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Wage Differential Compensation Can Women Be Economically Empowered? Empirical Evidence from South Asia

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Abstract. Purpose- This study investigates the responsiveness of South Asian women to wage increment at the macro level and examines the South Asian women's sensitivity on compensating wage differentials in terms of economic empowerment of women in the South Asian region at the micro-level. **Design/methodology/approach** – In the macro level analysis, the model used annual time series data from four South Asian countries; Sri Lanka, India, Pakistan and Bangladesh over the period of 2000 to 2017. Micro-level analysis of the study was done with the use of primary data gained through a questionnaire survey from the same sample countries and it covers the economic advancement and power and agency dimensions of women's economic empowerment. The women's wage compensation sensitivity index (WWCSI) constructed based on the survey results was used to build up the relationship between wage differential compensation and women's economic empowerment. **Findings** – According to the results of macro level analysis of this study, wage is a key determinant of female labor force participation. Findings of micro level analysis suggest that compensating wage differentials is a strong tool that can economically empower South Asian women. It further shows that estate females are less sensitive to wage differential compensation than rural and urban females. And educated females show greater sensitivity for wage differential compensation than non-educated females. This research also identified relatively low wage differential compensation sensitivity in terms of power and agency compared to the economic advancement dimension in women's economic empowerment. **Originality/value** – These findings support the view that wage differential compensation is "gendered", and therefore, requires a special program to economically empower females.

Keywords. Female labor force participation, South Asia, Women empowerment, Women's wage differential compensation sensitivity

1. Introduction

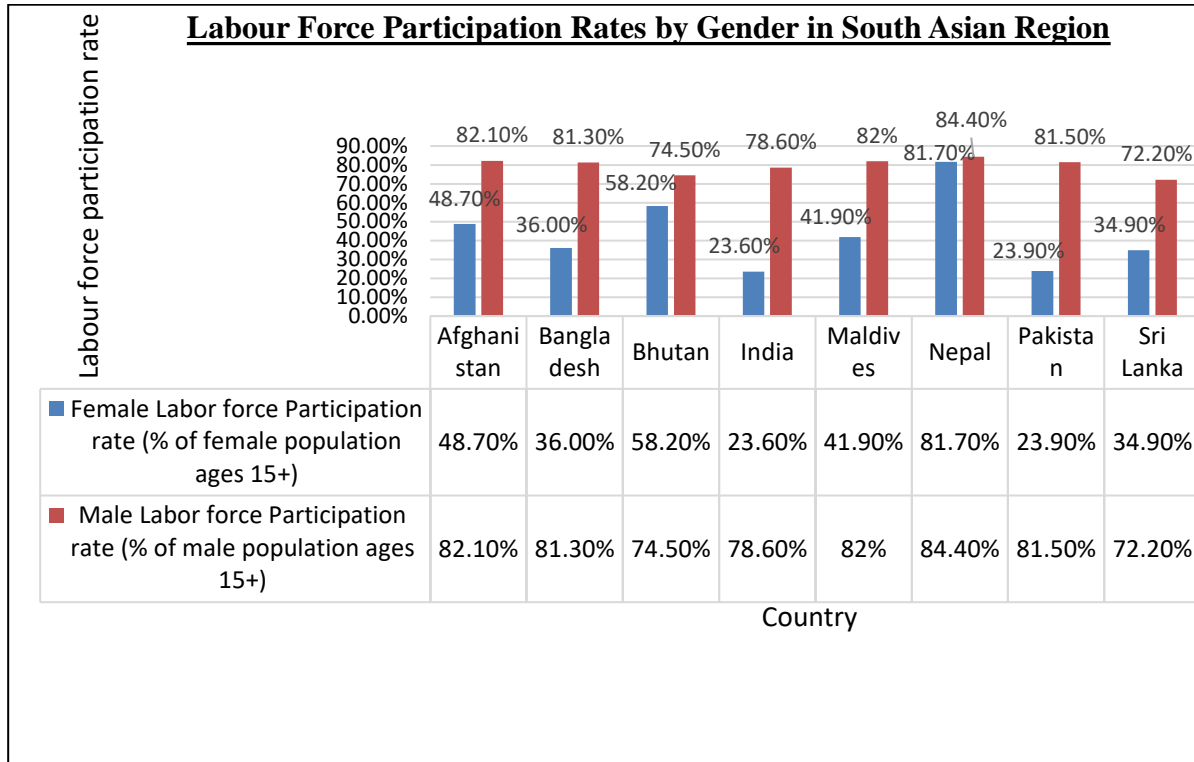
Direct path towards gender equality, poverty eradication and inclusive economic growth can be built by women empowerment. Empowering women alone can alleviate significant rate of the poverty in the world. Moreover, empowered women can empower their family and communities. Women, notably mothers, play the biggest role in decision-making about family

meal planning and diet. And Women also self-report more often their initiatives in preserving child health and nutrition. Because of above these reasons, women are on average, less likely to participate in the labour force than men. Globally, in 2018, Women's labour force participation rate was 48.5 % a decrease from 51.4% in 1990 (Hardymon, 2019). The decline of global female labour force participation is a crucial problem that is faced in most parts of world.

