PRAGUE UNIVERSITY
OF ECONOMICS
AND BUSINESS

Mechanism of Influence of Precarious Work on Political Participation: An Empirical Study Based on HKPSSD Data

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Abstract

Precarious work is characterized by flexible and nonstandard employment relations. It affects people's economic relationships and participation in social and political movements. Based on the data of the Hong Kong Panel Study of Social Dynamics 2015, this paper explores the influence mechanism of precarious work on political participation with political attitudes as a mediator. The results show that, for precarious workers, there is a significantly lower probability of institutionalized political participation and a higher probability of non-institutionalized political participation. Also, the young precarious workers have a lower probability of institutionalized political participation and a higher probability of non-institutionalized political participation than the middle-aged and the elderly. Political attitudes are a significant mediator between precarious work and political participation.

Keywords: economic globalization, precarious work, political participation, mediation effect

JEL Classification: F61, F66, E24, E26

1. Introduction

Precarious work in the global labor market, which is influenced by economic globalization, has received much attention from scholars. It is characterized by part-time, flexible, and nonstandard employment relations, which differs from the traditional work that is characterized by stability and standardization. It turns out that precarious work affects workers' wages (Gash and McGinnity, 2007; Qu, 2012) or job quality (Giesecke, 2009), results in the segmentation

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of the labor market (Li, 2018) and becomes an important structural factor of economic and social inequality (Hudson, 2007). Some scholars have also explored whether precarious work is more conducive for entering to a stable job market by developing workers' ability in the long term (McGinnity, Mertens and Gundert, 2008; Gash, 2008), or traps workers in temporary jobs and on the verge of unemployment, limiting their development (Mansson and Ottosson, 2011; Pedulla, 2016).

While these studies of "precarious work" are undoubtedly valuable, few studies have focused on the potential political impact of this new form of globalized work. In fact, those in precarious work are more vulnerable to low pay, unemployment, and lack of social security due to the lack of traditional stable employment relationships, making it difficult to build meaningful networks and structures to develop beneficial interpersonal trust and professional identity (Standing and Jandrić, 2015). In addition, due to the segmentation of the labor market, and the widening gap between the rich and poor, the lack of economic security also triggers precarious workers' sense of inequality and insecurity. The economic downturn, hopelessness, and dissatisfaction affect other areas, thus increasing the risk of socio-political instability. Recent years, precarious work has political effect as socio-political movements have intensified around the world, not least among those in precarious work (Lee and Kofman, 2012). Then, does precarious work affect individuals' political participation? And what are its mechanisms? Clarifying these two questions is the key to understanding the labor and social policy dilemmas in the system of economic globalization. To answer the questions above, this paper takes Hong Kong, China, the world's freest economy, as the subject of this study. It draws the data of Hong Kong Panel Study of Social Dynamics 2015 to build mediation models to examine the impact of precarious work on people's political participation in the context of globalization.

Specifically, the paper begins by introducing a discussion of the definition of precarious work. Following the empirical background of the research and illustrating how and why precarious work influences political life, the paper identifies the mediation effect of political attitudes. After that, the data, variables, and methods are introduced, followed by the section of data analysis. The article concludes with a discussion of the findings and the main implications.

In doing so, this paper brings unique contributions in two ways: firstly, it empirically analyses the influence mechanism of precarious work on political participation, extending the impact of employment patterns on people's social life from the economic to the political sphere, which leads to a more comprehensive understanding of the consequences of globalization. Secondly, a cohort analysis is conducted to subdivide the sample into two groups: youth, as well as middle-aged and elderly. It facilitates the understanding of the inherent differences in the impact of precarious work forms on different age groups.

2. Literature Review and Research Hypothesis

2.1 Situation and definition of precarious work

Precarious work is increasingly common and is expanding on a global scale. This expansion of precarious work is associated with social, economic, and political changes that have operated for several decades as production has also been globalized (Kalleberg and Hewison, 2013). It has also reshaped global socio-economic structures and institutions (Centeno and Cohen, 2012). Specifically, to maximize the profit, the public welfare function, taxes and labor market regulation should be reduced. The market can automatically achieve the optimal allocation of all resources, *i.e.* land, labor and capital, which requires a country to increase the flexibility of its labor market. Thus, a new type of employment – precarious work – emerges and expands rapidly around the world, which differs from the standard, typical and stable employment that developed during the industrial revolution. The previous stable employment was characterized by permanent employment, full-time work with fixed working hours and workplaces, and relatively stable social security and benefits (Li, 2018), which does not meet the requirements of flexibility. The requirements of working flexibility are fourfold. The first is quantitative flexibility, which means that companies can easily adjust their employment at no cost to adapt to economic trends. The second is functional flexibility, which means that organizations can easily adjust the skill requirements of their workforce to increase efficiency. The third is time flexibility, which allows companies to adopt more flexible working hours and duration of labor to improve their adaptability to market changes. The final one is wage flexibility, which means that wages can take the form of hourly, daily, weekly or monthly that can be adjusted quickly in response to changes in demand (Atkinson, 1984). Precarious work is the product of adapting to this shift in the elasticity of capital accumulation, which significantly reduces the cost of employers and managers (Fligstein and Shin, 2007).

Precarious work is an employment status in contrast to stable employment. Guy Standing (2011) regards stable employment as stable work, with fixed hours, and a known path to advancement, membership of a union and collective bargaining. Whereas precarious work is lacking these characteristics – short-term work with irregular hours, no clear path to advancement and upward mobility, and no protection of labor union. In this regard, the flexible employment and non-standard employment relations can be regarded as precarious work. According to Lv (2019), precarious work is a form of employment between long-term unemployment and employment, which is less stable and insecure in the labor market. Its characteristics include transitory and transient employment contracts, usually for less than a year; highly flexible working hours; lower payment than full-time workers; lack of general security programs. However, the definition of precarious work is ambiguous in the Chinese context (Standing, 2017a), but two key points can be identified from the above descriptions. The first is about the job category, which is generally part-time.

Full-time employment means that the workers have fixed working hours and workplaces, and therefore have the essential safety rights at work, which are not usually available to those in precarious work. The second is the duration of employment, as precarious workers are not usually employed by one employer in long term and have more flexible working hours to adapt to the flexible needs of the market. In summary, this paper will define precarious work in terms of job category and the duration of employment: precarious work is defined as non-full-time work (usually part-time) and for a non-permanent period (usually no more than one year).

