a whole becomes more salient than the category of race and the individual becomes a member of in-group now rather than one from the out-group as before. Therefore, discrimination against the member of an out-group is distinctly less salient thus affective conflict would reduce significantly.

This idea of group longevity was supported through a research conducted by Watson, Kumar & Michaelsen (1993) who studied the interaction process & performance of culturally homogenous and culturally diverse groups for 17 weeks. Initially, homogenous groups scored higher on both process and performance effectiveness. Over time, both types of groups showed improvement on process & performance, & e between group differences converged. By wk 17, heterogeneous groups scored higher on 2 task measures. Since race was one of the aspects they studied so we can draw conclusion that multiracial actually can lead to better process and performance effectiveness.

LIMITATIONS AND DIFFICULTIES

Representativeness of the population

Due to limited time and resources available for this research paper, we only managed to survey a sample size of 146. This may not be representative of the behavior of the population of Singapore as a whole due to the variances that may arise from the small sample size. However, we have used hypothesis testing to verify the reliability of our results. At the 95% confidence level, there is only a 5% chance of drawing the wrong conclusion from the

findings.

Social desirability effect

Another possible source of imprecision of the survey results is the presence of social desirability effect. Respondents tend to put their best self forward (i.e. they might not say that they actually do not trust their colleagues etc) in surveys where their names and contact information are taken down as they are afraid that they might be quoted based on the survey they filled up. Furthermore, they might feel that they need to portray their departments/organizations well. Thus, in order for us to overcome this social desirability effect, we assured the respondents that this survey is for academic purposes, their names will not be recorded and their organization and survey information will be kept confidential and anonymous. This is to facilitate genuine answers from the respondents and deter social desirability.

RECOMMENDATIONS

Longitudinal studies should be conducted in Singapore so that the organizational effectiveness due to multiracial networks could be studied and tracked over time. Also, we should consider in-depth studies that take the size of group and group longevity into consideration.

Other determinants beside race should be investigated to observe if it affects social capital within these networks. For instance, according to the surveys collected, we found that differences between colleagues of another generation create problems and conflicts in the workplace and this might reduce the organizational efficiency.

IMPLICATIONS AND CONCLUSION

From our findings, we understand that though our findings (both primary and secondary) suggest that multiracial network does not mean increased social capital. Also, studies representing positive and negative aspects of racial diversity on organizational effectiveness and performance suggest that there should be a bigger picture that can help to decipher this mystery.

Through our data analysis, we discovered that there were 2 perspectives that cleared the picture. First, the extent of group diversity has an impact on performance. Second, the amount of time spent together as a team can overcome initial obstacles of working in a team.

This suggests that over time, multiracial network would have more value compared to mono-racial network given the wide range of ideas and perspectives which in turn leads to high-quality ideas and eventually performance effectiveness. Initially there might be differences between different races in the multiracial network, but with time, it will be overcomed (just like how groups go through storming, norming, forming, performing and adjourning). This is where managers and organizations play an important role in facilitating the process.

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Appendices

Appendix A: Survey Questions and the reasoning behind using each question

Networks
1.1 You are very close to your colleagues whom you feel at ease with, can talk to about private matters or call on for help.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

1.2 If you suddenly needed a small amount of money (less than $50), you would turn to your colleagues for help.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

1.3 If you suddenly faced a long-term emergency such as a job loss, death of a breadwinner in family, you would turn to your colleagues for assistance.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

1.4 You are confident that people in your department would lend a hand to you in times of need.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

In this section, we sought to measure the respondent's perceived closeness of network in terms of calling upon others for help. If the person is close to the members, he/she will not hesitate to ask for help.

Trust and Solidarity
In every organization, some people get along with others and trust each other, while other people do not. Now, I would like to talk to you about trust and solidarity in your workplace.

2.1.1 Most people in this organization can be trusted.

1	2	3	4	5	6	7
Strongly						Strongly

disagree   agree

2.1.2 In this organization, one has to be alert or someone is likely to take advantage of you.

   1   2   3   4   5   6   7
Strongly   Strongly
  agree   disagree

2.1.3 Most people in this organization are willing to help if you need it.

   1   2   3   4   5   6   7
Strongly   Strongly
disagree   agree

2.1.4 In this organization, people generally trust each other in matters of lending and borrowing money.

   1   2   3   4   5   6   7
Strongly   Strongly
disagree   agree

Under this section, there is an equal share of questions on both perceived and actual trust among colleagues. Fukuyama (1995) identifies social capital as an ability that arises from trust. He mentioned that ' the ability to associate depends on the degree to which communities share norms and values…Out of such shared values comes trust, and trust has a large and measurable economic value'. Therefore, some of the questions in our survey were formed in order to measure the level of **trust** between employees in the department.

Collective action and cooperation
3.1 You work with your colleagues to perform your day-to-day operations.

