



# Determinant of Labor Force Resilience Against the Employment Impact of the Covid-19 Pandemic in Bali Province, Indonesia: An Application of Survival Analysis

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**Abstract.** The impact of coronavirus disease 2019 (Covid-19) pandemic is not only on health problems, but also has a negative impact on economic. The sector that economically worst affected by the pandemic is the tourism and its derivatives. As a result of depending heavily on the tourism sector, Bali is the province with the most labor force that has stopped working during the pandemic. In this study, data from the national labor force survey were analyzed using the Weibull-Gamma Shared Frailty Survival Model to explore the determinants of labor force resilience against the event of stop working due to the Covid-19 pandemic. The results show that gender, education level, experience in training, marital status, and age of labor force are variables that significantly affect on how quickly a labor force experiences an event of stop working. Moreover, variations among regions where they work (regencies/cities) also have a significant effect on stop working acceleration.

## 1. Introduction

The world is currently facing a crucial problem with the outbreak of a new virus, the coronavirus (Covid-19). After the first infected case of the coronavirus was detected in Wuhan, China, in December 2019, the number of infected people increased rapidly until it eventually spread throughout the world, including Indonesia. In March 2020, the World Health Organization (WHO) determined the existence of Covid-19 as a pandemic, so prevention efforts must be made so that there is no increase in cases. In line with this, the Indonesian Government has issued several policies to break the chain of Covid-19 spread, including urge people to stay at home, implementing social distancing, and implementing Large-Scale Social Restrictions (*Pembatasan Sosial Berskala Besar/PSBB*) in several areas.

In the conditions of the outbreak of the coronavirus, it turned out to have many impacts in various sectors, not only on health problems. This pandemic condition also has a negative impact on the economic sector. All jobs or businesses, regardless of size, face serious challenges with actual threats of significant income declines, bankruptcy, and job losses in certain sectors (ILO, 2020a). This situation occurred as a result of restrictions on economic activity throughout the fields in many countries which led to a sharp and unexpected decline in economic activity so that there would be a drastic decline in employment (ILO, 2020b). On the one hand, protecting workers and their families from the risk of transmitting this virus must be a top priority, so it is necessary to have a restriction on activities in the world of work that can minimize the occurrence of transmission, that is by seeking work to be done from home. On the other hand, the existence of activity restrictions and an appeal to work from home causes a new problem because workers cannot do all types of work from home (Randi, 2020).

The sector that economically worst affected by the Covid-19 pandemic is the tourism sector. Pffor and Hosie (2008) state that the tourism business is very vulnerable to potential crises stemming from



external shocks, which are inherently unpredictable, so they cannot prepare for crises. Bali is an international tourist destination that makes tourism as the main commodity, so that the impact of the Covid-19 pandemic is very much felt for the Bali economy and also tourism actors in it (Paramita and Putra, 2020). The paralysis of the tourism sector has caused many of the labor force who work in this sector to be forced to stop working or lose their jobs. Based on data from Sakernas August 2020, it is known that the Bali Province is a province with the highest cases of stop working due to the Covid-19 pandemic in Indonesia, which is 6.50 percent. Ngadi and Purba (2020) stated that the area with the highest number of layoff cases occurred in Bali-Nusa Tenggara. Even the case of layoffs without severance pay in Bali Province are the highest in Indonesia which causes Bali Province to become a red zone area in terms of employment vulnerability (Ngadi and Purba, 2020).

The large number of labor force who have stopped working due to the Covid-19 pandemic would cause unemployment in Indonesia to increase. This is in accordance with the ILO's initial estimate (2020a), which shows a significant increase in the number of unemployed and underemployed during the Covid-19 pandemic. Even though the government has successfully suppressed the unemployment rate in Indonesia in the last five years, the presence of Covid-19 has increased the unemployment rate again (Fahri, Jalil, and Kasnelly, 2020). Another impact of the labor force who has stopped working due to the Covid-19 pandemic and has changed status to unemployment is loss of income. This can cause the labor force near the poverty line to fall into poverty and the labor force below the poverty line to worsen. As a result, poverty would also increase due to the Covid-19 pandemic (ILO, 2020a). This situation can automatically affect people's purchasing power which tends to decline, where the circulation of money in the community becomes very minimal, which causes the production of goods to be limited so that there is a trade deficit in the economic cycle (Kurniawansyah, Amrullah, Salahuddin, Muslim, and Nurhidayati, 2020).