2.2 Precarious work, political participation and political attitudes

People in precarious work are the working poor, unlike the traditional poor who are unemployed, and can be described as the "new poor" in a consumerist society (Xiong, 2015). The carrier of labor is not only the human being but also the citizen. The devaluation of labor through precarious work has resulted in social crisis in addition to the economic one. According to Granovetter and Swedberg (2001), people's economic behaviours are embedded in social relations, and social networks influence every aspect of their actions. In precarious work, the organized interaction between capital (companies) and labor (unions) gradually breaks down, people's networks weaken, fragmented collectives of interest prevail, and the sense of social solidarity is dissolved, plunging society into a crisis of atomization under a system of flexible accumulation.

Standing (2017b) pointed out that in the market-oriented global capitalism, the number of precarious workers is growing rapidly, and the risk is transferred to workers and their family, whose life stability is systematically reduced. However, economic uncertainty, unlike risk, cannot be fully countered by insurance, which is the major factor in the insecurity of the precariously employed. Precarious work has contributed to greater economic inequality, insecurity, and instability (Kalleberg, 2009). More and more people are suffering from economic insecurity, which implies political instability and the extreme trends. Recently, a growing number of precarious workers have sparked a series of protest marches against the exploitation, which shows the politics in places such as the Middle East, Western Europe and the United States (Lee and Kofman, 2012). Therefore, it is urgent and important to examine the politics of precarious work, *i.e.* the relationship between precarious work and political participation, in the context of economic globalization.

Scholars have different interpretations of the definition and classification of political participation in terms of the subject, legitimacy, mode and degree of participation (Shu, 2005; Shen, 2018), but political participation essentially refers to individuals or groups using their political rights and qualifications to influence the allocation of social resources by the political system in order to obtain their own political benefits (Liu *et al.*, 2015). Therefore, political participation can be

divided into two different forms: institutionalized political participation and non-institutionalized political participation, according to whether it conforms to the relevant procedures stipulated by law or the system (Chen, 2013). Institutionalized political participation refers to the participation in accordance with the procedures and requirements set out in laws, regulations and institutions, such as voting, joining elections and community activities. Non-institutionalized political participation refers to political activities that do not comply with the procedures and requirements stipulated by laws, regulations or institutions, including demonstrations and petitions. Political participation is the expression of citizens' democracy. Institutionalized political participation is beneficial to the political civilization, stability and harmony of a society, while non-institutionalized political participation may lead to social instability and conflicts (Fan and Zhang, 2006).

There is a strong link between socio-economic status and political participation. It is assumed that economic development will improve the material living standards of the citizens and raise people's absolute socio-economic status. When the material needs of individuals are met, the public can then devote themselves to public affairs and fight for their civil rights (Shen, 2018). Additionally, socio-economic development is conducive to social organizations and social groups, in which people can participate. As individuals participate in the various activities within these organizations, they also gain a better understanding of the public, acquire a sense of public consciousness and thus become more actively involved in the politics. Conversely, lower socio-economic status is associated with political apathy, with a positive correlation (Pateman, 1976; Verba *et al.*, 1995). People in lower socio-economic status often lack confidence in their influence in the political system and are less aware of their political efficacy. The stable employment that developed during the industrial revolution saw people enjoy formal, standardized and stable labor relations, with more stable and protected pay and a better socio-economic status through their work. In addition, workers are organized in labor unions and lead an institutionalized labor and organizational life. When people's rights are infringed or violated, they often make their voices heard through labor unions and other organizations. In precarious work, on the other hand, labor relations are non-standardized, more flexible than traditional labor relations. With high precariousness of income, they lack the necessary job security and income security, and their socio-economic status is relatively lower, so that job-based identity and occupational communities are not possible (Standing, 2011). Therefore, from the above discussion two parallel hypotheses can be formulated regarding the relationship between precarious work and political participation.

Hypothesis H_{1a}: Those in precarious work are less likely to take institutionalized political participation than the stable employed.

Hypothesis H_{1b}: Those in precarious work are more likely to take non-institutionalized political participation than the stable employed.

In addition, Standing (2011) pointed out that precarious workers are not the same, and that their own attitudes towards precarious work and their level of security vary, so they can be divided into different groups. In the case of the elderly, they return to the labor market through temporary jobs created by flexible demand, and the state subsidizes them. However, it will reduce the average wages and it can be said that the elderly are taking away jobs from the young. For the younger generation, they face the identity crisis caused by the commodification of education on the one hand, and the difficulty of securing a stable job with career progression on the other, leading a life of precariousness. Such are the differences in the precarious work between generations that a third hypothesis on the relationship between precarious work and political participation is proposed.

Hypothesis H_{1c}: Political participation differs across generations of precarious workers.

Political attitudes are the basic cognitive, emotional and behavioral dispositions towards the political system or political objects that individuals gradually acquire during their acquired socialization (Shen, 2018). Attitudes are highly correlated with behaviors, as they encompass people's feelings and perceptions about the objects, and influence the responses. Empirical studies show that political attitudes influence political participation (Quintelier and Van Deth, 2014). Individuals' political attitudes contain political behaviors and tendencies, and play a preparatory role in political participation. Hence, political behaviors are factors of political participation. In addition, studies on the factors of political attitudes show that individuals' socio-economic status has a significant impact on political attitudes. The formation of political attitudes is influenced not only by their family and education, but also by their daily life practices (Gao, 2014; Li, 2011). Employment is an important life practice, and people's socio-economic status is manifested through occupational status. The employment varies from generations, depending on the historical period in which one grows up, the social structures one faces and the institutional environment one finds oneself in. Therefore, based on the previous analysis, in the relationship between precarious work and political participation, the role of political attitudes is considered as a mediating factor, and the following two hypotheses are formed.

Hypothesis H_{2a}: Political attitudes have a mediation effect on the influence of precarious work on individuals' political participation.

Hypothesis H_{2b}: The mediation effect of political attitudes varies across generations of precarious workers.

Based on the literature review, this study proposes a correlation model as shown in Figure 1 to explore the mechanism of the impact of precarious work on political participation.

