# On Acceptability, Career Commitment and Special Accommodation To Women Programmer: Gender Based Perspective

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## Abstract

Gender seemed to have important role in choosing a job in the computer related works. Women graduated from a computer college are less interested in working as computer programmer, although they are given special privileges. The objective of this study is to examine if there are differences on perception such as acceptability, career commitment and women special accommodation/privileges on marital and maternity leaves, between men and women graduates.The issue above is empirically tested by asking both men and women alumni directly using electronic-questionnaires. Statistical test was utilized to test differences on their answers. It is found that there are slight differences between the issue of acceptability, while there are no differences on the issue of career commitment and special or particular accommodation between men and women alumni. Larger part of the respondents expressed that working women should have the same career commitment as their men counterparts. In addition, special accommodation should also be given to them since they are unique individuals.

Key words: Women programmer, acceptability, career commitment, special accommodations.

## Introduction

At the international Information and Communication Expo, CeBIT, in Germany, job offered for computer programmers amounted around 70 percent of the total job vacancies, however only a handful of women applied for the positions.These facts forced the German government to set an affirmative actions to promote women to work in the information technology as well as asking the companies in the industry to accomodate specific persons to assit working women should they have problems in their jobs (Purwaningsih, 2008 in www.dw-world.de).

In another study, Aryani (2003) suggested that women in the IT industry mostly work in the administrative positions, i.e, handling electronic mail, data entry or computer operators. Very few women actively work as specialists and professionals, moreover as a decision makers in IT industry. In contrast another study, among students from the IT Departments in Universitas Indonesia, did not found any strong support that female students were not going to work as programmers (Wijoyono, 2008).

Small number of women working as IT professional, could be due to the facts that women are often considered as individuals who are able to discuss social matters rather than handle the things that need technical skilled in solving logical problems (Cameron and Butcher-Powell, 2006).

As the consequences of relatively small portion of women labor work as computer programmer, several working issues arose. Among others, are issues related to acceptability, responsibility, promotion, long working commitment and privileges or accommodation specially offered to keep the woman programmer in the company. Those issues arise due to the existence of gender problems. The history of women working in the field of technological-industry has shown a very long struggle to overcome all the

obstacles and barrier created by the rigid social culture and discrimination. Discrimination occurs because there are some social structures being referred to by individuals, but they have difficulties which one to choose with simple solution (Ried et. al, 1987). Furthermore, gender inequality is manifested into other forms of injustice, such as marginalized, economic impoverished, subordinated or unimportant in decision making, stereotyping and discriminating, negative labeling, hostility, long working hours and carrying heavier responsibilities.

To shed some lights on different perceptions based on gender related to those issues mentioned above, an empirical study of such opinion is warranted. This particular study is taking the case of women working as computer programmer in the information technology industry.

## Objectives

The objective of this paper is to present the empirical results on the study of preferential treatment provided for the women IT programmers. The treatments covered the issues of acceptability, career commitment and special accommodations for women. Specifically it would show if there were any different perceptions betwen male and female programmers on those issues.

## Literature Review

The term "gender" and "gender-biased", are commonly found in the literature of working women. In the gender idiology, Annisa (1997), distinguished clearly the different between men and women using the terms of masculim vs feminime, rational vs emotional, agressive vs pasive, which traditionally believed as an inherent identity of sexes. However the term "gender" itself is neutral, and can not be associated with sex permanently, since gender is not based on physical biology differences. Annisa (1997) argued that gender is based more on function, role, and social responsibilities and therefore it is interchangeable.

There are three approaches reffered to in the study on gender, namely nature, nurture and equilibrium theories. Nature theory, proposed by Barghe, Tigerr and Fox, Parker and Parker (Sanderson, 1993), stipulated that differences in men and women is universallly natural facts and therefore division of labor between the two is a consequence of that biological facts. Men who are stronger and bigger than women do the harder work that needs more physical strength and have higher risks. Women, on the other hands, do the less physical works, and according to Blumberg (1978) and Ember (1983), such attitude had actually close the doors for women to actuallized their potential abilities.

In contrast to, the equilibrium theory puts the stresses on the equal partnership between men and women in division of labor and roles in family life and society. Therefore, equality and equity on labor tasks should be contextual and situational based, not based on quantitative arguments nor quota and it is specific not universal.