The Covid-19 pandemic can certainly be a big problem because Bali tourism, which empowers a lot of workers and drives Bali's economy, is at a disadvantage at this time (Kusuma, 2020). These problems can have an impact on other sectors. Aji, Pramono, and Rahmi (2018) state that tourism has a multiplier effect that can affect the conditions of other industries that support tourism itself, either directly or indirectly. Judging from the decline in the tourism sector which has an impact on the worrying labor conditions in Bali Province and the emergence of various negative impacts caused by the large number of labor force who have stopped working due to the Covid-19 pandemic, it is necessary to conduct research to analyze the resilience of the labor force in Bali Province not to stop working due to the Covid-19 pandemic.

## 2. Methodology

### 2.1. Research scope

The data used in this study is secondary data, that is raw data from the August 2020 National Labor Force Survey (*Survei Angkatan Kerja Nasional/Sakernas*) organized by the Indonesian Central Bureau Statistics (*Badan Pusat Statistik Indonesia/BPS Indonesia*). This research covers all areas in Bali Province. The scope of the analysis unit in this study was the entire labor force in Bali Province which was sampled in the August 2020 Sakernas. The labor force classified as unemployed was excluded from the analysis because they had no potential to stop working due to the Covid-19 pandemic.

In this study, there are two kinds of variables: the dependent and independent variables. The dependent variable used in this study is the working period of the labor force starting from the first case of Covid-19 infection in Indonesia, precisely in March 2020 until the labor force lost their job or stopped working due to the Covid-19 pandemic. The labor force that stopped working due to the Covid-19 pandemic was declared as an event, while the labor force that did not stop working due to the Covid-19 pandemic from March 2020 until the enumeration was carried out (August 2020) was classified as a censored. The independent variables that are suspected to affect the working period of the labor force until they stop working due to the Covid-19 pandemic include the classification of the area of residence, gender, education level, training, marital status, age group, and unobserved variables (frailty).



2.2. Analysis method

The stages of analysis in this research began from exploring the data, then continued by doing descriptive analysis and inferential analysis. Descriptive analysis is used to see an overview of the resilience of the labor force in Bali Province during the Covid-19 pandemic. The analytical tools used are tables, pie charts, and Kaplan-Meier curves. The inferential analysis is used to determine the variables that significantly affect the resilience of the labor force in Bali Province not to stop working due to the Covid-19 pandemic and to find out whether the unobserved variables that are assumed to be generally the same in individuals who live in the same regency/city have a significant effect on the resilience of the labor force in Bali Province not to stop working due to the Covid-19 pandemic. Therefore, the appropriate inferential analysis used in this study is survival analysis with the shared frailty model. Survival function of several models in survival analysis is shown in Table 1.

Table 1. Survival Function.

Model		Survival Function
Distributions	Exponential	$S(t) = e^{-\lambda t}, t \geq 0$
	Weibull	$S(t) = e^{-\lambda t^p}, t \geq 0, \lambda > 0, p > 0$
	Log-logistic	$S(t) = \frac{1}{1 + \lambda t^p}, p > 0, \lambda > 0$
	Log-normal	$S(t) = 1 - \Phi\left(\frac{\log t - \mu}{\sigma}\right)$
Accelerated Failure Time (AFT)		$S_0(t) = S_1(\gamma t) \text{ for } t \geq 0$
Shared Frailty		$S_{jk}(t Z_k) = S_{jk}(t)^{Z_k}$

Source: Kleinbaum and Klein (2012)

3. Results and Discussion

3.1. Overview of the resilience of the labor force in Bali Province during the Covid-19 pandemic

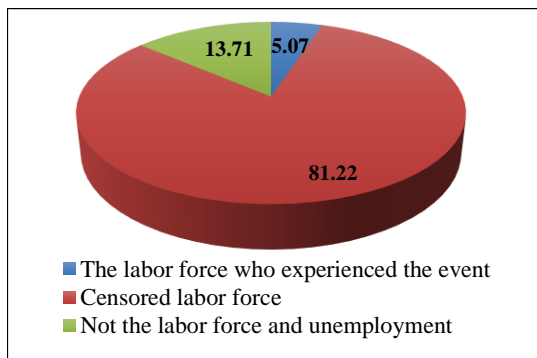


Figure 1. Percentage of the labor force in Bali Province based on status (event/censor).

