Will the End of Wage Subsidary Programme Have an Impact on Employment?

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EU-ERA DP 7/2021

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August 2021

Abstract

Motivation and aim: The coronavirus pandemic (COVID-19) has undeniably had an enormous impact on the production sectors and labour market worldwide, and Malaysia is no exception. In response to this issue, the Malaysian government has introduced several economic rescue programmes, including a temporary Wage Subsidy Programme (WSP) to help firms retain their employees. WSP has contributed significantly to workforce recovery but only providing short-term assistance. The ending of the WSP leads to a critical policy debate on how it affects employees and unemployment rates. This paper aims to examine the potential impacts of ending the WSP on employment in Malaysia.

Method and material: Descriptive and inferential statistics were carried out on 469 firms selected throughout the country still receiving WSP benefits. An online survey was undertaken using a questionnaire for about one month, consisting of 12 questions covering the firm's background information, employability of future employees, and business situation.

Key findings: The findings showed that ending the WSP would unlikely increase unemployment rates and the net effects of the WSP on employment are positive.

Policy implications: This study provides a "prima-facie" case towards implementing a targeted WSP for 2021 as the results indirectly indicate the positive signs of labour market recovery.

JEL Classifications
J21, J23, J28

Keywords:
COVID-19; Temporary wage subsidy program; Employment; Labour market

Will The End of Wage Subsidy Programme Have an Impact on Employment?

1. INTRODUCTION

The unprecedented nature of the Coronavirus 2019-nCoV (COVID-19) pandemic has brought a sudden disruption to the production sectors of all infected countries and labour markets. In response to the pandemic, the governments of almost all infected countries have restricted economic activities and people movements to protect the population from this life-threatening disease. As a result of the restriction control measures in place, the International Monetary Fund (2020) has declared that this pandemic has contributed to a stagnation of the global economy, predicted to be greater than the subprime economic crisis in 2008 and the Asian financial crisis of 1997. In addition, this crisis has impacted a total of 3.3 billion employees globally (International Labour Organisation, 2020a). Likewise, the spread of the virus across Asia and the Pacific region is anticipated to significantly impact employment losses.

Malaysia is not an exception, given that this pandemic has sparked the most prominent employment crisis experienced in decades. Statistics reveal that the amount of unemployed in Malaysia has risen significantly from the normal unemployment rate of 3.5% or 546.6 thousand in the first quarter to 5.1% or 791.8 thousand in the second quarter of 2020 (Department of Statistics Malaysia, 2020). Loss of employment numbers for those covered under the Office of Employment Insurance System has also increased remarkably from 15,602 in the first quarter to 34,806 in the second quarter of 2020 (Social Security Organisation, 2020a). Thousands of businesses have also been significantly impacted since they needed to pause their business operations indefinitely and retrench and decrease their employee numbers. Due to the reality that some individuals have briefly been cut off and others indefinitely shut-off, certain people cannot gain employment, leading to the lack of a primary source of income.

In response to the labour market disruption, specific temporary programmes have been designed to mitigate unemployment in sustaining jobs and aiding companies to retain a significant number of employees (International Labour Organisation, 2020b). Under the Economic Stimulus Package of PRIHATIN, the government of Malaysia has implemented several remedial measures, including the temporary Wage Subsidy Programme (WSP), Employment Retention Programme (ERP), and Hiring Incentive Programme (HIP). Among these programmes, the WSP is the most extensive financial assistance programme offered to employers for local employees earning RM4,000 or less, which commenced on 1st April 2020 (see Social Security Organisation, 2020b). It is important to note that a temporary WSP has also been adopted in many outbreak-affected countries with different terminologies used to represent it, such as *Job Support Scheme* in Singapore, *Temporary Emergency Bridging Measure* in the Netherlands and *Emergency Wage Subsidy* in Canada.

The WSP ended in September 2020 and benefiting 2.7 million employees (Social Security Organisation, 2020c). Under this WSP, the government provided employers with six months of assistance to retain employees. The WSP was further extended for three months under the WSP 2.0 scheme, ending by 31st December 2020. As of 13th November 2020, WSP and WSP 2.0 contributed to retaining 3.4 million employees and benefited 400,350 employers. Altogether, these two programmes involved RM 17.7 billion of direct disbursement from the government. In addition, these programmes have contributed to a positive change in Malaysia's labour market as the unemployment rate decreased to 4.7% in the third quarter of 2020 relative to the second quarter of 2020 (Department of Statistics Malaysia, 2020).

However, ending the WSP leads to a critical policy question: "How does it affect the employees and unemployment rates?". This paper documents the findings obtained from a snap employer survey, examining the potential impacts of ending the WSP on employees and unemployment rates. In the snap survey, 1,700 samples of targeted firms are extracted from the firm "population" currently receiving the WSP in the Social

Security Organisation (SOCSO) data system. The survey is performed employing an online survey, commencing for about a month from 30th October 2020 to 22nd November 2020. Our contribution to the scientific knowledge in this field is essentially an empirical assessment of ending the WSP, which is limited in the current literature. This paper is also expected to provide policy responses to the decision of ending the WSP. For example, the results provide a "prima-facie" case to implementing a targeted WSP in 2021 because ending the current WSP is unlikely to increase the unemployment rates.