However, half or more than half of the labour force in most of developed countries involve female participation. According to Australian Bureau of Statistics (2018), in Australia, women's labour force participation rate has reached the highest ever recorded (60.5%) in January 2018(Australian Bureau of Statistics (ABS), 2018). According to Canadian national statistical office (2017), in Canada, over half (61.5%) of women participated in the labour force in 2017. Women's labour force participation rates have remained above 50% since 1980(Canadian national statistical office, 2017). In Japan, women's labour force participation rate was 51.1% in 2017, a small increase from 48.4% in 2005(Shambaugh, Nunn and Portman, 2017). According to U.S. Bureau of Labor Statistics (2017) In the United States, 57.0% of women were in the labour force in 2017 (U.S. BUREAU OF LABOR STATISTICS, 2015).

But the situation in South Asia is very different. Most of the South Asian countries show significant lack in female labour force participation when compared to males. According to World Bank (2018), India ranks 139, Pakistan ranks 137, and Sri Lanka ranks 128 in ranking the female labour force participation rate in ranking of 150 countries. India's female labour force participation rate was 23.6% in 2018. India could boost its growth from 1.5 percentage points to 9 percent per year if around 50% of women could join the work force. Pakistan's women labour force participation rate is 23.9 % which is quite glooming figure in 2018. Even though more than half the working population in Sri Lanka consists of women, the female labour force participation rate is only 34.9% in 2018. As per 2017 Global Gender Gap Report, the gender wage gap in Sri Lanka has widened, resulting in Sri Lanka moving down the rank to be slower than Bangladesh, Maldives and India(World Economic Forum, 2017) The female labour force participation rate of Bangladesh, Maldives and Afghanistan are 36%, 41.9 % and 48.7% respectively in 2018 (World Development Indicator, 2018). According to these statistics, at least half of the working age female population in most of South Asian countries do not belong to the labour force (*see figure 1.1*). Mean nominal monthly earnings of female employees (US Dollars) of Sri Lanka, India, Pakistan and Bangladesh are given in Appendix 1. On global average, women workers earn 23 percent less than their male counterparts doing the same job. This is considered as significant cause for women's low economic contribution(UN Women, 2018). Problem of women empowerment have been hotly debated globally, but have intensified in South Asia, which has seen rapid economic growth and structural transformation in recent decades.

Figure 1.1: Labour Force Participation Rates by Gender in South Asian Region (Modeled ILO Estimate) -2018



Source: World Development Indicator, 2018, World Bank

1 Research Problem

Recently, fast GDP growth has not translated into fast labour force participation growth in South Asian region. Only 28 percentage of females in South Asian region have a job or are looking for one, compared to 79 percentage of men. This is the second lowest in the world, after the Middle East and North Africa region which is at 21 percent (Dixon, 2018). Accordingly, one of current serious economic issues in South Asia is “Inadequacy of women’s labour force participation”. With the largest working-age population and growing middle class, South Asia’s development potential is vast. But the lack of women in employment and low labour force participation rates reflect lost potential (Dixon and Qian, 2018).

In most of South Asian countries there is much evidence on the substantial burden on women’s time due to maternity, **childcare and family-oriented policies**, violence against women and discriminations against women. Therefore, the opportunity cost of work of women is relatively higher than that of men (Banu, 2016).

Therefore, this research mainly involves in testing following research question.

“Can compensating wage differentials, economically empower women in South Asia?”

This question can be subjected to debates in development research because the income factor is the central dimension for women’s empowerment in this research question. There are very few empirical studies that examined the inter-relationships between the different dimensions of women’s empowerment. For instance, Kishor conducted a study in Egypt on ten empowerment

indicators (Kishor, 2000). Williams (2005) conducted a factor analysis in rural Bangladesh to identify the inter-relationship between six women's empowerment dimensions. But even these studies did not include income generated by women, one of the most important indicators of women's economic empowerment. Therefore, this research paper focused on labour income which was surprisingly not included by other empirical studies as women's empowerment tool. This paper is studying the relationship between wage differential compensation and women's economic empowerment as it relates to sample South Asian countries namely Sri Lanka, India, Pakistan and Bangladesh.

2 Research Questions

The researcher expected to answer one (1) primary research question and three (2) secondary research questions to achieve the ultimate aim of this study.

Primary research question:

1. Can compensating wage differentials economically empower women in South Asian Region?

Secondary research question:

1. What type of relationship can be observed in between the wages and female labor force participation in macro level?
2. What is the nature of economic sensitivity shown by South Asian females for wage differential compensation

3 Objectives of the study

In order to answer the stated research problem and the research questions, one (1) primary and three (2) secondary objectives of the study were set.

Primary objective:

1. To investigate the impact of compensating wage differentials on women's economic empowerment in the South Asian Region at the micro level.

Secondary objective:

1. To examine the responsiveness of South Asian women to wage increment at the macro level and determine the relationship between wages and female labor force participation. (objective of macro level quantitative analysis)
2. To identify the nature of economic sensitivity shown by South Asian females for wage differential compensation (objective of micro level quantitative analysis)

4 Significance

Inadequate women's economic empowerment is also a serious issue that almost all the countries in South Asian region faced. Although the male labour force participation rate in eight countries in South Asia exceeds 70%, countries other than Nepal and Bhutan, others have not experienced at least 50% female labour force participation in 2018 (World Development Indicator, 2018). The research is addressing this common regional economic problem by highlighting importance of wage differential compensation. As per the researcher's best knowledge, No study has been carried out for entire South Asian region to identify the impact of wage differential compensation on women's economic empowerment (based on overcoming the reproduction and social reproduction burden on females) which would directly increase the

income of females and lead to women's economic empowerment. That is the key significance of this research.

