DOI: 10.1111/ijsw.12117
Int J Soc Welfare 2014: ••: ••–••

INTERNATIONAL JOURNAL OF SOCIAL WELFARE
ISSN 1369-6866

Impact of enforcing a statutory minimum wage on work and quality of life of vulnerable groups in Hong Kong

Wong H., Ye S. Impact of enforcing statutory minimum wage on work and quality of life of vulnerable groups in Hong Kong

The statutory minimum wage (SMW) law was enforced in Hong Kong on 1 May 2011. To examine its impact, this longitudinal study measured the quality of life, job and pay satisfaction, monthly income, hourly rate and working hours of vulnerable groups ($n = 253$) before and after the legislation. The findings confirmed that the enforcement of the SMW induced a positive impact as intended. The introduction of the SMW induced a positive wage and employment effect on the vulnerable groups in Hong Kong without harming their employment rate. Job and pay satisfaction, as well as most domains of the quality of life (i.e., physical and psychological health, and environment), increased significantly. In general, the positive impact of the SMW was more prominent for employees who previously worked less than 18 hours a week and who had hourly rates less than 28 HKD. The implications of the findings are discussed in the social context of Hong Kong.

Key Practitioner Message: • *Enforcing minimum wage induced a positive impact on quality of life, job and pay satisfaction, and a monthly income of vulnerable groups.* • *The social relations (quality of life) decreased after implementing minimum wage for workers working longer than 18 hours a week.* • *Longer working hours is a key factor for the increase of a monthly income among the vulnerable groups.*

Hung Wong[1], Shengquan Ye[2]

[1] Department of Social Work, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong
[2] Department of Applied Social Studies, City University of Hong Kong, Kowloon, Hong Kong

Key words: minimum wage, wage effect, employment effect, job satisfaction, quality of life, vulnerable groups, Hong Kong

Hung Wong, Department of Social Work, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong
E-mail: hwong@cuhk.edu.hk

Accepted for publication 12 July 2014

Among different groups of poor people in Hong Kong, the surge of working poverty attracts increasing attention. Despite the economic recovery in 2005 and 2006, the number of working poor has continued to grow. In 2006, 13.1 per cent of the working population (representing 418,600 workers) earned incomes less than half of the median income of the working population. Between 1996 and 2006, the number of working poor whose earnings were below the marker had increased by 87.9 per cent (Wong, 2007). The Hong Kong Poverty Report of Oxfam Hong Kong (2012) showed that in 2012, nearly 10 per cent or 192,500 households (658,100 people) with at least one employed person had an income of less than half the median income of households with the same number of household members.

To alleviate working poverty, unions, non-governmental organisations (NGOs) and political parties jointly urged the Hong Kong Special Administration Region Government to introduce a statutory minimum wage (SMW) law. The government responded by launching in October 2006 a Wage Protection Movement (WPM) which was a wage protection campaign through the voluntary participation of employers. However, the coverage of the WPM was limited as it covered only cleaning workers and security guards.

According to the government, the main purpose of the SMW should be to forestall the payment of excessively low wages, and thereby protect vulnerable groups prone to exploitation. After heated debates between employers' associations and unions concerning the level of the first minimum wage protection, the SMW law was finally passed on 1 May 2011, setting the hourly rate level at 28 HKD. The question as to whether setting up the SMW is beneficial or harmful to the vulnerable groups (e.g., welfare recipients and women who have recently arrived in Hong Kong) has been the subject of long-lasting and intense debates among academic and legislative councilors. To address the concerns regarding the impacts of the SMW, the current

© 2014 The Author(s). International Journal of Social Welfare © 2014 International Journal of Social Welfare and John Wiley & Sons Ltd

longitudinal study examined a wide variety of aspects related to the job and quality of life of vulnerable groups before and after the legislation.

Vulnerable groups are 'marginalized, socially excluded, have limited opportunities and income, and suffer abuse, hardship, prejudice and discrimination' (Larkin, 2009, p. 3); however, the definition of 'vulnerable groups' is flexible and contextual. In the context of Hong Kong and the research objective, welfare recipients, new migrant women and low-paid workers were selected to participate in the study as they are the groups that are more strongly marginalised, socially excluded and have limited income, respectively.

Literature review

Economists are the major opponents of the minimum wage. Many have claimed that a minimum wage system would distort the price mechanism of the labour market and would increase unemployment (negative employment effect) among the least-skilled workers (Fowler, 2007; Neumark & Wascher, 2007). Brandon (2008) argued that a minimum wage lengthened the duration of a person's receiving welfare and caused a negative employment effect among welfare mothers. Burkhauser and Sabia (2007) reported that although there were minimum wage increases in the USA between 1998 and 2003, this did not affect the poverty rates. The minimum wage increases did not alleviate poverty, particularly among the working poor and single mothers, as promised. According to opponents, although the introduction of a minimum wage ostensibly helped vulnerable low-paid workers, it actually hurt the workers by reducing their employment opportunities and increasing their dependency on welfare. Therefore, a minimum wage would not alleviate the problem of poverty.

However, other economists have proposed the alternative view that a minimum wage offers substantial benefits to low-wage workers by increasing their wages (income effect) without inducing significant negative employment effects. Research has shown that the job losses reported in earlier analyses did not occur when the minimum wage was introduced nor when it was increased neither in the USA (Card, 1992a, 1992b; Card & Krueger, 1994; Dube, Naidu, & Reich, 2007; Fox, 2006; Katz & Krueger, 1992), in the UK (Dickens, Machin, & Manning, 1999; Machin & Wilson, 2004; Stewart, 2004) nor in several other European countries (see e.g., Dolado et al., 1996).

The implementation of the minimum wage has impacted on working hours. Stewart and Swaffield (2008) found that the introduction of the National Minimum Wage (NMW) in the UK reduced the basic working hours of low-wage workers by 1 to 2 hours per week. This finding indicated a negative employment effect aside from the rise in the unemployment rate. However, Connolly and Gregory (2002) obtained different results for female workers in the UK. They found no significant changes in the working hours of full- or part-time working women or in the probability of keeping a full- or part-time job or transiting between the two, after the introduction of NMW.

Dolado, Felgueroso, and Jimeno (2000) summarised the impact of the minimum wage on different countries that are members of the Organisation for Economic Co-operation and Development (OECD). The study concluded that the minimum wage had been an effective redistributive tool when no serious adverse effect on employment was made. Actually, the real earnings of the less skilled fell sharply in countries that lacked wage floors. Freeman (1996) pointed out that an appropriate minimum wage could be a modestly effective redistributive tool in both the UK and the USA, particularly when it was linked with other redistributive policies. Dickens, Riley, and Wilkinson (2009) investigated the impact of the rise of the minimum wage in the UK from 2001 to 2006. Their study emphasised that in most years the strongest wage growth was at the bottom of the wage distribution and for those workers who were directly affected by the increases in the NMW.

The Low Pay Commission in the UK proposed that different age groups, people with disabilities, workers from ethnic minorities, women and migrant workers should be given particular attention because most of them had low-paid jobs and worked in low-wage sectors. Therefore, they were more likely to be affected by the minimum wage (Low Pay Commission, 2008). This conclusion was also applicable to the case of Hong Kong. Vulnerable groups, including welfare recipients and women who had recently arrived in Hong Kong from Mainland China, were more likely to be affected by the minimum wage. This argument is the focus of the present study.

