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Quantile Regression Analysis on Sex Wage Difference

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Abstract Based on the investigation data of social position of national women in the third phase by National Women's Federation and National Bureau of Statistics in 2010, regression analysis on sex wage difference is conducted. It is divided into two parts. The first part is the impact on wage by sex, and it is divided into whole country, eastern, central and western regions. The second part is the impact on wage by different education backgrounds. It tries to explore sex wage difference situation at different positions of wage distribution, study if there exists "ceiling effect" or "floor effect" in population's wage distribution situation, sex wage difference situation in eastern, central and western regions and the education's impact on future income situations of men and women.

Key words Quantile regression, Sex wage difference, Ceiling effect, Floor effect

1 Introduction

At present, global female wage income is only equivalent to 77% of male wage income. According to the newest statistics of 2015, 1.3 billion women are employed in the world, while employed men reach 2 billion. Female employed population accounts for 46% of global total female, while male accounts for 72%[1]. The problem embodied by wage difference is more complex than single number, and it is because that it reflects the diversity of female living environment. Women and men always join in labor force in different manners, and are treated differently by employers on the labour market.

2 Variable illustration

Sample object is between 18 and 60 years old. After eliminating the samples only completing special volume but not main volume and lacking some data, 16701 samples are obtained finally, in which 8768 male samples and 7933 female samples.

2.1 Explained variable The problem related to income in the questionnaire on Chinese women's social status in 2010 is personal annual wage income. To make contrast result more accurate and convenient for quantitative research, it is converted into hourly wage. According to working days of every week and working hours of every day, working hours of every week are counted, and hourly wage is obtained finally: hourly wage = monthly income/(4 weeks of every month * actual time of every week), and then natural logarithm of hourly wage is obtained for regression analysis. The model uses the method of most researches to take logarithm of the explained variable. It is because that bias is easy to appear by using non logarithmic variable estimation, and logarithmic wage income could make the wage income distribution close to normal distribution, and eliminate partial heterogeneity and the interference of special point[2].

2.2 Explanatory variables (i) Sex variable. It is divided into man and women. In this paper, man is 1, and woman is 0. (ii) Work experience. Actual ages of male and female laborers subtracts education age and 6 to obtain work experience. If laborer is not educated or the education age is primary school graduation level and below, work experience is age subtracting 16. It is because that the labour law stipulates that laborers could join in work only reaching 16 years old. In this paper, the square of work experience dividing 100 is used to show nonlinear relationship between age or work experience and wage income[3]. (iii) Marital status. According to signal theory, marital status affects the work and family of labour. In this paper, considering marital status of labour individual sample, the samples are divided into two kinds: married and not married, and not married samples contain unmarried, divorced, separated, and widowed situations. Married is 1, and not married is 0. (iv) Nationality. The Han Nationality is 1, and other is 0. (v) Political outlook. Party member is 1, and other is 0. (vi) Parental education. Seen from human capital theory, parental education affects children's human capital endowment. Parents illiterate or few literate is 1, parents with primary school education is 2, junior high school education is 3, senior middle school education is 4, secondary specialized school education is 5, junior college education is 6, undergraduate education is 7, graduate education is 8. (vii) City and countryside. Economy development level and income in China's city and countryside have large difference. City is 1, and countryside is 2. (viii) Region. It is divided into three regions: east, center and west. Economy development and residents' income are different in eastern, central and western regions of China. East is 1, center is 2, and west is 3. (ix) Dummy variable is shown as Table 1.

3 Research methods

Sex wage difference uses conditional mean for analysis. Although it is typical method, the research method in the mean sense is easy to cause bias. In this paper, quantile regression is used to study sex wage difference from different quantile of wage income distribution. Koenker and Bassett firstly proposed quantile regression;

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using quantile regression[4], Kuhn found that American women with high wage income were easier to be discriminated[5]; Buchinsky[6], Arulampalm and Mark were also famous economists using quantile regression to study sex wage difference in early period. Based on the theory of discrimination economics, human capital theory and signal theory, below econometric model is constructed in this paper[7].

Table 1 Illustration and assignment of the index

Name of variable	Meaning	Illustration
inc	Logarithmic hourly wage income	
sex	Sex	Man = 1, woman = 0
exp	Work experience	Age subtracting 16 when education level is primary school and below, and other is age – education age – 6
*exp*2	Square of work experience	
mar	Marriage	Married = 1, not married = 0
na	Nationality	Han Nationality = 1, other = 0
pol	Political outlook	Party member = 1, other = 0
fedu	Father's education background	Illiterate or seldom literate = 1, primary school = 2, junior high school = 3, senior middle school = 4, secon dary specialized school = 5, junior college = 6, undergraduate = 7, graduate = 8
medu	Mother's education background	Illiterate or seldom literate = 1, primary school = 2, junior high school = 3, senior middle school = 4, secondary specialized school = 5, junior college = 6, undergraduate = 7, graduate = 8
cx	City and countryside	City = 1, countryside = 2
quyu	Region	East = 1, center = 2, west = 3
*qy*1	Dummy variable of subdivided region	East = 1, other = 0
*qy*2		Center = 1, other = 0
*qy*3		West = 1, other = 0
*edu*1	Dummy variable of education degree	Illiteracy or primary school = 1, other = 0
*edu*2		Junior high school = 1, other = 0
*edu*3		Senior middle school = 1, other = 0
*edu*4		Secondary technical or vocational school = 1, other = 0
*edu*5		Junior college or above = 1, other = 0
*sedu*1	Dummy variable of subdivided higher education degree	Junior college = 1, other = 0
*sedu*2		Undergraduate = 1, other = 0
*sedu*3		Graduate = 1, other = 0
*ledu*1	Dummy variable of subdivided lower education degree	Illiteracy or primary school = 1, other = 0
*ledu*2		Junior high school = 1, other = 0
*ledu*3		Senior middle school or secondary specialized school = 1, other = 0

$$\ln W_j = c + G_j\alpha + X_j\beta + \varepsilon_j$$

In the model, woman takes 0, and man takes 1. $\ln W_j$ is logarithmic hourly wage, and G_j is sex dummy variable. X_j shows the influence factor vectors of sex wage difference, containing human capital factor, profession, region characteristics and marital status. ε_j is disturbance term; c is constant, and parameter α is sex wage difference; parameter β is marginal return vector of influence factor X_j.