2. Methodology

Through following analysis, this study intends to deeply answer the research question of "Can compensating wage differentials economically empower women in South Asia?" with theoretical and empirical evidences. Methodologies in this study are based on the basics of labour economic theories and previous empirical literatures.

This study is done with use of macro level and micro level studies.

2.1 Methodology of Study

2.1.1 Macro Level Study

2.1.1.1 Research Design

This study has employed the deductive approach to empirically validate the relationship between "Wage" and "Female Labour Force Participation". **Deductive approach** generally starts with a theory and then tests its implications with data. This study uses a panel data model (longitudinal) of four sample South Asian countries with lowest female labour force participation rate in 2018) over the period of 17 years from 2000-2017. This study uses multiple regression analysis to explain the relationship between wage and female labour force participation.

The female labour force participation rate is taken as the dependent variable in the model and it is used as the proxy variable for women's economic empowerment. Independent variables of model are the determinants of female labour force participation namely; wage, education level, health and working poverty. Stationarity of variables is checked using "Levin Lin and Chu" (LLC) test. Multicollinearity is checked by the "Variance Inflation Factor" (VIF)

The empirical investigation is based on the following regression equation:

$$FLFP = f(W, EL, HS, WP) \quad (1)$$

where,

FLFP= Female labour force participation

W= Wage

EL= Educational level

HS= Health status

WP=Working poverty

The study intends to test following hypothesis by using the model explained above.

Null Hypothesis 1: There is no significant relationship between wage and female labour force participation rate.

Alternative Hypothesis 1: There is a significant relationship between wage and female labour force participation rate.

2.1.1.2 Population and Sampling

Population:

Population is the collection which includes all the measurements of interest to the researcher or the entire group of people, events or objects of interest that the researcher wishes to investigate. All the South Asian countries are considered as the population in this research.

Sampling:

Sample is a subset of the population. Sample technique used under the sampling process of this study is purposive / judgmental /selective sampling. This is a non-probability sampling technique in which researcher relies on their own judgments when selecting the subjects for sample. This technique is used because the researcher needs to access a specific group of countries with low women's economic empowerment, that are highly suited to the achieve desired objective. India, Sri Lanka, Bangladesh and Pakistan are selected as the subjects of the sample because those were the four South Asian countries that have showed the lowest female labour force participation rate in 2018 according to World Bank.

2.1.1.3 Collection of Data

Data collection methods:

Secondary data collected from the readily available sources were used for this macro level quantitative analysis. Data related to female labour force participation were collected from the ILOSTAT database of International Labour Organization (Data retrieved in September 2019). United Nations Population Division's World Population Prospects: 2019 Revision and the Human Mortality Database of University of California, Berkeley, and Max Planck Institute for Demographic Research were used as the original source to collect female mortality rate data over the selected period. The source which provides the data related to the female primary education is the database of UNESCO Institute for Statistics. The statistics of International Labour Organization (ILO modeled estimates) is used to collect data of working poverty and wage (labour income share) for the macro level analysis. Data collection process was done through one-month period from May end to June end of 2020.

Methods of measurement:

All the variables were measured based of previous literatures and labour economic theories. Wage is captured by labour income. Labour income is recognized as an important determinant of female labour force participation by Bayissa, Smits and Ruben (2017). Hence, wage is denoted by labour income share as a percent of GDP (%). According to Sharma and Sanchita (2017) women's empowerment is depending on facts such as education, health, household management and decision making. Therefore, education level and health are considered as independent variables in this model. Educational level is captured by primary education and health is captured by female mortality rate because primary education and female mortality are major focuses in South Asia. Education level is denoted by primary education, pupils (% female) and health is denoted by mortality rate of adult female (per 1,000 female adults). Working poverty is captured by working poverty rates published by ILO.

Table 2.1 shows methods of measurement of variables employed in macro analysis of the model and supportive literatures related.

Table 2.1 Methods of measurement of variables employed in the model (macro analysis) and supportive literatures

	<u>Variable</u>	<u>Measurement</u>	<u>Variable Code</u>	<u>Supportive Literature</u>
Dependent Variable	Female labour force participation	Female labour force participate rate of the year	FLFP	Haque, Tareque Islam, Mostofa (2011) <i>Women Empowerment or Autonomy: A Comparative View in Bangladesh Context</i> (Haque <i>et al.</i> , 2011)
Independent Variables	Educational Level	Primary education, pupils (%) female)	PRIMEDU	Oxaal (1997) <i>Education & poverty: A gender analysis</i> (Oxaal, 1997)
	Health	Mortality rate, adult, female (per 1,000 female adults)	MR	Behrman and Deolalikar (1987) <i>Will developing country nutrition improve with income?</i> (Behrman and Deolalikar, 1987)
	Working Poverty	Working poverty rate (percentage of employed living below US\$1.90 PPP) (%)	WP	World Bank report (2011)

	Wage	Labour income share as a percent of GDP (%)	W	Haque, Islam, Tarequ, Mostofa (2011) Women empowerment or autonomy: A comparative view in Bangladesh context (Haque <i>et al.</i> , 2011)
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2.1.2 Micro Level Study