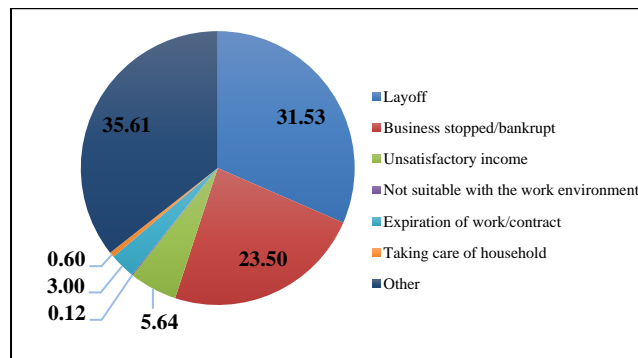


Figure 2. Percentage of the labor force who stopped working due to the Covid-19 pandemic in Bali Province based on the main reason for stop working.

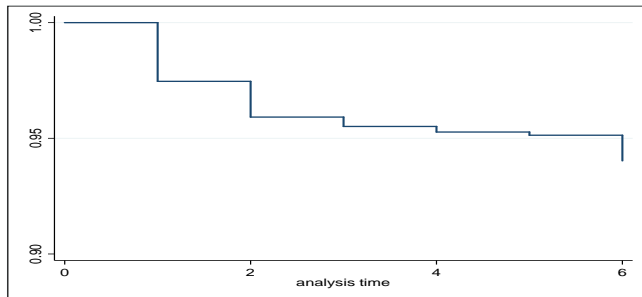
The working-age population in Bali Province in 2020 based on the August 2020 National Labor Force Survey (Sakernas) results amounted to 16,444 people. Of this number, 834 people in the labor force or 5.07 percent experienced an event or stopped working due to the Covid-19 pandemic, 13,356 people in the labor force or 81.22 percent experienced censorship or did not stop working due to the Covid-19 pandemic, and 2,254 people or 13.71 percent are not in the labor force and are unemployed. The labor force that has experienced censorship is said to have survived during the Covid-19 pandemic.

In Figure 2, it can be seen that 31.53 percent of the labor force stated that they had stopped working due to Covid-19 because they were laid off, 23.5 percent because their business was stopped/bankrupt,