Several researches on the topic of gender differences in the information technology industries have been done previously by Basuki and Widyatmoko (2005), Cameron and Butcher-Powell (2006) and Logan and Crump (2007).

Similar study on the issues of acceptability, carreer commitment and special accommodation was carried out by Basuki and Widyatmoko (2005). They found in their study on the accountants, using discourse analysis with cyber ethnography, that there are no differences between male and female respondents on the above issues. Both genders tend to oppose the sex discriminations in the office. In additon, the study also found the

opinion of double role for women and that women accountants were less rational and used more instints in the office. The respondents argued that it was more inherently women nature.

Cameron and Butcher-Powell (2006) conducted a study on men and women working in the IT industries. The respondents were asked on how they utilized a group disscussion to enhance their competencies. Based on 213 respondents, the research results showed that there was significance differences on how men and women utilized a group discussion. Women used a group discussion more for social reasons than men.

Women double roles also indicated by Logan and Crump (2007) in their study in New Zealand. Their study found that there were differences between men and women working in the IT industry. Very few women reached high level in management, not because they are not capable of doing managerial tasks, but they face double roles as a mother and working women. Not having self confidence is also another facts found in women that hinders them to perform their best potential capabilities.

**Gender Inequality**

Understanding on differences based on gender is very important to analyze social inequality on women. Such matter is closely related to gender differences and inequality, also with other inequality structures in the society. It is manifested in examples, such as, marginalized, economic deprivation process, subordinated, stereotyping and discrimination, negative labeling etc.

Quoting Anker and Hein, Nasikun (1990) argued that women position in the households or in the family and in the labor market are closely related with all the social systems. Discrimination in the working place based on gender, emerged from the cultural norms which differentiate women status in the society. Such opinion, which puts men as the head of the family and women as a housewife, is another source of discrimination for division of labor. It occurs not only in a group, but also in households, as well as in the society.

Factors such as education, technology, economic growth can produce changes in roles and division of labor based on gender. Division of labor between women and men on jobs can therefpre interchange. It will also show that women have harder work without properly paid, at home as well as in the office.

Indraswari and Thamrin (1994) have identified four dimensions of women marginalization; first delianating women from productive works. Second, concentrating women on peripheral labor market, such as informal or secondary markets which are unsecured, lowly paid with bad working conditions. Third, maginalization as feminization or segregation. Lastly the fourth, marginalization as economic inequality. In particular, the last dimension saw the marginalization as the widening economic inequality between men and women, indicated by wage differential, differences in promotion, facilities accesses including on training and career development.

Gender equality means a condition whereas women and men receive equal treatment to enable them to take-part and actively participate on every line. All discriminating based on gender need to be abolished, on two principal reasons. First, every culture and society can take different road to reach gender equality. Second, implicitly, equality means that every woman and man can pursue their roles in line with their goals and objectives in every aspect of life.

**Research Method**

This study presented the results of the survey conducted on men and women programmer in the IT industry in Indonesia. The name of the companies that hired computer programmers were obtained from the data available at SCC (Stikom Career Centre). Mostly those programmers were Stikom graduates and the respondents of this survey. About 200s questionnaires were distributed to the respondents and about fifty percent returned the completed it and be used to analyze the data.

1. Type and source of data.
   Primary and secondary data were utilized for this study. The primary data were obtained from a field survey conducted by means of questionnaire and direct interview. Electronic mail is used to distribute the questionnaires and interview the respondents. In addition to the data available at SCC, other external publications are the source for secondary data.

2. Data collection
   Data were collected from the respondents using the accidental sampling method. As mentioned previously, the questionnaires were distributed by means electronic mail (internet). The questionnaire consists of list of questions on the three issues related to the acceptability, career commitment and preferential treatment for women employees. It a closed ended questions. Validity and reliability tests were performed on the questionnaires before they are distributed, omissions and correction were done accordingly. The response rate of the survey is close to 50 percent.

3. Data Analysis
   Data collected were tabulated and analyzed utilizing the inferential statistical tool t-test and F-test. The results from the sample then inferred to the population of men and women computer programmers.

**Findings and discussions**

The three main variables in this study are the issues of acceptability, career commitment and specific accomodations given to women working as computer programmers. Specifically the study seeks to explore if there are any differences on the preceptions of the respondents on those issues. Table 1 shows descriptive group statistics. Result of this study is presented in Table. 2.