Quantile regression could select any quantile for parameter estimation. Supposed that $\ln W_j$ is explained variable income, and X_j is explanatory variable of row K, under the condition of variable X_j, θ^{th} quantile of $\ln W_j$ is $q^\theta \frac{\ln W_j}{X_j}$, and $q^\theta(\ln W_j \mid X_j) = X_j\beta\theta$; $\ln W_j = X_j\beta(\theta) + \varepsilon(\theta)_j$; in which, it is supposed $q^\theta(\varepsilon(\theta) \mid X_j) = 0$ and $\theta \in (0,1)$. For different quantile θ, coefficient vector $\beta(\theta)$ is also different, and quantile estimation is obtained according to the formula.

$$\hat{\beta}(\theta) = \underset{\beta(\theta)}{arg\min}\{\sum_{(j:\ln W_j \geq X\beta(\theta))} \theta \mid \ln W_j - X_j\beta(\theta) \mid + \sum_{(j:\ln W_j < X\beta(\theta))} (1-\theta) \mid \ln W_j - X_j\beta(\theta) \mid\}$$

4 Quantile regression of whole country, eastern, central and western regions

Taking mean regression of classical hypothesis condition as the basis, quantile regression model is used to accurately fit related data. Explanation degree of each explanatory variable to income at different quantile is observed, and regression in whole country, eastern, central and western regions is conducted, obtaining respective statistical data. Seen from Table 2, based on OLS regression, average sex wage difference in whole country is 0.4531. Seen from quantile regression result, coefficients of income distribution at 10%, 50% and 90% of quantile are 0.4704, 0.4261 and 0.4192, showing as "floor effect". Other human capital fac-

tors affecting wage income are contrasted, such as education return. Education at each layer all has significantly positive effect on wage income, and higher education level could bring higher reciprocation. Started from 25% of quantile coefficient, inverted U type of distribution of work experience appears, which corresponds with actual situation. Generally speaking, with age or work experience increases to certain degree, wage income does not increase. The effect of marriage is significant, and there is a certain truth on "marrying firstly and then settling down". The influence level of nationality on wage income is the maximum at 25% of quantile, while influence effect of political outlook is less, and it shows declining trend from 25% of quantile. Father's education level has significant influence at 50%, 75% and 90% of quantile, and other level is insignificant. The influence of city and countryside on wage income gradually declines with the improvement of quantile. The influence is significant in eastern region, and it is insignificant in central region and shows negative effect. For labours, attractive force of eastern region is obviously higher than central region. Seen from Table 3, sex wage difference in eastern region is 0.4833. Seen from quantile regression result, the coefficients of wage income distribution at 25%, 50% and 90% of quantile are respectively 0.5258, 0.4647 and 0.4456. With the rise of wage income quantile, sex wage difference decreases, showing as "floor effect". Seen from education variable, each education level all has significantly positive effect on wage income. With the improvement of education level, the influence on wage income increases. For each education level, the higher the wage income, the smaller the sex wage difference. Quantile coefficient of work experience firstly declines and then rises, and the minimum is at 25% of quantile. Marriage has the largest influence on wage income at 25% of quantile, and then the higher the income, the less the marriage's effect. Maybe it is because that marriage makes both men and women obtain more profits for middle and lower income, such as commonly bearing mortgage. For high income, although marriage still has positive effect on income, individual possessing high income could deal with all sorts of big expenses, thereby decreasing the income's dependence on marriage. The nationality has smaller effect, and political outlook is only significant (0.1 level) at 50% of quantile. Father's education level does not have significant influence, while mother's education level has significant influence (0.1 level) at 25% and 90% of quantile and 0.01 level of significant influence at 50% and 75% of quantile. It illustrates that mother's education level has crucial influence on children wage income. Generally speaking, children family education is closely related to mother's knowledge and education. Maybe it is because that mother spends longer time on living with children in general family, and routine education is from mother's words and deeds. Seen from the city and countryside, its impact is larger at low quantile. Seen from Table 4, sex wage difference in central region is 0.5258, and the coefficients of income distribution at 10%, 50% and 90% quantile are respectively 0.5010, 0.5064 and 0.4280. Each education level all has positive effect on wage income, and returning rate rises with the promotion of education level. Returning rate of junior high school graduation is the maximum at 50% of quantile, while the maximum returning rate of other education level is at 10% of quantile, showing the trend of firstly declining, then rising and then declining. The education basically has larger influence at low quantile, while the influence at high quantile is relatively smaller. Seen from regression result, high education level may have certain advantage in obtaining high income. But if education is the same, high income may need other factors, such as exertion and opportunity. Starting from 25% of quantile, work experience shows inverted U type of trend, but the strongest effect on wage income is at 10% of quantile, with 0.0657 of coefficient. Marriage has 0.05 level of significant influence at 10% of quantile, while other has 0.01 level significant influence. With the increase of wage income, quantile coefficient becomes large. The nationality's impact on wage income is not significant, and political outlook has significant influence at low and middle quantile. Father's education level has significant influence (0.05 level) on wage income at 75% and 90% of quantile. But mother's education level only has significant influence (0.1 level) at 75% of quantile. Seen from Table 5, sex wage difference in western region is 0.3317, which is lower than that in whole country, eastern and central regions. Each education degree all has positive effect on wage income, and income is improved with education degree. Work experience shows declining trend with wage income increases, the higher the quantile, the lower the coefficient. Marriage has insignificant influence at 10% quantile and significant influence (0.05 level) at 25%, 50% and 90% of quantile. The maximum influence effect is at 90% of quantile, and the most significant influence is at 75% of quantile. The nationality's regression effect is significant (0.01 level), maybe it is because that living minority in western region is more, making that the factor has relatively larger impact on income. Political outlook has insignificant influence. Father's education factor has insignificant influence, while mother's education factor only has significant influence (0.1 level) at 75% of quantile. Urban-rural factor has significant influence. Moreover, with the rise of quantile, the coefficient is from high to low. The higher wage income level, the smaller the urban-rural influence. Contrasting eastern, central and western regions, based on OLS regression, sex wage difference is 0.4833 in eastern region, 0.5258 in central region and 0.3371 in western region. Seen from numerical value, sex wage difference is the maximum in central region and the minimum in western region. Whole country and eastern region show as "floor effect". Education factor has significantly positive effect on wage income in eastern, central and western regions. With the improvement of education level, wage income is correspondingly elevated. Work experience all has significantly positive effect in eastern, central and western regions, and work experience has certain correlation with income, but the influence degrees of each quantile are different in eastern, central and western regions. Marriage factor has different influences in eastern, central and western regions. Nationality and political outlook have different influence degrees on wage income in different regions. Pa-

rental education is related to children income condition, and has different influence degrees in different regions. In sum, mother's education level is more important for children. Urban-rural variable basically shows as that the higher the quantile, the lower the coefficient in eastern, central and western regions, illustrating that urban-rural impact on low wage income is larger than high wage income.