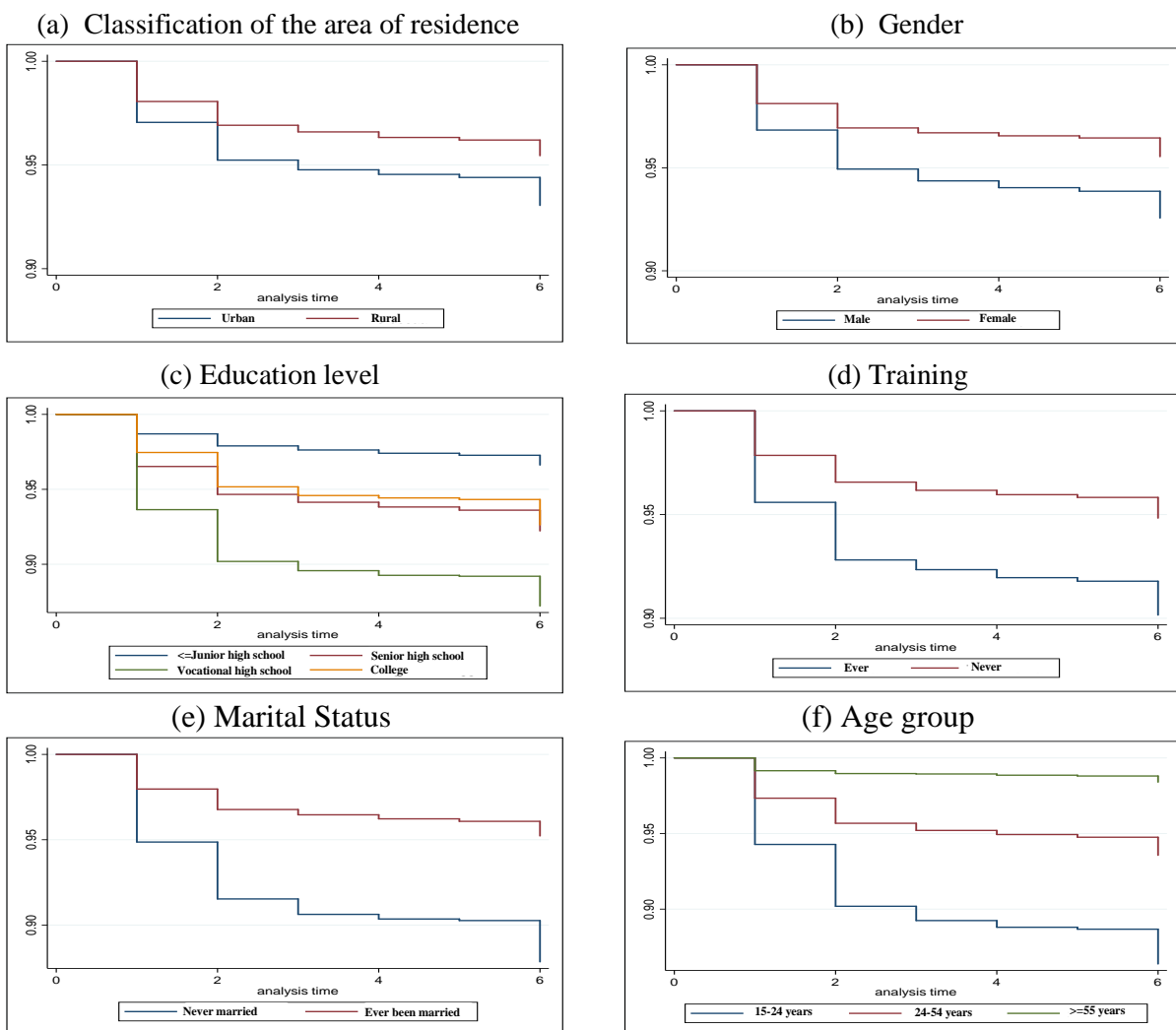
5.64 percent because their income was not satisfactory, 0.12 percent because they were not suitable with the work environment, 3.00 percent due to the expiration of the work/contract, 0.60 percent due to taking care of the household, and 35.61 percent due to other reasons.

Of the entire labor force in Bali Province, most of them live in urban areas, are male, have the highest education of junior high school and below, have never participated in training, ever been married, and are in the age range of 25-54 years. The frequency and percentage of each characteristic of the labor force in the Bali Province can be seen in Appendix A.



**Figure 3.** Kaplan-Meier curve of labor force resilience not to stop working due to the Covid-19 pandemic

From Figure 3, it can be seen that most of the entire labor force stopped working in the first two months of the Covid-19 pandemic, in March and April 2020. This is indicated by a steeper downward curve in the first two months. After passing the second month, the curve's decline became more gentle, indicating that fewer events (the labor force who stopped working due to the Covid-19 pandemic) had occurred during that time.



**Figure 4.** Kaplan-Meier curve of labor force resilience not to stop working due to the Covid-19 pandemic based on independent variables.



Through the Kaplan-Meier curve shown in Figure 4, it can be seen that the labor force that has higher resilience not to stop working due to the Covid-19 pandemic is the labor force who live in rural areas, are female, have the highest education of junior high school and below, have never participated in training, ever been married, and are more than 55 years old. This is reinforced by the Log-rank Statistic test shown in Appendix B, which shows the results of rejecting  $H_0$ , which means that there is a significant difference in the Kaplan-Meier curve between categories.