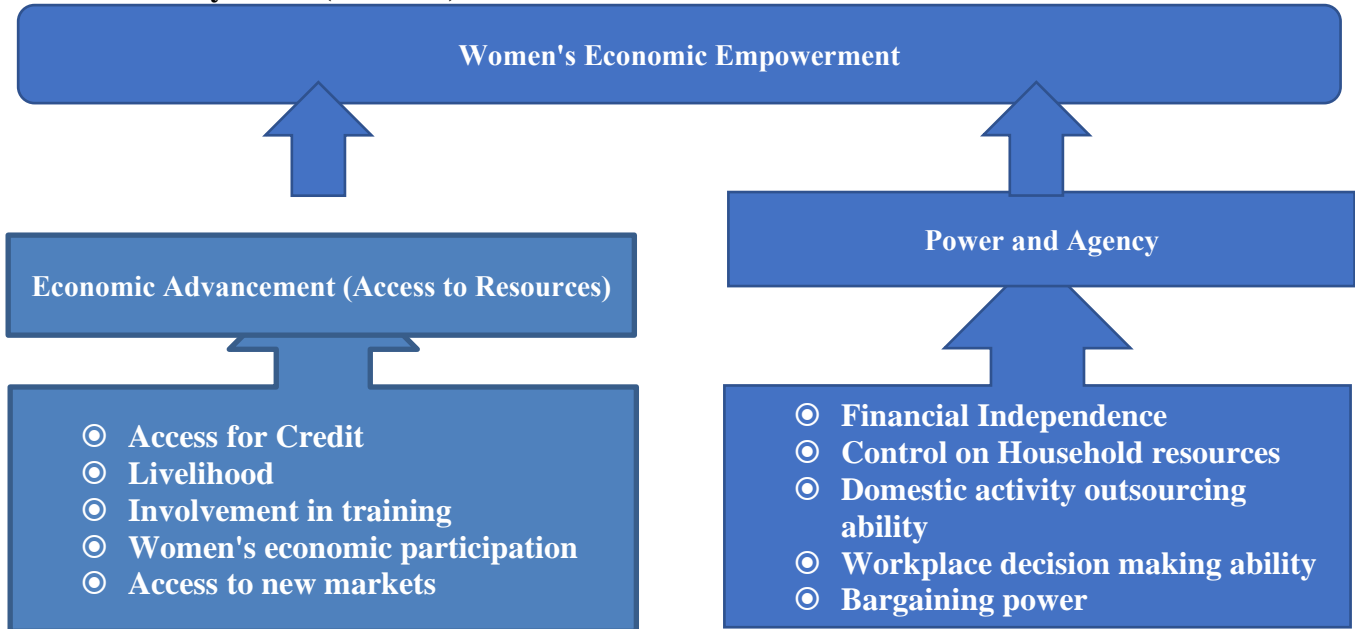
2.1.2.2 Research Design

Macro level quantitative study was used only to recognize the cause-and-effect relationship between wage and women's economic empowerment. That was unable to address a key concept in the study named "wage differential compensation" because of unavailability of macro level secondary data. Further, macro picture is not sufficient to understand behaviors of female at household level. Therefore, it was a necessity to conduct micro level analysis to achieve ultimate objectives of the research as a solution for limitations in macro level analysis. This is an inductive study.

The micro level analysis of the quantitative study involved in identifying the economic empowerment-based responsiveness or sensitivity of South Asian females for wage differential compensation. For this purpose, an index called Women's Wage Compensation Sensitivity Index (WWCSI) is constructed as the ultimate output of this analysis. This is the index which shows how sensitive South Asian women are to wage differential compensation in terms of economic empowerment. This index can be used to determine whether paying additional wage as a compensation to cover the extra opportunity cost of female workers is a successful tool to economically empower South Asian women.

Women's economic empowerment was measured by using two major dimensions namely "Economic Advancement" and "Power and Agency". According to International Centre for Research on Women, World Bank and UNDP access to credit, livelihood, involvement in training, women's economic participation and access to new market are the sub indicators used to measure "Economic Advancement". And "Power & Agency" is measured by five indicators namely financial independence, control on household resources, domestic activity outsourcing ability, workplace decision making ability and bargaining power. The whole process of mode of impact of wage differential compensation on women's economic empowerment can be presented in a diagrammatic form as in Figure 2.1.

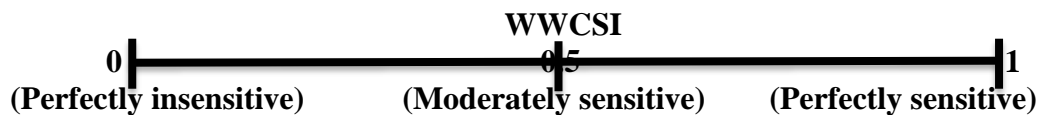
Figure 2.1: Conceptual framework for the Construction of Women’s Wage Compensation Sensitivity Index (WWCSI)



Conceptual framework in figure 2.1 shows the indicators of women empowerment that can be directly influenced by paying extra wage to female workers as compensation to cover the extra opportunity cost that they have to incur when joining the labour force.

WWCSI shows the responsiveness of South Asian women to above mentioned all dimensions and indicators of women’s economic empowerment, if they receive additional wage as compensation. This is constructed following Human Development Index (HDI) made by the United Nations Development Program (UNDP 2005) using the formula below (Haque *et al.*, 2011):

$$\text{Dimension Index} = \frac{\text{Actual Score} - \text{Minimum Score}}{\text{Maximum Score} - \text{Minimum Score}} \quad (2)$$



In line with model expressed above the study has tested following hypothesis in this micro level analysis of quantitative study.