**Table. 1. Descriptive Statistics**

|  | N | Mean | Std. Deviation | Std.Error Mean |
|---|---|---|---|---|
| Acceptability | 42 | 66.2917 | 9.7601 | 1.50602 |
|  | 55 | 59.6138 | 13.69687 | 1.84689 |
| Career Commitment | 42 | 70.0833 | 14.78697 | 2.28168 |
|  | 55 | 76.0364 | 16.40097 | 2.21151 |
| Specific Accomodations | 42 | 75.6714 | 12.84473 | 1.98198 |
|  | 55 | 72.5382 | 12.01782 | 1.62048 |

**Table. 2**
**Independent Sample Test on**
**Acceptability, Career Commitment and Specific Accomodations**

| Variables | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | |
|---|---|---|---|---|---|---|---|
| | | F | Sig | t | Sig. (2-tailed) | Mean Differance | Std. Error Difference |
| Acceptability | Equal variances assumed | 3.764 | 0.055 | 2.681 | 0.009 | 6.67785 | 2.49083 |
| | Equal variances not assumed | | | 2.802 | 0.006 | 6.67785 | 2.38308 |
| Career Commitment | Equal variances assumed | 0.295 | 0.588 | -1.847 | 0.068 | -5.95303 | 3.22228 |
| | Equal variances not assumed | | | -1.873 | 0.064 | -5.95303 | 3.17755 |
| Specific Accomodations | Equal variances assumed | 0.262 | 0.610 | 1.235 | 0.220 | 3.13325 | 2.53718 |
| | Equal variances not assumed | | | 1.224 | 0.224 | 3.13325 | 2.56012 |

Statistical test shown in the above table indicated that out of the three variables used in this study on gender based perception, only variable on acceptability that significantly different between men and women respondents. The other two variables, namelu the issues of career committment and specific accomodation for women programmer do not show any significant differences. In can also be inferred that men and women working as computer programmers do not have any different perceptions on neither career commitment nor specific accommodation for women programmers. Both sexes, in general agreed that men and women must have equal treatment on the issues of career commitment, and further, the specific accommodation for women employees is a natural consequences that should be given to them. Results of this study support the proposition of nature rather than nurture theories and the opinion of the respondents are seemed incline to the equilibrium theory.To better understand these employees' perceptions, results on each variable are presented below.

**Acceptability**
On the issues of acceptability, there are nine elements involved in this variable, namely working agreement, work evaluation, equal chance for being permanent employees, work pressures, diligence, perseverance to solve problem, capabilities to solve problem,  willingness and ability to learn and timelineness. Those elements were asked to the respondents and their answered were recorded and analyzed. The results are presented in Table.3.

From the responses of the respondents it can be said that out of the nine elements above, four elements showed the significant differences between women and men programmers, namely they are; diligence, perseverance to solve problem working pressures and timelineness. Men and women are different when facing these issues. It seemed that women programmer is different when working with tasks that need thoroughness or diligence and in the jobs that needs perseverance. Men and women employees are also different in adapting to jobs under pressures. In addition, it seemed women programmers can work according to the time schedule more than their counterpart.

However, there are no differences found in this study, on the element of working agreement, work evaluation, change to be permanent employees, ability to solve problems and willingness to learn. Men and women programmers acknowledged they all faced the equal treatment from the IT companies they worked for. In other words the company did not offered different working agreement, nor gave different work evaluation based on gender. Both men and women employees have the equal opportunity to pursue their career

by being promoted as permanent staffs. They all have the same capability to solve problems found in their jobs as well as learning more on advance assignments, taks or jobs.