In light of the above, the paper is structured into five sections, with the empirical literature review is discussed in the next section. Section 3 focuses on the methodologies for data collection and data analyses. Section 4 presents the most important findings obtained from the descriptive statistics and econometric model. Finally, section 5 provides a summary and concluding remarks.

2. LITERATURE REVIEW AND DESIGN OF A TEMPORARY WAGE SUBSIDY

This section reviews the related literature on a temporary wage subsidy, aiming to provide justification for the novelty of our study. Our review indicates that there is limited evidence on the impacts of ending a temporary wage subsidy with the particular application during the COVID-19 crisis (Cassells & Duncan, 2020; Hubbard & Strain, 2020; Faulkender et al., 2020), although there are many countries that have implemented it. Therefore, in this paper, we empirically contribute to examining the impact of ending a temporary wage subsidy on employment.

The literature indicates that the temporary wage subsidy is not new or unique under the employment retention programme. For example, a temporary wage subsidy was implemented during the Global Financial Crisis of 2007-2008, using different terminologies such as *Kurzarbeit* scheme in Germany and *Productive Recovery Programme* (REPRO) in Argentina. It sought to provide temporary financial support to relieve a

temporary shock to the labour market and a reduction in labour demand (Verick & Islam, 2010; Hijzen & Martin, 2012). The case of COVID-19 shows the broad applications of temporary wage subsidy compared to other economic and health-related crises. Table 1 summarises several temporary wage subsidy schemes implemented in several selected countries in response to the COVID-19 crisis.

There are several differences between Malaysia and other countries in designing the temporary wage subsidy, depending on each country's circumstances and ability. Differences can be observed concerning eligibility, duration and amount of the subsidy. In relation to eligibility, the coverage of some schemes depends on the level of employees' wages or the business size, while others cover a broad range of employees or businesses. In the case of Malaysia, all registered businesses and employees earning RM4,000 or less are eligible to apply under this scheme. This is in contrast to Singapore and the United Kingdom (UK), where the temporary wage subsidy schemes cover all registered business and employees' regardless of the business size.

Our review shows that the duration of a temporary wage subsidy is different from one country to another. Usually, the temporary wage subsidy schemes tend to occur between three months to one year, with possible extensions based on the country's economic situation. In Malaysia, the temporary wage subsidy was initially enabled for six months before extending to a further three months. In Brunei and Indonesia, the temporary wage subsidy scheme is available for up to three and four months, respectively.

The variation is also applied for the monthly allocation, where some countries prefer lump sum assistance while others are rated based on the share of wage loss to the total wage. For example, in Malaysia, firms with more than 200 employees, between 75 and 200 employees and less than 75 employees are eligible for a wage subsidy of RM600, RM800 and RM1,200 per month, respectively. In the UK, Thailand and the United

States (US), the temporary wage subsidy is allocated between 50% and 80% of employees' monthly wages.

Nevertheless, there are also similarities between Malaysia and other countries concerning the disbursement mechanism and implementing agencies. Most of the temporary wage subsidy schemes are disbursed to enterprises in some countries such as Malaysia, the UK, the US and Singapore, which transfer directly to employees. In relation to implementing agencies, Malaysia and other countries like the Philippines, Thailand and Indonesia are administered through the Social Security Contributions.

Regarding the modelling techniques, computable general equilibrium (CGE) and statistical modelling are the most common techniques used to measure the impacts of the temporary wage subsidy. For example, Go et al. (2010) applied a CGE model to the case of South Africa, showing that the temporary wage subsidy is likely to benefit the overall employment with the elasticity of substitution ranges from 1.9% to 7.2%. Using statistical modelling, a synthetic control method, Kim and Lee (2019) conducted secondary data analysis, discovering that the geographically targeted temporary wage subsidy initially had little impact in retaining employment due to the temporary wage subsidy scheme underutilised.

