

## Occupational Mobility of Tourism Sector Workers during the COVID-19 Pandemic



Desak Putu Eka Nilakusmawati\*<sup>1</sup>, I Gusti Ayu Made Srinadi<sup>2</sup>, Made Susilawati<sup>3</sup>, Ni Luh Putu Suciptawati<sup>4</sup>, Desak Ketut Tri Martini<sup>5</sup>, Dewa Made Alit Adinugraha<sup>6</sup>

<sup>1,2,3,4</sup>Mathematics Department, Udayana University, Badung, Bali, Indonesia

<sup>5</sup>Indonesia Defense University, Sentul, Bogor, Indonesia

<sup>6</sup>Bandung Institute of Technology, Bandung, Indonesia

**ABSTRACT:** The COVID-19 pandemic has shocked the travel and tourism industry, namely the arrival of international and domestic tourists has reduced significantly. This has an impact on reducing working hours, income and even job loss for formal and informal workers in the tourism sector. Tourism sector workers, in their efforts to maintain their income, carry out job mobility and adopt strategies to survive the COVID-19 pandemic. The aim of this research is to determine the occupational mobility of tourism sector workers during the COVID-19 pandemic. The research was conducted in 8 districts and 1 municipality in Bali Province, Indonesia. Data collection in the field was carried out using survey methods. The research findings showed that 59.6 percent of respondents stated that they carried out job mobility. Some respondents stated that they experienced 1 job change from before the pandemic to during the COVID-19 pandemic. How long does it take to change jobs from the initial job to the next job, 31.8 percent of respondents said they experienced it in less than 6 months, 21.9 percent said they experienced a job change in a period of more than 6 months to 1 year, as many as 6.6 percent said they experienced changing jobs within a period of more than 1 year, while 39.7 percent did not experience *occupational* mobility. The association of occupational mobility of tourism sector workers with the socio-economic characteristics of respondents shows that there is an association between the presence/absence of job mobility and the variables of gender, level of education, professional education/training held, frequency of experiencing job changes/transfers from one job to another. other jobs, the time span of how long it takes to change jobs from the first job to the next job, and variable changes in income during the pandemic compared to income before the COVID-19 pandemic.

**KEYWORDS:** Occupational mobility, occupational, tourism sector workers, tourism sector

### I. INTRODUCTION

The COVID-19 pandemic has shocked the travel and tourism industry. According to the UNWTO [1] international tourist arrivals declined by 74%, and domestic tourism also reduced significantly, resulting in tourism unemployment, at a scale of half a million jobs lost per day, eight times greater than that experienced during the financial crisis global 2008. This decline in international tourist arrivals resulted in a loss of export revenues of US\$910 billion to US\$1.2 trillion, which put 100-120 million tourism-related jobs at risk [2].

To mitigate the socio-economic impact of this global tourism crisis, the United Nations World Tourism Organization [3] and The World Travel and Tourism Council have called for a priority to protect workers' livelihoods and the first step is to "encourage job retention, support the self-employed and protect disadvantaged groups." most vulnerable" [4].

UNWTO [5] reports that worldwide, current financial measures for travel and tourism employment are widely implemented with around 100 countries implementing some level of subsidies for small and medium tourism businesses and self-employed workers across countries. UNWTO [4] reports that under national subsidy programs such high levels are unlikely to last long as large numbers of workers will quickly exhaust the budget. With COVID-19 mobility measures protracted and tourism sector recovery uncertain in the short term, the government's immediate task is to channel limited resources to provide direct support to those most financially impacted.

The COVID-19 pandemic has had an impact on formal and informal workers in the tourism sector in the form of reductions in working hours, income, and worst of all, job loss. The efforts of tourism sector workers to maintain their income are by carrying out job mobility and taking other strategies to survive the COVID-19 pandemic.

Based on the background above, several research questions emerge: What is the occupational mobility of informal tourism sector workers during the COVID-19 pandemic?; What is the association between job mobility and the socio-economic characteristics of

## Occupational Mobility of Tourism Sector Workers during the COVID-19 Pandemic

tourism sector workers?; What sustainable policy recommendations make it possible to improve the welfare of tourism sector workers and still be able to maintain their business in similar conditions in the future? Based on the several research questions mentioned above, it is important to carry out this research to examine the job mobility of tourism sector workers in relation to the socio-economic characteristics of workers.

Occupational Mobility is the movement of workers from one job to another. This mobility is divided into two types, namely Horizontal Mobility and Vertical Mobility. Horizontal mobility is the movement of labor from one job to another in the same class or level. Vertical mobility is the job movement of a worker from a lower class and status in one job to another job in a higher class and status. Furthermore, inter-industry mobility is the movement of labor from one industry to another in the same job in industrial mobility.

Some of the benefits of labor mobility include: improved economic prospects for workers, improved industrial structure, and reduced unemployment. Determining factors for labor mobility include: 1) Education and Training: labor mobility depends on the extent to which the workforce is educated and trained. The higher or more someone is educated and skilled. The greater the opportunity to move from one job or place to another; 2) The urge to rise in life; 3) Transportation and communication facilities; 4) Social Arrangements, labor mobility also depends on social order; 5) Agricultural development; 6) Job-related advertisements; 7) Industrial development; 8) Development of trade and business. Job mobility of the workforce is hampered by several factors, namely: 1) Age restrictions prevent people from moving: quite often the age factor prevents people from moving from one job to another; 2) Differences in worker abilities; 3) Jobs intended for a specific gender; 4) Length of training and education; 5) The role of trade unions in recruitment.