Figure 1: Research framework of the relationship between employment status and political participation
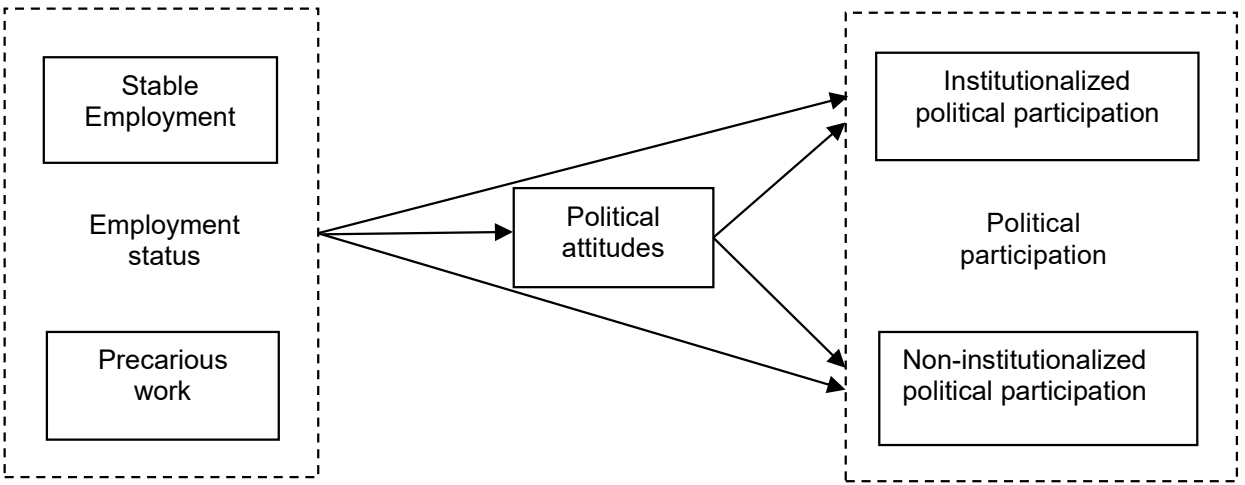
Source: Authors' own elaboration

3. Data and Variable Descriptions

3.1 Sample city: Hong Kong

Hong Kong is recognized as one of the world's freest economies, with a long history of liberal capitalism and little intervention by the authorities. Apart from attracting capital from around the world to create vast wealth and making it the richest region in the world, Hong Kong's institutional freedom still leaves a large number of people struggling in poverty. According to the Hong Kong Inequality Report released by Oxfam Hong Kong in 2018, 1.3 million people in Hong Kong were living below the poverty line in 2016, and the Gini coefficient of the local's income was 0.539, a 45-year high, widening the wealth gap (Oxfam Hong Kong, 2018). And according to the Hong Kong Poverty Report 2019 released by the Census and Statistics Department of Hong Kong Government (2020), the problem of working poverty in Hong Kong was still serious in 2019. Unlike the increase in poverty and poverty rate was mostly driven by inactive households previously, about 35% of the new poor in 2019 came from working households, indicating that Hong Kong's economic environment got worse and job opportunities decreased. There are nearly 154,000 working-poor households, with a population of nearly 5.02 million. The report suggests that working poverty dues to the low level of statutory minimum wage, which prevents the grassroots from escaping poverty. With nearly 30% of these part-time working poor or the underemployed, the number of people in precarious work is significant. According to Hong Kong statistics (Figure 2), the incidence of precarious work has been climbing since the mid-

1990s. In addition, the fragmentation of the job market leads to insufficient protection for casual workers. Specifically, in terms of employment system protection, the Hong Kong *Employment Ordinance* only provides rights and benefits for the continuous employees[1], such as rest days, paid annual leave, sickness allowance, severance pay, etc., and lacks protection for the rights and benefits of those in flexible or precarious employment (Lee and Wong, 2004). Take part-time workers as an example, except for the Mandatory Provident Fund Schemes (MPFS) after working for an employer for 60 consecutive days, they are still unable to apply the legal protections that full-time workers are entitled to (Wong, 2001). It can be argued that in this context, employers are more incentivized to use flexible workers to reduce costs and avoid obligations that would otherwise require the provision of benefits to workers.

Figure 2: The expansion of precarious work in Hong Kong (1990–2014)
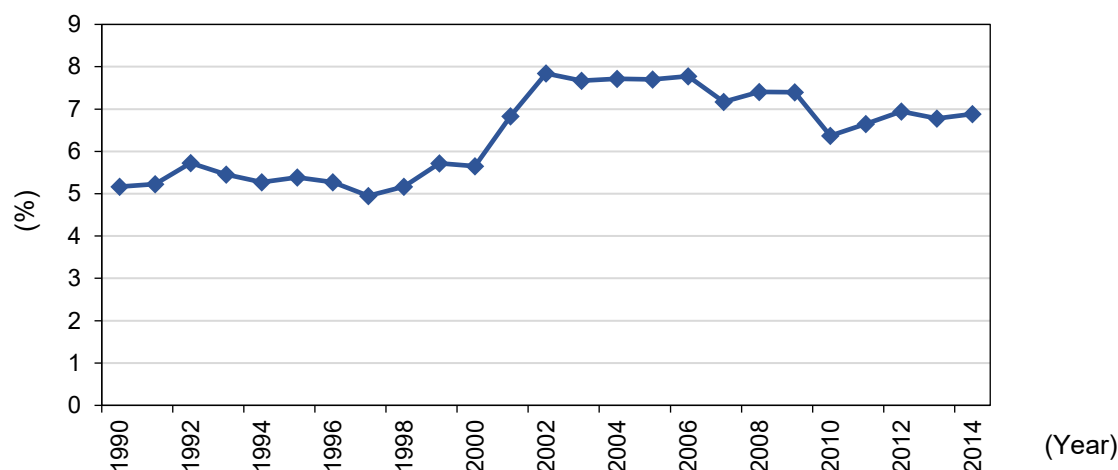
Note: The number of employed persons in the *Hong Kong Annual Digest of Statistics* combined the data of formal employees and outworkers, so the incidence of outworkers cannot be calculated separately. The figure reports the incidence of self-employed and unpaid family workers, which is based on the relevant data from the Hong Kong Census and Statistics Department.