Table 1: List of Temporary Wage Subsidies across Countries

No	Country	Programme	Eligibility	Duration	Allocation	Implementing Agencies
1	United States (Internal Revenue Service, 2020; International Labour Organisation, 2020b; International Labour Organisation, 2020c; US Small Business Administration, 2020)	Employment Retention Credit (ERC) and Pay cheque Protection Programme (PPP) Loans	**ERC** (1) All employers, regardless of size (2) Business is fully or partially suspended by government order due to COVID-19 during the calendar quarter. (3) Gross receipts below 50% of the comparable quarter in 2019. **PPP** (1) SMEs with 500 or fewer employees (2) Employers must show that 60% of loans were used for payroll (initially is 75%)	10 months	**ERC** 50% of the qualifying wages (based on the firm size in 2019) paid up to $10,000 in total per employee **PPP** Average monthly payroll expense multiplied by 2.5 (up to $10 million) "wages" includes cash payments and a portion of the healthcare benefit allowance.	**ERC** Internal Revenue Service (IRS) **PPP** Small Business Administration (SBA)
2	United Kingdom (Government of the United Kingdom, 2020a; Government of the United Kingdom, 2020b)	Coronavirus Job Retention Scheme	• All organisation with employees (businesses, charities, recruitment agencies or public authorities are included). • Employees must have: (1) PAYE payroll scheme on or before 30th October 2020. (2) Enrolled for PAYE online (3) UK bank account	May - October 2020 (extended until 30th April 2021)	(1) June to August • 80% of wages up to £2,500 • Includes Employer National Insurance Contributions (ER NICS) and pension except for August (2) September • 70% of wages up to £2,187.50 (3) October • 60% of wages up to £1,875	
3	Singapore (Inland Revenue Authority of Singapore, n.d)	Jobs support scheme	• All employers who have made mandatory CPF contributions for their local employees (Singapore Citizens and Permanent Residents).	10 months (up to Aug 2020) and 7 months (Sep 2020 to Mar 2021)	**(1) Initially 10-month** 25% to 75% of the first S$ 4,600 of gross monthly wages per employee **(2) Extended 7-month** 10% to 50% of wages, adjusted based on sectors	Inland Revenue Authority of Singapore
4	Brunei-Darussalam (International Labour Organisation, 2020b; International Labour Organisation, 2020c)		• MSMEs with less than 100 employees • Registered employees that receive less than BND 1,500 • Worked at least 1-month with current employer	3 months	Providing 25% payroll subsidy to local employees of MSMEs	Tabung Amanah Pekerja (TAP)

No	Country	Programme	Eligibility	Duration	Allocation	Implementing Agencies
5	Thailand (EABC Thailand, 2020)	Thailand Stimulus Packages	**Payment of wages** (1) Employees without wages during the temporary closure of business up to 2 months due to government order **Tax Deduction of the wages paid** (1) Business income from last 12 months not exceeding 500 million baht (2) No more than 200 employees with earnings 15,000 baht per month per employee (3) The number of insured employees from 1st April 2020 to 31st July 2020 must not be less than the number of insured employees as of 31st March 2020	Payment of wages: 4 months (April – July 2020) Tax Deduction of wages paid: 6 months	**Payment of wages** 62% of daily wages, up to 90 days **Tax deduction of the wages paid** SMEs can deduct the wage expenses three times	Social Security Fund (SSF) and The Revenue Department
6	Indonesia (Sumarto & Ferdiansyah, 2021)	Wage Subsidy Programme	• Registered local employees • Employees with earnings Rp 5 million or less per month	4 months	Rp 1.2 million per employee every two months	BPJS Ketenagakerjaan
7	Philippines (RSM Philippines, 2020)	Small Business Wage Subsidy (SBWS)	• An employee of an eligible small business • Unpaid for at least two weeks during the temporary closure of work in accordance with Labour Advisory No. 1, Series of 2020	2 months, (depending on the extent of the ECQ)	5,000 to 8,000 pesos per month (depending on their region of work) for up to two months (depending on the extent of the ECQ)	Social Security System (SSS)
8	Malaysia (Social Security Organisation, 2020b; Social Security Organisation, 2020c)	Wage Subsidy Programme (WSP) and Wage Subsidy Programme 2.0 (WSP 2.0)	**WSP** (1) Firm loss of 50% or more revenues by March 2020. (2) Employers must be registered with the Companies Commission of Malaysia (SSM) **WSP 2.0** (3) Firm loss of 30% or more revenues (from 2019 to 2020) after the implementation of the Recovery Movement Control Order (RMCO) (4) Registered employers and employees (5) Employees earning RM4000 or less (6) Employers are forbidden from retrenching employees but allowed to reduce working hours or wages if their employees agree after negotiation	3 - 6 months	**WSP 1.0** Based on firm size: (1) 75 or fewer employees • RM1,200 per employee per month (2) Between 75 and 200 employees • RM800 per employee per month (3) 200 or more employees • RM600 per employee per month **WSP 2.0** (1) Current WSP Recipients • RM600 per employee per month for 3 months (2) New Applicants • RM600 per employee per month for 6 months	Social Security Organisation (SOSCO)

3. RESEARCH DESIGN

Empirical analyses in this paper are performed based on primary data collection. Section 3.1 describes the data collection methods, detailing the scope and sampling technique. Section 3.2 presents the methodologies for data analysis, focusing on descriptive statistics and econometric model.

Data Collection Method

This study collected data by using an online survey approach where emails were sent to randomly targeted firms. The online survey is the most appropriate approach used for data collection given the restricted mobility for conducting a face-to-face data collection implied under the Conditional Movement Control Order (partially lockdown). In addition, the online survey is cost-effective (Heiervang & Goodman, 2011; Baker et al., 2010; Smith et al., 2007) and time-efficient in gaining a quick response (Heiervang & Goodman, 2011).

The samples of targeted firms were extracted from the "population" of firms that are incumbent recipients of WSP and WSP 2.0 assistance in the SOSCO data system. The online survey was conducted for about one month, starting from 30th October to 22nd November 2020. The survey questions contained a total of 12 questions covering the domains of the firm's background information (3 questions), future employees' welfare (4 questions), and business situation (5 questions). The survey was refined and amended based on the International Labour Organisation (ILO) survey questionnaire for assessing the needs of enterprises resulting from COVID-19 (International Labour Organisation, 2020d). The survey questions are detailed in Appendix 1.