Null Hypothesis 2: Compensating wage differentials for women to cover additional opportunity cost of work cannot economically empower women in South Asia.

Alternative Hypothesis 2: Compensating wage differentials for women to cover additional opportunity cost of work can economically empower women in South Asia.

2.1.2.3 Population and Sampling

Population:

A large collection of individuals or objects that is the main focus of a scientific query is known as the population. All the non-working married females in entire South Asian region is considered as the population under the micro level quantitative analysis in this study.

Sampling:

Sample is a group of subjects that are gained from a larger population for measurement. Micro level analysis is a deep investigation on macro picture showed in macro level analysis. Therefore, sampling process of this analysis should be similar to the previous analysis. Accordingly, micro level analysis also used non-probability sampling technique called purposive / judgmental /selective sampling which was used in the macro level analysis. Under this technique, this study also selected India, Sri Lanka, Bangladesh and Pakistan as the sample countries because those were the South Asian countries with least female labour force participation in 2018. However, simple random sampling technique was used when selecting respondents for each sample country. This study then collected a random sample of population from each sample countries. Married and coupled (age of 15+), non-working females who have kid/kids of age less than 18 years in India, Pakistan, Sri Lanka, and Bangladesh were the respondents of the sample. Sample size is 113.

2.1.2.4 Collection of Data

Data collection methods:

This study utilized the primary data that have being collected through a specially designed questionnaire with the survey covering four sample countries namely India, Pakistan, Sri Lanka, and Bangladesh which are characterized by lowest female labour force participation rate recent time (2018) in the South Asian region. This survey was conducted with the support of local committee and national committee branches of International Association of Students in Economic and Commercial Sciences (AIESEC) in the four selected South Asian countries. The primary survey questionnaire was given in form of google forms to local committee representatives of AIESEC in each country to collect data from the targeted group. The data collection took around two months (July and August of 2020).

Methods of measurement:

Women's economic empowerment is considered as the dependent variable in this micro level analysis. Female labour force participation rate female (% of female population ages 15+) which was estimated by International Labour Organization (ILO) is used to measure women's economic empowerment. The independent variable of this analysis is the women wage differential compensation and estimated hourly wage compensation was used to measure it.

All the variables employed in the model including dependent, independent & intervening variables, measurements and literatures that have supported for each variable are summarized in Table 2.2.

Table 2.2: Variables employed in the model (micro analysis) and supportive literatures

<u>Variable</u>	<u>Measurement</u>	<u>Intervenin g Variables</u>	<u>Intervening Variables</u>	<u>Variable Code</u>	<u>Supportive Literature</u>
Women's economic empowerment	(Labour force participation rate, female (% of female			FLFR	International Centre for Research on Women: Understanding and



(Dependent Variable)	population ages 15+) (modelled ILO estimate)				measuring women empowerment (Golla <i>et al.</i> , 2011) Naila Kabeer: Reflection on the measurement of women's empowerment (Kabeer, 2001)
Women wage differential compensation (Independent Variable)	Estimated hourly wage compensation			WWC	Introduced newly by author
		Economic Advancement	Access for Credit		UNDP (2011) and World Bank (2011) International Centre for Research on Women: Understanding and measuring women empowerment (Golla <i>et al.</i> , 2011)
			Livelihood		
			Involvement in training		
			Women's participation in economic activities		
			Access to New markets		
		Power and Agency	Financial Independence		International Centre for Research on Women: Understanding and measuring women empowerment (Golla <i>et al.</i> , 2011)
			Control of household resources		
			Decision making ability in workplaces		
			Bargaining Power		
			Ability to outsource domestic activities		Govindasamy and Malhotra: Women's Position and Family Planning in Egypt (Govindasamy and Malhotra, 1996)

					<p>Malhotra and Mather: Do Schooling and Work Empower Women in Developing Countries? Gender and Domestic Decisions in Sri Lanka</p> <p>(Malhotra and Mather, 1997)</p>
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Generally different rating scales have been developed to measure attitudes of the individuals. The most famous rating scale is Likert Scale. Five-point Likert scale was used when designing questioner for the survey to measure the sensitivity of females for wage differential compensation in terms of all the indicators of two major dimensions of women's economic empowerment namely economic advancement and power & agency. Five-point Likert scale is a form of psychometric response scale in which respondents express their level of preference or agreement to a particular statement in five points (*see Table 2.3*). Women's wage compensation sensitivity index (WWCSI) is constructed based on this survey results.