Source: Hong Kong Annual Digest of Statistics (1991–2015)

This precarious work brought about by economic globalization may lead to the precarious income of the precariously employed, increasing the risk of losing their stability in life and posing the danger of falling further into the precariat (Standing, 2011). Thus, as the gap between the rich and the poor in society widens further, people's sense of relative deprivation will also grow. The anger and discontent regarding economy spills over into other areas of society and,

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1   According to the Hong Kong *Employment Ordinance*, a continuous employee is one who has been employed by the same employer for a continuous period of four weeks or more, while working at least 18 hours per week.

in severe cases, may lead to political unrest. Hong Kong, as a top global city, can provide insight into the relationship between this global economic phenomenon and its political consequences. Therefore, this research takes Hong Kong as a sample city to analyze and examine the mechanism of the impact of precarious work on political participation.

3.2 Data source

The data for this study comes from the Hong Kong Panel Study of Social Dynamics (HKPSSD), a tracking study of Hong Kong households conducted by the Centre for Applied Social and Economic Research of the Hong Kong University of Science and Technology. It aims to track social and economic changes in Hong Kong and their impact on individuals. It is currently the largest and most representative social survey database in Hong Kong. The survey was conducted biennially from 2011 onwards. The sample is drawn from the address database of the Hong Kong Census and Statistics Department, using stratified random sampling according to housing type and district. Specifically, the sampling strata were constructed through indices reflecting the socio-economic status of each constituency area in Hong Kong and the address of the building units of the Census and Statistics Department. The sample size of each stratum was calculated based on the empirical response rate. Finally, the sample was drawn through the equidistant sampling method. The survey interviewed with selected households' occupants aged 15 years and above. The sample selected is highly representative. In addition, to ensure that respondents' personal information is not disclosed, the survey uses the University of Michigan Survey Center's the Computer Assisted Personal Interviewing (CAPI), along with its web support system. It allows the project research staff to monitor the fieldwork, check for sample bias, and assess data quality and make corrections, by examining summary statistics generated by the system. The interviewers no longer have access to the data after the interview is completed. The CAPI system ensures the quality, reliability, and confidentiality of the survey data (Wu, 2016).

This study uses the third wave data completed in 2015. According to the technical report of HKPSSD, the third wave of survey achieved 72% response rate at household level and 88% response rate at individual level. And the sample attrition was mainly due to non-contact. The original samples were screened according to the research needs in this paper. As the main topic is the relationship between employment status and political participation, the sample of who are in business for themselves, *i.e.* employers, are excluded. Additionally, this research excludes those who are currently unemployed and can return to work at any time but have not looked for work in the past month. They are considered to have no desire to work and have voluntarily withdrawn from the labor market. Also, the research excludes those who are currently unemployed and cannot readily return to work whom leave the labor market due to old age, retirement, schooling, or chronic illness, or disability. Finally, voting in the Legislative Council Election was selected

as the variable to measure institutional political participation in this study. After excluding cases that did not meet the requirements for this research, the total number of cases in the analysis sample was 2 973.

3.3 Description of variables

3.3.1 Core independent variable: precarious work

In the HKPSSD questionnaires, people were asked about their current form of employment and whether they were employed full time or part time. The forms of employment in current positions were classified as long term, short term or casual and contractual. Part-time job is defined as those with a fixed number of working days, who usually work less than five days per week and less than six hours per working day, or those without a fixed number of working days, who work for less than 30 hours per week for those. Based on the definition of employment status in this paper, the full-time permanent work can be defined as stable employment. Additionally, HKPSSD also asked whether the respondent's current employment was still with the same compared to the previous period (HKPSSD Phase 2 survey was conducted in 2013). If the respondent answered "yes", then the respondent was in a relatively stable employment status, regardless of the form of employment. Others who are not in either of these situations fall into the category of precarious work. Thus, the core independent variable of this study – precarious work, is obtained as a dichotomous variable, where 1 means precarious work and 0 means stable employment.

3.3.2 Mediating variable: political attitudes

This study uses political attitudes as a mediating variable introduced into the model in order to explore the relationship between precarious work, political attitudes and political participation. Political attitudes are measured by the question "In terms of political attitudes, what do you think you tend to be?" The question is answered on a scale of 1 to 7, with 1 being very conservative, 4 being moderate centrist and 7 being very open.

3.3.3 Dependent variable: political participation

Political participation refers to the activities of citizens or social groups trying to influence the decision-making process of the political system. It can be divided into two forms – institutionalized and non-institutionalized political participation, according to whether it conform to the relevant procedures stipulated by laws or institutions. Institutionalized political participation refers to the act in accordance with the procedures and requirements set out in laws, regulations and

institutions, and is measured by the variable of voting in this study, based on the question "Did you vote in the Hong Kong Legislative Council Election?" Non-institutionalized political participation refers to political activities that do not comply with the procedures and requirements set out in laws, regulations or institutions, and often takes the form of mass events accompanied by certain acts of resistance (Gong, 2009). The questionnaire asked respondents whether they had participated in any of the four demonstrations listed, and this variable was obtained by assigning a value of 1 to those who had participated in one or more demonstrations and 0 to those who had not.

3.3.4 Control variables

There is a correlation between individuals' political participation and their socio-economic status, and studies have shown that income (Sun, 2010) and education (El-Said and Rauch, 2015) are relevant to public political participation. Therefore, personal characteristics variables were considered for inclusion in the model, mainly including gender, age, average monthly income, birthplace, and years of schooling. The definition and assignment of each control variable are as follows: gender: male = 1, female = 0; age is the actual age of the individual at the time of 2015; average monthly income variable is logarithmic; birthplace: born in Hong Kong = 1, born in other regions = 0; years of education is the highest level of education that the respondent has completed (graduated), no formal schooling = 0; private school in former times = 5; primary school = 6; secondary 3 (Lower Secondary) = 9; secondary 5 = 11; sixth form (UK education) and post-secondary (non-degree, UK education) = 13; first degree = 16; master degree = 18; doctor degree = 23; upper secondary (US education) and post-secondary (vocational/technical training) (US education) = 12; college/community college (US education) = 14. In addition, the effects of household characteristics and government welfare policies were also considered. The household characteristics variables include individual marital status (married = 1, unmarried = 0) and the number of household members living together. The government welfare policy variable is whether the respondent has monthly income from government benefits such as Comprehensive Social Security Assistance (CSSA) and other cash benefits, allowances, if yes = 1, no = 0. Table 1 shows the descriptive analysis of the variables.

