

The Application of Quantitative Research in the Issue of Australian Women's Economic Empowerment

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ABSTRACT

Modern society pays more and more attention to women's opportunities. Although the Australian government and parliament have implemented appropriate legislation and taken appropriate government interventions to solve these problems, this social problem still exists. People with different level of educations have different views on women's opportunities. This study assumes that there is a connection between people's education level and the government's attitude to intervene in women's opportunities and uses hypothesis testing methods to give experimental results and analyse data to draw conclusions. This case will use the chi-square test, which will make the test more rigorous and more convincing. The conclusion from the hypothesis test is that there is a connection between the education level of the Australian people and their attitudes or beliefs about supporting women's economic empowerment.

Keywords: *Women's opportunities, chi-square test, Australian government, women's economic empowerment*

1. INTRODUCTION

Modern society is paying more and more attention to women's opportunities. According to the Australian Human Rights Commission (2017) [1], although the Australian Government and Parliament have implemented appropriate legislation and adopted appropriate government interventions to address these issues, this social problem still exists. People with different levels of education hold different views on women's opportunities. Therefore, this study assumes that there is a relationship between people's educational level and their attitudes toward government intervention in women's opportunities and uses hypothesis testing methods to give experimental results and analyse the data to draw conclusions. This case will use a chi-square test, which will make the test more rigorous and persuasive.

1.1 Research question

Why do some Australians support increasing women's opportunity in business and industry while others do not?

1.2 Dependent Variable (DV): People's attitude towards women's opportunities.

The dependent variable (people's attitude) is divided into five categories, they are Strongly agree, Agree, Neither agree nor disagree (stay neutral), Disagree and Strongly disagree, respectively. In this case this variable of the attitude of people concerning women's empowerment depends on or responds to change concerning the level of education of the population in *Australia*.

1.3 Independent Variable (IV): People's educational level.

The independent variable is grouped into two again, they are university education (Bachelor's degree (including Honors), postgraduate degree or postgraduate diploma) and non-university education (No qualification since leaving school, Trade qualification, Non-trade qualification, Undergraduate Diploma, Associate Diploma). The level of education of the Australian people being the independent variable is the factor to be controlled for purposes of determining the effect or impact that it has.

2. LITERATURE AND THEORY

2.1 Literature review

Different authors have different opinions in regard to increasing women opportunities in businesses and industries. This research aims at looking into some of these opinions with a major focus on the Australian job market and comparing with another western countries such as UK and the US.

2.1.1 Improving national productivity and economic growth

In the United States of America, United Kingdom, Australia and other nations around the world, women have considerably improved their social position which has, in turn, increased their opportunities in the business sector significantly. Taylor and Perezniето (2014) advanced that women's economic empowerment entails achieving the

equal access of women to and control over the economic resources and making sure that they can employ them to apply increased control in various other areas in their lives. The Australian government is supporting and promoting women due to their enormous contribution to the country's economic growth over the last few years. However, from the perspective of Nikolaev, & Wood (2018), a substantial portion of the society indicates that women have a disadvantage in the labour market and strongly advocates for their non-involvement in economic.

2.1.2 Level of Education as a factor

Educational levels are considered a primary source of human capital and a highly relevant criterion of determining labour productivity. Highly educated people have positive attitudes towards the abilities and potential of women in businesses while the lower educated individuals have negative attitudes towards the involvement of women in business and industry (Van, 2016). Gender differences in educational levels have attracted abundant attention causing different attitudes. Initially, most literature focused on a presumed disadvantaged position of women, especially in education attainment. However, these perceptions and attitudes towards women have changed (Australian Bureau of Statistics, 2016). For example, education attainment for people since 1996 has been on the rise and more people have become highly educated in Australia. Educated individuals accounted for over 89 percent in 2016 (Polesel, 2018). The implications of education level attainment on the attitudes towards women in Australia have positively impacted the labour workforce. According to Patrinos & Montenegro, (2014), an additional year in primary school for girls increases wages 10% which rises to approximately 15 to 25% for every extra year they are in secondary or high school and close to 17% in the case of tertiary education. The Australian women's labour workforce participation has slightly increased over the past decade from 62% to 65% of the population aged between 20 years to 74 years (Australian Bureau of Statistics, 2016).

2.1.3 Gender Segregation

The lower educated persons are the ones opposed to the increment of opportunities of women in the labor markets are the gender stereotypes who are opposed to the economic empowerment of women in Australia (Van Hek et al., 2016). Gender inequality is a factor which has been at the play in opposing the involvement of women in economic activities. Data from the UK, US and most other nations around the world indicate that 15% of men compared to 11% of women are unemployed and as of the year 2015, there were 25% of working-age women who were underemployed as compared 19% of men (Hunt & Samman, 2016).