### 3.2. Variables that significantly affect the resilience of the labor force not to stop working due to the Covid-19 pandemic in Bali Province

This study uses a parametric distribution that can accommodate Accelerated Failure Time (AFT) assumptions. Based on Table 2, the distribution used in this study should be the Lognormal distribution because it has the smallest AIC value. However, the Lognormal distribution was not chosen in this study because it is related to the problem of data convergence, so that when using this distribution, the iteration process occurs continuously and does not produce a model. This also happens when using the Loglogistic distribution. Therefore, the Weibull distribution was chosen to model survival data used in this study.

**Table 2.** Null model AIC value on AFT parametric distribution.

Distribution	AIC
Exponential	8169.719
Weibull	8164.871
Loglogistic	8159.631
Lognormal	8088.645

In this study, the authors wanted to find out whether the unobserved variables that are assumed to be generally the same in individuals who live in the same regency/city in Bali Province have a significant effect on the resilience of the labor force not to stop working due to the Covid-19 pandemic. Therefore, it is necessary to include shared frailty variables, that is, random effects that affect survival time, where individuals in the same cluster have the same unobservable factors. Regency/city in Bali Province that are residence to the labor force are suspected of having an immeasurable effect on the resilience of the labor force not to stop working due to the Covid-19 pandemic.

In Appendix B, it can be seen the results of the Logrank test to see if there are differences in resilience not to stop working due to the Covid-19 pandemic based on regencies/cities in Bali Province. Significant results indicate that there are differences in resilience between regencies/cities in Bali Province. This can be the basis for using the shared frailty method, where there are factors that cannot be measured in each regency/city that can affect the resilience of the labor force not to stop working due to the Covid-19 pandemic.

In using the shared frailty model, the frailty variable in the model is assumed to follow a certain distribution. Based on the principle of parsimony, the simplest and most commonly used distribution is the gamma distribution. In addition, it can be seen in Table 3 that the shared frailty model with Gamma distribution and Inverse-Gaussian distribution has AIC values that are not much different. Therefore, the frailty distribution chosen to model the survival data in this study is the Gamma distribution.

**Table 3.** AIC value of Weibull Shared Frailty model for Gamma and Inverse-Gaussian distribution.

Distribution	AIC
Gamma	8055.936
Inverse-Gaussian	8055.573

In Appendix C, it can be seen that the likelihood ratio (LR) test of theta shows the result of rejecting the null hypothesis, which means that the presence of the frailty variable in the model is more suitable to explain the resilience of the labor force not to stop working due to the Covid-19 pandemic in Bali



Province than the model without the frailty variable. In addition, the test results of the frailty variance (ln theta) also show the results of rejecting the null hypothesis, which means that the frailty variable has a significant influence on the resilience of the labor force not to stop working due to the Covid-19 pandemic in Bali Province.

Determination of the best model in this study using the backward elimination method, that is, by eliminating the independent variables one by one starting from the independent variable that is least significant in the model or has the highest p-value. Based on this method, the best model was obtained with five independent variables, that is, gender, education level, training, marital status, and age group. The output of the best model can be seen in Table 4.

**Table 4.** Best model: Weibull Gamma Shared Frailty Model.

Variables and characteristics	Coefficients ( $\beta$ )	Acceleration Factor ( $e^{\beta}$ )	p >  z
<b>Gender</b>			
Female <sup>a</sup>	1		
Male ( $X_1$ )	-0.4850	0.616	0.000 <sup>b</sup>
<b>Education level</b>			
≤Junior high school <sup>a</sup>	1		
Senior high school ( $X_{21}$ )	-0.3833	0.682	0.000 <sup>b</sup>
Vocational high school ( $X_{22}$ )	-0.6867	0.503	0.000 <sup>b</sup>
College ( $X_{23}$ )	-0.2611	0.770	0.039 <sup>b</sup>
<b>Training</b>			
Never <sup>a</sup>	1		
Ever ( $X_3$ )	-0.2422	0.785	0.008 <sup>b</sup>
<b>Marital status</b>			
Never married <sup>a</sup>	1		
Ever been married ( $X_4$ )	0.3282	1.388	0.003 <sup>b</sup>
<b>Age group</b>			
15-24 years <sup>a</sup>	1		
25-54 years ( $X_{51}$ )	0.4907	1.633	0.000 <sup>b</sup>
≥55 years ( $X_{52}$ )	1.7569	5.795	0.000 <sup>b</sup>
<b>_cons</b>	4.5321		0.000 <sup>b</sup>
<b>/lntheta</b>	-2.2490		0.000 <sup>b</sup>
<b>P</b>	0.9327		
<b>Theta</b>	0.1055		
<b>Weibull Gamma Shared Frailty Model vs. Weibull Model (without frailty)</b>	65.05		0.000 <sup>b</sup>
<b>Simultaneous test</b>	426.76		0.000 <sup>b</sup>