Most studies examining the impact of the minimum wage have centred on economic dimensions, such as employment, negative employment effect and income effect. Few have scrutinised the psychological dimensions, especially the effects on the quality of life of the affected groups and on their job and pay satisfaction.

Quality of life (QoL) is a multidimensional and comprehensive concept that reflects the situation and satisfaction of an individual towards different life aspects, including physical and psychological health, family life, social life and financial conditions. Sirgy (2011) reviewed several QoL indicator projects and concluded that QoL could be classified into six major theoretical concepts, namely: socio-economic development, personal utility, a just society, human development, sustainability and functioning. Many of these concepts included an economic aspect (income) as one of the QoL domains.

Int J Soc Welfare 2014: ••: ••–••
© 2014 The Author(s). International Journal of Social Welfare © 2014 International Journal of Social Welfare and John Wiley & Sons Ltd

Working condition, especially wages, is a relatively straightforward factor that affects QoL because it provides economic security. Income and subjective well-being have been found to be positively related (LaBarbera & Gurhan, 1997). Job pay has been consistently ranked as one of the most important determinants of a high QoL in Europe (Clark, 2001, 2005; Haller & Hadler, 2006).

Wage increases affect job satisfaction. Based on the British Household Panel Survey, Clark (1999) identified the positive effects of wages and wage increases on job satisfaction. However, no significant effect of the absolute amount of the wage alone was found. Based on the research findings reviewed above, the present study included a wide range of indicators to investigate the impact of the SMW on vulnerable groups in Hong Kong. Aside from common objective measures (i.e., hourly rate and monthly income), QoL, job and pay satisfaction were also investigated in the study. Hypotheses were developed based on the literature review and the local context in Hong Kong.

Hypotheses

H1: SMW has an overall positive impact on the work and life of vulnerable groups. Specifically, this study predicts that after the implementation of the SMW,

H1a. the QoL will improve;

H1b. job and pay satisfaction will increase; and

H1c. the monthly income will increase.

H2: Based on the thresholds adopted in the legislation, this study further hypothesised that the positive effect will be stronger for people with original hourly rates below 28 HKD,[1] as well as for those employees with original working hours of less than 18 hours per week.[2] Specifically, this study predicted that after the implementation of the SMW,

H2a. increases in the QoL, job satisfaction, pay satisfaction and monthly income of individuals with initial hourly rates below 28 HKD will be greater than those of individuals with initial hourly rates of 28 HKD or more; and

H2b. increases in the QoL, job satisfaction, pay satisfaction and monthly income of individuals who initially worked for less than 18 hours per week will be greater than those of individuals who initially worked for 18 hours or more.

H3: Following the view that a SMW tends to function as a redistributive tool, this study hypothesised that an averaging effect will be induced on the hourly rate and working hours of vulnerable groups. Specifically, this study predicted that after the implementation of the SMW,

H3a. the hourly rates of individuals who initially received an hourly rate below 28 HKD will increase, but a reverse effect will be observed for those employees who initially received an hourly rate of 28 HKD or more; and

H3b. the working hours of individuals who initially worked for less than 18 hours per week will increase. A reverse effect will be observed for those who initially worked for 18 hours or more per week.

Methods

Procedure

The present study used a two-stage stratified systematic sampling design. In the first stage, housing estates and residences were selected through random sampling. For each chosen housing estate, 50 residences were randomly selected. Within the selected residence, a screening questionnaire was administered to assess whether any household member met the criteria set in the present study for vulnerable groups. Household members who met the criteria were invited for an interview. The first round of data collection was carried out in May to September 2010, that is, 8 to 12 months before the enforcement of the Minimum Wage Legislation in May 2011.

To test the effect of the law, the participants were invited to take part in a follow-up interview on November 2011 to January 2012, that is, 6 to 8 months after the legislation was enforced. To increase the response rate, a reasonable amount of financial incentive was provided to the participants as appreciation of their help. Finally, the longitudinal survey achieved a successful rate of 63.7 per cent in retaining the participants.

Participants

Of the 397 participants who took part in the survey during Time 1, 253 of them responded to the questionnaires at Time 2, resulting in an attrition rate of 36.3 per cent. Independent-samples t-test showed no significant difference in the examined variables, except for the psychological health domain of QoL and hourly rate, both of which were significant only at the level of $p < 0.05$. Therefore, no substantial effect of sample attrition was found. Among the 253 participants, 107 were women who had recently arrived in Hong Kong (i.e., less than 7 years, without permanent resident status), 58

[1] This is the hourly rate threshold set in the SMW.

[2] Individuals working for less than 18 hours per week are not protected by the Employment Ordinance and not entitled to benefits such as a rest day, annual leave and severance pay. However, this group of workers will be covered in the SMW legislation.

© 2014 The Author(s). International Journal of Social Welfare © 2014 International Journal of Social Welfare and John Wiley & Sons Ltd

were recipients of the Comprehensive Social Security Assistance (CSSA) scheme (i.e., the sole income protection scheme in Hong Kong) and 88 were low-income workers (with monthly incomes of less than HK$5000). The mean age of the sample was 40.25 (SD = 11.70). One hundred and ninety-five were women. Most of the participants were married (n = 172). In terms of educational level, a majority of the respondents attained primary (n = 79) and secondary (n = 150) education. More than 60 percent of the participants (n = 161) lived in public housing estates (i.e., housing estates provided by the government for people with low or no income).

Measures

The research examined the effects of the minimum wage based on objective and subjective indicators. The subjective indicators included scales of pay satisfaction, job satisfaction and QoL. The objective indicators were hourly rate, working hours and monthly income.

Measurement of QoL WHO Quality of Life-BREF. The World Health Organization Quality of Life Group developed the WHOQOL-BREF scale. This brief version consisted of two overall measures and 24 items from four domains, namely, physical health, psychological health, social relations and the environment. As defined by the WHOQOL Group, QoL refers to 'individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns' (World Health Organization, 1997, p. 1). Since then, the short version was translated into various languages and validated in different local contexts and samples, such as the Chinese version for Hong Kong (Leung, Tay, Cheng, & Lin, 1997). All items of the WHOQOL-BREF were designed to ask respondents about their perception of their life in the previous month by using a 5-point Likert-type response format. Nonetheless, in the WHOQOL-BREF, one item asked respondents to rate the extent to which they were satisfied with their sex life. In Chinese culture, this topic is a private matter which should not be discussed with others, even in a questionnaire. Given its minimal relevance to the research objectives, the research team removed this item from the questionnaire to avoid unnecessary disturbance to the participants. Without this item, willingness to participate in the survey would increase, and respondents would provide valid answers. The Cronbach's alpha values of the WHOQOL-BREF scale in this research were 0.917 and 0.900 at Times 1 and 2, respectively.

Measurement of job satisfaction. The job in general (JIG) scale (Ironson, Smith, Brannick, Gibson, & Paul, 1989) was used to measure global job satisfaction. This scale contains 18 items for the general evaluation of one's job. The Cronbach's alpha values of the JIG scale in this research were 0.849 and 0.779 at Times 1 and 2, respectively.

Measurement of pay satisfaction. The job descriptive index (JDI) (Smith, Kendall, & Hulin, 1969) was a multidimensional measure of job satisfaction that assesses pay satisfaction, supervision, promotion, co-workers and so on. Only the pay satisfaction subscale (nine items) was used in this research. The instructions were similar to the JIG. This tool was recognised as the most carefully developed and validated instrument for job satisfaction (Spector, 1997). The Cronbach's alpha values of the JDI-Pay scale in this research were 0.757 and 0.626 at Times 1 and 2, respectively.