Table 1: Descriptive statistics of variables

Variables	N	mean	SD	min	max
Precarious work	2 973	0.297	0.457	0	1
Political attitudes	2 960	4.295	1.130	1	7
Gender	2 973	0.453	0.498	0	1
Age	2 973	44.794	12.820	21	91
Inincome	2 972	8.998	1.621	4.605	13.122
Birthplace	2 973	0.666	0.472	0	1
School years	2 967	10.693	3.686	0	23
Marital	2 973	0.650	0.477	0	1
Household size	2 973	3.389	1.398	1	12
Govwelfare	2 973	0.266	0.442	0	1
Institutionalized political participation	2 973	0.506	0.500	0	1
Non-institutionalized political participation	2 973	0.078	0.268	0	1

Source: Hong Kong Panel Study of Social Dynamics 2015

4. Model Setting and Analysis of Results

4.1 Model setting

The idea of mediating effect is that if the independent variable X influences a variable M, which in turn has an effect on the dependent variable Y, then M is said to be the mediating variable, and M acts as a mediator between X and Y. In this study, the dependent variable political participation is a dichotomous variable and therefore logistic regression should be used instead of the usual linear regression for the analysis of mediating effects (Liu *et al*., 2013; Fang *et al*.,2017).

$$Y' = i_1 + cX + d_1CV + \varepsilon_1 \tag{1}$$

$$Y'' = i_2 + c'X + bM + d_2CV + \varepsilon_2 \tag{2}$$

$$M = i_3 + aX + d_3CV + \varepsilon_3 \tag{3}$$

$$Y' = LogitP(Y = 1 \mid X, CV) = \ln \frac{P(Y = 1 \mid X, CV)}{P(Y = 0 \mid X, CV)} \tag{4}$$

$$Y'' = LogitP(Y = 1 \mid M, X, CV) = \ln \frac{P(Y = 1 \mid M, X, CV)}{P(Y = 0 \mid M, X, CV)} \tag{5}$$

In the above set of regression equations, Y is the dependent variable political participation, X is the core independent variable precarious work, CV is the control variable and M is the mediating variable political attitudes. As the coefficient b is in logit in the mediation model of the logistic regression, there is the problem that the coefficients a and b are of different scales and the mediation effect is not equal to ab at this point. In addition, the conditional probabilities of the dependent variable taking values in equations (1) and (2) are not influenced by the same independent variable, so there is also the problem of scale differences. In order to achieve equal scaling of the regression coefficients, the transformation of the regression coefficients was carried out by referring to the standardization treatment proposed by MacKinnon and Dwyer (1993), with the following standardization formula.

$$a^{std} = a \times \frac{SD(X)}{SD(M)} \tag{6}$$

$$b^{std} = b \times \frac{SD(M)}{SD(Y'')} \tag{7}$$

$$c^{std} = c \times \frac{SD(X)}{SD(Y')} \tag{8}$$

$$c'^{std} = c' \times \frac{SD(X)}{SD(Y'')} \tag{9}$$

In the above equation, the superscript *std* represents the standardized coefficient, $SD(X)$ and $SD(M)$ can be calculated from the raw data, and $SD(Y')$ and $SD(Y'')$ are calculated according to the equation proposed by MacKinnon (2008).

$$\text{var}(Y') = c^2 \, \text{var}(X) + \frac{\pi^2}{3} \tag{10}$$

$$\text{var}(Y'') = c'^2 \, \text{var}(X) + b^2 \, \text{var}(M) + 2c'b \, \text{cov}(X, M) + \frac{\pi^2}{3} \tag{11}$$

After the above standardized transformation, the size of the mediating effect can be calculated in two ways: one involving the examination of the product of coefficient while the other involving of the comparison of the difference of the respective coefficients. According to Liu *et al.* (2013), although the magnitude of the mediating effect obtained by these two methods is very close, the value obtained by the coefficient product method is closer to the true value of the mediating effect and can better represent the mediating effect. Under the coefficient product method, the value of the standardized coefficients a^{std} and b^{std} multiplied together is the estimate of the mediating effect ab^{std}.

4.2 Analysis of regression results

4.2.1 Regression analysis of precarious work on political participation

The control variables, the core independent variable precarious work and the mediating variable political attitudes were sequentially included in the regression model. The regression analysis was conducted by dividing the dependent variable political participation into two groups, voting representing institutionalized political participation and demonstrations representing non-institutionalized political participation. Table 2 presents the results of the logistic regression for the full sample.

Table 2: Impact of precarious employment, political attitudes on political participation (all)

Variables	Institutionalized political participation			Non-institutionalized political participation		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Precarious work		−0.367*** (0.113)	−0.391*** (0.114)		0.628*** (0.217)	0.492** (0.225)
Political attitudes			0.124*** (0.036)			0.546*** (0.061)
Gender	0.135* (0.081)	0.074 (0.084)	0.058 (0.084)	0.336** (0.148)	0.408*** (0.151)	0.327** (0.155)
Age	0.043*** (0.004)	0.044*** (0.004)	0.046*** (0.004)	−0.042*** (0.009)	−0.043*** (0.009)	−0.039*** (0.009)
Inincome	0.029 (0.027)	−0.028 (0.032)	−0.029 (0.032)	0.116* (0.068)	0.230*** (0.08)	0.239*** (0.082)
Birthplace	0.693*** (0.088)	0.689*** (0.088)	0.691*** (0.089)	0.373* (0.202)	0.389* (0.203)	0.325 (0.207)
School years	0.141*** (0.014)	0.142*** (0.014)	0.140*** (0.014)	0.223*** (0.026)	0.220*** (0.026)	0.215*** (0.027)
Marital	0.006 (0.100)	0.028 (0.100)	0.019 (0.101)	−0.485*** (0.182)	−0.527*** (0.184)	−0.491*** (0.189)
Household size	−0.031 (0.030)	−0.030 (0.030)	−0.024 (0.030)	−0.091 (0.058)	−0.093 (0.059)	−0.055 (0.061)
Govwelfare	−0.154* (0.090)	−0.149* (0.090)	−0.154* (0.090)	0.362** (0.166)	0.341** (0.167)	0.346** (0.173)
Cons	−4.044*** (0.382)	−3.466*** (0.420)	−4.052*** (0.453)	−4.63*** (0.777)	−5.801*** (0.889)	−8.538*** (0.984)
N	2966	2966	2953	2966	2966	2953
Adj. R^2	0.072	0.075	0.079	0.178	0.183	0.231

Note: Figures reported in brackets are standard errors. *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$, the same below.
Source: Author's own elaboration

As shown in Table 2, Model 1 and Model 4 are logistic regressions with control variables as independent variables for voting and demonstrations, respectively. It can be found that men are more likely to participate in institutionalized and non-institutionalized political participation than women. Those who are born locally in Hong Kong are more likely to participate than those from other regions. The odds of participation increase with the number of years of education. In addition, as people get older, they are more likely to engage in institutionalized political participation, in contrast to reducing individuals' non-institutionalized political participation. Personal income has a more significant effect on non-institutionalized political participation than institutionalized political participation[2]. With respect to family structure, married individuals are significantly less likely to be non-institutionalized politically engaged than unmarried individuals, while the effect from family size on individual political engagement behavior is smaller. With respect to institutional influences, those who receive government benefits such as CSSA have a higher probability of non-institutionalized political participation and a lower likelihood of institutionalized political participation[3].