The survey samples included small and medium enterprises (SMEs) and large firms throughout Malaysia still receiving WSP benefits. As of 23rd October 2020, 378,557 firms received benefits from the WSP during the COVID-19 outbreak (Social Security Organisation, 2020a). The samples of 46,670 were obtained from the SOCSO database representing firms that
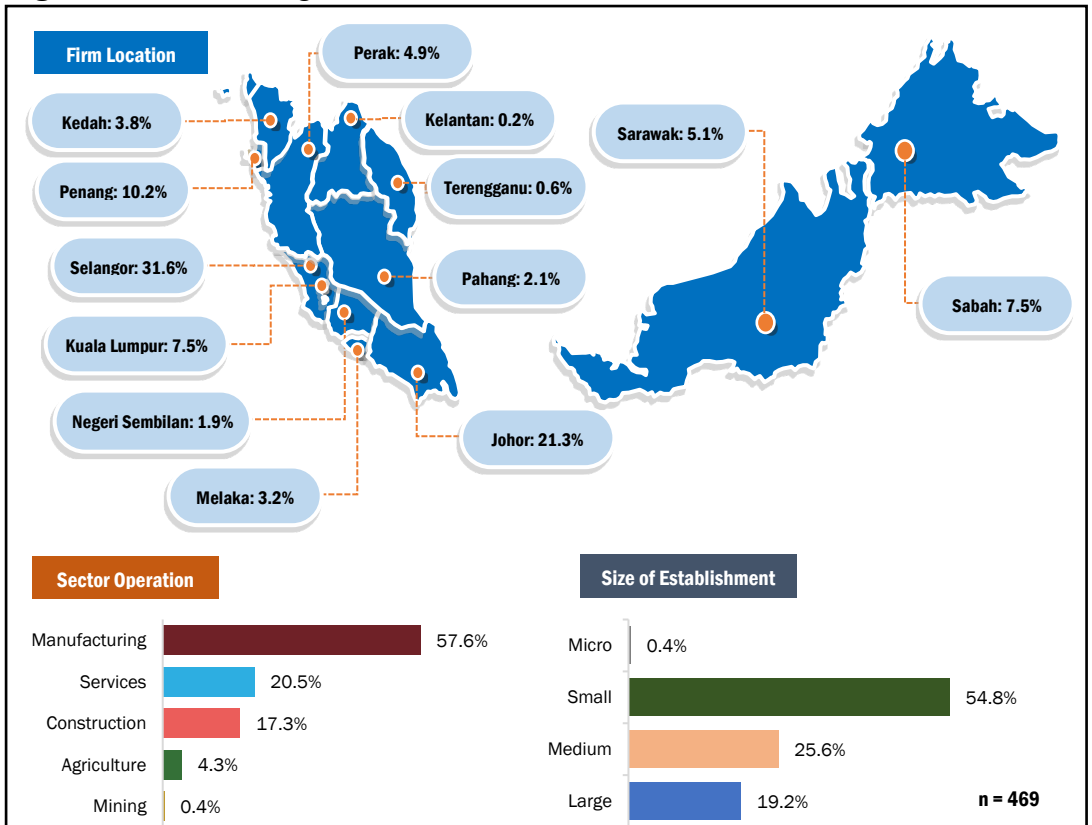
still receive the assistance. For sample selection, the nonprobability purposive sampling technique was used to determine the desired information for the study (Dattalo, 2008). The minimum number of respondents required for this study was 382 firms with a margin-of-error at 5% and 95% confidence level according to Cochran's sample size determination (Kotrlik & Higgins, 2001). In turn, a total of 469 responses were successfully collected, with a response rate of 27.6% from 1,700 samples. This data collection exceeded the minimum sample size required for this study in representing the WSP recipients.

The key characteristics of 469 firms are summarised in Figure 1. The results show that 57.6% of the firms represent the Manufacturing sector, followed by 20.5% for Services, 17.3% for Construction, 4.3% for Agriculture, Forestry & Fishing sectors and 0.4% for Mining & Quarrying. Geographically, firms in the state of Selangor represent the highest response rate with 31.6%, followed by Johor with 21.3% and Penang with 10.2%. Regarding the size of establishments[1], small enterprises constitute the highest response rate at 54.8%, while microenterprises denote the lowest with 0.4%. Medium and large enterprises represent 25.6% and 19.2%, respectively, of total responses.

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[1] Size of establishment refers to the micro, small, medium and large enterprises in Malaysia. According to SME Corp. Malaysia (2013), a common definition for SMEs endorsed by the National SME Development Council (NSDC) are based on the number of full-time employees or sales turnover. The definition is as follows:

1. **Microenterprises:** All sectors that have less than 5 full-time employees.
2. **Small:** For Manufacturing (including agro-based) and Manufacturing-related Services required to have full-time employees from 5 to less than 75 while Services and other sector have full-time employees from 5 to less than 30.
3. **Medium:** Manufacturing sector have full-time employees from 75 to not exceeding 200 while Services and other sectors have full-time employees from 30 to not exceeding 75.
4. **Large:** Manufacturing sector have full-time employees more than 200 while Services and other sectors have full-time employees more than 75.