Results

Descriptive statistics

Table 1 presents the means and standard deviations of the studied variables at two time points, paired samples t-tests showing the values and significance of the mean differences, and the correlations between the two time points. As shown in Table 1, significant increases were

Table 1. Descriptive statistics, paired samples t-test and correlation.

	Mean (T1)	SD (T1)	Mean (T2)	SD (T2)	Mean difference	Correlation
Hourly rate	32.45	28.50	35.39	18.07	2.95	0.39**
Working hours	28.00	16.67	33.38	17.20	5.38**	0.37**
Monthly income	3138.92	1434.63	5012.90	3122.08	1873.98**	0.27**
Pay satisfaction	5.40	3.24	6.45	2.77	1.05**	0.28**
Job satisfaction	16.12	7.77	20.81	6.77	4.70**	0.26**
Quality of life (QoL)	51.10	7.17	52.66	6.29	1.56**	0.46**
QoL-Physical health	14.13	2.16	14.80	1.82	0.67**	0.28**
QoL-Psychological health	12.34	2.13	12.99	1.96	0.65**	0.39**
QoL-Social relations	13.55	2.27	13.23	2.22	–0.32	0.26**
QoL-Environment	11.07	2.55	11.63	1.95	0.56**	0.44**

**$p < 0.01$.

Int J Soc Welfare 2014: ••: ••–••
© 2014 The Author(s). International Journal of Social Welfare © 2014 International Journal of Social Welfare and John Wiley & Sons Ltd

Table 2. Correlations among variables for Time 1 and Time 2.

		Hourly rate	Working hours	Monthly income	Pay satisfaction	Job satisfaction	QoL	QoL Physical health	QoL Psychological health	QoL Social relations
Hourly rate	T1	1	—	—	—	—	—	—	—	—
	T2	1	—	—	—	—	—	—	—	—
Working hours	T1	−0.379**	1	—	—	—	—	—	—	—
	T2	−0.213**	1	—	—	—	—	—	—	—
Monthly income	T1	−0.135*	0.837**	1	—	—	—	—	—	—
	T2	0.241**	0.794**	1	—	—	—	—	—	—
Pay satisfaction	T1	0.294**	−0.236**	−0.067	1	—	—	—	—	—
	T2	0.173*	0.120	0.241**	1	—	—	—	—	—
Job satisfaction	T1	0.299**	−0.134*	−0.008	0.568**	1	—	—	—	—
	T2	0.172*	0.106	0.173*	0.524**	1	—	—	—	—
QoL	T1	0.090	−0.015	−0.013	0.362**	0.364**	1	—	—	—
	T2	0.155*	0.154*	0.208**	0.378**	0.410**	1	—	—	—
QoL Physical health	T1	−0.019	0.005	−0.015	0.131*	0.119	0.708**	1	—	—
	T2	0.083	0.037	0.047	0.252**	0.278**	0.710**	1	—	—
QoL Psychological health	T1	0.146*	0.024	0.037	0.306**	0.367**	0.849**	0.485**	1	—
	T2	0.118	0.168*	0.215**	0.328**	0.368**	0.878**	0.574**	1	—
QoL Social relations	T1	0.069	0.020	0.021	0.254**	0.280**	0.711**	0.257**	0.495**	1
	T2	0.157*	0.089	0.165*	0.279**	0.298**	0.746**	0.292**	0.515**	1
QoL Environment	T1	0.087	−0.079	−0.072	0.424**	0.365**	0.868**	0.506**	0.700**	0.476**
	T2	0.125	0.189**	0.218**	0.344**	0.360**	0.826**	0.448**	0.702**	0.472**

N = 253.
Note: The first row of correlations in each cell is for Time 1 and the second row is for Time 2.
*p < 0.05; **p < 0.01.
QoL, quality of life.

found on almost all variables, except for hourly rate and QoL in the social relations domain. The hourly rate increased and QoL in social relations domain decreased. However, both changes were non-significant. All the variables were relatively stable over the study period as indicated by the significant correlations.

Table 1 shows the mean levels and their changes over time. Table 2 presents the correlations between the key variables. Hourly rate was negatively correlated with working hours at both Times 1 ($r = -0.379$) and 2 ($r = -0.213$), whereas working hour was highly positively correlated with monthly income at both Times 1 ($r = 0.837$) and 2 ($r = 0.794$). Interestingly, hourly rate was negatively correlated with monthly income at Time 1 ($r = -0.135$), but was positively correlated with it at Time 2 ($r = 0.241$).

At Time 1, job and pay satisfaction were positively correlated with hourly rate ($r = 0.299$ and 0.294, respectively), but were negatively correlated with working hours ($r = -0.134$ and -0.236, respectively). Monthly income had no significant effect on the three types of outcomes. Similarly, QoL had no significant relationship with the three work variables (i.e., hourly rate, working hour and monthly income). At Time 2, several important changes were found in the correlation pattern. First, working hours were no longer negatively correlated with job and pay satisfaction. Instead, this factor became positively correlated with QoL. Second, QoL positively correlated with hourly rate, working hours and monthly income. Third, monthly income became positively correlated with job and pay satisfaction.

To test whether the SMW had a detrimental effect on the employment of vulnerable groups, a cross-tab table (see Table 3) was developed based on the employment status (as defined by whether the participants were engaged in any paid work in the last 7 days) before and after the legislation. At both Times 1 and 2, 163 (64.4%) individuals were employed, whereas 22 (8.7%) remained unemployed. Given that the number of people who found and lost their jobs was the same, no substantial negative employment effect was found.

Impact of SMW on outcomes related to life and work satisfaction

Four domains of life satisfaction. The above analyses show that the four domains of QoL were not always consistent in their mean level changes and correlations (e.g., several correlations were as low as 0.26). Hence, the four domains should be examined independently instead of being combined into a total score. To examine the changes before and after the SMW, repeated measures multivariate analysis of variance (MANOVA) was conducted, where the four domains of QoL were used as the dependent variables and the original hourly rate and working hours at Time 1 as two independent variables.

© 2014 The Author(s). International Journal of Social Welfare © 2014 International Journal of Social Welfare and John Wiley & Sons Ltd

Table 3. Employment status before and after the SMW.

		T2: Did you engage in any paid work in the last 7 days?		
		Yes	No	Total
T1: Did you engage in any paid work in the last 7 days?	Yes	163 64.4 per cent	34 13.4 per cent	197 77.9 per cent
	No	34 13.4 per cent	22 8.7 per cent	56 22.1 per cent
	Total	197 77.9 per cent	56 22.1 per cent	253 100.0 per cent

SMW, statutory minimum wage.

Table 4. MANOVA of four domains of QoL.

	F	Hypothesis df	Error df	p	Partial η^2
Hourly rate (T1)	1.920	4	246	0.108	0.030
Working hours (T1)	0.866	4	246	0.485	0.014
Time	10.414	4	246	0.000	0.145
Time × Hourly rate (T1)	0.450	4	246	0.773	0.007
Time × Working hours (T1)	2.870	4	246	0.024	0.045

MANOVA, multivariate analysis of variance; QoL, quality of life.

According to the hypotheses, the original hourly rate at Time 1 was recoded into two levels, that is, <28 HKD (less than the level of the SMW) versus ≥28 HKD (equal or greater than the level of the SMW). Similarly, the original number of working hours was also recorded, that is, <18 hours (less than the threshold for labour legislation protection) versus ≥18 hours (equal or greater than the threshold for labour legislation protection).