Model 2 integrated the core independent variable precarious work based on model 1, with a negative coefficient. There is a significant negative relationship between precarious work and voting ($p < 0.01$), indicating that precarious workers are less likely to vote compared to those with stable employment, and stable workers are 1.443 ($1/e^{-0.367} = 1.443$) times more likely to vote than precarious workers. At the same time, the Adj. R^2 of model 2 also increases compared to model 1 after the inclusion of the core independent variable precarious work, indicating that this variable is an important variable in explaining voting and hypothesis H_{1a} was verified. Compared to Model 4, Model 5 can be found that after controlling the variables such as gender and age, the coefficient of precarious work is positive, indicating that precarious workers are 1.874 ($e^{0.628} = 1.874$) times more likely to participate in demonstrations than those who are steadily employed, and this result is significant ($p < 0.01$), verifying hypothesis H_{1b}.

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2   It is assumed that income increases promote individual political participation (Barkan, 2004), but it is suggested that the development of democratic politics requires corresponding cultural prerequisites (Nathan & Shi, 1993). In addition to individual socioeconomic variables, whether individuals have political contact with and trust in the government is an important prerequisite for their political participation (Lawless and Fox, 2001). In Hong Kong, the special history of a long period of colonial rule has on the one hand, excluded the vast majority of Hong Kong people from politics and left them with few channels of political participation within the system. On the other hand, a social atmosphere of "political apathy" has gradually developed, causing Hong Kong people to show a low interest in institutionalized political participation (Lua, 1990; Yin and Cai, 2019). Thus, although Hong Kong has experienced rapid economic development since the 1960s, its political development has not advanced in tandem, and the political science theory of "economic development for democratic development" is not fully applicable in Hong Kong (Lua, 2015).

3   The reasons may be that those who need to receive this portion of government benefits are usually those who cannot support themselves financially. Although the CSSA program can provide them with a certain amount of money to meet their basic needs, it still cannot directly change the situation of working poverty and reduce the risk of political instability that is implied by the instability of the amount and source of income from work.

Considering the different impact of precarious work on political participation between generations, this study divided the sample into two age groups, the youth and the middle-aged and elderly groups. The definition of youth refers to the National Bureau of Statistics of China, where people aged between 15 and 34 years are considered as youth, while the others fall under the category of the middle-aged and old-aged group. Table 3 shows the impact of precarious work, political attitudes on political participation for the youth group. By comparing Model 2 with Model 1 and Model 5 with Model 4, it can be seen that precariously employed youth have a lower likelihood of institutionalized political participation and a higher probability of non-institutionalized political participation than those who are steadily employed. In particular, precarious workers are 0.664 ($e^{-0.40\,9} = 0.664$) times more likely to participate in voting than those in stable employment, and 1.632 ($e^{0.490} = 1.632$) times more likely to participate in demonstrations.

Table 3: Impact of unstable employment, political attitudes on political participation (youth group)

Variables	Institutionalized political participation			Non-institutionalized political participation		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Precarious work		−0.409*	−0.451*		0.490*	0.297
		(0.239)	(0.241)		(0.293)	(0.311)
Political attitudes			0.181***			0.637***
			(0.066)			(0.083)
Gender	0.031	0.002	−0.029	0.522***	0.566***	0.448**
	(0.145)	(0.146)	(0.148)	(0.191)	(0.194)	(0.204)
Age	0.088***	0.085***	0.092***	−0.135***	−0.129***	−0.115***
	(0.019)	(0.019)	(0.019)	(0.026)	(0.027)	(0.027)
Inincome	0.066	−0.008	−0.003	0.054	0.143	0.154
	(0.057)	(0.072)	(0.073)	(0.081)	(0.098)	(0.104)
Birthplace	1.203***	1.187***	1.159***	0.429	0.441*	0.361
	(0.187)	(0.187)	(0.187)	(0.263)	(0.263)	(0.273)
School years	0.222***	0.228***	0.223***	0.278***	0.273***	0.271***
	(0.029)	(0.029)	(0.030)	(0.040)	(0.040)	(0.041)
Marital	−0.332*	−0.297	−0.313*	−0.251	−0.288	−0.357
	(0.186)	(0.187)	(0.188)	(0.282)	(0.283)	(0.292)
Household size	−0.092*	−0.094*	−0.077	−0.208***	−0.207***	−0.159*
	(0.049)	(0.049)	(0.049)	(0.077)	(0.078)	(0.081)
Govwelfare	−0.253	−0.230	−0.254	0.398*	0.370	0.404*
	(0.176)	(0.177)	(0.178)	(0.227)	(0.228)	(0.242)
Cons	−6.689***	−5.876***	−6.887***	−1.922*	−2.956**	−6.476***
	(0.821)	(0.943)	(1.022)	(1.054)	(1.234)	(1.406)
N	968	968	965	968	968	965
Adj. R²	0.143	0.145	0.150	0.142	0.145	0.217

Source: Author's own elaboration

Table 4 reports the situation of middle-aged and older groups. Precarious work still negatively associated with institutionalized political participation while it positively associated with non-institutionalized political participation. It also suggesting that precarious workers are less likely to be institutionally politically engaged and more likely to be non-institutionally politically engaged than those who are steadily employed. In Tables 3 and 4 shows that young precarious workers are less likely to participate in voting than middle-aged and older precarious workers, while at the same time being more likely to participate in demonstrations, suggesting that there are differences between generations in the impact of precarious work on people's political participation. The hypothesis H_{1c} is tested.