Table 2.3: Description of indicators and dimensions used in five-point Likert scale for constructing WWCSI

Dimension	Description of indicator	Coding	Measurement Scale for women's empowerment for wage differential compensation
ECONOMIC ADVANCEMENT (If an additional wage is paid as compensation to married women)	Women's participation in Economic activities (women's economic participation)	a) =Definitely work b) =Most probably work c) =Not very likely to work d) =Not work	a) 4 b) 3 c) 2 d) 1
	Involvement in training	a) =Increase greatly b) =Increase slightly c) =decrease greatly d) =decrease slightly e) = no change	a) 5 b) 4 c) 3 d) 2 e) 1
	Livelihood	a) =Improve greatly	a) 5



		b) =Improve slightly c) =decline greatly d) =decline slightly e) = no change	b) 4 c) 3 d) 2 e) 1
	Access to new markets	a) =Increase greatly b) =Increase slightly c) =decrease greatly d) =decrease slightly e) =no change	a) 5 b) 4 c) 3 d) 2 e) 1
	Access to Credit	a) =Increase greatly b) =Increase slightly c) =decrease greatly d) =decrease slightly e) =no change	a) 5 b) 4 c) 3 d) 2 e) 1
POWER & AGENCY (If an additional wage is paid as compensation to married women)	Control of household resources	a) =Wife (Respondent) only b) =Husband / Partner only c)=Wife (Respondent) and Husband/Partner both jointly d)=Wife (Respondent) and another person jointly e) =Someone else	a), c), d) 1 b), e) 0
	Financial independence	a) =Increase greatly b) =Increase slightly c) =decrease greatly d) =decrease slightly e) =no change	a) 5 b) 4 c) 3 d) 2 e) 1
	Bargaining power	a) =Increase greatly b) =Increase slightly c) =decrease greatly d) =decrease slightly	a) 5 b) 4 c) 3 d) 2 e) 1

		e) =no change	
	Decision making ability in workplace	a) =Increase greatly b) =Increase slightly c) =decrease. greatly d) =decrease slightly e) =no change	a) 5 b) 4 c) 3 d) 2 e) 1
	Ability to outsource domestic activities	a) =Increase greatly b) =Increase slightly c) =decrease greatly d) =decrease slightly e) =no change	a) 5 b) 4 c) 3 d) 2 e) 1

3. Analysis and Findings

3.1 Macro Level Analysis

This study established the relationship between female labour force participation and the determinants of female labour force participation. The dependent variable is female labour force participation and independent variables are wage, educational level, health and working poverty rate. Stationarity of variables were checked using “Levin Lin and Chu” (LLC) test. Female labour force participation rate was stationary at second difference. We used second difference because of absence of significant fluctuation in female labour force participation rate within sample countries. All the independent variables were stationary at the level. However, as the dependent variable is a ratio, the model ignored the stationarity at the second difference and considered the level data. Hence, variables in the model were finalized with level variables. Multicollinearity was checked by the “Variance Inflation Factor” (VIF), and it suggested that the model is free from that error.

The model was tested for both random effect and fixed effect. Table 3.1, column 01 gives the Random Effect model, column 02 gives the Fixed Effect model. The Hausman test recommended the suitability of Fixed Effect model. Hence, it was adjusted for heteroskedasticity. Table 02, column 03 shows Fixed Effect model adjusted to be robust.

Model estimates the relationship between wage and female labour force participation. Model is significant at 5% where R^2 overall is 64.99%. Hence it implies that overall, 64.99% variation in female labour force participation rate is explained by the independent variables included in the model. Wage is significant at 5% with a positive relationship. Other independent variables are not significant at least at 10%.

Table 3.1 : Results of model employed in micro level quantitative analysis

VARIABLES	(1) Random Effect	(2) Fixed Effect	(3) Fixed Effect, Robust
Educational Level	-0.0837 (-0.421)	0.428 (0.846)	0.428 (0.863)
Health	-0.199*** (-9.061)	0.144 (1.282)	0.144 (0.681)
Wage	0.00310 (0.0329)	0.516*** (3.490)	0.516** (3.580)
Working Poverty	0.298*** (4.396)	-0.267 (-1.001)	-0.267 (-0.532)
Constant	52.12*** (5.104)	-29.34 (-1.162)	-29.34 (-1.240)
Observations	45	45	45
R-squared	0.9073	0.6499	0.6499
Number of country ID	4	4	4

Note: t-statistics are given in parentheses and *** p<0.01, ** p<0.05, * p<0.1

Source: Results extracted from the STATA

There is a positive significant relationship between wage and female labour force participation rate. This means, higher wage higher the labour force participation of female and lower wage lowers the female labour force participation in South Asian region. Based on the results of the macro level analysis, we fail to reject the hypothesis.

3.2 Macro Analysis

3.2.1 Validation and measurement properties

Consistency and reliability both were tested to identify the reliability of the measures. Extent to which items measuring the concept move together as a set is identified as the consistency and Cronbach's alpha is used to measure the internal consistency reliability. That reliability coefficient says how well items in a set are positively correlated with one another. The coefficient value varies within the range of 0 to 1. If Cronbach's alpha of an item exceeds 0.7, which can be identified as an item with good and satisfactory reliability.

With reference to the table 3.2 , Cronbach's Alpha values of dimension 1 ("Economic Advancement" Dimension) and dimension 2 ("power and agency") are taking values of 0.857 and 0.802 respectively. Accordingly, Cronbach's Alpha of both the dimensions of women's economic empowerment mentioned above exceeds 0.7. This proves the reliability of the measures and dataset. Accordingly, it can be used for further analysis.

Table3.2 : Cronbach's Alpha and Model Summary

Dimension	Cronbach's Alpha	Variance Accounted For		
		Total (Eigenvalue)	Inertia	% of Variance

1	.857	4.380	.438	43.805
2	.802	3.591	.359	35.913
Total		7.972	.797	
Mean	.832 ^a	3.986	.399	39.859

a. Mean Cronbach's Alpha is based on the mean Eigenvalue.

Source: Data generated by SPSS v.20

Four conditions should be satisfied to achieve the validity.