Figure 1: Firm's Background Information

Firm Location

Perak: 4.9%
Kedah: 3.8%
Kelantan: 0.2%
Sarawak: 5.1%
Penang: 10.2%
Terengganu: 0.6%
Selangor: 31.6%
Pahang: 2.1%
Kuala Lumpur: 7.5%
Sabah: 7.5%
Negeri Sembilan: 1.9%
Johor: 21.3%
Melaka: 3.2%

Sector Operation

Manufacturing — 57.6%
Services — 20.5%
Construction — 17.3%
Agriculture — 4.3%
Mining — 0.4%

Size of Establishment

Micro — 0.4%
Small — 54.8%
Medium — 25.6%
Large — 19.2%

n = 469

Data Analysis and Modelling

Data collected from this survey was analysed using descriptive and inferential statistics. Descriptive statistics are typically used to summarise and describe the initial findings from the data by percentage and cross-tabulation between variables. Inferential statistics are used to establish some empirical relationships observed from the descriptive statistics (Byrne, 2007). We provided inferential statistics on the relationship between a firm's business situation and employment plans (whether hiring or dismissal). The objective of this analysis was to examine the empirical factors that determine employment plans.

For inferential statistics, we used the Probit model to analyse dichotomous or binary outcome variables. In the Probit model, the inverse standard normal distribution of the probability was modelled as a linear combination of the predictors. Since our main objective was to estimate the probability of unemployment concerning the WSP, the application of the Probit model was deemed the most appropriate approach. As a matter of fact, the application of the Probit model is widely used in labour market studies literature (see, for example, Brown & Sessions, 1997; Cirillo et al., 2020; Cowling et al., 2020).

The Probit model that fits our goal can be written as follows:

$$\Pr(Employment\ plans = 1) = \ \Phi\ (\beta_0 + \beta_1 Impact + \ \beta_2 Recovery + \beta_3 Continue)$$

Employment plans are the dependent variables that represent two cases: the dismissal or hiring of employees. The dependent variable takes the value of 1 for the case of dismissal employees and 0 if otherwise. A similar approach was used for the case of hiring employees. *Impact* refers to the magnitude of impact on firms' performance due to COVID-19. *Recovery* is a dummy variable where the value of 1 indicates the firm business recovery, only 1 to 25% compared to before COVID-19 occurred, and 0 otherwise. *Continue* represents an indication of firms to the continuation of business operations in 2021. It is described by using dummy variables where the value 1 is for the continuity of business operations as usual in 2021 and 0 is otherwise.

4. RESULT AND DISCUSSION

Overall, the results show that ending the WSP is unlikely to increase the unemployment rates as the percentage of firms that plan to dismiss employees was relatively smaller than the firms planning to increase employee numbers. Specifically, the survey indicates that more than half (55.9%) of the firms plan to retain employees, 29.2% scheduled to increase, and only 14.9% were likely to dismiss their employees despite

the discontinuation of the WSP. Thus, altogether, the net effects of the WSP on employees were positive.

The results in Table 2 detail the employment plans by firm size. It can be observed that the majority of the firms that intended to hire employees is dominated by firms with 31-75 employees, which contributes 12.2%. For the case of dismissal, the pattern shows that the decision is closely associated with the number of employees in the firms. That is, the higher (lower) the number of employees in a firm, the lower (higher) the number of firms expected to dismiss their employees. For example, firms with 5-30 employees have a high dismissal rate at 4.7% compared to firms with more than 200 employees, which recorded the lowest dismissal rate at only 2.6%. Meanwhile, firms with an existing size of employees between 5-30 and 31-75 are more likely to retain their employees, accounting for 19.6% and 20.3%, respectively.

Table 2: Employment Plans by Establishment Size (%)

Number of Employees[a]	Retaining[b]	Hiring[b]	Dismiss[c]
Less than 5 employees	0.4	0.0	0.0
5 - 30 employees	19.6	7.5	4.7
31 - 75 employees	20.3	12.2	4.3
76 - 200 employees	10.4	6.0	3.4
More than 200 employees	5.1	3.6	2.6
Total	55.9	29.2	14.9

Notes: [a] Refer to question 3; [b] Refer to question 7; [c] Refer to question 5 in Appendix 1

Retaining Employees. While most firms that plan to retain employees were concentrated in the manufacturing sector, most were small enterprises, as indicated in Table 3. The manufacturing sector accounted for the largest firms to retain employees contributing 58.0% of the overall sectors. This was followed by the construction sector with 21.4% and the services sector with 17.2%.

Unexpectedly, small enterprises across all sectors were more likely to retain their employees, accounting for 58.8%. Small enterprises could

survive during the pandemic by maintaining the flow of goods and services and restoring public confidence of other business owners and the community at large (Doern et al., 2019). Additionally, Irvine and Anderson (2006) and Muñoz et al. (2019) found that small firms with proper crisis planning survive and recover better from crises events. Empirical studies can support this, showing that smaller firms contribute more to job creation than larger firms in the EU country as a whole (De Wit & De Kok, 2014).

