This research attempts to study the statistical analysis of women contribution and participation in maritime industry of northern region of Peninsular Malaysia where the research has been conducted in four (4) states: Perak, Penang, Perlis and Kedah. The purposes of research are to identify the contribution and participation of women especially in maritime industry whereby the elements such as discrimination gender and harassment can be influenced their performances and participation in the maritime related companies. According to Ahmad (1998), Malaysian women are highly important contributors to the country’s economic and social development. Their access to health and education and their participation in the economy have increased rapidly over the years. A sample of 55 respondents from different levels of management and operations was selected which involves 22 males and 32 females from six (6) maritime related companies in northern region of Peninsular Malaysia. The paired samples test between average number of female workers involved in operational level and decision making level is an accurate method for measuring the differences between the average number of women involved in operational level and decision making level. The result indicates the P-value = 0.135 and the test tend to reject the null hypothesis at the significant level 0.05. Therefore, the average number of women involved in decision making level significantly difference from the average number of women involved in operational level. To investigate the ratio between men and women in maritime companies of northern region of Peninsular Malaysia, and the factors of women influences and contributions in the maritime related companies, more sophisticated and convincing statistical analysis such as independent sample T-test and simple regression are applied and briefly shows in this research. From the results, it can be concluded that the women participation in northern region of Peninsular Malaysia is still considerably low compared to other industries.

Field of Research: Women Participation, Management and Operational Level, Maritime.

1. Introduction

According to (Lim, 2006) the Northern Region is one of the four regions in Peninsular Malaysia, which include the states of Perlis, Kedah, Penang, and Perak. Regarding to economic development, Penang and Perak can be classified as middle-income states while Kedah and Perlis were being classified as low-income states. (Aslam & Hassan, 2003). With a population of 1.77 million, Penang is the leader in manufacturing activities and the growth centre for northern Malaysia. In 2007, 200 multinational
corporations had large scale operations in Penang, making it the second growth centre in Malaysia, after the Klang valley. Furthermore, Penang’s position in northern Malaysia has been reinforced by the development started under the Northern Corridor Economic Region (NCER) program. The program includes 21 districts in Penang Island and the mainland, and the states of Kedah, Perlis, and northern Perak. The Northern Corridor Economic Region program aims to accelerate economic growth and elevate income levels in the north of Peninsular Malaysia. It is part of a national strategy focusing on regions which can benefit from land, labor and natural resources, combining these with manufacturing experience and international linkages. The aim of the Northern Corridor Economic Region is to become a competitive, world-class sustainable economic region. It is expected that the Northern Corridor Economic Region would be a destination of choice for foreign and domestic businesses to invest. Women are the most vulnerable to the effects of external shocks in the form of commodity price collapse and changes in terms of trade and economic crisis. An immediate assessment of the immediate impact of the economic downturn on the labor market has been the marked increase in the retrenchment of workers. The slower GDP growth is expected to result in a significant decline in employment growth and loss of jobs. The level of employment is projected to decrease in all sectors except for the export-oriented industries. Malaysian women are highly important contributors to the country’s economic and social development. Their access to health and education and their participation in the economy have increased rapidly over the years. (Ahmad, 1998).

2. Women and shipping

In some countries, the shipping industry offers a way out of poverty for many workers. Employment in the shipping industry provides access to foreign currency and a regular salary with a direct impact on the economic viability of seafarers and their extended families. There is no intrinsic reason why women should not participate in and benefit from employment within the shipping industry. However, the shipping industry is traditionally regarded as an exclusively male preserve and only one or two percent of the global workforce of seafarers is women. (Tansey, 2000). She also stated the relevance of sea experience too many shore-based jobs means the resource of women with appropriate skills is limited and will continue to act as a long-term constraint on the representation of women in the maritime sector as a whole. There may also be cultural resistance to women working outside the home, but the principal objections to employing women at sea appear to centre on the lack of adequate separate facilities for women on board and stringent physical requirements. In addition, the perception that seafaring is a man's job can lead to lack of training and work-experience opportunities for women, compounded by employers' reluctance to appoint those women that are trained. To break the cycle, adequate training has a critical role in the integration of women into all spheres of professional life, with special emphasis on improving accessibility at all levels to potential women applicants.

2. Women in maritime industry

Women’s status in society and their participation in economic activities are strongly influenced by religious and traditional social issues and customary patterns of division of labor. Lower enrolment of girls in technical schools and universities may stem from these socio-cultural issues with a direct effect on their subsequent role in a country's commercial and economic structure (Tansey, 2000). By bolstering women's education and participation in the economy, society as a whole will benefit. This is the essence of the United Nations Women in Development initiative, which has been taken up across the United Nations system.
3. Women contribution in economic productivity

This rise in productivity is quite large by historic standards and brings with it very significant positive implications for the economy. In particular, increases in productivity mean larger potential increases in GDP without the same risk of inflation in an economy where productivity is lower. One calculation suggests that current output per person is about 10 percent higher than it would have been without the productivity acceleration. And, in the long run, increases in productivity raise real wages and allow our children to enjoy a higher standard of living, accumulate greater wealth, and pay for programs such as Social Security (Shaw, 2005). The opportunity that risen for women in every field and more so when we have come a long way in terms of gender equality. The maritime industry with its allied areas is no different. Women by nature are more profit conscious, meticulous and good at multi-tasking. They are also more flexible and are organized. This augurs well with the ever increasing demands that occur in the maritime industry more as one has to deal with lot of external factors like customs, shippers, regulators, unpredictability in weather etc on a day-today basis (Shaw, 2005).