Table 2 Quantile regression result in whole country

Item	(1)OLS	(2)Q10	(3)Q25	(4)Q50	(5)Q75	(6)Q90
Senior middle school	0.4563***	0.4886***	0.4815***	0.4788***	0.4037***	0.3800***
	(19.350)	(11.894)	(15.695)	(18.969)	(12.531)	(9.967)
Secondary specialized school	0.6142***	0.7066***	0.6497***	0.6245***	0.5460***	0.4764***
	(19.691)	(13.310)	(16.165)	(18.703)	(12.721)	(9.414)
College degree or undergraduate	0.9132***	1.0738***	0.9396***	0.9235***	0.8296***	0.7628***
and above	(31.928)	(22.708)	(25.667)	(30.168)	(21.179)	(16.851)
Sex	0.4531***	0.4704***	0.4342***	0.4261***	0.4237***	0.4192***
	(34.956)	(21.034)	(25.562)	(25.982)	(24.167)	(20.267)
Work experience	0.0462***	0.0482***	0.0381***	0.0446***	0.0466***	0.0420***
	(11.421)	(6.723)	(7.148)	(10.289)	(8.618)	(6.855)
Square of work experience	-0.0009***	-0.0010***	-0.0008***	-0.0009***	-0.0009***	-0.0008***
	(-12.313)	(-7.496)	(-8.141)	(-11.303)	(-8.928)	(-7.017)
Father's education level	0.0176**	0.0138	0.0141	0.0205***	0.0185**	0.0231**
	(2.549)	(1.125)	(1.540)	(2.773)	(2.009)	(2.107)
Mother's education level	0.0321***	0.0184	0.0239**	0.0315***	0.0411***	0.0212
	(3.988)	(1.322)	(2.269)	(3.659)	(3.768)	(1.643)
East	0.3243***	0.2970***	0.3118***	0.3123***	0.2766***	0.3175***
	(19.141)	(10.281)	(14.252)	(17.217)	(11.938)	(11.611)
Center	-0.0021	0.0357	-0.0037	-0.0301	-0.0323	-0.0271
	(-0.119)	(1.193)	(-0.164)	(-1.598)	(-1.348)	(-0.950)
Constant	7.3658***	6.2170***	6.9299***	7.4765***	8.0697***	8.6226***
	(132.154)	(63.317)	(93.450)	(125.303)	(108.991)	(102.235)
N	16347	16347	16347	16347	16347	16347

Note: "*", "**" and "***" respectively show significance at 10%, 5% and 1% levels. The value in the bracket is t value of estimated coefficient. Regression also contains junior high school, marriage, nationality, political outlook and urban-rural variables.

Table 3 Quantile regression result in eastern region

Item	(1)OLS	(2)Q10	(3)Q25	(4)Q50	(5)Q75	(6)Q90
Senior middle school	0.4275***	0.5361***	0.4878***	0.3931***	0.3145***	0.2535***
	(11.128)	(8.582)	(9.323)	(9.918)	(7.925)	(4.227)
Secondary specialized school	0.5517***	0.7183***	0.6470***	0.5064***	0.4427***	0.3530***
	(11.373)	(9.345)	(9.938)	(10.125)	(8.705)	(4.546)
College degree or undergraduate	0.9294***	1.0794***	0.9505***	0.8628***	0.8552***	0.8298***
and above	(20.681)	(15.412)	(15.712)	(18.619)	(18.522)	(12.011)
Sex	0.4833***	0.5258***	0.4846***	0.4647***	0.4194***	0.4456***
	(24.183)	(16.279)	(17.677)	(20.114)	(20.441)	(14.300)
Work experience	0.0423***	0.0408***	0.0286***	0.0381***	0.0463***	0.0490***
	(6.915)	(4.118)	(3.427)	(6.048)	(7.451)	(5.287)
Square of work experience	-0.0008***	-0.0009***	-0.0007***	-0.0008***	-0.0009***	-0.0009***
	(-7.679)	(-4.869)	(-4.330)	(-6.933)	(-7.770)	(-5.304)
Marriage	0.1545***	0.1522***	0.2289***	0.1612***	0.0768**	0.0503
	(4.702)	(2.911)	(5.164)	(4.759)	(2.248)	(0.966)
Father's education level	0.0049	0.0071	0.0061	0.0104	0.0055	0.0067
	(0.469)	(0.425)	(0.425)	(0.973)	(0.515)	(0.424)
Mother's education level	0.0422***	0.0147	0.0275*	0.0396***	0.0365***	0.0341*
	(3.560)	(0.787)	(1.726)	(3.239)	(2.980)	(1.839)
Constant	7.8954***	6.6513***	7.4239***	8.1534***	8.5760***	9.0300***
	(79.915)	(42.805)	(55.231)	(80.079)	(85.207)	(59.804)
N	6672	6672	6672	6672	6672	6672

Note: "*", "**" and "***" respectively show significance at 10%, 5% and 1% levels. The value in the bracket is t value of estimated coefficient. Regression also contains junior high school, nationality, political outlook and urban-rural variables.

Table 4 Quantile regression result in central region

Item	(1)OLS	(2)Q10	(3)Q25	(4)Q50	(5)Q75	(6)Q90
Senior middle school	0.3769***	0.4250***	0.3671***	0.4060***	0.3708***	0.2817***
	(9.402)	(6.140)	(7.137)	(8.273)	(8.950)	(5.252)
Secondary specialized school	0.5864***	0.7272***	0.5826***	0.6074***	0.5270***	0.4259***
	(10.773)	(7.917)	(8.436)	(9.121)	(9.273)	(5.918)
College degree or undergraduate	0.7277***	1.0420***	0.7631***	0.7377***	0.6291***	0.4788***
and above	(14.336)	(12.564)	(11.888)	(11.886)	(11.873)	(7.216)
Sex	0.5258***	0.5010***	0.4886***	0.5064***	0.4707***	0.4280***
	(23.389)	(13.022)	(16.941)	(18.405)	(20.116)	(14.179)
Work experience	0.0532***	0.0657***	0.0443***	0.0504***	0.0431***	0.0409***
	(7.229)	(4.938)	(4.602)	(5.593)	(5.703)	(4.214)
Square of work experience	-0.0010***	-0.0013***	-0.0009***	-0.0010***	-0.0008***	-0.0008***
	(-7.925)	(-5.470)	(-5.232)	(-6.366)	(-6.218)	(-4.737)
Marriage	0.1714***	0.1584**	0.1327***	0.1499***	0.1740***	0.1944***
	(4.421)	(2.336)	(2.596)	(3.161)	(4.362)	(3.811)
Father's education level	0.0239**	0.0169	0.0223	0.0239	0.0280**	0.0348**
	(1.977)	(0.787)	(1.379)	(1.617)	(2.306)	(2.363)
Mother's education level	0.0224	-0.0107	0.0234	0.0244	0.0280*	0.0055
	(1.568)	(-0.418)	(1.239)	(1.401)	(1.908)	(0.297)
Constant	7.6111***	6.4170***	7.1091***	7.7134***	8.3420***	8.8879***
	(65.005)	(30.321)	(46.191)	(53.858)	(68.979)	(55.987)
N	5154	5154	5154	5154	5154	5154

Note: "*", "**" and "***" respectively show significance at 10%, 5% and 1% levels. The value in the bracket is t value of estimated coefficient. Regression also contains junior high school, nationality, political outlook and urban-rural variables.