Table 3: Percentage of Retaining Employees by Sector and Size of Establishment

Sector	Size of Establishment (%)				
	Micro	Small	Medium	Large	Total
Manufacturing	0.0	38.9	12.6	6.5	58.0
Services	0.8	9.2	3.8	3.4	17.2
Construction	0.0	9.2	7.3	5.0	21.4
Agriculture, Forestry & Fishing	0.0	1.1	1.5	0.4	3.1
Mining & Quarrying	0.0	0.4	0.0	0.0	0.4
Total	0.8	58.8	25.2	15.3	100.0

Hiring Employees. The manufacturing sector not only shows the highest percentage of retaining employees but is also the largest contributor to the potential expansion of employment, accounting for 64.0%, as indicated in Table 4. On the other hand, the mining and quarrying sector is expected to contribute to the lowest expansion of employees at 0.7%.

Concerning the magnitude of potential expansion, most of the firms were planning to increase employment by around 1 to 10% (67.9%), followed by 11 to 20% (19.0%) and 21 to 30% (9.5%). Among the firms planning to increase employment from 1 to 10%, 59.0% were contributed by the manufacturing sector, with most sourced from small enterprises with 50.5%. The results indicate that employers are planning to hire new employees only on a small scale in 2021. Indeed, the government order to close all non-essential services and business premises has led to a cash flow imbalance. However, employers are still obligated to make

compulsory expenses such as business loans, rental fees, and employee salaries (Omar et al., 2020). This circumstance has led the firms to hire a low number of employees as an alternative to reduce the cost of business operations.

Dismissal of Employees. The potential employment reduction is mainly sourced from the manufacturing and services sectors. Detailing by sizes, it was found that small (44.3%), medium (22.9%) and large enterprises (32.9%) contribute largely to the reduction of employment, with the small enterprises dominating the most, as illustrated in Table 4. The magnitude of reduction is observed to occur between 1 to 10% and 11 to 20%.
The manufacturing sector was the hardest hit; the sector recorded the highest number of dismissed employees (44.3%) if the WSP ends. Small enterprises are the most affected at 24.3%, while medium enterprises are likely to experience a smaller effect at 7.1%. Despite the highest percentage of dismissed employees in the manufacturing sector, this sector also dominates the percentage of hiring employees in 2021.

The magnitude of employment reduction in the services sector is comparable to the manufacturing sector, which contributes 40.0% to the total potential reduction. The COVID-19 pandemic had affected the services sector since the beginning of the lockdown in March 2020. The most impacted industries in the services sector included accommodation, motor vehicles, and transportation and storage, which recorded the highest decline in GDP at 77.1%, 45.0% and 41.4%, respectively, in the third quarter of 2020 (Department of Statistics Malaysia, 2020). Contrary to the findings for the manufacturing sector, large firms in the services sector were most affected by the outbreak of COVID-19, with 17.1% of dismissed employees.

Together, the main implication that can be drawn from this survey is that ending the WSP does not significantly impact firms since the magnitude of employee dismissals is less inclined by the majority of firms. Regarding the establishment sizes, small enterprises tended to be more strongly affected by COVID-19 than other establishment sizes, as indicated by the

high percentage of dismissals. Concerning the economic sectors, manufacturing is the key sector that contributes to employee increase and dismissals. This implies that some manufacturing firms are less affected and are recovering, and some firms are severely affected and taking longer to recover.

Table 4: Percentage of Dismiss and Increase Number of Employees by Sectors and Size of Establishment

Sector	Establishment Size	Percentage of Dismiss of Employees[c]						Percentage of Increase of Employees[d]					
		1-10	11-20	21-30	31-40	>41	Total	1-10	11-20	21-30	31-40	>41	Total
Agriculture, Forestry & Fishing	Small	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.8	0.0	0.0	0.0	2.4
	Medium	0.0	2.9	0.0	0.0	0.0	2.9	1.6	0.0	0.0	0.0	0.0	1.6
	Large	0.0	0.0	1.4	0.0	0.0	1.4	3.2	0.0	0.0	0.0	0.0	3.2
	Total	0.0	2.9	1.4	0.0	0.0	4.3	6.3	0.8	0.0	0.0	0.0	7.1
Manufacturing	Small	17.1	4.3	1.4	1.4	0.0	24.3	28.6	8.7	3.2	0.8	0.8	42.1
	Medium	4.3	0.0	0.0	0.0	2.9	7.1	6.3	4.0	1.6	0.0	0.8	12.7
	Large	2.9	4.3	2.9	1.4	1.4	12.9	4.8	1.6	0.8	0.0	0.8	7.9
	Total	24.3	8.6	4.3	2.9	4.3	44.3	39.7	14.3	5.6	0.8	2.4	62.7
Construction	Small	4.3	1.4	0.0	0.0	0.0	5.7	3.2	0.0	0.0	0.0	0.0	3.2
	Medium	0.0	2.9	1.4	0.0	0.0	4.3	5.6	0.8	0.0	0.0	0.0	6.3
	Large	0.0	0.0	1.4	0.0	0.0	1.4	0.8	0.0	0.8	0.0	0.0	1.6
	Total	4.3	4.3	2.9	0.0	0.0	11.4	9.5	0.8	0.8	0.0	0.0	11.1
Services	Small	2.9	5.7	1.4	1.4	2.9	14.3	0.8	2.4	0.8	0.0	0.0	4.0
	Medium	4.3	2.9	0.0	1.4	0.0	8.6	5.6	0.0	0.8	0.0	0.0	6.3
	Large	8.6	4.3	2.9	1.4	0.0	17.1	5.6	0.0	1.6	0.8	0.0	7.9
	Total	15.7	12.9	4.3	4.3	2.9	40.0	11.9	2.4	3.2	0.8	0.0	18.3
Total	Small	24.3	11.4	2.9	2.9	2.9	44.3	34.1	11.9	4.0	0.8	0.8	51.6
	Medium	8.6	8.6	1.4	1.4	2.9	22.9	19.0	4.8	2.4	0.0	0.8	27.0
	Large	11.4	8.6	8.6	2.9	1.4	32.9	15.1	1.6	3.2	0.8	0.8	21.4
	Total	44.3	28.6	12.9	7.1	7.1	100.0	68.3	18.3	9.5	1.6	2.4	100.0