Additionally, 36% of women were employed full time while the number of men employed full time was 44%. According to the WGEA, Australia has a highly gender-segregated workforce. This means that there is an unequal distribution of men and women in certain occupations and industries. It also refers to the tendency of men and women majoring in different fields and to be unequally distributed across part-time and full-time jobs (Polesel, 2018). The lower educated individuals strongly uphold the traditional gender roles and expectations also influence the subjects that young men and women study in schools and universities, ultimately affecting career choices.

2.2 Theory

Several theories would explain the continued economic empowerment for women in business and industry in the recent past and include the following. The classical modernization perspective emphasizes economic development, the historical legacies perspectives that emphasize political and cultural influences, the human development view that stresses the cultural changes giving rise to self-expressional values and gender-egalitarian attitudes and lastly the institutional design perspective as pointed out by Alexander and Welzel (2007).

2.3 Hypothesis

The higher-level education people have, the more supportive attitude towards women's opportunities they have.

- ◆ Null hypothesis: There is no relationship between educational levels and the attitudes of people concerning the economic empowerment of women.

2.4 Case selection and case justification

The data used in the research questions required Australian data of 201 obtained in the Australian election study. The case study for the study will be Australia (the people), and the data source that will be used in the study is Australia's data from the 2016 Australian Election Study. This case is also common in the UK, the US and other European countries. Therefore, it is necessary to compare the data of these three to illustrate the universality and rationality of the hypothesis. The dependent variable in the study is the attitude of people to government intervention, and the independent variable is the education level of people. This is because the level of education in the Australian education system is different and each level has a different impact on the population. With the advancement of various levels of education, people tend to think differently about the impact of different levels of education on people. In this sense, these groups or categories will correctly reflect how education affects people's attitudes and perceptions about women's economic empowerment. The data from the

Australian Electoral Study is appropriate to answer the research question because it shows the different responses of various Australians to support and disapprove women’s economic empowerment. Finally, the results obtained by the analysis gave corresponding conclusions.

3. DATA AND METHOD

The research will use a quantitative method for purposes of quantifying the attitudes or behaviour and generalize their results from a population sample that is large and the hypothesis test to get the result by using JASP. The tests that would be used would be different due to the different variables in the research which include the chi-square test to identify the relationship existing between the two variables in the research. The formula for the chi-square test is as follows:

$$x_c^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

O_i = the frequencies observed
E_i = the frequencies expected
 Σ = the “sum of”

Chi-square test would use the data to calculate the value of the test statistic. The larger value of x^2 , the more likely it is that “X has a relationship with Y”. According to the Australian qualification framework (2013), this variable of education can be reclassified into two categories, university education and non-university education.

4. RESULTS AND DISCUSSIONS

4.1 The result diagrams of this hypothesis test are as following:

Contingency Tables ▼

women_opportunity	Educational level		Total
	Non university	University	
Strongly agree	275	88	363
Agree	733	216	949
Neither agree nor disagree	688	276	964
Disagree	220	72	292
Strongly disagree	58	37	95
Total	1974	689	2663

Figure 1: Contingency tables

Chi-Squared Tests

	Value	df	p
X ²	17.811	4	0.001
N	2663		

Figure 2: Chi-Squared Tests

Immediate results from contingency table and Chi-Square tabulation p-value of 0.001, which is less than 0.05. A p-value of less than 5% means that the results of the

contingency table are independent. Hence, a large proportion of and non-university (13.93%) as compared to university (12.77%) strongly agree that higher level education people are more supportive of women empowerment. A smaller proportion of individuals of higher education (10.45%) compared to non-university (11.14%) disagree that a person’s education level determines attitudes towards supporting women empowerment. However, a larger proportion of people with university education (5.37%) compared to 2.9% non-university education achievers strongly disagree of possible existence of higher attitudes in people of higher education to support women empowerment. Contingency tables also confirm that agreement to support economic empowerment of women is more prevalent among non-university education achievers (74%) than university for graduates (25.8%).

Additionally, for the result of chi-square test, the p-value is .001 < .005, the null hypothesis suggested, “There is no relationship between the perceptions and attitudes of people towards women economic empowerment with the levels of education.” Hence, null hypothesis is rejected. In other words, there is a relationship between these two variables.

4.2 Discussion

The confirmed p-value relationship means the rows and columns in the cross tab are independent. Hence, the association gives the researcher a green light to conduct further investigations on the cross tables. In other words, it is of worth to interpret the table’s results. Analytically interpreted, it means that agreement about women’s opportunities is not distributed across similarly based on their educational levels. Precisely, people with higher-level education are not of supportive attitudes for empowering women. The rejection in hypothesis based on data output concludes that higher levels of educational achievement prevents people from supporting economic empowerment of women. Cragun et al. (2016) confirms these findings when he finds that men of higher education strongly oppose women ordination into large roles in churches. Fine details for the output can be found based on assessing the contingency tables derived.