Table 5 Quantile regression result in western region

Item	(1)OLS	(2)Q10	(3)Q25	(4)Q50	(5)Q75	(6)Q90
Senior middle school	0.5424***	0.5042***	0.4909***	0.5912***	0.5581***	0.5577***
	(11.756)	(5.435)	(8.154)	(10.783)	(10.542)	(6.703)
Secondary specialized school	0.6741***	0.7227***	0.6258***	0.7435***	0.6663***	0.6093***
	(10.678)	(5.752)	(7.681)	(9.904)	(9.193)	(5.264)
College degree or undergraduate	0.9931***	1.1815***	1.1310***	1.0230***	0.8668***	0.7503***
and above	(17.645)	(10.638)	(15.654)	(15.282)	(13.180)	(7.169)
Sex	0.3371***	0.3179***	0.2887***	0.3392***	0.3204***	0.3515***
	(13.202)	(6.346)	(8.640)	(11.171)	(11.117)	(7.693)
Work experience	0.0501***	0.0707***	0.0602***	0.0518***	0.0489***	0.0368***
	(6.324)	(4.405)	(5.755)	(5.496)	(5.559)	(2.731)
Square of work experience	-0.0009***	-0.0013***	-0.0012***	-0.0009***	-0.0009***	-0.0007***
	(-6.543)	(-4.607)	(-6.219)	(-5.528)	(-5.604)	(-2.676)
Marriage	0.1494***	0.1093	0.1092**	0.1063**	0.1154***	0.1715**
	(3.858)	(1.423)	(2.121)	(2.309)	(2.684)	(2.565)
Father's education level	0.0269*	0.0073	0.0233	0.0268	0.0079	0.0339
	(1.902)	(0.246)	(1.220)	(1.598)	(0.498)	(1.289)
Mother's education level	0.0235	0.0438	0.0018	0.0263	0.0354*	0.0217
	(1.405)	(1.337)	(0.082)	(1.326)	(1.893)	(0.693)
Constant	7.2439***	5.9328***	6.6968***	7.2095***	7.8935***	8.5510***
	(69.712)	(28.214)	(48.609)	(58.410)	(68.010)	(48.160)
N	4521	4521	4521	4521	4521	4521

Note: "*", "**" and "***" respectively show significance at 10%, 5% and 1% levels. The value in the bracket is t value of estimated coefficient. Regression also contains junior high school, nationality, political outlook and urban-rural variables.

5 Quantile regression of education level

5.1 Quantile regression of high education population Seen from Table 6, undergraduate and graduate men and women are contrasted from whole income distribution, and it is found that education returns of women are all higher than men, which is significant at 0.01 level. Meanwhile, education return of undergraduate graduation is lower than graduate graduation. Marriage has positive effect on men and negative effect on women. For women with high

education level, marriage indicates needing a lot of time in caring family, thereby causing the waste of manpower capital. For men with high education, they need not spending too much time and vigour on housework and children. Father's education level is important to future wage income of children, especially boys. For girls, mother's education level has larger influence. Education levels of both father and mother have significant influence on girls (0.05 level), and mother's education level has larger influence. Father's education level has significant influence on boys(0.1 level), while mother's education level has insignificant influence. The influence of work experience on male income is larger than female. Said from the region, the influence on income by urban-rural factor is the maximum in western region. Seen from Table 7, education return of undergraduate man is higher than woman at 90% of quantile in eastern region, and male and female quantile coefficients are respectively 0.4392 and 0.2855. Marriage only has significant influence at 25% of quantile (0.5 level), and the influence on women is insignificant. Nationality, political outlook and father's education level have smaller influence. Mother's education level has insignificant influence on boys, significant influence of 0.05 level on girls at 25%, 70% and 90% quantile, and significant influence of 0.1 level at 50% of quantile. For future income of girls, mother's education level has larger influence. Urban-rural factor has insignificant influence on man and significant influence (0.01 level) on woman at 10% of quantile, illustrating that wage income of female low-income group could be affected by the urban-rural factor. Seen from Table 8, in high-education population of central region, at 10% of quantile, quantile coefficients of undergraduate and graduate graduation women are respectively 0.3147 and 0.7340, while male quantile coefficients are respectively 0.3355 and 0.7907, namely male education return is higher than women in high education population. Seen from Table 9, by comparing male and female education returns in western region, it is found that female education return rate is lower than man at 90% of quantile in undergraduate graduation group, and female education return is lower than man at 50% of quantile in graduate graduation group.

Table 6 OLS and quantile regression of high-education male and female wage equations in whole country

Item	Sex	(1) OLS	(2) Q10	(3) Q25	(4) Q50	(5) Q75	(6) Q90
Undergraduate	Male	0.2254***	0.2463***	0.1963***	0.1853***	0.1927***	0.2694***
	Female	0.3354***	0.3795***	0.4311***	0.3203***	0.3128***	0.2000***
Graduate	Male	0.7582***	0.6979***	0.6605***	0.6555***	0.6927***	0.9045***
	Female	0.9022***	0.9255***	0.8335***	0.8116***	0.8175***	0.6466***
Square of work experience	Male	-0.0012***	-0.0017***	-0.0011***	-0.0010***	-0.0011***	-0.0011***
	Female	-0.0004***	-0.0002**	-0.0003***	-0.0004***	-0.0004***	-0.0003***
Marriage	Male	0.1439***	0.1012	0.0970*	0.0543	0.0741	0.2048**
	Female	0.1385***	0.2697***	0.1939***	0.1112***	0.1052**	0.0538
Father's education level	Male	0.0232*	0.0285	0.0278**	0.0337***	0.0298**	0.0242
	Female	0.0333**	0.0322	0.0157	0.0229*	0.0248*	0.0687**
Mother's education level	Male	-0.0132	-0.0265	-0.0338**	-0.0100	0.0035	-0.0234
	Female	0.0344**	0.0203	0.0353**	0.0372***	0.0419***	0.0090
City and countryside	Male	0.0721	0.0713	0.1256**	0.1055*	0.0507	0.0725
	Female	0.2634***	0.5691***	0.1080	0.0890	0.1631**	0.3764***
East	Male	0.3079***	0.1388	0.1452***	0.2322***	0.3604***	0.4020***
	Female	0.1019**	-0.0022	-0.0522	0.0957**	0.2460***	0.3110***
Center	Male	-0.1821***	-0.1619*	-0.2390***	-0.2416***	-0.2013***	-0.1918**
	Female	-0.2942***	-0.1707**	-0.3282***	-0.2970***	-0.2878***	-0.2793***
Constant	Male	8.8904***	8.0362***	8.8124***	9.0626***	9.2900***	9.6516***
	Female	9.1419***	8.0990***	9.0795***	9.3790***	9.5255***	9.6309***

Note: "*", "***" and "****" respectively show significant influences at the levels of 10%, 5% and 1%. N male = 1620, N female = 1426. Regression also contains nationality and political outlook variables.