Notes: [c] *Refer to question 1, 3 and 5;* [d] *Refer to question 1, 3 and 6.*

Next, we link the employment plans with the firms' business situation. Figures 2a and 2b show that the COVID-19 pandemic has seriously disrupted firm sales, explaining 98.7% of the business performances. The magnitude of impact is sizeable, with 45.1% of firms largely impacted, 38.4% mediumly impacted, and 12.1% severely impacted.

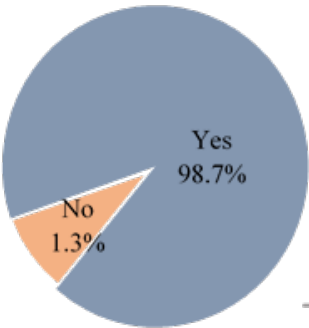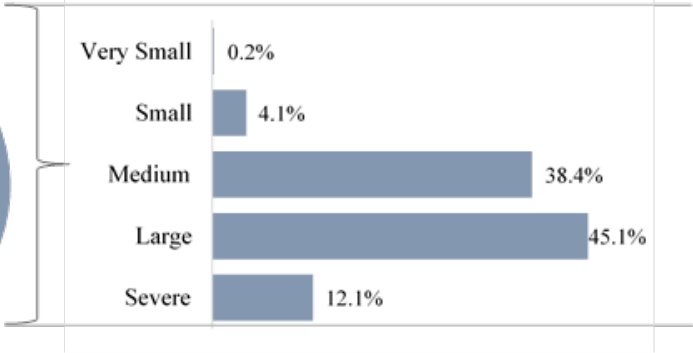**Figure 2**: COVID-19 impact on firm's performance in terms of sale[f]

Figure 3: Level of impact from impacted firms' performances in terms of sale[f]

Notes: [c]Note: [f] refer to question 8 and 9.

Several key business indicators determine the decision of firms to dismiss and hire employees. Table 5 provides an in-depth comparison between the key indicators which affect the firm's decision. The magnitude of the impact due to the COVID-19 pandemic clearly influences the decision of firms to dismiss or hire employees. For example, firms that plan to dismiss employees because most are severely impacted reflects 30.0% compared to only 8.0% for firms hiring employees.

Table 5: Key Business Indicators for Firms with Hiring and Dismissing Employees

Variables	Hiring	Dismissal
Severity of impacts[g]		
Minor	1.5	1.4
Moderate	44.5	25.7
Major	46.0	42.9
Severe	8.0	30.0
Business recovery[h]		
1-25%	29.2	38.6
25-50%	43.1	32.9
50-75%	23.4	21.4
75-100%	4.4	7.1
Full recovery period[i]		
6 months	5.8	1.4
6 to 12 months	46.7	41.4
More than 12 months	47.4	57.1
Business continuity[j]		
Yes	87.6	60.0
Not sure	12.4	38.6
No	-	1.4

Note:[d] Refer to question 9; [h] Refer to question 10; [i] Refer to question 11; [j] Refer to question 12 in Appendix 1.

Furthermore, the magnitude of recovery also determines the firm decision in dismissing and hiring employees. The results show that for all business recovery scales, the recovery phases for the firms with hiring employees are relatively higher than firms dismissing employees. Moreover, the tendency of firms to reduce employment is higher when more extended recovery periods are required. For example, the score of firms dismissing employees take more than 12 months to recover fully is higher than firms hiring employees, 57% vs 47%. Finally, it is common that business prospects determine the demand for employment. More than 87.6% of firms hiring employees plan to continue their business operations in 2021, compared to 60.0% of firms dismissing employees.

The results shown in Table 5 provide descriptive statistics without confirming the relationship between key business indicators and employment plans. The results in Table 6 provide the empirical relationship between the key business indicators and employment plans, estimated by using the Probit model. Both the estimated coefficients that

are statistically significant and the marginal effects are shown in the table. The marginal effects are used to determine the magnitude of the effect of the independent variables (key business indicators) towards the dependent variables (employment plans).