The hourly rate and working hours were based on participants' self-report total income and working hours in the month before survey. In the analysis, the model included three main effects (i.e., time, hourly rate and working hours) and two interaction effects (i.e., time × hourly rate, time × working hours). The main effect of time reveals whether there is an overall within-subject change of QoL from Time 1 to Time 2. The main effects of hourly rate and working hours indicate whether there is a between-subject difference of QoL between people with different original hourly rates and working hours. The interaction terms show whether the within-subject change of QoL differs between people with different original hourly rates and working hours.

As presented in Table 4, results from repeated measures MANOVA showed significant effects of time (Wilks' Lamda F (4, 246) = 10.414, p = 0.000, Partial η^2 = 0.145) and its interaction with working hour (Wilks' Lamda F (4, 246) = 2.87, p = 0.024, Partial η^2 = 0.045). Further univariate test revealed that the main effect of time was significant for all domains, except for the social relations domain (providing partial support to H1a). The interaction effect was significant for the physical health and social relations domains (see Figure 1). As indicated by the multiple comparison analyses, individuals who worked for less than 18 hours per week tend to experience a greater increase in the physical health domain of QoL and a less decrease in the social relations domain compared with their counterparts who worked for 18 hours or more per week. Therefore, H2b is supported. Changes in the four QoL domains were found to be similar (see Figure 2) for people with different hourly rates. Thus, H2a was not supported in terms of QoL.

Monthly income and job and pay satisfaction. For monthly income and job and pay satisfaction, results from repeated measures MANOVA (see Table 5) indicated a significant main effect of working hours (Wilks' Lamda F (3, 177) = 12.244, p = 0.000, Partial η^2 = 0.172), time (Wilks' Lamda F (3, 177) = 41.863, p = 0.000, Partial η^2 = 0.415), as well as its interaction with working hours (Wilks' Lamda F (3, 177) = 4.349, p = 0.006, Partial η^2 = 0.069). Further univariate testing revealed significant main effects of time on monthly income and both types of satisfaction, hence supporting H1b and H1c. The interaction effect of time with hourly rate was significant for pay satisfaction. Similarly, the interaction of time with working hours was significant for monthly income (see Figure 3). The subsequent multiple comparisons showed that the increase in the pay satisfaction of individuals with lower hourly rates was greater than that of their counterparts with higher hourly rates (supporting 'pay satisfaction' in H2a). Moreover, the comparison indicated that individuals with fewer working hours experienced a greater

Int J Soc Welfare 2014: ••: ••–••
© 2014 The Author(s). International Journal of Social Welfare © 2014 International Journal of Social Welfare and John Wiley & Sons Ltd

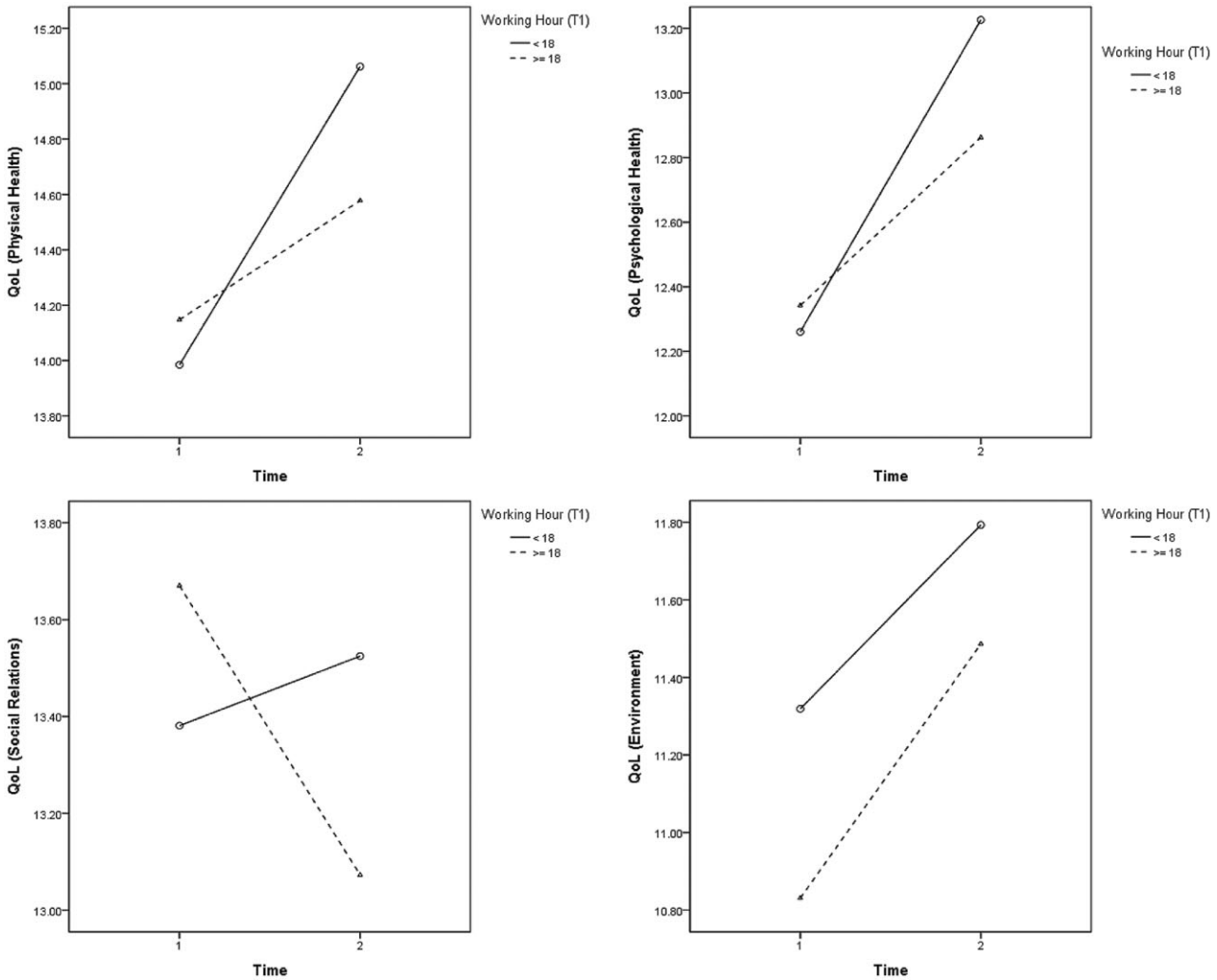

Figure 1. Changes in QoL by working hours.

increase in their monthly income than those with longer working hours (supporting 'monthly income' in H2b).

Impact of SMW on work itself

To investigate how the SMW influences working hours and hourly rate, similar repeated measures MANOVA were conducted with working hours and hourly rate as the dependent variables (see Table 6). The independent variables were the same as those in the previous analyses. The multivariate test showed significant effects of time (Wilks' Lamda F (2, 178) = 18.86, p = 0.000, Partial η^2 = 0.175) and its interaction with hourly rate (Wilks' Lamda F (2, 178) = 4.07, p = 0.019, Partial η^2 = 0.044) and working hours (Wilks' Lamda F (2, 178) = 11.68, p = 0.000, Partial η^2 = 0.116). The main effects of hourly rate (Wilks' Lamda F (2, 178) = 15.609, p = 0.000, Partial η^2 = 0.149) and working hours (Wilks' Lamda F (2, 178) = 31.096, p = 0.000, Partial η^2 = 0.259) were also significant.