Table 7 OLS and quantile regression of high-education male and female wage equations in eastern region

Item	Sex	(1) OLS	(2) Q10	(3) Q25	(4) Q50	(5) Q75	(6) Q90
Undergraduate	Male	0.2692***	0.1705	0.2022***	0.2516***	0.3312***	0.4392***
	Female	0.3428***	0.3480***	0.4105***	0.3950***	0.3424***	0.2855***
Graduate	Male	0.8447***	0.7525***	0.7209***	0.9571***	0.8092***	0.9047***
	Female	1.0355***	0.9433***	1.0163***	0.9860***	0.9639***	0.9999***
Work experience	Male	0.0670***	0.0906***	0.0519***	0.0660***	0.0845***	0.0700**
	Female	0.0608***	0.0582**	0.0474**	0.0474*	0.0727***	0.0780***
Square of work experience	Male	-0.0012***	-0.0018**	-0.0010**	-0.0011**	-0.0015***	-0.0014**
	Female	-0.0010**	-0.0010	-0.0007	-0.0007	-0.0011**	-0.0012*
Marriage	Male	0.1508**	0.1262	0.1824**	0.0675	0.1062	0.2108*

(to be continued)

(continued)

Item	Sex	(1) OLS	(2) Q10	(3) Q25	(4) Q50	(5) Q75	(6) Q90
Nationality	Male	0.3240**	0.4407	0.2379	0.2632	0.2747	0.4547*
	Female	−0.0817	−0.0288	−0.0201	−0.0081	−0.1239	−0.1199
	Female	0.1969	0.0411	−0.0852	0.1912	0.2855	0.2202
Political outlook	Male	−0.1017*	0.0542	−0.0951	−0.0819	−0.1445**	−0.1298
	Female	−0.0497	−0.1214	−0.0715	−0.0506	0.0428	0.0046
Father's education level	Male	0.0276	0.0232	0.0374	0.0517*	0.0380	−0.0153
	Female	0.0070	0.0431	−0.0051	0.0181	0.0141	0.0157
Mother's education level	Male	−0.0065	−0.0496	−0.0346	0.0045	0.0092	−0.0266
	Female	0.0668***	−0.0131	0.0541**	0.0602*	0.0673**	0.0711**
City and countryside	Male	0.0755	0.1858	0.1423	0.0772	0.0271	0.0885
	Female	0.1292	0.4673***	0.0376	−0.0009	0.1136	0.3568**
Constant	Male	8.8904***	8.0362***	8.8124***	9.0626***	9.2900***	9.6516***
	Female	8.8235***	7.9686***	8.9179***	9.0124***	8.9832***	9.1642***

Note: "*", "**" and "***" respectively show significant influences at the levels of 10%, 5% and 1%. N male = 826, N female = 740.

Table 8 OLS and quantile regression of high-education male and female wage equations in central region

Item	Sex	(1) OLS	(2) Q10	(3) Q25	(4) Q50	(5) Q75	(6) Q90
Undergraduate	Male	0.1716***	0.3355***	0.1998*	0.1493*	0.0442	0.1714
	Female	0.3064***	0.3147***	0.3127***	0.2825***	0.2545***	0.2408
Graduate	Male	0.5798***	0.7907**	0.5220*	0.4182*	0.3671	0.3905
	Female	0.8258***	0.7340***	0.9833***	0.7767***	0.7526***	1.1511***
Work experience	Male	0.0563***	0.0687	0.0361	0.0184	0.0272	0.0770*
	Female	0.0590***	0.1163***	0.0678**	0.0205	0.0145	0.0374
Square of work experience	Male	−0.0009**	−0.0011	−0.0005	−0.0001	−0.0004	−0.0014*
	Female	−0.0009*	−0.0023***	−0.0011*	0.0001	0.0001	−0.0006
Marriage	Male	0.1296	0.4766**	0.1300	0.1004	0.1460	0.1083
	Female	0.0750	0.1496	0.1563	0.1040	0.1662	0.0299
Nationality	Male	−0.0871	−0.2938	−0.0948	−0.2077	−0.0274	0.2471
	Female	0.3789	0.7866***	0.2613	0.0522	0.2939	0.3289
Political outlook	Male	0.0200	0.1241	0.1115	0.0724	0.0208	−0.1396
	Female	0.0410	0.0746	0.1577*	0.0613	0.0106	0.0517
Father's education level	Male	0.0531**	0.0774*	0.0416	0.0141	0.0465*	0.0814**
	Female	0.0596**	0.0379	0.0425	0.0316	0.0549*	0.1155**
Mother's education level	Male	−0.0413	−0.0608	−0.0395	−0.0096	−0.0104	−0.0386
	Female	−0.0069	0.0236	−0.0016	0.0125	0	−0.0578
City and countryside	Male	0.0964	0.0118	0.1308	0.1423	0.1993*	0.1375
	Female	0.3805***	0.6200***	0.3329*	0.2403*	0.3734**	0.5164**
Constant	Male	8.9930***	8.0186***	8.8826***	9.5109***	9.4923***	9.1374***
	Female	7.8961***	6.0502***	7.5644***	8.6895***	8.6431***	8.7472***

Note: "*", "**" and "***" respectively show significant influences at the levels of 10%, 5% and 1%. N male = 431, N female = 344.

Table 9 OLS and quantile regression of high-education male and female wage equations in western region

Item	Sex	(1) OLS	(2) Q10	(3) Q25	(4) Q50	(5) Q75	(6) Q90
Undergraduate	Male	0.1850**	0.2388	0.2032***	0.1632**	0.0916	0.2119**
	Female	0.2770***	0.4803***	0.4302***	0.2706***	0.2429***	0.1776
Graduate	Male	0.6018**	0.3509	0.7725***	0.5460**	0.2872	0.8083***
	Female	0.4974	1.0368***	0.7828***	0.4301*	0.4368**	−0.0340
Work experience	Male	0.0956***	0.1555**	0.1033***	0.0592***	0.0682**	0.0807**
	Female	0.0249	0.0251	0.0195	0.0264	0.0344	0.0525
Square of work experience	Male	−0.0017***	−0.0029*	−0.0018***	−0.0008*	−0.0011*	−0.0014*
	Female	−0.0003	−0.0005	−0.0001	−0.0001	−0.0004	−0.0009
Marriage	Male	0.1645	0.0487	0.1944*	−0.0569	0.0189	0.2212
	Female	0.3203***	0.1992	0.3445**	0.2547***	0.1836**	0.3773**

(to be continued)

(continued)