Table 6: The Case of Firms with Hiring Employees

	Panel A		Panel B	
Dependent variable	Hiring employees		Dismissal employees	
Independent variables	Coefficient	Marginal Effect	Coefficient	Marginal Effect
Impact	-0.014	-0.005	0.382***	0.082***
Recovery	0.127	0.043	0.290*	0.061*
Continue	0.537***	0.180***	-0.450***	-0.096***
Pseudo R^2	0.021		0.081	
No. of Observation	469			

Note: z-statistic correspond to the test of the following underlying coefficient being zero ***p<0.01; **p<0.05; *p<0.10.

The results in Panel A of Table 6 show that the coefficient for *Continue* is positive and with a statistically significant sign indicating the firms with a plan to continue business operations in 2021 have a higher likelihood of increasing their employee numbers. The marginal effects show that as the firms plan to continue business in 2021, there is a 17.8% chance for firms to increase their employee numbers.

For the dismissal of employees, the coefficient for the level of *Impact* shows a positive relationship and is statistically significant. The firms face a higher impact by COVID-19; there is an 8.2% chance for the firms to dismiss their employees. Firms with a large impact are associated with high financial constraints since most firms need to cease or pause their operations due to government intervention in curbing the spread of COVID-19. Here permanent employment layoffs have a close association with financial constraints (see Chundakkadan et al., 2020).

The estimation shows *Recovery* of firms compared to before the COVID-19 virus hit, having a positive relationship and is statistically significant at 10%. This indicates that a low recovery rate tends to be associated with a higher likelihood of employee dismissals. Results find a negative and

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significant coefficient for *Continue*. It implies that firms planning to continue business operations in 2021 are less likely to dismiss their employees. The observation shows that firms that plan to continue business have 9.6% fewer chances to dismiss their employees next year.

5. SUMMARY & CONCLUSION

This study documents the findings gathered from a snap employer survey, aiming to examine the impacts of ending the WSP on employment. The findings confirmed our expectation that ending the WSP is unlikely to increase unemployment rates. Out of all respondents who participated in this survey, 15% plan to reduce the employment size, 29% scheduled to increase employment, and 56% are likely to retain the current employment numbers. Altogether, the net effects of the WSP on employment are positive. This provides a "prima-facie" case to implementing a targeted WSP for 2021, given the results indirectly indicate positive signs about labour market recovery.

Some sectors have shown significant recovery after the government re-opened the economy since June 2020 and complemented massive economic stimulus packages. However, some firms in some sectors, such as the tourism industry, may require an extended recovery period, thus needing WSP assistance from the government. These findings support the main reasoning behind the implementation of the targeted WSP. Therefore, from an economic perspective, a targeted WSP is considered a productive policy decision that could promote economic recovery in sustainable ways.

The findings in this report should be considered as "first hand" information on the employment consequences of ending the temporary WSP. This study has several inherent limitations as it does not consider other significant factors expected to influence the findings. It is worth mentioning two main limitations. First, the survey does not consider the impacts of Conditional Movement Control Order (CMCO) periods. Opening up all economic activities are preconditions for economic recovery, and implementation of the CMCO is likely to influence

production and employment recovery speed. Second, the survey questionnaire is limited and could not be used to deep-dive or drill down into the micro-view of the affected employment conditions. For example, information on occupation, qualification and age of employees is important in determining appropriate actions to be taken.

ACKNOWLEDGEMENTS

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Appendix 1: PERKESO Snap Employer Survey

No.	Question	Measurement	Categories
1.	Sector of operation:	Nominal Categorical	• Agriculture • Forestry & Fishing • Mining & Quarrying • Manufacturing • Construction • Services
2.	Location of your firm (if you braches, please indicate location of the main branch):	Open-ended	-
3.	Total number of full-time employees before COVID-19 hit (including permanent and contract employees):	Interval scale	• Less than 5 employees • 5 – 30 employees • 30 – 75 employees • 75 – 200 employees • More than 201 employees
4.	Have your firm planned to dismiss any employees after ending the wage subsidy program?	Nominal Categorical	• Yes • No
5.	If Yes, what is percentage of employees released next year? (percentage over your total current employees)	Interval scale	• 1 – 10% • 11 – 20% • 21 – 30% • 31 – 40% • More than 41%
6.	If No for question 4, does your firm plan to increase the number of the employees in the next year?	Nominal Categorical	• Yes • No
7.	If Yes for question 6, what is the percentage of the increase in the number of employees (percentage over your total current employees?	Interval scale	• 1 – 10% • 11 – 20% • 21 – 30% • 31 – 40% • More than 41%
8.	Does COVID-19 still gives an impact to your firm's performance in terms of sales?	Nominal Categorical	• Yes • No
9.	If Yes for question 8, what is the level of the impact?	Interval scale	• Very small • Small • Medium • Large • Severe
10.	Please provide percentage of your business recovery compared to before COVID-19 hit	Interval scale	• 1 -25% • 26 – 50% • 51 – 75 • 76 – 100%
11.	Given the current situation, how long would it takes your firm to fully recover?	Interval scale	• 6 months • 6 – 12 months • More than 12 months
12.	Does your firm have plan to continue your business operations as usual by 2021 onwards?	Nominal Categorical	• Yes • Not sure • No

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