Further univariate testing revealed the significant main effects of time on working hours and the significant interaction effect of time with hourly rate and working hours on the two work conditions. Further multiple comparison offered two interesting findings (see also Figure 4) that supported H3a and H3b. First, individuals with higher hourly rates tended to experience a decrease in their hourly rates, whereas their counterparts who had lower hourly rates reported increased hourly rates. This finding helped explain why no significant increase in hourly rate was found in the entire sample. Second, although an overall increase in working hours was found, such an increase was more dramatic for those with fewer working hours.

Discussion

This study examined the effect of the SMW on the work and life of vulnerable groups in Hong Kong. Two major findings were discussed in connection with the existing

© 2014 The Author(s). International Journal of Social Welfare © 2014 International Journal of Social Welfare and John Wiley & Sons Ltd

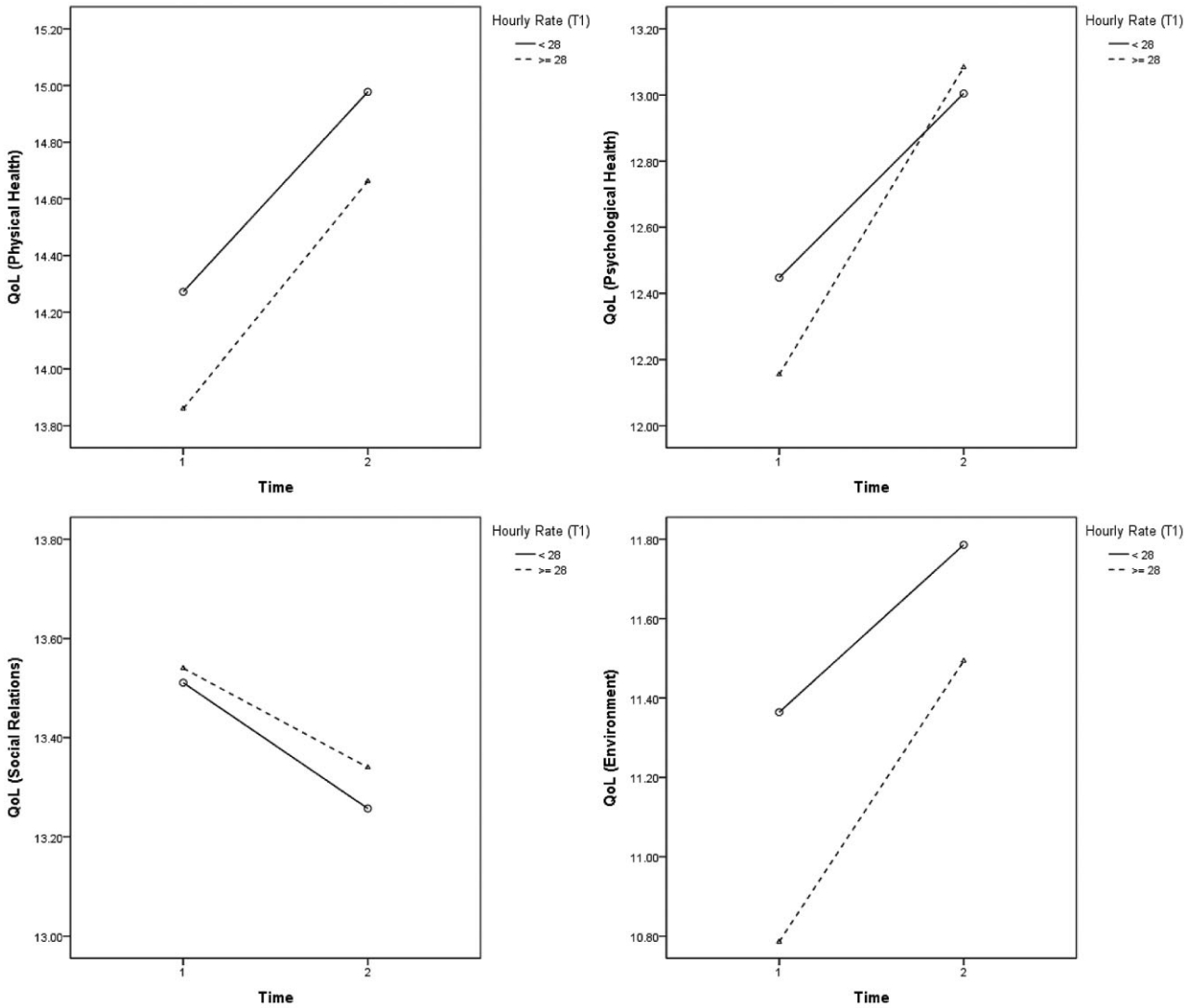

Figure 2. Changes in QoL by hourly rate.

Table 5. MANOVA of monthly income, job and pay satisfaction.

	F	Hypothesis df	Error df	p	Partial η^2
Hourly rate (T1)	1.867	3	177	0.137	0.031
Working hours (T1)	12.244	3	177	0.000	0.172
Time	41.863	3	177	0.000	0.415
Time × Hourly rate (T1)	2.005	3	177	0.115	0.033
Time × Working hours (T1)	4.349	3	177	0.006	0.069

MANOVA, multivariate analysis of variance.

literature and the local context. First, the SMW induced a positive impact, as it had intended, on several outcome measures related to life and work (e.g., QoL, job and pay satisfaction, and monthly income). Second, the positive impact of the SMW was more prominent for the more vulnerable workers, with fewer working hours and a lower hourly rate.

Positive impact of SMW on QoL satisfaction and income

Over the years, concerns and debates have been raised as to whether the SMW could really benefit vulnerable groups as was intended. Our findings clearly show that, after the enforcement of the SMW, dramatic increases

© 2014 The Author(s). International Journal of Social Welfare © 2014 International Journal of Social Welfare and John Wiley & Sons Ltd