Item	Sex	(1)OLS	(2)Q10	(3)Q25	(4)Q50	(5)Q75	(6)Q90
Nationality	Male	0.0920	-0.0461	0.0561	0.0910	0.1912**	0.1831*
	Female	0.0318	0.0514	0.0163	-0.0164	0.1423*	0.1367
Political outlook	Male	-0.0256	0.0536	0.0385	0.0442	0.0618	-0.1698*
	Female	-0.0558	-0.0844	-0.0303	-0.0144	0.0188	-0.0958
Father's education level	Male	-0.0242	-0.0177	-0.0134	0.0089	0.0061	-0.0345
	Female	0.0496*	0.0705	0.0296	0.0086	0.0267	0.0773
Mother's education level	Male	0.0058	0.0148	-0.0088	-0.0170	-0.0047	-0.0053
	Female	0.0332	0.0361	0.0306	0.0552**	0.0394	0.0781
City and countryside	Male	-0.0544	-0.0030	-0.1525	0.0364	-0.0006	-0.0707
	Female	0.3963**	0.8553***	0.3504	0.2050	0.1386	0.1206
Constant	Male	8.8370***	7.6322***	8.5243***	9.2483***	9.3108***	9.6295***
	Female	8.6921***	7.5536***	8.4539***	8.9440***	9.1534***	8.9719***

Note: "*", "**" and "***" respectively show significant influences at the levels of 10%, 5% and 1%. N male =345, N female =342.

5.2 Quantile regression of low-education population As shown in Table 10, according to coefficients of income distribution at different quantile, it is found that return rate of junior high school graduation is lower than senior middle school or secondary specialized school graduation, and education returns of man and woman are basically close. According to coefficient of income at different quantile, return rate of senior middle school graduation is lower than senior middle school or secondary specialized school graduation, and education returns of man and woman are basically close, which is significant at 0.01 level. Except at 10% of quantile of senior middle school graduation, female education return is all higher than male. Coefficients of male and female senior middle school graduation at 10% of quantile are respectively 0.2503 and 0.1339, illustrating that sexualgender discrimination of low-income woman is more serious. Father's education level only has significant influence on man at 25% of quantile (0.1 level) and insignificant influence on woman; mother's education level only has significant influence on man at 75% of quantile(0.05 level) and insignificant influence on woman at 90% of quantile, illustrating that mother plays very important role in daughter's further income. Seen from Table 11, in low-education population of region region, male junior high school graduation is insignificant at 75% and 90% of quantile, while female junior high school graduation is insignificant at 10% of quantile. In senior middle school or secondary specialized school graduation population, male and female coefficients at 10% of quantile are respectively 0.4598 and 0.4161, while male and female coefficients at 25% of quantile are respectively 0.4663 and 0.4549, illustrating that sexualgender discrimination received by low-income women is more serious. Seen from Table 12, male senior high school graduation in central region is significant (0.05 level) at 10% and 25% of quantile and has significant influence (0.01 level) at other quantile, while female senior high school graduation is insignificant at 10% of quantile. Seen from Table 13, male and female education returns are overall significant in western region (at 0.01 and 0.05 levels), at 50% of quantile of income distribution, quantile coefficients of junior middle school and senior middle school women are all lower than man. Marriage has significant influence on man in whole country, eastern, central and western regions. It only has significant influence (0.01 level) at 50% and 75% of quantile in whole country for female, and significant influence (0.1 level) at 90% of quantile. Marriage has insignificant influence on female in eastern, central and western regions. In summary, low-education male population has larger benefit from marriage. Nationality basically has insignificant influence on man and woman in eastern and central regions and significant influence in western region. Political outlook has different effects at different quantile of different regions. In summary, quantile regression is significant in whole country. For male, father's education level and mother's education level have close effect, and their effects are different at different quantile of wage income. For female, mother's education level is more important.

Table 10 OLS and quantile regression of low-education male and female wage equations in whole country

Item	Sex	(1)OLS	(2)Q10	(3)Q25	(4)Q50	(5)Q75	(6)Q90
Junior high school	Male	0.2146***	0.2503***	0.2165***	0.2014***	0.1895***	0.1775***
	Female	0.2333***	0.1339**	0.2567***	0.2513***	0.2560***	0.2319***
Senior middle school or	Male	0.3828***	0.4248***	0.4031***	0.3853***	0.3310***	0.3207***
secondary specialized school	Female	0.4942***	0.4950***	0.4513***	0.4562***	0.5477***	0.5087***
Square of work experience	Male	-0.0006***	-0.0005**	-0.0004**	-0.0006***	-0.0008***	-0.0007***
	Female	-0.0001***	-0.0001**	-0.0001***	-0.0002***	-0.0001***	-0.0000
Marriage	Male	0.3468***	0.3727***	0.3598***	0.3604***	0.2656***	0.2614***
	Female	0.0991***	0.1241	0.0511	0.1117***	0.0926***	0.0837*
Father's education level	Male	0.0259**	0.0355	0.0295*	0.0229	0.0075	0.0000

(to be continued)

(continued)

Item	Sex	(1) OLS	(2) Q10	(3) Q25	(4) Q50	(5) Q75	(6) Q90
	Female	−0.0017	−0.0057	−0.0155	0.0023	0.0040	−0.0108
Mother's education level	Male	0.0177	0.0318	0.0167	0.0249	0.0314**	0.0003
	Female	0.0573***	0.0735*	0.0633***	0.0575***	0.0315**	0.0305
City and countryside	Male	0.4050***	0.5108***	0.4432***	0.3403***	0.3191***	0.3182***
	Female	0.5677***	0.8917***	0.7794***	0.5176***	0.3596***	0.3746***
East	Male	0.4135***	0.5111***	0.4646***	0.3958***	0.2971***	0.3137***
	Female	0.2605***	0.2163***	0.2064***	0.3324***	0.2640***	0.2505***
Center	Male	0.1236***	0.1692***	0.1457***	0.1138***	0.0653**	0.0429
	Female	−0.0491*	−0.0654	−0.0818**	−0.0363	−0.0235	−0.0469
Constant	Male	7.9048***	6.8483***	7.5322***	7.9714***	8.4659***	9.2240***
	Female	8.0297***	6.8510***	7.5383***	8.0767***	8.6838***	9.2338***

Note: "*", "**" and "***" respectively show significant influences at the levels of 10%, 5% and 1%. N male = 7044, N female = 6275.