Table 4: Impact of precarious work, political attitudes on political participation (middle-aged and older group)

Variables	Institutionalized political participation			Non-institutionalized political participation		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Precarious work		−0.355*** (0.132)	−0.374*** (0.133)		0.365 (0.353)	0.351 (0.354)
Political attitudes			0.106** (0.043)			0.396*** (0.098)
Gender	0.198** (0.101)	0.118 (0.105)	0.104 (0.106)	−0.146 (0.251)	−0.079 (0.260)	−0.098 (0.261)
Age	0.046*** (0.006)	0.048*** (0.007)	0.051*** (0.007)	0.028* (0.017)	0.026 (0.017)	0.029* (0.017)
Inincome	0.015 (0.031)	−0.035 (0.036)	−0.037 (0.037)	0.713*** (0.189)	0.765*** (0.194)	0.773*** (0.199)
Birthplace	0.573*** (0.103)	0.576*** (0.103)	0.583*** (0.104)	0.383 (0.337)	0.380 (0.337)	0.356 (0.339)
School year	0.121*** (0.016)	0.121*** (0.016)	0.119*** (0.016)	0.181*** (0.042)	0.181*** (0.041)	0.175*** (0.042)
Marital	0.248* (0.131)	0.284** (0.132)	0.277** (0.133)	−0.130 (0.311)	−0.158 (0.314)	−0.092 (0.321)
Household size	0.001 (0.040)	0.002 (0.041)	0.004 (0.041)	-0.096 (0.116)	−0.099 (0.116)	−0.074 (0.117)
Govwelfare	−0.072 (0.106)	−0.071 (0.106)	−0.068 (0.107)	0.624** (0.267)	0.626** (0.268)	0.630** (0.272)
Cons	−4.216*** (0.542)	−3.775*** (0.565)	−4.295*** (0.597)	−13.508*** (2.011)	−13.97*** (2.054)	−16.046*** (2.193)
N	1998	1998	1988	1998	1998	1988
Adj. R^2	0.055	0.058	0.061	0.156	0.158	0.182

Source: Author's own elaboration

In the above, Model 3 and Model 6 are based on Models 2 and 5 respectively with the addition of the mediating variable political attitudes. Both from the analysis of the whole sample and by age group, the variable political attitudes show a significant positive relationship with political participation, which also indicates that individuals' external actions are indeed influenced by their attitudinal sentiments. In addition, the coefficient of precarious work decreases to different degrees after the inclusion of mediating variables. This result indicates that political attitudes may have a mediating effect in the influence of precarious work on political participation, which needs to be further calculated and tested.

4.2.2 Calculation and testing of the mediating effect of political attitudes

This paper uses the coefficient product method to calculate and test the mediating effect of political attitudes in the influence of precarious work on political participation. Firstly, an OLS regression analysis of precarious work and political attitudes was conducted to examine the relationship between these two variables, controlling for other variables. Table 5 reports the results of the regressions and shows that precarious work has a positive effect on political attitudes, indicating that precarious workers are more liberal and open in their political attitudes, and the significance level was 1% for the whole group and 5% for the youth group. Numerically, the youth group has the largest coefficient value for the precarious work variable (0.295), indicating that precarious work has a greater impact on youth political attitudes than other age groups, making them more skewed towards the right.

Table 5: Impact of precarious work on political attitudes

Variables	Model 7					
	All		**Youth group**		**Middle-aged and older group**	
Precarious work	0.161***	(0.059)	0.285**	(0.117)	0.076	(0.070)
Gender	0.125***	(0.044)	0.219***	(0.073)	0.047	(0.056)
Age	−0.009***	(0.002)	−0.031***	(0.009)	−0.006*	(0.003)
lnincome	0.032*	(0.017)	0.005	(0.034)	0.045**	(0.019)
Birthplace	0.060	(0.046)	0.181**	(0.087)	0.022	(0.055)
School years	0.027***	(0.007)	0.028**	(0.014)	0.029***	(0.008)
Marital	−0.030	(0.053)	0.062	(0.093)	−0.022	(0.071)
Household size	−0.060***	(0.016)	−0.085***	(0.024)	−0.051**	(0.022)
Govwelfare	0.022	(0.047)	0.032	(0.088)	0.022	(0.056)
Cons	4.198***	(0.215)	4.982***	(0.454)	3.955***	(0.292)
N	2953		965		1988	
R²	0.040		0.052		0.029	

Source: Author's own elaboration

Based on the above results and equations (6) to (11), the regression coefficients after standardization can be calculated. And the standard errors corresponding to the standardized regression coefficients are:

$$SE\left(a^{std}\right) = SE\left(a\right) \times \frac{SD(X)}{SD(M)} \tag{12}$$

$$SE\left(b^{std}\right) = SE\left(b\right) \times \frac{SD(M)}{SD(Y'')} \tag{13}$$

$$SE\left(c^{std}\right) = SE\left(c\right) \times \frac{SD(X)}{SD(Y')} \tag{14}$$

$$SE\left(c'^{std}\right) = SE\left(c'\right) \times \frac{SD(X)}{SD(Y'')} \tag{15}$$

The coefficient product method was used to obtain the estimates of the mediating effect ab^{std}, and the corresponding standard errors were calculated according to the formula $SE(ab^{std}) = \sqrt{(a^{std})^2 (SE(b^{std}))^2 + (b^{std})^2 (SE(a^{std}))^2}$, proposed by Sobel (1982). Further, a Sobel test $z = ab^{std} / SE(ab^{std})$ was used to determine whether the mediating effect was significant or not. The confidence interval for the mediating effect under the assumption of normality was $(ab^{std} - z_{\alpha/2} \times SE(ab^{std}), \ ab^{std} + z_{\alpha/2} \times SE(ab^{std}))$, and the proportion of the mediating effect in the total effect was $ab^{std} / (ab^{std} + c'^{std})$.

The standardized regression coefficients and Sobel test results are shown in Table 6. First, from the analysis of the whole sample, the mediating effects of political attitudes in the relationship between precarious work on voting and demonstrations are 0.005 and 0.021 respectively. Both z-values are greater than 1.96. The mediating effects pass the Sobel test, indicating that political attitudes have a significant mediating role in the process of precarious work on individual political participation, and hypothesis H_{2a} is tested. The ratio of the mediating effect to the total effect is the proportion of the mediating effect in the relationship between the independent variable and the dependent variable, where political attitudes explain 4.857% of the effect of precarious work on voting and 15.159% of the effect of precarious work on demonstrations.