<sup>a</sup>Reference category

<sup>b</sup>Significant at alpha = 0,05

Thus, the Weibull Gamma Shared Frailty model equation formed is as follows:

$$\hat{S}(t|Z_k) = \left[ e^{-\hat{\lambda}t^{0.933}} \right]^{Z_k} \tag{1}$$

$$\hat{t} = \left( -\frac{Z_k}{\sqrt{\ln(\hat{S}(t|Z_k))}} \right)^{1/0.933} \frac{1}{\hat{\lambda}^{1/0.933}} \tag{2}$$

$$\frac{1}{\hat{\lambda}^{1/0.933}} = \exp(4.532^* - 0.485X_1^* - 0.383X_{21}^* - 0.687X_{22}^* - 0.261X_{23}^* - 0.242X_3^* + 0.328X_4^* + 0.491X_{51}^* + 1.757X_{52}^*) \tag{3}$$

3.2.1. *Simultaneous test.* Simultaneous test in this study resulted in a chi-square value of 426.76 and a p-value of 0.000, which resulted in a decision to reject the null hypothesis. This decision means that there is at least one independent variable that affects the resilience of the labor force not to stop working



due to the Covid-19 pandemic in Bali Province.

3.2.2. *Partial test.* Partial test in this study shows that variables that significantly affect the resilience of the labor force not to stop working due to the Covid-19 pandemic in Bali Province include gender, education level, training, marital status, age group, and unobserved variables (frailty).

3.2.3. *Interpretation.* The interpretation of the results of the parameter estimator in this study uses the acceleration factor from the Weibull distribution so that the difference in the resilience of the labor force not to stop working due to the Covid-19 pandemic in Bali Province can be seen between categories in the independent variable.

- Gender

The male labor force is 0.616 times faster to stop working due to the Covid-19 pandemic than the female labor force in Bali Province when other variables are constant. Women have higher resilience because modern Balinese women have now received a lot of education up to college and have established jobs that provide opportunities for women to have a very important role in social, educational, political, and family life (Pramita, Yasa, and Artika, 2020).

- Education level

The labor force with the highest education in senior high school is 0.682 times faster to stop working due to the Covid-19 pandemic than the labor force with the highest education in junior high school and below when other variables are constant. The labor force with the highest education in vocational high school is 0.503 times faster to stop working due to the Covid-19 pandemic than the labor force with the highest education in junior high school and below when other variables are constant. Meanwhile, the labor force with the highest education in college is 0.770 times faster to stop working due to the Covid-19 pandemic than the labor force with the highest education in junior high school and below when other variables are constant.

The results of this study were not in line with the research conducted by Montenegro et al. (2020), which states that highly educated workers appear to be safer because they have a greater chance of working remotely or without direct interaction. Data published on the state of employment in Bali Province in August 2019 shows that the labor force with junior high school education and below has the lowest percentage of the labor force working in the accommodation and food and drink supply sector. The accommodation and food and drink supply sector is used to approach the tourism sector because more than 50 percent of tourist spending is used to pay for hotel accommodation and food and drinks (Yoeti in Santoso, 2014). Given that the impact of this pandemic is being felt for the tourism sector, it is possible that the labor force with junior high school education and below has the highest resilience in the conditions of the Covid-19 pandemic.

- Training

The labor force who have participated in training is 0.785 times faster to stop working due to the Covid-19 pandemic than the labor force who have never participated in training in Bali Province when other variables are constant. It can be concluded that participation in training does not have a good impact on reducing the risk of the labor force not to stop working due to the Covid-19 pandemic or the labor force that has participated in training has lower resilience to not stop working due to the Covid-19 pandemic. Based on the descriptive analysis of this study, the results showed that most of the labor force had never participated in training. This provides quite strong information that participation in training is not a priority when entering the working world.