4. Women’s contribution at the workplace

The direct contribution has come about from their role as workers in the paid economy. First, women are increasingly better educated than men; 68 percent of women who had recently completed high school were enrolled in an undergraduate degree granting institution in fall 2002, compared to 62 percent of men. And 9 million women were enrolled in undergraduate and graduate programs in 2001, compared to 6.9 million men. Second, women have a history of success as team players and problem-solvers. In surveys, female managers receive lower ratings on masculine attributes and styles of leadership (task-oriented, directive) but higher ratings for non-masculine styles (interpersonally oriented, participative) (Eagly & Carli, 2003).

In the past, when the masculine approach was most valued, this meant that women faced a substantial uphill battle in being (and being perceived as) effective leaders, although lab experiments showed women to be more effective when the roles were defined as less masculine. (Shaw, 2005). More recently, however, there are signs of a change in the ideal managerial style, from one in which leaders sit atop a hierarchy and operate by setting objectives and rewarding those who are successful to one where leaders aim to encourage commitment and creativity and take on the role of a coach or teacher. Driven by an economic environment characterized by an accelerated pace of technological change and intense global competition, this apparent redefinition of the ideal suggests that women may now have a comparative advantage in key managerial skills that are associated with firm productivity. Social networks inside the firm have also been shown to be important, both to women’s advancement and to firm productivity, and women have always been good at building and maintaining these networks (Shaw, 2005).

Women have also contributed indirectly to increases in productivity and long-run economic growth through unpaid work, both at home raising children and in their communities. Women are still disproportionately responsible for the valuable activity of caring for children, and the economic changes associated with the increase in trend productivity suggest that it has become more valuable than ever to raise children who are problem-solvers and who can think for themselves. There is a substantial body of research suggesting that investing in children has a high rate of return. (Shaw, 2005)
5. Theoretical Framework

![Theoretical framework of the study](image)

Based on the objective of this study that is to examine whether there is significant difference between average number of women involved in decision making level and average number of women involved in operational level, the above theoretical framework was developed (Figure 1).

6. Methodology

6.1 Sample and data collection method

The population in the Northern Region of Peninsular Malaysia consist any company who provide, conduct and relate to any type of maritime field. For the sample of the population, the study will be carried out FIVE (5) randomly selected companies, chosen by the method of random companies from Northern Region of Malaysia. Initially, TEN (10) companies have be chosen in order to gather information about this research, in mutual circumstances, only FIVE (5) companies were willing to cooperate and be able to answer and respond for those questionnaires. From this step, they were invited for completing a questionnaire related to this research. Average among of them, answering questions in five minutes. A detailed questionnaire was developed and organized to understand a women contribution and participation in maritime industry, regarding into several section that can be analyzed. The questionnaire will serve only kind of topics, issues and questions regarding to the research objectives.

6.2 Instrumentation

The survey questions were used as a source of primary data to investigate the women contribution and participation in Northern Region of maritime industry. The survey questionnaires consist of eighteen questions. The questionnaire was divided into three sections which based on the whole research objectives. Firstly, the first section of questionnaire is to find the difference between average number of women involved in decision-making level and operational level. The question will be formed to find whether decision-making level consists of women is more than operation level or vice versa. Secondly, this research intends to analyze the ratio between men and women in maritime companies. It is significantly to determine the ratio between both genders since the researcher needs to analyze whether the ratio is becoming larger or vice versa. Finally, the questionnaire will evaluate
the factors that can increase the influences and contributions in women participations in maritime
industry of Northern Region of Peninsular Malaysia. This is to analyze what and how many factors and
reasons that contributing women to work in maritime company. Questionnaire will be sent to
random companies by a mail and directed to the company.

7. Finding & Discussion

7.1 Paired Sample t-Test

Does the average number of women involved in the decision-making level differ from the average
number of women involved in operational level in maritime company of Northern Region of
Peninsular Malaysia at α = 0.05? By assuming \( H_0: \mu_1 = \mu_2 \) and \( H_1: \mu_1 > \mu_2 \) (claim) where
\( \mu_1 \) = average number of women in decision making
\( \mu_2 \) = average number of women in operational level

Reject the null hypothesis since P-value is 0.135. Therefore, the decision-making level significantly
difference from the average number of women involved in operational level in maritime company of
Northern Region of Malaysia. It can be concluded that the number of women involved in decision-
making level is higher because women are more interested in making their career in decision-making
level of management rather than operational level of management.