Table 11 OLS and quantile regression of low-education male and female wage equations in eastern region

Item	Sex	(1) OLS	(2) Q10	(3) Q25	(4) Q50	(5) Q75	(6) Q90
Junior high school	Male	0.1784***	0.3333***	0.2676***	0.1818***	0.0916	0.0689
	Female	0.2497***	0.1631	0.3521***	0.2888***	0.2455***	0.1263**
Senior middle school or	Male	0.3619***	0.4598***	0.4663***	0.3835***	0.2728***	0.2200**
junior college	Female	0.4683***	0.4161***	0.4549***	0.4490***	0.5239***	0.3643***
Work experience	Male	0.0151	−0.0182	0.0044	0.0180**	0.0412***	0.0297
	Female	0.0500***	0.0449	0.0231	0.0412***	0.0511***	0.0522***
Square of work experience	Male	−0.0004**	0.0001	−0.0003	−0.0004***	−0.0008***	−0.0006*
	Female	−0.0010***	−0.0011**	−0.0006**	−0.0009***	−0.0010***	−0.0010***
Marriage	Male	0.4296***	0.5257***	0.4626***	0.3950***	0.2256***	0.3581***
	Female	−0.0343	0.0247	0.0342	0.0482	0.0326	−0.0441
Nationality	Male	0.2119**	0.3929***	0.1930*	0.0996	0.1828*	0.1896
	Female	0.0704	0.1426	0.1575	0.0242	0.0177	−0.0190
Political outlook	Male	0.0755	0.1701**	0.0744	0.1201***	0.0242	−0.0346
	Female	0.0555	0.064	0.0266	−0.0653	0.0257	0.0692
Father's education level	Male	−0.0152	0.0271	0.0157	−0.0181	−0.0241	−0.0741**
	Female	−0.0047	−0.0133	−0.0133	0.0021	0.0045	0.0163
Mother's education level	Male	0.0349*	0.0314	0.0162	0.0471***	0.0236	0.0382
	Female	0.0602**	0.0375	0.0681**	0.0596**	0.0181	0.0459
City and countryside	Male	0.3533***	0.4894***	0.3741***	0.2795***	0.2734***	0.3770***
	Female	0.4887***	0.9296***	0.6954***	0.3781***	0.2781***	0.2557***
Constant	Male	8.6841***	7.6409***	8.2368***	8.7829***	9.0888***	9.6576***
	Female	8.0357***	6.9295***	7.6564***	8.2725***	8.6578***	9.1396***

Note: "*", "**" and "***" respectively show significant influences at the levels of 10%, 5% and 1%. N male = 2768, N female = 2338.

Table 12 OLS and quantile regression of low-education male and female wage equations in central region

Item	Sex	(1) OLS	(2) Q10	(3) Q25	(4) Q50	(5) Q75	(6) Q90
Junior high school	Male	0.1889***	0.2280**	0.1307**	0.1995***	0.1783***	0.2216***
	Female	0.1664***	−0.0493	0.1745***	0.1991***	0.1810***	0.2668***
Senior middle school or	Male	0.2582***	0.4154***	0.2692***	0.2513***	0.2425***	0.2126***
secondary specialized school	Female	0.5198***	0.5704***	0.5382***	0.4839***	0.5955***	0.5376***
Work experience	Male	0.0362***	0.0341	0.0304*	0.0208	0.0358***	0.0322**
	Female	0.0520***	0.1050***	0.0292*	0.0534***	0.0151	0.0295
Square of work experience	Male	−0.0008***	−0.0008*	−0.0007***	−0.0006**	−0.0007***	−0.0007***
	Female	−0.0010***	−0.0021***	−0.0007**	−0.0011***	−0.0003	−0.0006
Marriage	Male	0.3801***	0.3364***	0.3267***	0.3686***	0.2706***	0.2995***
	Female	−0.0021	−0.0463	−0.0726	0.0352	0.0635	0.0926
Nationality	Male	−0.0716	−0.0258	0.1187	−0.0268	−0.1510*	−0.2334**
	Female	0.0346	0.0735	0.0826	−0.0186	0.0297	0.0298

(to be continued)

(continued)

Item	Sex	(1)OLS	(2)Q10	(3)Q25	(4)Q50	(5)Q75	(6)Q90
Political outlook	Male	0.1930***	0.1698	0.2017***	0.1848***	0.0532	0.2000***
	Female	0.2207***	0.2121	0.3326***	0.3054***	0.1589**	0.0984
Father's education level	Male	0.0276	0.0437	0.0339	0.0471**	0.0146	0.0200
	Female	0.0029	-0.0493	-0.0183	-0.0030	0.0126	-0.0028
Mother's education level	Male	0.0229	0.0173	0.0191	0.0249	0.0362	0.0162
	Female	0.0448*	0.0419	0.0341	0.0675***	0.0100	-0.0158
City and countryside	Male	0.3079***	0.4244***	0.3902***	0.2347***	0.1905***	0.2310***
	Female	0.4890***	0.6296***	0.6653***	0.4790***	0.2405***	0.3517***
Constant	Male	8.4102***	7.2567***	7.8542***	8.6256***	9.1105***	9.6409***
	Female	7.6482***	6.2897***	7.4921***	7.7300***	8.7297***	8.9458***

Note:"*", "***" and "****" respectively show significant influences at the levels of 10%, 5% and 1%. N male =2305, N female =2074.

Table 13 OLS and quantile regression of low-education male and female wage equations in western region

Item	Sex	(1)OLS	(2)Q10	(3)Q25	(4)Q50	(5)Q75	(6)Q90
Junior high school	Male	0.2085***	0.2268**	0.1785***	0.2209***	0.2190***	0.1932**
	Female	0.2841***	0.2952***	0.2621***	0.2000***	0.2673***	0.3023***
Senior middle school or	Male	0.4846***	0.4599***	0.3755***	0.5076***	0.4937***	0.5150***
secondary specialized school	Female	0.5630***	0.5132***	0.5030***	0.4955***	0.5215***	0.6389***
Work experience	Male	0.0340***	0.0466*	0.0188	0.0404***	0.0420***	0.0172
	Female	0.0595***	0.0795***	0.0802***	0.0399***	0.0317	0.0623***
Square of work experience	Male	-0.0007***	-0.0010**	-0.0005*	-0.0008***	-0.0008***	-0.0003
	Female	-0.0011***	-0.0013***	-0.0014***	-0.0008***	-0.0006*	-0.0011***
Marriage	Male	0.2316***	0.2623**	0.2257***	0.2229***	0.1649**	0.1814**
	Female	0.0271	0.0905	-0.0994	-0.0571	0.0497	0.0412
Nationality	Male	0.4273***	0.4065***	0.4903***	0.5007***	0.3883***	0.2395***
	Female	0.2719***	0.2585***	0.2805***	0.3474***	0.2985***	0.1230*
Political outlook	Male	0.1198	0.0850	0.1910*	0.2734***	0.0775	-0.0064
	Female	0.1264	0.2105	0.1211	0.1573	0.2163	0.1649
Father's education level	Male	0.0821***	0.0161	0.0732**	0.0952***	0.0596*	0.0817**
	Female	-0.0098	-0.0226	0.0126	0.0262	-0.0035	-0.0716*
Mother's education level	Male	-0.0252	0.0425	-0.0301	-0.0154	-0.0232	-0.0425
	Female	0.0815***	0.1381**	0.0606	0.0683**	0.0677	0.1255**
City and countryside	Male	0.6307***	0.7195***	0.7251***	0.5980***	0.5864***	0.3978***
	Female	0.6422***	0.9165***	0.7724***	0.6727***	0.5286***	0.4107***
Constant	Male	7.7272***	6.5578***	7.4227***	7.5707***	8.2816***	9.1831***
	Female	7.1659***	5.5547***	6.4317***	7.4623***	8.1457***	8.3757***

Note:"*", "***" and "****" respectively show significant influences at the levels of 10%, 5% and 1%. N male =1971, N female =1863.