- Marital Status

The labor force that had been married is 1.388 times longer to stop working due to the Covid-19 pandemic than the unmarried labor force in Bali Province when other variables are constant. The results of this study are in line with the research conducted by Montenegro et al. (2020), which states that unmarried workers experienced a greater decline in employment during the Covid-19 pandemic than married workers. This can happen because the married labor force tends to try to maintain their jobs so that they and their families can survive during the Covid-19 pandemic.

- Age group

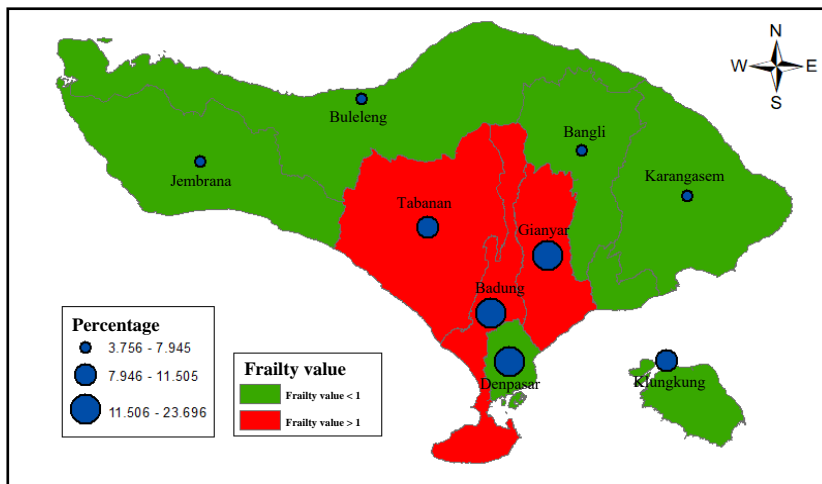


The labor force aged 25-54 years is 1.633 times longer to stop working due to the Covid-19 pandemic than the labor force aged 15-24 years in Bali Province when other variables are constant. Meanwhile, the labor force aged 55 years and over is 5.795 times longer to stop working due to the Covid-19 pandemic than the labor force aged 15-24 years in Bali Province when other variables are constant. The results of this study are in line with the research conducted by Montenovio et al. (2020), which states that young workers have had bad luck during this Covid-19 pandemic, where these young workers have smaller remote work prospects and tend to require face-to-face interaction in their work, thus causing resilience not to stop working to be low.

- Unobserved variables (frailty)

The frailty variable is denoted by  $Z_k$ , which is a random variable with a gamma distribution for the  $k$ -th cluster with an average = 1 and the value of variance (theta) = 0.1055, where  $k$  consists of nine regencies/cities in Bali Province. The labor force in regencies/cities with a  $Z_k$  value  $> 1$  is said to be weaker or more at risk of experiencing events (stop working due to the Covid-19 pandemic).

Based on Figure 5, it can be seen that the three regencies with a  $Z_k$  value  $> 1$  have a fairly high percentage of the population working in the accommodation and food and drink supply sector, that is, 10.595 percent for Tabanan Regency, 23.696 percent for Badung Regency, and 16,400 percent for Gianyar Regency. There are also inconsistent conditions, that is, several regencies/cities with a high percentage of the population working in the accommodation and food and drink supply sector but having a  $Z_k$  value  $< 1$ , which is 16.318 percent for Denpasar City and 11.505 percent for Klungkung Regency. This means that although quite a lot of residents in Denpasar City and Klungkung Regency work in the accommodation and food and drink supply sector, the risk or potential to stop working due to the Covid-19 pandemic is lower than Tabanan, Badung, and Gianyar Regencies. Meanwhile, Jembrana, Bangli, Karangasem, and Buleleng regencies have a value of  $Z_k < 1$ , which is in line with the low percentage of the population working in the accommodation and food and drink supply sector.