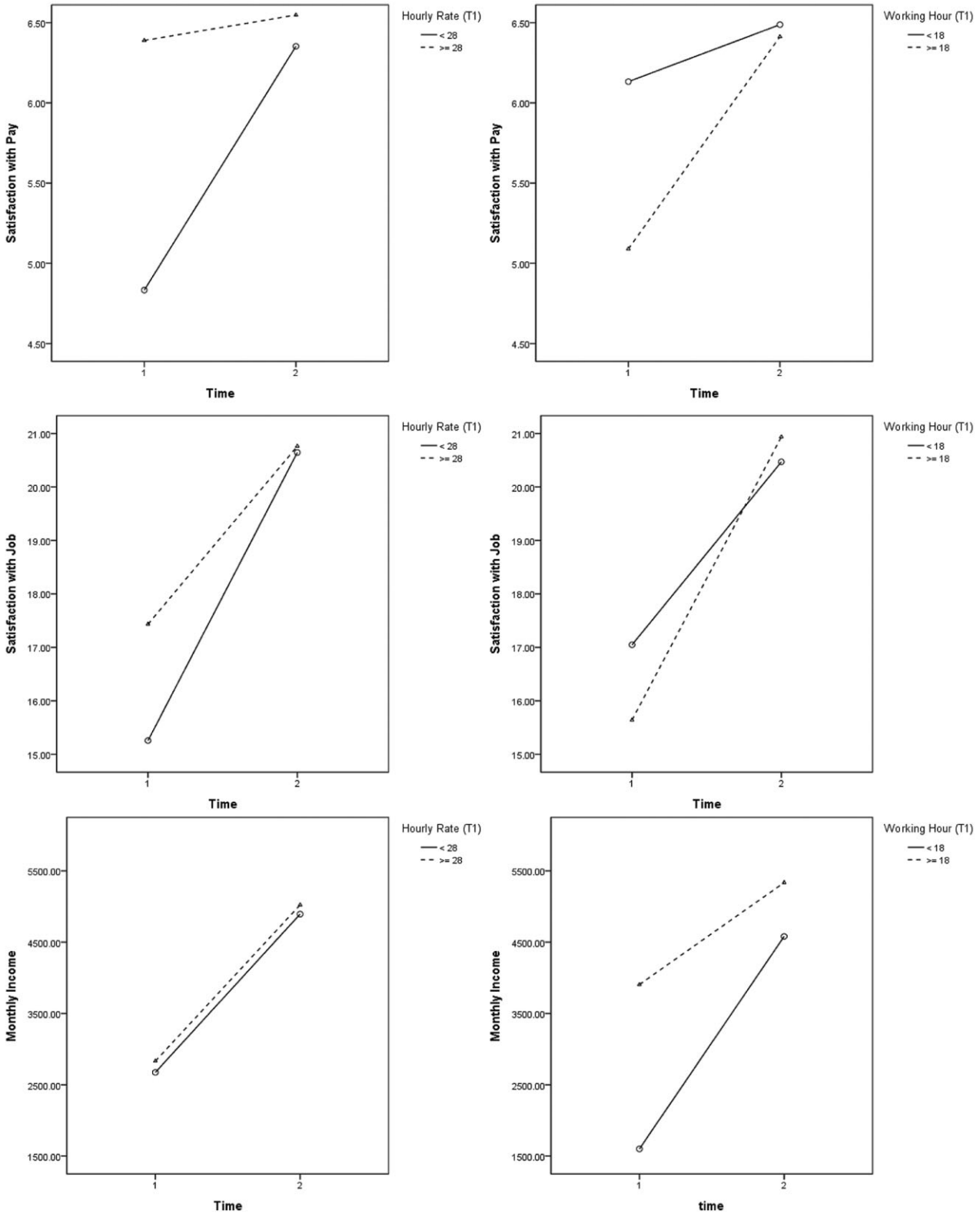

Figure 3. Changes in pay and job satisfaction by hourly rate and working hours.

© 2014 The Author(s). International Journal of Social Welfare © 2014 International Journal of Social Welfare and John Wiley & Sons Ltd

Table 6. MANOVA of hourly rate and working hours.

	F	Hypothesis df	Error df	p	Partial η^2
Hourly rate (T1)	15.609	2	178	0.000	0.149
Working hours (T1)	31.096	2	178	0.000	0.259
Time	18.855	2	178	0.000	0.175
Time × Hourly rate (T1)	4.066	2	178	0.019	0.044
Time × Working hours (T1)	11.680	2	178	0.000	0.116

MANOVA, multivariate analysis of variance.

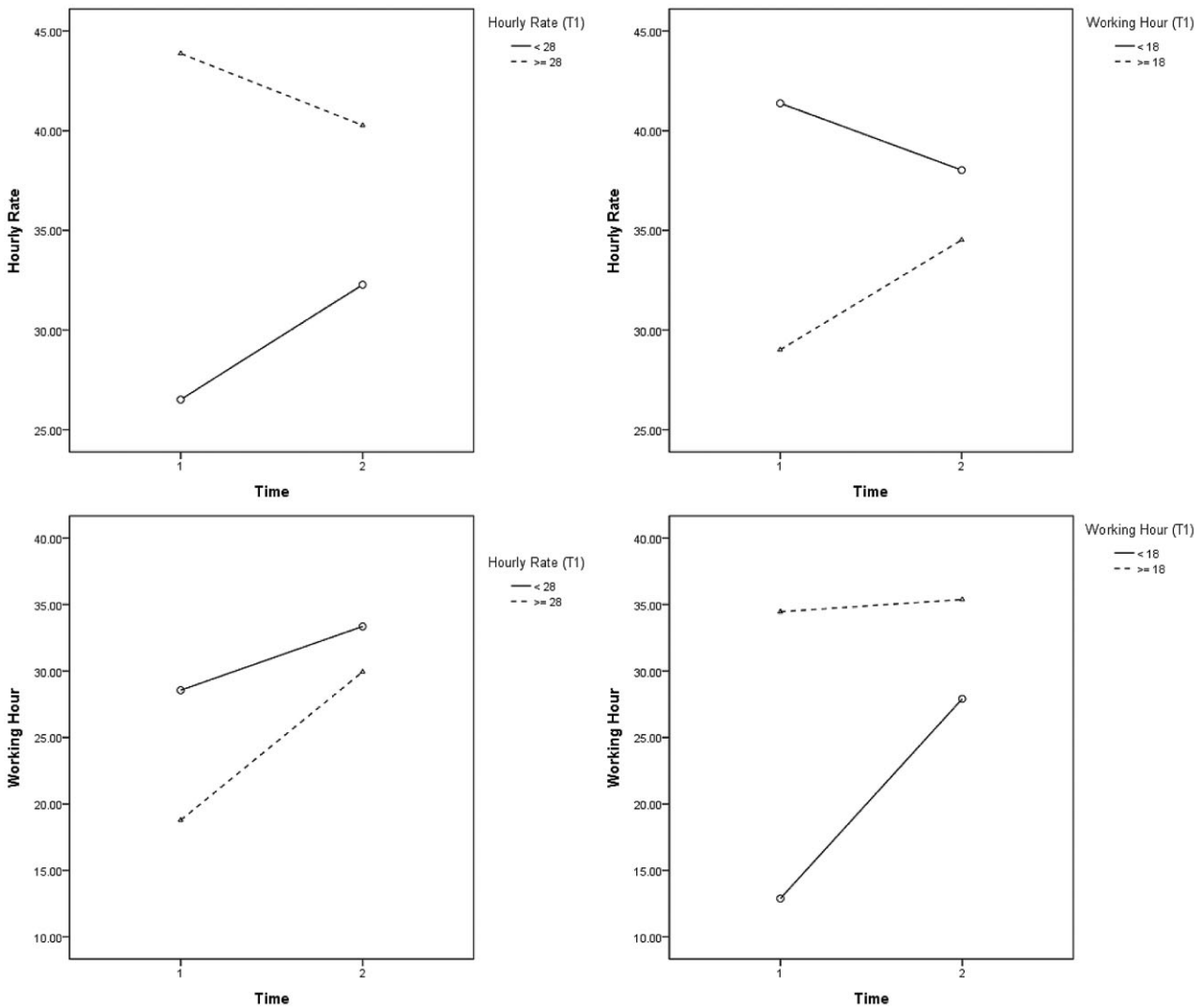

Figure 4. Changes in work conditions by hourly rate and working hours.

were experienced in most domains of QoL, job and pay satisfaction, and objective monthly income. These findings indicate the benefits of the SMW without sacrificing employment rate. All these findings provide solid evidence supporting the legislation in Hong Kong.