Table 6: Standardized regression coefficients and Sobel test

Age group	Forms of political participation	c'^{std}	ab^{std}	z	Confidence interval	Ratio of the mediating effect
All	Institutionalized political participation	−0.098	0.005	2.131**	(0.0004, 0.0096)	4.857%
	Non-institutionalized political participation	0.117	0.021	2.610***	(0.0002, 0.0415)	15.159%
Youth group	Institutionalized political participation	−0.101	0.012	1.826*	(0.0012, 0.0219)	10.287%
	Non-institutionalized political participation	0.062	0.038	2.326**	(0.0060, 0.0700)	37.917%
Middle-aged and older group	Institutionalized political participation	−0.097	0.002	0.987	—	—
	Non-institutionalized political participation	0.090	0.008	1.041	—	—

Source: Author's own elaboration

Secondly, the mediating effects of the youth group all pass the Sobel test, while none of the mediating effects of the middle-aged and older groups pass the Sobel test, indicating that among the youth group, precarious work has a significant effect on their political participation by influencing their political attitudes. Political attitudes explain 10.287% of the effect of precarious work on young people's voting and 37.917% of the effect on their demonstrations. There were significant generational differences in the mediating effects of political attitudes, which were significant mediators among the youth group, while there were no significant mediating effects in the political participation of middle-aged and older people. Thus, hypothesis H_{2b} was tested.

To ensure the robustness of the results, the mediation effect is tested by bootstrap method, the results of which are approximately the same as Sobel test. For the whole sample, 4.712% of the total effect of precarious work on institutionalized political participation arises through the mediating variables, while the mediating effect of precarious work on non-institutionalized political participation accounts for 13.849% of the total. For the youth, political attitudes explain 10.659% of the effect of precarious work on institutionalized political participation while 33.908% of effect on non-institutionalized political participation. In the middle-aged and older groups, political attitudes do not significantly mediate the effect of both types of political participation.

4.3 Robustness test

To address the possible endogeneity of the sample, this study uses the propensity score matching (PSM) for robustness tests. Firstly, with the control variables as independent variables and precarious work as the dependent variable, the propensity score of precarious work for each sample was calculated using logit models. The results show that women and older people are more likely to be employed in precarious work. The higher the level of individual income, the lower the probability of engaging in precarious work. Secondly, the covariates were tested for equilibrium. The results show that the percent bias (%bias) of the covariates before matching fluctuated from −142.0 to 43.0, and the percent bias of the covariates tended to be 0 after matching. All t-test results accept the null hypothesis, indicating that there is no systematic difference between the control group and the treatment group, and the alternative hypothesis was satisfied. Finally, three matching methods were used for propensity score matching. As shown in Table 7, *ATT* maintained a certain level of significance regardless of the matching method used, indicating that after accounting for the selection bias of the sample, precarious work still reduces people's motivation for institutionalized political participation and increases the likelihood of non-institutionalized political participation.

Table 7: Propensity score matching results for political participation (all)

	Matching Methods	Treatment Group	Control Group	*ATT*	SD
Institutionalized political participation	Nearest neighbor matching	0.416	0.519	−0.103**	0.058
	Radius matching	0.416	0.539	−0.123***	0.038
	Kernel matching	0.416	0.476	−0.060*	0.036
Non-institutionalized political participation	Nearest neighbor matching	0.077	0.024	0.053***	0.020
	Radius matching	0.077	0.031	0.046**	0.019
	Kernel matching	0.077	0.031	0.046**	0.020

Note: The treatment group is for those with precarious work, and the control group is for those with stable employment.

Source: Author's own elaboration

5. Conclusion and Discussion

This study explored the influence mechanism of the precarious work on political participation, with political attitudes as a mediation variable from two aspects – institutionalized political par-

ticipation and non-institutionalized political participation. The research has three following findings. Firstly, precarious work has a significant influence on individuals' political participation, resulting in a lower probability of institutionalized political participation and a higher probability of non-institutionalized political participation, which is reflected by the tendency of those in precarious work not to participate in formal elections but to voice their concern through street marches. Secondly, the impact of precarious work on political participation varies between generations. Young precarious workers have a lower probability of institutionalized political participation and a higher probability of non-institutionalized political participation than middle-aged and older precarious workers. There is relatively greater impact of precarious work on young people. Thirdly, political attitudes have a significant mediation effect in the impact of precarious work on political participation, and the mediation effect is greater for the youth. It shows that youth's political participation susceptible to their political attitudes, which can be considered as an emotional expression, whereas this is not the case for middle-aged and elderly people, whose political participation behavior is directly and significantly influenced by their employment status.

Through an analysis of the relationship between precarious work, political attitudes and political participation, this paper suggests that precarious work has an impact on areas like politics other than the labor (Standing, 2011), which empirically supports our understanding of the changes in labor market elasticity under economic globalization and the possible socioeconomic and political consequences. Precarious work is a form of employment that has developed in response to economic globalization. While an increase in the flexibility of market may solve some of the problems and increase the level of employment, the situation of precarious workers may not be substantially altered. When they encounter setbacks in their lives and jobs, they are more likely to engage in non-institutionalized political participation to express their demands, rather than seeking institutionalized political participation to solve their problems, as precarious work often lacks the channels of expression like trade unions. Hence, it systematically increases social instability.

Employment is the foundation of people's livelihoods and a way to secure the nation. The freedom and happiness of the individuals is important because the carriers of labor are people themselves. While increasing the flexibility of labor by following the rules of the market can help capital accumulation and maximize profits, it also creates more precarious jobs, the cost of which is unaffordable. The relationship between precarious work, political attitudes and political participation, as observed in this paper based on data from Hong Kong, a top global city, can provide some insight into the impact of precarious work on people's political participation in a capitalist society in developed regions. The impact of precarious work as a product of globalization on people's political participation in developing countries or regions as well as in societies with socialist systems is subject to further analysis and discussion. In addition, the sudden outbreak

of the COVID-19 pandemic in 2020, which swept through the world, has profoundly affected the global job market, and the impact on those in precarious work is not to be underestimated, all of which deserves attention and inclusion in the framework of future research.

Acknowledgement

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