**Table 3.**
**Independent Samples Test on Acceptability**

| | | Levene's test for Equality of variances | | t-test for Equality of Means | | | |
|---|---|---|---|---|---|---|---|
| | | **F** | **Sig.** | **t** | Sig. (2-tailed) | Mean Difference | Std.Error Difference |
| Work Agreement | Equal variances assumed | 0.253 | 0.616 | -0.208 | 0.835 | -0.7342 | 3.52575 |
| | Equal variances not assumed | | | -0.210 | 0.834 | -0.7342 | 3.50222 |
| Work Evaluation | Equal variances assumed | 0.318 | 0.574 | -1.094 | 0.277 | -3.91299 | 3.57554 |
| | Equal variances not assumed | | | -1.070 | 0.288 | -3.91299 | 3.65666 |
| Chance for being permanent staff | Equal variances assumed | 0.003 | 0.958 | -0.454 | 0.651 | -1.48009 | 3.26338 |
| | Equal variances not assumed | | | -0.460 | 0.647 | -1.48009 | 3.22093 |
| Work pressures | Equal variances assumed | 10.617 | 0.002 | 2.680 | 0.011 | 11.47965 | 4.40232 |
| | Equal variances not assumed | | | 2.757 | 0.007 | 11.47965 | 4.16315 |
| Diligence | Equal variances assumed | 6.717 | 0.011 | 4.509 | 0.000 | 17.79697 | 3.94659 |
| | Equal variances not assumed | | | 4.773 | 0.000 | 17.79697 | 3.72829 |
| Perseverance to solve problems | Equal variances assumed | 6.764 | 0.011 | 3.750 | 0.000 | 15.80173 | 4.21402 |
| | Equal variances not assumed | | | 3.944 | 0.000 | 15.80173 | 4.00686 |
| Capability to solve problems | Equal variances assumed | 11.738 | 0.001 | 1.479 | 0.142 | 5.85238 | 3.95665 |
| | Equal variances not assumed | | | 1.574 | 0.119 | 5.85238 | 3.71842 |
| Willingness to learn | Equal variances assumed | 11.283 | 0.001 | 1.176 | 0.243 | 4.65844 | 3.96132 |
| | Equal variances not assumed | | | 1.240 | 0.218 | 4.65844 | 3.75629 |
| Timelineness | Equal variances assumed | 3.695 | 0.058 | 2.701 | 0.008 | 10.62987 | 3.93553 |
| | Equal variances not assumed | | | 2.818 | 0.006 | 10.62987 | 3.77233 |

**Career Commitment**

There are four elements on the issues of career commitment. Those elements are working hours, working out of the offices or company trips, work overtime and promotions. Two elements show different perceptions between men and women respondents; they are the company trips and working overtime. On the average, women are less eager to work out of the office or have to work overtime, especially when they are married and have to leave the family behind. It could be the case, that their emotions or motherhood instinct involved more in making decisions on these elements. On the contrary men programmers focused more on these assignments, for they believe that those assignments could provide them with a chance for wider and better perspectives and opportunities. Therefore is not surprising to see differences between men and women on the other element on the issues of acceptability, namely work pressures, since they are related, work overtimes are mostly under pressures.

Responses on the other two elements, working hours and promotions do not seem statistically different. Both women and men programmers have the same working hours and offered the equal opportunities for promotions in achieving higher ranks in the companies they worked. These responses left a little unanswered question; when they have equal opportunities, why women are more reluctant to received assignment on company trips since the trips might open a wider chance to be promoted. It could also be inferred that assignment on company trips alone, in facts, might not be a serious considerations in promoting women for higher ranks in the companies.

Data obtained from Stikom Career Center (SCC) shown, that employer offered the same opportunity for men and women programmer. In fact the companies generally prefer to hire permanent staff, as long as they met the requirements. In fact, in 2009, job offered for computer programmers were not gender-biased, the companies offered the same position for men and women recruitees (SCC, 2010).

**Table.4**
**Independent Samples Test on Career Commitment**

| | | Levene's test for Equality of variances | | t-test for Equality of Means | | | |
|---|---|---|---|---|---|---|---|
| | | **F** | **Sig.** | **t** | Sig. (2-tailed) | Mean Difference | Std.Error Difference |
| Working hours | Equal variances assumed | 5.949 | 0.017 | -0.453 | 0.651 | -2.10043 | 4.63256 |
| | Equal variances not assumed | | | -0.471 | 0.639 | -2.10043 | 4.46334 |
| Company Trips | Equal variances assumed | 0.111 | 0.740 | -2.174 | 0.032 | -9.41385 | 4.32931 |
| | Equal variances not assumed | | | -2.170 | 0.033 | -9.41385 | 4.33835 |
| Overtime | Equal variances assumed | 2.326 | 0.131 | -2.113 | 0.037 | -9.01126 | 4.26556 |
| | Equal variances not assumed | | | -2.077 | 0.041 | -9.01126 | 4.33857 |
| Promotion | Equal variances assumed | 2,745 | 0.101 | -1.292 | 0.200 | -3.28658 | 2.54475 |
| | Equal variances not assumed | | | -1.326 | 0.118 | -3.28658 | 2.47912 |

## Specific Accommodations

Interestingly, on the issues of special or specific preferential treatment to accommodate women programmers, is not statistically different between men and women employees in the IT industry. The issues are broken down into five elements, they are; treatment for leave when women programmers who are having their menstruation periods, marital leave, women working with pregnancy, maternal leave and absentee for family illness.