Recently, the Hong Kong government released the 2012 report by the Minimum Wage Commission (2012) which was based on the General Household Survey conducted by the Census and Statistics Department. Although the survey did not particularly focus on the vulnerable groups, the findings were, to a certain extent, consistent. For instance, the report showed an increase in the monthly income by 2.7 per cent among the public from May to July 2012, as compared with the same period in 2011. The percentage was considerably higher (8.1%) among the lowest decile group,

Int J Soc Welfare 2014: ••: ••–••
© 2014 The Author(s). International Journal of Social Welfare © 2014 International Journal of Social Welfare and John Wiley & Sons Ltd

suggesting that disadvantaged people actually benefitted more from the SMW. The report indicated that although several jobs in different sectors were restructured, the unemployment rate remained generally stable after the SMW, which was consistent with our findings as well. Interestingly, the report showed a slight decrease in the weekly working hours by 0.4 per cent 1 year after the SMW. However, our study reveals a significant increase in the weekly working hours among the vulnerable groups. This finding suggests that the employers of individuals belonging to vulnerable groups tend to adopt a different management strategy in response to the SMW by requiring the employees to work for a longer time.

An additional finding from our study is that the social relations domain of QoL decreased dramatically for those who worked for more than 18 hours before the legislation. This group of people remained working for long hours after the legislation (see Figure 4). Further analyses revealed that the decrease in the social relations domain of QoL took place mainly among the newly arrived women and low-income workers, but not among the CSSA recipients who worked for much fewer hours than did the former two groups. The findings raise the concern as to whether long working hours make it difficult for people to maintain their relationships with family and friends.

Interestingly, working hours did not correlate with the physical health and social relations domains of QoL, but correlated positively with the other two domains, which is a departure from previous findings (e.g., Verbakel & DiPrete, 2008). A possible reason is that the longer working hours may contribute to QoL through increasing monthly income. This explanation gains support from the findings based on partial correlation analysis which revealed that the correlation between working hours and the two domains of QoL became non-significant when monthly income was controlled. To further understand the impact of the SMW on the life of vulnerable groups, future research should examine how working hours and monthly income can affect the interaction and daily living of the families more specifically.

Differential impacts of SMW on different subgroups

This study provides evidence supporting the different effects of the SMW on different subgroups classified according to the thresholds set in the legislation. The increase in the working hours of individuals who had fewer working hours was more substantial than the working hours of individuals who had longer working hours. Longer working hours was a key factor for the increase of monthly income among this subgroup. Previously, individuals working below 18 hours a week belonged to the most vulnerable group in the labour market because the employment ordinance of Hong Kong does not protect these workers. They are not entitled to have benefits such as a rest day, annual leave or severance pay. Fortunately, the results show that the effects of the SMW are more prominent for this more vulnerable group in the labour market.

Similarly, positive wage effect is more substantial for individuals with hourly rates of less than 28 HKD. Given that the SMW sets the threshold to 28 HKD, this group of workers directly benefitted from the legislation. Consistent with our hypothesis regarding the averaging effect, individuals with higher hourly rates experienced a decrease in the hourly rates. However, the monthly income of both groups increased significantly. This result supports the view of Dolado et al. (2000) that minimum wage is an effective redistributive tool in which wages are redistributed from the groups receiving a higher hourly rate to the groups receiving a lower hourly rate. However, the former, whose productivity was usually higher, was allowed to work for a longer time to attain their total income increase.

Consistent with our findings, the report of the Minimum Wage Commission (2012) pointed out that workers with a lower education level and who are older than 55 years old had a higher percentage of monthly income increase after the SMW. Similarly, a higher percentage of increase in hourly rate was experienced by workers with a lower hourly rate. Specifically, the year-to-year increases of the hourly rate were 22.4 and 19.1 per cent for the 5th and 10th percentiles, respectively. However, given that the target populations of the survey and our study were different, the decrease of hourly rate in the subgroup with a higher hourly rate was not found in the report. Thus, how the difference relates to the unique job market for vulnerable groups is worth further investigation.

Implications and recommendations for policy research and practice

Using a longitudinal study to compare the changes in work and life of vulnerable groups before and after the enforcement of the SMW, this study provides new evidence showing that the successful implementation of a minimum wage generates a positive impact, as it intended. Particularly, this research shows that individuals belonging to the more vulnerable groups tend to obtain greater benefits from the legislation. Although certain redistributive and averaging effects exist, no substantive unemployment effect or other negative impact was found. The results ease the concern of policy makers, scholars and the public as to whether a SMW can be effectively implemented in Hong Kong.

The present study examined the impact of the SMW with a focus on psychological constructs, including

© 2014 The Author(s). International Journal of Social Welfare © 2014 International Journal of Social Welfare and John Wiley & Sons Ltd

QoL and job and pay satisfaction. The findings provide solid evidence that the SMW can provide vulnerable groups with objective and tangible benefits, such as increased monthly income, and with subjective and intangible benefits, such as improved QoL and job and pay satisfaction. The implementation of any social policy should not be achieved at the cost of psychological well-being. The positive impact on both objective and subjective aspects can firmly establish the effectiveness and usefulness of the SMW.

The moderate negative impact on social relations highlights the importance of a balanced work and family life. The enforcement of a SMW tends to lengthen the working hours of vulnerable groups, which may reduce their time for social interaction with family and friends. Thus, further research is needed to examine the specific process through which the enforcement of the SMW can affect the social relations and activities of low-income workers.

To achieve the goal of a SMW in improving the QoL of vulnerable groups, other relevant social policies and services can play important roles to ensure the effective implementation of a SMW for different subgroups of low-income workers. For example, women who have recently arrived in Hong Kong are family caregivers who have to take care of young children. They often have to take part-time jobs and work for less than 18 hours a week. Although attractive conditions are available in the labour market since the implementation of the SMW, they encounter difficulties in finding suitable and sufficient childcare services in the society. Therefore, their employment ratio and working hours have not increased substantially. Expanding childcare services can be one of the most effective ways to increase the positive effects of a minimum wage for women who have recently arrived in Hong Kong.

Our findings confirm that the vulnerable groups experience an increase in their income by working for longer hours. However, this result is not attributable to the increase of the hourly rate after the enforcement of the SMW. According to the Support for Self-reliance (SFS) scheme of the CSSA, able-bodied adults who are CSSA recipients aged 15 to 59 years must earn not less than HKD 1,755 from work per month, and should work 120 hours per month. Otherwise, they have to join the SFS scheme and find at least three jobs within 2 weeks. Some of the low-income CSSA recipients indicated that they were required to participate in the SFS scheme after their working hours were reduced after the implementation of the SMW, and this requirement confused them. The result of this study highly recommends that the current CSSA scheme be reformed. The current restriction on working hours in the CSSA system must be modified for the sake of motivating CSSA recipients to participate in the labour market again, and to engage in jobs with higher income, and thus increase their opportunities to leave CSSA and be alleviated from poverty.

Limitations of the study

This study has several limitations. First, because the SMW covers all people who are eligible, it is not practically possible to examine its impact by setting experimental and control groups using random assignment. It is possible that contextual variables, such as the economic climates and employment opportunities of specific sectors, may absorb the negative employment impacts of the SMW, as suggested by some economists. Upon completion of this study, we checked the economic data in 2011 and found that the GDP expanded by 4.9 per cent in Hong Kong, which is slightly higher than the average-trend growth of 4.5 per cent of the past decade. In addition, the annual inflation rate ranged from 4.05 to 5.28 per cent during 2011–2013. How the SMW was related to these specific economic issues was not examined in this study and needs further investigation.

Second, as it is not practically feasible to set up experimental and control groups, the present study investigated different impacts of the SMW on different vulnerable groups based on their initial working hours and hourly rate. These groups, however, can differ in various aspects such as occupation, monthly income and employability. These factors may confound the effects revealed in the present study.