1. KMO value should be greater than 0.5
2. Sig value of the Barlett's Test of Sphericity should be less than 0.5
3. AVE should be greater than 0.5
4. CR should be greater than 0.7

Table 3.3 : KMO and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.680
Bartlett's Test of Sphericity	Approx. Chi-Square	439.043
	df	91
	Sig.	.000

Source: Data generated by SPSS v.20

As per in Table 3.3, KMO value of all the variable (indicators of women empowerment) of the model is greater than 0.5, significance value of Bartlett's Test of Sphericity is less than 0.05. Moreover, AVE value and CR value have exceeded 0.5 and 0.7 respectively. Therefore, validity of the respective components is satisfied.

3.2.2 Testing hypotheses (Statistical Analysis) and Findings

Table 3.4 presents the comparative result of women wage compensation sensitivity by mean values of economic advancement and power & agency indices of sample countries. Economic advancement index value in overall South Asia is 0.844 while power and agency index value are 0.794. This means, women wage differential compensation can contribute for economic advancement of females than for the rise of women's power and agency. Mean value of those two major indices is calculated as women's wage compensation sensitivity index (WWCSI). Overall South Asia's WWCSI value is recorded as 0.819. This value is closer to perfect sensitivity in WWCSI index range.

All the four sample countries namely Sri Lanka, India, Pakistan and Bangladesh show a value greater than 0.8 for WWCSI within the country boundaries. Highest WWCSI value was showed by Pakistan while lowest value was recorded for Sri Lanka. All the sub-indicators of two major dimensions also show index value above 0.8 except for bargaining power index and workplace decision making index. This implies that, granting wage differential compensation will not be a very strong option to increase the household bargaining power and working place decision making ability. But wage differential compensation, have ability to strongly empower women in terms of all the other dimensions of economic empowerment of women.

Table 3.4 : WWCSI and its sub-indices in Sri Lanka, India, Pakistan, and Bangladesh

INDICATORS OF WWCSI													
	Economic advancement (mean value)						Power and agency (mean value)						W W C S I
	Women part. Index	Training index	Access to mkt. Index	Livelihood index	Access to credit index	Economic advanceme	Household ctrl. Index	Fin. Ind. Index	Bargaining index	Dec.ma. Index	Outsourcing index	Power and agency	
Sri Lanka	0.783	0.866	0.82	0.849	0.872	0.838	0.814	0.883	0.67	0.7	0.82	0.777	0.807
India	0.817	0.865	0.837	0.872	0.851	0.848	0.853	0.881	0.625	0.745	0.83	0.787	0.817
Pakistan	0.810	0.9	0.837	1	0.9	0.846	0.842	0.895	0.747	0.742	0.824	0.81	0.828
Banglade sh	0.812	0.864	0.838	0.87	0.848	0.846	0.830	0.881	0.7	0.745	0.827	0.804	0.825
South Asia	0.813	0.866	0.839	0.873	0.85	0.844	0.848	0.882	0.721	0.743	0.824	0.794	0.819

Source: Results generated by WWCSI calculation in the study

Table 3.5 presents the results of WWCSI and its sub-indices based on residence and educational level of South Asian women. According to the results, highest sensitivity for wage differential compensation is showed by rural female while urban females are showing slightly less sensitivity than rural women. Least sensitivity is recorded from estate sector. This concludes that, estate women are less likely to empower economically than rural and urban females although they are paid with wage differential compensation.

Moreover, with reference to the table 3.5, WWCSI value is lesser among highly educated females than the less educated females. This indicates that, females with low level of education are more likely to empower economically than women with high level of education if wage differential compensation is paid.

Table 3.5 : WWCSI based on residence and educational level

Criteria	Category	Indicators of WWCSI		WWCSI
		Economic advancement index (Mean value)	Power and agency index (Mean value)	

Residence	Rural	0.850	0.809	0.829
	Urban	0.847	0.802	0.825
	Estate	0.707	0.666	0.687
Education level	10 year or less	0.851	0.816	0.834
	10-14 years	0.850	0.809	0.829
	14 year or more	0.746	0.700	0.723

Source: Results generated by WWCSI calculation in the study

Note- Equal weightage is given for each dimension when constructing index because of insufficiency of further analytical information to determine specific weight.

Based on results of the micro level analysis, we fail to reject the hypothesis. Accordingly, compensating wage differential for women to cover additional opportunity cost of care work can economically empower South Asian women.

4. Discussion

According to the results of macro level analysis of the study, wage (labour income) is a key determinant of female labour force participation. Hence, women's wage increment can influence the rise of female labour force participation and economic empowerment of women. This means, a rising wage acts as a women's economic empowerment tool for women. Similar result is followed by S.Garikipati (Garikipati, 2006), O.Weber & A.Ahmad (Weber and Ahmad, 2014), F.W.Bayissa, J.Smits and R.Ruben (Bayissa, Smits and Ruben, 2017b).

Results in micro level analysis, show that WWCSI value of all the sample countries is greater than 0.5, which means South Asian females are relatively highly sensitive for wage differential compensation. Therefore, South Asian women can be economically empowered by paying additional wages or subsidies to compensate extra opportunity cost that working mothers have to incur because of household activities, domestic care etc.