A large proportion of highly educated people oppose women empowerment. Only 12.72% of university graduates in comparison with 13.91% of people who have less educational attainment strongly agree to support economic empowerment of women. The matter can be understood from the fact that the world’s history has been coupled with high levels of gender inequality. Earlier times existed in the historical perspectives of America and European cultures when women had no significance in the society apart from taking care of the homes (Varnum & Grossmann, 2016). The opposite should be expected of what the results provide that university graduates are people who understand the importance of education, independence, and women contribution to the society when they are participating in economic activities. Karim’s (2017)

findings support the results obtained by confirming that fears of women domination, opposing women's independence, and a feeling of not wanting to have women's contribution towards family welfare are causes of disagreement to support female empowerment. Hence, educated people have a fearful attitude against and female empowerment.

Maybe empowered women could affect men's ability to remain political leaders as the case is in most world nations. As the findings are strange, future investigation should be conducted to understand reasons causing educationally advanced people to develop fears of supporting economic empowering of women. Through the chi-square test, it can be seen that people's attitudes towards women's opportunities and education levels are not independent but have a relationship. However, the results of the data display are different from the assumptions made and further correlation tests are required.

In addition, this hypothesis test also has the limitation. In the classification of the dependent variable (people's attitude), it is divided into five categories, Strongly agree, Agree, Neither agree nor disagree (stay neutral), Disagree and Strongly disagree, respectively. However, "strongly agree" in favour and "strongly disagree" is a subject with a personal and full of emotional colour. What degree can it be considered as "strongly"? Therefore, I think that a standard should be given here to define these ambiguous words, such as the standard of "strongly", it will make the whole test more scientific and rigorous.

5. CONCLUSION

In conclusion, people in Australia need to get as much education as possible and that is the college education level for them to be able to appreciate the importance of economic empowerment of women. In this sense, there is a relationship between the educational levels of people in Australia and the attitudes or perceptions that they have towards supporting the economic empowerment of women.

REFERENCES

- [1] Alexander, A. C., & Welzel, C. (2007, April). Empowering women: four theories tested on four different aspects of gender equality. In Annual meeting of Midwest Political Science Association. Chicago: Palmer House Hotel.
- [2] Australian Qualifications Framework, Australian Government. (2019). Retrieved 26 October 2019, from <https://www.aqf.edu.au/>.
- [3] Australian Human Rights Commission. (2017). "A Conversation in Gender Equality".
- [4] Australian Bureau of Statistics. (2016). Average Weekly Full-Time Earnings May 2012-Nov 2016.
- [5] Cragun, R., Merino, S., Nielsen, M., Beal, B., Stearmer, M., & Jones, B. (2016). Predictors of opposition to and support for the ordination of women: insights from the LDS Church. *Mental Health, Religion & Culture*, 19(2), 124-137. doi: 10.1080/13674676.2015.1126703.
- [6] Hunt, A., & Samman, E. (2016). Women's economic empowerment: navigating enablers and constraints. UN High-Level Panel on Women's Economic Empowerment background paper. London: Overseas Development Institute.
- [7] Karim, R., Lindberg, L., Wamala, S., & Emmelin, M. (2017). Men's Perceptions of Women's Participation in Development Initiatives in Rural Bangladesh. *American Journal Of Men's Health*, 12(2), 398-410. doi: 10.1177/1557988317735394.
- [8] Nikolaev, B. N., & Wood, M. S. (2018). Cascading ripples: Contagion effects of entrepreneurial activity on self-employment attitudes and choices in regional cohorts. *Strategic Entrepreneurship Journal*, 12(4), 455-481.
- [9] Patrinos, H. and Montenegro, C.E. (2014) Comparable estimates of returns to schooling around the world. Policy Research Working Paper 7020. Washington, DC: World Bank.
- [10] Polesel, J., Leahy, M., & Gillis, S. (2018). Educational inequality and transitions to university in Australia: aspirations, agency, and constraints. *British Journal of Sociology of Education*, 39(6), 793-810.
- [11] Van Hek, M., Kraaykamp, G., & Wolbers, M. H. (2016). Comparing the gender gap in educational attainment: the impact of emancipatory contexts in 33 cohorts across 33 countries. *Educational Research and Evaluation*, 22(5-6), 260-282.
- [12] Van Bavel, J., Schwartz, C. R., & Esteve, A. (2018). The reversal of the gender gap in education and its consequences for family life. *Annual Review of Sociology*, 44, 341-360.
- [13] Varnum, M., & Grossmann, I. (2016). Pathogen prevalence is associated with cultural changes in gender equality. *Nature Human Behaviour*, 1(1). doi: 10.1038/s41562-016-0003.
- [14] Strasser, Ulrike. 2007. "Judith Bennett, History Matters. Patriarchy and The Challenge of Feminism". *L'Homme* 18 (2). DOI:10.7767/lhomme.2007.18.2.149.
- [15] Taylor, G. and Perezniето, P. (2014) Review of evaluation approaches and methods used by interventions on women's and girls' economic empowerment. London: ODI.