   1   2   3   4   5   6   7
Strongly   Strongly
disagree   agree

3.2 If there was a problem in this organization, people will cooperate to try to solve the problem.

   1   2   3   4   5   6   7
Strongly   Strongly
disagree   agree

This is to check if their department needs to work cooperatively and whether they do.

Social Cohesion
4.1 There is a strong feeling of togetherness or closeness in your department.

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

4.2 There are often differences in characteristics between people working in an organization. For example, differences in age, race, gender, religious beliefs. These differences characterize your department a lot.

1	2	3	4	5	6	7
Strongly agree						Strongly disagree

4.3 Do any of these differences cause problems?
    1 All the time
    2 Most of the time
    3 Sometimes
    4 Very rarely
    5 None at all → go to question 5.5

4.4 Which two differences most often cause problems?
    1 Differences in education
    2 Differences between men and women
    3 Differences between younger and older generations
    4 Differences between old and new colleagues
    5 Differences in religious beliefs
    6 Differences in race
    7 Other differences i.e. _____

4.5 Does your department have people…

	1 Yes 2 No
A. Of different religious groups	
B. Of different race	
C. Of different gender	
D. Of different educational level	
E. Of different nationality	

Under this section, we wanted to measure how close the department is and the most practical way is to find out if they have conflicts at work. To prevent participant bias (they might answer the question based on what experimenter wants to know instead of reporting the truth), we place 'race' among other factors that could have lead to conflicts. Also, it would provide future recommendations as to the other determinants that would affect social capital and subsequently organizational performance. Lastly, we wanted to find out how diverse this department was and whether it was multi or mono- racial.

I am going to ask few questions about your everyday social interaction.

4.6 What are the common methods that you use to communicate with your colleagues:
1 Phone calls
2 SMS/ MMS
3 Social networking websites like facebook and friendster
4 Instant Messenger like MSN, Yahoo etc

4.7 In the past month, how often have you communicated with your colleagues with the chosen method/ (s) mentioned?

1	2	3	4	5	6	7
Not even once a month	Once every month	Once every 2 weeks	Once every week	Every other day	Every day	More than once a day

4.8 In the last 3 months, have you met with your colleagues to talk or to have food or drinks?

1	2	3	4	5	6	7
Never hang out at all						Always hang out

4.9 In the last 3 months, have colleagues visited you in your home or have you visited colleagues in their home?

1	2	3	4	5	6	7
Never visit at all						Always visit

4.10 Were the colleagues you met and visited with mostly…

	1 Yes 2 No
A. Of different race	
B. Of different religious groups	
C. Of different gender	
D. Of different educational level	
E. Of different nationality	

4.11   In the last 3 months, have you gotten together with your colleagues to play games (e.g. video games, mahjong), sports, or other recreational activities (e.g. movies)?

1	2	3	4	5	6	7
Don't get together at all						Always get together

In his book, Bowling Alone, Robert D. Putnam uses activities like informal social gatherings, social visits, dinners and card games to determine the level of bonding social capital in the American society.

'Informal connections that we strike up- getting together for drinks after work…sharing a barbeque picnic on a hot summer evening,…Like pennies dropped in a cookie jar, each of these encounters is a tiny investment in social capital (Putnam, 1993).

Based on this, we formulated the above questions to gauge the level of social capital between colleagues in a department. Each of the above questions measures the degree of friendship between workers and consequently the level of **connectedness** between them.

Appendix B: F-Test

F Test for Differences in Two Variances

Data	
Level of Significance	**0.05**
Population 1 Sample	
Sample Size	**78**
Sample Standard Deviation	**1.01**
Population 2 Sample	
Sample Size	**68**
Sample Standard Deviation	**0.85**

Intermediate Calculations	
F **Test Statistic**	**1.411903114**
Population 1 Sample Degrees of Freedom	77
Population 2 Sample Degrees of Freedom	67

Two-Tail Test	
Lower Critical Value	**0.629406818**
Upper Critical Value	**1.601001828**
p-**Value**	**0.149842107**
Do not reject the null hypothesis	

Appendix C: t-test

t Test for Differences in Two Means

(assumes equal population variances)

Data	
Hypothesized Difference	**0**
Level of Significance	**0.05**
Population 1 Sample	
Sample Size	**78**
Sample Mean	**4.6**
Sample Standard Deviation	**1.01**
Population 2 Sample	
Sample Size	**68**
Sample Mean	**5**
Sample Standard Deviation	**0.86**

Intermediate Calculations	
Population 1 Sample Degrees of Freedom	77
Population 2 Sample Degrees of Freedom	67
Total Degrees of Freedom	144
Pooled Variance	0.889589583
Difference in Sample Means	-0.4
t **Test Statistic**	**-2.556174374**

Two-Tail Test	
Lower Critical Value	**-1.976575034**
Upper Critical Value	**1.976575034**
***p*-Value**	**0.011619282**
Reject the null hypothesis	