Third, due to the restriction of the funding source, the second-wave data were collected only 6 to 8 months after the enforcement of the SMW. Interesting long-term effects of the legislation may be found if a longitudinal study collected more waves of data and covered a longer period.

Fourth, the sample size in this research was relatively small because of practical constraints in recruiting participants from vulnerable groups. The sample size limited the possibility to conduct a more detailed analysis. For instance, it would be interesting to run the analyses among different occupational or educational groups. However, due to the limited sample size, the groups often contained relatively few and an unequal number of cases, which prevented us from making a reliable estimation of the mean levels of each group. Though our findings were generally consistent with the Hong Kong government report that contained a considerably larger sample size, the different composition and target of the two research samples still, to some certain extent, limited the generalisability of our findings.

Acknowledgements

The work described in this article was fully supported by a grant (Public Policy Research, 7th Round) from

© 2014 The Author(s). International Journal of Social Welfare © 2014 International Journal of Social Welfare and John Wiley & Sons Ltd

the Central Policy Unit of the Government of the Hong Kong Special Administrative Region and the Research Grants Council of the Hong Kong Special Administrative Region, China (Project No. CUHK 4020-PPR-09).

References

Brandon, P. D. (2008). *Examining effects of minimum wages: Single mothers' exits from welfare*. Washington, DC: Employment Policies Institute.

Burkhauser, R. V. & Sabia, J. J. (2007). The effectiveness of minimum-wage increases in reducing poverty: Past, present, and future. *Contemporary Economic Policy*, *25*(2), 262–281.

Card, D. (1992a). Do minimum wages reduce employment? A case study of California, 1987–89. *Industrial and Labor Relations Review*, *46*(1), 38–54.

Card, D. (1992b). Using regional variation in wages to measure the effects of the federal *minimum wage*. *Industrial and Labor Relations Review*, *46*(1), 22–37.

Card, D. & Krueger, A. B. (1994). Minimum wages and employment: A case study of the fast-food industry in New Jersey and Pennsylvania. *The American Economic Review*, *84*(4), 772–793.

Clark, A. (2001). What really matters in a job? Hedonic measurement using quit data. *Labor Economics*, *8*, 223–242.

Clark, A. (2005). What makes a good job? Evidence from OECD countries. In S. Bazen, C. Lucifora, & W. Salverda (Eds.), *Job quality and employer behavior* (pp. 11–30). Basingstoke: Palgrave Macmillan.

Clark, A. E. (1999). Are wages habit-forming? Evidence from micro data. *Journal of Economic Behavior & Organization*, *39*, 179–200.

Connolly, S. & Gregory, M. (2002). The National Minimum Wage and hours of works: Implication for low paid women. *Oxford Bulletin of Economics and Statistics*, *64*(Suppl.), 607–631.

Dickens, R., Machin, S., & Manning, A. (1999). The effect of minimum wages on employment: Theory and evidence from Britain. *Journal of Labor Economics*, *17*(1), 1–22.

Dickens, R., Riley, R., & Wilkinson, D. (2009). *The employment and hours of work effects of the changing National Minimum Wage*. Research Report for the Low Pay Commission. London: Low Pay Commission.

Dolado, J., Kramarz, F., Machin, S. J., Manning, A., Margolis, D., Teulings, C., . . . & Keen, M. (1996). The economic impact of minimum wages in Europe. *Economic Policy*, *11*(23), 319–372.

Dolado, J. J., Felgueroso, F. J., & Jimeno, J. F. (2000). *The Role of the Minimum Wage in the Welfare State: An Appraisal*. IZA Discussion Paper No. 152. Bonn: The Institute for Study of Labour (IZA).

Dube, A., Naidu, S., & Reich, M. (2007). Economic effects of a citywide minimum wage. *Industrial and Labor Relations Review*, *60*(4), 522–543.

Fowler, T. A. (2007). *EPI minimum wage survey of labor economists*. Washington, DC: Employment Policies Institute.

Fox, L. (2006). *Minimum wage trends: Understanding past and contemporary research*. EPI Briefing Paper No. 178. Washington, DC: Economic Policy Institute.

Freeman, R. B. (1996). The minimum wage as a redistributive tool. *The Economic Journal*, *106*(136), 639–649.

Haller, M. & Hadler, M. (2006). How social relations and structures can produce happiness and unhappiness: An international comparative analysis. *Social Indicators Research*, *75*, 169–216.

Ironson, G. H., Smith, P. C., Brannick, M. T., Gibson, W. M., & Paul, K. B. (1989). Construction of a job in general scale: A comparison of global, composite, and specific measures. *The Journal of Applied Psychology*, *74*(2), 193–200.

Katz, L. F. & Krueger, A. B. (1992). The effect of the minimum wage on the fast-food industry. *Industrial and Labor Relations Review*, *46*(1), 6–21.

LaBarbera, P. A. & Gurhan, Z. (1997). The role of materialism, religiosity, and demographics in subjective well-being. *Psychology and Marketing*, *14*, 71–97.

Larkin, M. (2009). *Vulnerable groups in health and social care*. Thousand Oaks, CA: Sage.

Leung, K. F., Tay, M., Cheng, S. W., & Lin, F. (1997). *Hong Kong Chinese version World Health Organization Quality of Life–Abbreviated Version*. Hong Kong: Hong Kong Hospital Authority.

Low Pay Commission (2008). *National minimum wage: Low Pay Commission report 2008*. Norwich: The Stationery Office.

Machin, S. J. & Wilson, J. (2004). Minimum wages in a low-wage labour market: Care homes in the UK. *The Economic Journal*, *114*(494), C102–C109.

Minimum Wage Commission (2012). *2012 Report of the Minimum Wage Commission*. Retrieved from http://www.mwc.org.hk/en/downloadable_materials/2012MWCReport-Eng.pdf

Neumark, D. & Wascher, W. (2007). Minimum wages and employment. *Foundations and Trends in Microeconomics*, *3*(1–2), 1–182.

Oxfam Hong Kong (2012). *Oxfam Hong Kong poverty report: Employment and poverty in Hong Kong families (2003–2012)*. Hong Kong: Oxfam Hong Kong.

Sirgy, M. J. (2011). Theoretical perspectives guiding QoL indicator projects. *Social Indicators Research*, *103*(1), 1–22.

Smith, P. C., Kendall, L. M., & Hulin, C. L. (1969). *The measurement of satisfaction in work and retirement*. Chicago, IL: Rand McNally.

Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences*. Thousand Oaks, CA: Sage.

Stewart, M. B. & Swaffield, J. K. (2008). The other margin: Do minimum wages cause working hours adjustments for low-wage workers? *Economica*, *75*(297), 148–167.

Stewart, M. B. (2004). The impact of the introduction of the U.K. minimum wage on the employment probabilities of low-wage workers. *Journal of the European Economic Association*, *2*(1), 67–97.

Verbakel, E. & DiPrete, T. (2008). The value of non-work time in cross-national quality of life comparisons: The case of the United States vs. the Netherlands. *Social Forces; a Scientific Medium of Social Study and Interpretation*, *87*, 679–712.

Wong, H. (2007). *Employed, but poor: Poverty among employed people in Hong Kong*. Oxfam Hong Kong Briefing Paper. Hong Kong: Oxfam Hong Kong.

World Health Organization. (1997). *Development of the WHOQOL-BREF from the WHOQOL-100*. Geneva: WHO.

© 2014 The Author(s). International Journal of Social Welfare © 2014 International Journal of Social Welfare and John Wiley & Sons Ltd