**Figure 5.** Frailty value and percentage of Balinese population aged 15 years and over who worked in the accommodation and food and drink supply sector during the past week in 2019 by regency/city.

#### 4. Conclusion

Based on the results of the analysis and discussion regarding the resilience of the labor force not to stop working due to the Covid-19 pandemic in Bali Province, the following conclusions can be drawn:

- The labor force in Bali Province mostly stopped working in the first two months of the Covid-19 pandemic, that is, in March and April 2020. Characteristics of the labor force with higher resilience not to stop working due to the Covid-19 pandemic based on the Kaplan-Meier survival curve, that is, living in rural areas, female, having the highest education at junior high school and below, never having participated in training, having been married, and are in the age range of 55 years and over.
- There are five independent variables that significantly affect the resilience of the labor force not to stop working due to the Covid-19 pandemic in Bali Province. The five variables are gender,





education level, participation in training, marital status, and age group. In addition, there are three regencies/cities in Bali Province that have more than one frailty value, that is Tabanan Regency, Badung Regency, and Gianyar Regency. This means that there are unobserved variables that cause the labor force living in the three regencies/cities to have a greater risk or potential to stop working due to the Covid-19 pandemic than other regencies/cities with a frailty value of less than one.

Based on the conclusions, there are several suggestions that can be given, that is:

- The government is expected to continue to carry out the handling program for the labor force who stopped working due to the Covid-19 pandemic by taking into account the characteristics of the labor force that has lower resilience.
- The labor force that has lower resilience during the Covid-19 pandemic are expected to make better preparations, such as participating in various existing government programs or independently seeks to improve skills according to the needs during this Covid-19 pandemic, such as the ability to use technology, the ability to use social media, and language skills.
- Further researchers are expected to be able to dig deeper into the variables that are thought to affect the resilience of the labor force not to stop working due to the Covid-19 pandemic, using more diverse analytical methods and in accordance with the conditions of the data used, and if necessary can use primary data to suit the needs of the analysis so that better research results can be obtained.

## Appendices

### Appendix A. Frequency and percentage of labor force based on independent variables

No	Variables and characteristics	Category	Frequency	(%)
1	Classification of the area of residence	Urban	8,418	59.32
		Rural	5,772	40.68
2	Gender	Male	7,228	50.94
		Female	6,962	49.06
3	Education level	≤Junior high school	7,544	53.16
		Senior high school	2,964	20.89
		Vocational high school	1,715	12.09
		College	1,967	13.86
4	Training	Ever	2,449	17.26
		Never	11,741	82.74
5	Marital status	Never married	2,317	16.33
		Ever been married	11,873	83.67
6	Age group	15-24 years	1,661	11.71
		25-54 years	8,748	61.65
		≥55 years	3,781	26.65

### Appendix B. Logrank Statistic Test

Variables	<i>p-value</i>
Classification of the area of residence	0.000
Gender	0.000
Education level	0.000
Training	0.000
Marital status	0.000
Age group	0.000
Regency/city	0.000



**Appendix C. Output null model: Weibull Gamma Shared Frailty**

```

Weibull AFT regression

Gamma shared frailty
Group variable: kode_kab
Number of obs = 14,190
Number of groups = 9
Obs per group:
    min = 1,293
    avg = 1,576.67
    max = 1,848

No. of subjects = 14190
No. of failures = 834
Time at risk = 80124

Log likelihood = -4024.9681
F( 0, .) = .
Prob > F = .


```

_t	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
_cons	4.830847	.1823972	26.49	0.000	4.473355	5.188339
/ln_p	-.0845004	.0339579	-2.49	0.013	-.1510567	-.0179441
/lntheta	-1.837755	.4919177	-3.74	0.000	-2.801896	-.8736136
p	.9189713	.0312063			.859799	.9822159
1/p	1.088173	.0369521			1.018106	1.163063
theta	.1591744	.0783007			.0606949	.4174404

```

LR test of theta=0: chibar2(01) = 110.93      Prob >= chibar2 = 0.000
. estat ic

Akaike's information criterion and Bayesian information criterion


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Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	14,190	.	-4024.968	3	8055.936	8078.617

Note: N=Obs used in calculating BIC; see [R] BIC note.

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