Further, results show that WWCSI is highest in rural sectors compared to other sectors. However, although the urban sector is less sensitive to wage differential compensation than the estate sector, the gap between WWCSI values in the rural and urban sectors is significantly smaller. The lowest WWCSI value is recorded from estate sector. According to world bank group findings regarding women and law, sexual harassment in the workplace is high in low-income economies like estate areas and implementation of laws on harassment is not that much strong. This kind of unsafe working environment discourages estate females to join with labour force even though they receive an additional wage as compensation.

Moreover, there is a negative relationship between female education level and WWCSI value. Accordingly, sensitivity for wage differential compensation is relatively high among lower educated females and relatively low among high educated females. This finding implies that, priority given by educated females for non-wage factors is higher than the priority given for wage compensation when taking decisions related to labour force enrollment and economic empowerment. This is because they can already earn a decent salary with their higher education

level. Therefore, absence of wage differential compensation is not a significant factor affects for low economic empowerment among educated females. But less educated women are more sensitive to wage differential compensation because they have fewer "higher paying jobs opportunities" for their education level.

This research also identified relatively low wage differential compensation sensitivity in terms of power and agency with compared to economic advancement. This is mainly because of relatively low value in bargaining power index and workplace decision making index. According to Doss, labour income can influence only for little rise in bargaining power with compared to non-labour income because income that is not related to labour decisions does not affect the relative prices of home-produced goods and purchased goods (Doss, 1996). Further thematic analysis of the qualitative study revealed that the strength of the emotional relationship between husband and wife also affects the bargaining power of women. It found that wives with weak emotional ties with their husbands had a higher level of positive impact of wage differential compensation on bargaining power than wives with strong emotional ties. As per to Becker relatively low workplace decision making power can be there, because of gender based invidious and non-invidious discrimination and attitude of considering women as less important labour factor than men by both men and women (Becker, 1986). However, domestic work outsourcing index is relatively high in all four countries, which means additional wage is required for married women to fulfill domestic tasks like child care, household chores from the market.

Combining above results we can conclude that, in overall view, compensating wage differentials can definitely economically empower women in South Asian region. However, wage differential compensation is likely to be more productive among rural females and then among urban females. And wage differential compensation programme will be successful more among less educated females. This could be due to the opportunity cost of care being greater in more isolated rural settings, often necessitating paying to replace the 'care'; in the case of the less educated their salaries, compared to that of the more educated, could lead to paying for 'care' being a greater burden on them than for the well-educated, high earnings.

5. Conclusions and Recommendations

5.1 Conclusion

The study has done with two analyses in macro level and micro level. Accordingly, first phase of the research is done as a micro level quantitative analysis and then those quantitative results were followed up with an in-depth micro level quantitative study to explain how sensitivity of females for wage differential compensation vary with different consequences and with various dimensions of women's economic empowerment.

Macro level analysis of this study examined the relationship between wage and female labour force participation in the South Asian region. Using e longitudinal data model for period of 2000-2017 in Sri Lanka, India, Pakistan and Bangladesh that had the lowest female labour force participation rate recently (2018) in South Asia. Major finding of the macro level analysis in the quantitative study is the positive significant relationship between wage and female labour force participation. Micro level analysis in the study shows nature of economic sensitivity shown by South Asian females for wage differential compensation in micro level. This is done with use of primary data gained through a questionnaire survey from married and coupled, non-working females who have kid/kids of age less than 18 years in India, Pakistan, Sri Lanka, and Bangladesh. Ultimate output of this survey is the women's wage compensation sensitivity index (WWCSI).

Findings of micro level analysis proved that compensating wage differentials can economically empower women in South Asia. As per the results of macro level analysis of this study, wage is a key determinant of female labor force participation. Findings of micro level analysis suggest that, compensating wage differentials is a strong tool that can economically empower South Asian women. It further shows that, estate females are less sensitive for wage differential compensation than rural and urban females. And educated females show greater sensitive for wage differential compensation than non-educated females. This research also identified relatively low wage differential compensation sensitivity in terms of power and agency with compared to economic advancement dimension in women's economic empowerment.

5.2 Policy recommendations

Based on the results, South Asian women can be economically empowered by paying additional wage as compensation to cover extra opportunity cost of working mother. This compensating programme will be more effective in term of economic empowerment among rural and less educated females. However, to make this wage differential compensation more productive, it's necessary to focus on some other non-wage factors too. Establishing regulatory framework to minimize gender-based discrimination in firms, creating an efficient market for domestic activities with the intervention of government, removing social and cultural barriers for women's economic activation, expanding the flexibility of female jobs can be cited as some policy recommendations to make wage compensation programme more productive.

Government should come up with subsidization programme especially for urban females in order to turn housewives into own account worker because interest of females to earn at home is high. That may create employment opportunities for non-working neighboring females too. When implementing such subsidization rogramme, own account works of females should be monitored by Regional Secretary Office under regular basis. Subsidization should only be a temporary programme which will be stopping after female reach to growth level. Otherwise, females will tend to over depend on subsidies and also it will be a fiscal burden for the government.

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Appendices

Appendix 1:

Country	Source	Year	Mean nominal monthly earnings of female employees (US Dollars)
Sri Lanka	LKA - LFS - Sri Lanka Labour Force Survey	2015	160.24
		2016	160.48
Pakistan	PAK - LFS - Labour Force Survey	2015	99.79
		2017	113.3
Bangladesh	BGD - LFS - Labour Force Survey	2016	154.28
		2017	138.87
India	N/A	N/A	N/A