7.2 One-independent t-test

To find the ratio of two independent samples of men and women, and their working hours in week, it
needs to use the Independent Sample T-Test to determine the sum of ranks between these two
genders. Ratio between men and women in terms of estimation working hours per week as follows:

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>Type of gender of respondent</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimation working hours per week</td>
<td>Male</td>
<td>17</td>
<td>56.82</td>
<td>16.667</td>
<td>4.042</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>32</td>
<td>48.81</td>
<td>13.955</td>
<td>2.467</td>
</tr>
</tbody>
</table>

The mean in the table above shown that the number of female has more estimation working hours
per week compare to men, and the ratio is 55.82:49.81, and can be simplified to about 56:50 for men
compare to women. It means that men have more estimation working hours per week than women.
It is proven that men have put more time and willing to do more extra hours compare to women.

Ratio between men and women in terms of number of years of service in the maritime company as
follows:

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>Type of gender of respondent</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of service in the company</td>
<td>Male</td>
<td>18</td>
<td>3.78</td>
<td>2.840</td>
<td>0.669</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>32</td>
<td>6.25</td>
<td>7.348</td>
<td>1.299</td>
</tr>
</tbody>
</table>

The mean in the table above shown that the number of female has more number of years of service
in the company compare to men, and the ratio is 3.78:6.25, and can be simplified to about 5:11 for
men compare to women. It means that women have work and also can stay longer in the maritime

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company compare to men. Significantly, men does not stay longer in the company and more willing to change the atmosphere to earn more salary and promotion while women has proven to have more loyalty in working with the company.

Ratio between men and women in terms of the number of days taking for leaving in recent year as follows:

<table>
<thead>
<tr>
<th>Type of gender of respondent</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days for leave in recent year</td>
<td>Male</td>
<td>18</td>
<td>16.94</td>
<td>11.255</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>32</td>
<td>15.38</td>
<td>7.413</td>
</tr>
</tbody>
</table>

The mean in the table above shown that the number of men has more number of leaving in recent year compare to women, and the ratio is 16.94:15:38, and can be simplified to about 17:15 for men compare to women. It means that men have more number of taking leave compare to women. Women are more acceptable to take more leave than men because commonly women have some internal issues according to their health and body conditions but in this case proven that men are taking more leave during working days.

7.3 Correlation Coefficient

What are the factors that increase women influences and contributions in their participations in maritime industry of Northern Region of Peninsular Malaysia? Correlation test are used to analyze data for “The influences and contribution of women in the organization of maritime industry”

Dependent variables are decision making and performance factors. These variables obtained by selecting the highest two mean between the predictors then the correlations between the predictors were testing against each other.

<table>
<thead>
<tr>
<th></th>
<th>DecisionMaking</th>
<th>Performance</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>DecisionMaking</td>
<td>3.392</td>
<td>3.231</td>
<td>55</td>
</tr>
<tr>
<td>ImportantRole</td>
<td>2.936</td>
<td>2.737</td>
<td>55</td>
</tr>
<tr>
<td>Leadership</td>
<td>3.518</td>
<td>3.408</td>
<td>55</td>
</tr>
<tr>
<td>Performance</td>
<td>3.373</td>
<td>3.231</td>
<td>55</td>
</tr>
<tr>
<td>TimeManagement</td>
<td>3.392</td>
<td>3.231</td>
<td>55</td>
</tr>
</tbody>
</table>

The correlation of decision making and performance has weakly positive relationship, +0.154 and significant at the 0.01 level. It means these two dependent variables have small effect to each other.
8. Conclusion and Future Recommendation

Women participation in Northern Region of Malaysia is still considerably low compare to other industries. As the result, this could lead to lack of confidence and gender inequality by participating in maritime industries. Most of women have been found are more interesting to make money by joining decision-making level rather operational level. Some maritime companies circulated there are no women involving in their operational level in companies. On the other hand, women has more accurate number of estimation working hours per week and more number of years of services compare to their gender counterparts. Which proven that women are taking their jobs more seriously than women compare to men. It can be said that men are more vulnerable of changing their jobs or moving to another company. But women also have high number of taking number of leave according to the outcome. This logically means women are more exposed of acceptable number of excuses such as maternity issue, their monthly period, children care, and some related family issues. In addition, the values to increase the contribution and influence of women in the maritime sector are influence of various factors. As mentioned, women are influenced by internal and external criteria of making decision-making, leadership, role, extra hours work and ability. These criteria will improve the women contribution and influence toward their participation in maritime company.

Malaysian government also need to set several ground rules when women working onboard ship. As the ship lies far from the land, the ship is no longer bonding with the Government rules and will create a certain atmosphere that can lead a number of disadvantages to the women onboard. By implementing the rules, women will feel more safe and comfortable to work onboard ship. As far as concerned, the implementation of the rules will create a numerous change of perceptions on working in maritime industry. This will benefit the maritime sector itself as it has been supported by gender equality and development. Women now should and be always treated equal to the men, and should implement a various programs to achieve the target, which included flexible working hours, working from home and providing childcare centers at workplaces. Recommendation for this research, maritime companies should be opened to involve in more respective manner in students research about their companies. Some companies would choose to neglect and reluctant to involve in the research. Generally, most maritime companies in Northern Region, not willing at all to co-operate in the student research and not benefit the research overall. This perspective should be changed in the future to allow more accurate data can be collected and measured.

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References