6 Conclusions

Firstly, seen from quantile regression results, average sex wage difference in whole country is 0.4531. Sex wage difference has asymmetry phenomenon at different positions of wage distribution. Sex wage difference at the end of wage distribution is larger than top, and sex wage difference of low wage income population is larger, showing as obvious "floor effect", but it is different in eastern and western regions. Sex wage difference of central region is the most serious, followed by eastern region, and the minimum difference is in western region. "Floor effect" is shown in eastern region, and employment attraction in eastern region is higher than central and western regions. Secondly, education has clear positive effect on wage income. With the improvement of education level, profit rate increases. Education benefit rate of population with different education levels rises with the increase of education level. It also affects sex wage difference, showing as that education benefit rate of population with high education level is lower than that with low education level. Meanwhile, population at higher quantile of wage income distribution has higher education profit rate than that at low quantile. Thirdly, work experience increases with age, but income decreases; marriage's influence weakens with the improvement of quantile level. But marriage has different influences on male and female income, and the influence is different at high and low quantile. In summary, male benefit rate is higher than female benefit. Comparatively speaking, man at low education level has larger benefit rate. Nationality and political outlook have different influences in different regions and at different income quantile. Compared with father's education level, mother's education level is more important to future wage income of children. Father's education level is more important to boys' future wage income. For girls, mother's education level has larger influence. Possible explanation

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every activity and every employee. Considering this fact, a systematic theoretical training should be carried out among all employees, so as to make them understand the significance of implementing activity-based costing, stimulate them to take an active part in it, and help them to learn about their own status and the role of they are playing.

7 Conclusion

In the process of literature reading, the author found that few scholars study the whole-process activity-based costing of project enterprises, and the existing studies are only limited to the calculation part of activity-based costing, lacking the value chain application. Under the traditional cost accounting model, construction enterprises can not carry out effective cost control for the whole agricultural water conservancy project, and the cost control of the agricultural water conservancy project rests on the budget formulation before the construction. Through the calculation and analysis of the construction process of the whole water conservancy project, it is possible to carry out accurate and effective cost control of the project. The determination of cost drivers is the focus of using activity-based costing. The function of cost accounting is generally assumed by the financial department of an enterprise. Due to the disconnection between financial staff and construction, the selection of cost drivers is unscientific and inaccurate. The ultimate goal of using activity-based costing is to make the cost data of agricultural water conservancy projects more detailed and accurate, and on this basis, to analyze the activity chain and value chain of agricultural water conservancy projects centered by activities, in order to find out non-value-added activities, optimize the enterprise's value chain, and perfectly save costs and create revenues. Therefore, cost control is of great importance for the management of enterprises concerning agricultural water conservancy projects. With the improvement of the modernization of enterprises in China, the implementation environment and conditions of activity-based costing are becoming increasingly mature. As an advanced cost control method, activity-based costing will definitely play an important role in the cost control of agricultural water conservancy projects in China, and its application prospect will be bright and broad.

References

[1] COOPER R, KAPLAN RS. How cost accounting distorts product costs [J]. Management Accounting,1988(6):20 - 27.
[2] COOPER R, KAPLAN RS. Measure costs right: make the right decisions[J]. Harvard Business, 1988:21 - 28.
[3] COOPER R, KAPLAN RS. How cost accounting distorts product cost [J]. Management Accounting, 1991:4.
[4] COOPER R, KAPLAN RS. Activited-based system[J]. Accounting Horizons , 1992: 9 - 11.
[5] YU XY. The basic framework of the new management system based on ABM[J]. Basic Framework of Modern Finance, 1994 (4): 54 - 56. (in Chinese).
[6] CHEN SQ. The modern cost management theory [M]. Beijing: China Renmin UP, 1998:25 - 48. (in Chinese).
[7] DU DL, LIU XS. One of the key activities of ABC[J]. Business Research, 2004(13): 35 - 37. (in Chinese).
[8] KANG YM. Recognition and classification of homework in activity based costing[J]. Research of Financial & Accounting, 2004,(9): 29 - 30. (in Chinese).
[9] LIU Y. Analysis of third party logistics enterprise cost drivers under activity based costing[J]. Business Accounting, 2012(1): 78 - 80. (in Chinese).
[10] XUE CF. Research on the optimal management of enterprise value chain activities based on competitive advantage[J]. Contemporary Economy, 2013(21):52 - 55. (in Chinese).
[11] ZOU HL. The application of activity based costing in enterprise cost management[J]. Accountant, 2015(15):22 - 23. (in Chinese).
[12] YOU XM. Analysis on the case of WXAH company by using activity-based cost management [D] . Nanjing: Southeast China University, 2014. (in Chinese).
[13] KOU ZJ. Discussion on the application of activity based costing in packaging enterprises[J]. Trade Practice, 2016 (8): 66 - 67. (in Chinese).
[14] SUN JZ. Application of activity based costing in construction enterprise cost management[J]. Economic Research Guide, 2012(8): 182 - 183. (in Chinese).

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is that mother could put her heart into daughter's education. The impact of urban-rural variable on female income is larger than male, and the impact at low quantile is larger.

References

[1] International Labour Organization. Working women [Z]. 2016. (in Chinese).
[2] XIE Y, EMILY H. Regional variation in earnings inequality in reform-era urban China[J]. American Journal of Sociology, 1996, 101 (4): 950 - 992.
[3] ROGER W. Differences in wage distributions between natives, non-refugees, and refugees[R]. Working Papers, 2008.
[4] KOENKER RW, BASSET T. Regression quantiles[J]. Econometrics, 1978: 33 - 50.
[5] KUHN P. Sex discrimination in labor markets: The role of statistical evidence[J]. American Economic Review, 1987, 77 (4): 567 - 583.
[6] BUCHINSKY M. The dynamics of changes in the female wage distribution in the USA: A quantile regression approach[J]. Journal of Applied Econometrics,1998, 13 (1): 1 - 30.
[7] ARULAMPALAM W, ALISON LB, MARK L. Is there a glass ceiling over Europe? Exploring the gender pay gap across the wages distribution [R]. ISER Discussion Paper, 2005.