Table.5 presents the results of the study. In general men and women programmers have almost similar responses on such issues. It might seemed that men respondent respected these special treatments for their counterpart since these accommodation are consequences of hiring women employees and it all are naturally inherent in women. Therefore there is no objection from the men employees, for women programmers to receive those specific accommodations, especially having women periods, pregnancy and maternal leaves. Although the first element, periods leave, is actually granted and regulated in the labor regulation, the companies have to comply with such regulation. However, modern women, have long abandon this preferential treatment. They have no difficulties doing their jobs under the periods. Therefore the respondents' perception on such matter is not statistically significant, as Table.5 have indicated.

On the issue of women working while they are pregnant, there is no significant difference on the common five percent significant level, as shown in the table. However if the significancy is lowered to ten percent, it seemed the difference exists. The recorded response mentioned that some men respondents were worried to have women counterpart worked while they are pregnant. The women were thought would not be able to perform tasks under heavy stress and pressures. On the other hand, women programmers have the different opinion, in favor of able doing their jobs until late of the pregnancy.

**Table. 5**
**Independent Samples Test on Specific Accommodations**

| | | Levene's test for Equality of variances | | t-test for Equality of Means | | | |
|---|---|---|---|---|---|---|---|
| | | **F** | **Sig.** | **t** | Sig. (2-tailed) | Mean Difference | Std.Error Difference |
| Periods leave | Equal variances assumed | 1.170 | 0.282 | -0.041 | 0.967 | -0.19827 | 4.84683 |
| | Equal variances not assumed | | | -0.040 | 0.968 | -0.19827 | 3.96252 |
| Marital leave | Equal variances assumed | 3.128 | 0.080 | 0.415 | 0.679 | 2.0013 | 4.82148 |
| | Equal variances not assumed | | | 0.405 | 0.686 | 2.0013 | 4.93624 |
| Working with pregnancy | Equal variances assumed | 10.463 | 0.002 | 1.631 | 0.106 | 6.48615 | 3.97637 |
| | Equal variances not assumed | | | 1.723 | 0.088 | 6.48615 | 3.76427 |
| Maternal leave | Equal variances assumed | 1.420 | 0.236 | 1.256 | 0.212 | 3.50433 | 2.79112 |
| | Equal variances not assumed | | | 1.311 | 0.193 | 3.50433 | 2.67339 |
| Absent due to family illness | Equal variances assumed | 0.359 | 0.55 | 1.035 | 0.303 | 3.87273 | 3.74242 |
| | Equal variances not assumed | | | 1.064 | 0.290 | 3.87273 | 3.64025 |

Issues on the element of marital and maternal leaves did not have statistical differences from the respondents's perception. Based on the responses on the issues of preferential treatment, all findings in this study support and in favor of the hypothesis on the nature theory. However the finding might not applied to the other industries. A lot of research works still need to be conducted to have a more comprehensive and general answers on these issues.

## Concluding Remarks

There are three issues on the acceptability of women programmers working in the IT industry that are the focus of this study. The study found in general that differences exist on the issues of acceptability, while the other two issues, career commitment and preferential treatment for women programmers, the differents were not statistically significant between men and women.

On the issues on acceptability it self, more detailed observation found that differences occurred on more personal matters such as work under pressure, diligence and perseverance to solve problems. Furthermore on the issues of career commitment, differences are also detected particularly on work out of the office or company trips and work overtime. Meanwhile both men and women respondents provided similar responses on the issues of special treatment accommodating women natural needs as unique individuals. There were no differences on these issues.

On theoretical based, the findings of this study tended to support of the nature theory used in approaching study on the gender inequality. However more other serious study needs to be undertaken to understand more about attitude differentials between men and women in their working place.

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