Job mobility is defined as external job mobility involving organizational change [6]. According to Zampoukos [7] labor mobility occurs in three forms: inter-sectoral, intra-sectoral and through geographical relocation. These mobilities may combine in different ways during a person's (work) life. In addition, some of them occur according to a certain temporality, for example due to fluctuating demand patterns. Gabriel's research [8] found differences in mobility patterns between different population groups, gender, race and income levels. In general, mobility appears to be higher among men than among women. Similarly, Holzer, Lane, and Vilhuber [9] found that job mobility towards high-paying jobs is also somewhat limited, and in such cases movement will be hampered by discrimination, partial information, poor job networks, and agency preferences.

Previous research has shown that occupational choice is influenced by individual characteristics such as gender, academic performance, vocational interests, and expected occupational self-efficacy [10]. Fitzenberger and Kunze's [11] article highlights the influence of job mobility on wage levels, and in this connection, mobility seems to help improve income distribution. Theodossiou and Zangelidis [12] state that individual characteristics are empirically proven to be important determinants of labor mobility, including gender and other demographic differences. For example, men were shown to be more mobile across occupations, while women showed higher rates of exit to non-occupation across six European countries.

Ashton and Sung [13] show that education and skills are also important factors of labor market transition, although they do not play the same role in different segments of the labor market. Theodossiou and Zangelidis [12] show that women with less education have lower job-to-occupation transitions in six European countries. Cali, Hidayat, and Hollweg [14] explain that the ability of workers to switch to new jobs is very important to determine economic resilience to shocks (positive or negative).

Oliveira and Machado [15] explain that mobility patterns differ, depending on gender and race, so that women and African descendants in Brazil are overrepresented in low-paid jobs and in generally disadvantageous employment paths, such as downward mobility and decreasing wages. Monsueto, et al [16] explained that for these groups, mobility would be synonymous with mere labor turnover, involving frequent job changes without adding skills or increasing productivity.

A study on job mobility by Paci and Serneels [17] of a number of developing countries shows that there are significant barriers to job mobility in Middle Eastern and North African countries, according to an analysis of mobility between formal and informal segments. It goes on to explain that there are major barriers to upward mobility among self-employed workers in Mexico, which are determined by education and access to capital. Other studies in Ethiopia, Ghana and the Republic of Tanzania, analyzed the influence of mobility between sectors defined by employment status, and found strong barriers to mobility; and, when there is mobility, the main factor driving wage growth is firm size.

Based on a multi-regional input-output model and high-resolution job profiles, the research of Y.-Y. Sun et al. [18] developed a new analytical model to recognize vulnerable populations in crisis by identifying who they are, where they work, and in what sectors they work. The model was applied in Indonesia to assess tourism losses and found for the Bali region 820,000 possible job losses and the unemployment rate for young people, women, low-educated and low-income workers has exceeded 30% and around 40% of job losses occurred in the retail and wholesale sectors.

## II. METHODS

The research was conducted in 8 districts and 1 municipality in Bali Province. The research location was chosen based on the consideration that the tourism sector is the main industry of Bali Province which is a barometer of national tourism development. Another consideration is that the drastic reduction in the number of tourist visits coming to Bali in 2020 and 2021 due to the

## Occupational Mobility of Tourism Sector Workers during the COVID-19 Pandemic

impact of the COVID-19 pandemic has caused many of Bali's tourism components, including hotels, restaurants, travel agents and other tourism components, to be closed, which has an impact on workers. The tourism sector, which has not received salaries for almost two years, has been laid off and even laid off because many hotels are empty, then tourist attractions are also required to close temporarily so that regional income also decreases drastically.

According to the information of the Head of Disnaker dan ESDM Bali Province, that in districts and cities (in total), to date 79,103 formal workers have been laid off and 3,349 people have been laid off. BPS [19] reported that the number of unemployed people in Bali Province by Regency/City in 2019 was 39,288 people and increased drastically to 144,500 people in 2020.

Apart from the considerations above, the employment opportunities for the majority of the population of Bali Province are in the tertiary sector which includes trade/hotels and restaurants, industry, transportation, finance and services that rely on the tourism sector as the main industry. Based on the considerations mentioned above, in this research, Bali Province was chosen as the research location.

Respondents in this study were individuals who met the criteria as formal and informal workers in the tourism sector before the COVID-19 pandemic and at the time of the survey the respondents worked in other jobs in the tourism sector and outside the tourism sector. This is to look at job mobility, by comparing information about the jobs held by individuals at two different points in time. Respondents' employment at two different points in time includes the type and status of employment in the tourism sector before the pandemic and the type and status of employment of respondents during the COVID-19 pandemic. Thus, four types of results will be obtained in relation to respondents' job mobility, including: (1) respondents who have the same job in both periods, (2) have different jobs, (3) are unemployed; and (4) inactive/laid off.

Sampling in this research was carried out using snowball sampling, which is a sampling technique where the data collector first selects several respondents who are appropriate to the research, after the first respondent participates in the research, they are then asked to provide a list of other respondents as the next participants. has the same characteristics as the sample required for this research. The number of samples in this study was 151 respondents.

Data was collected using a survey method using a questionnaire as a data collection tool. The questionnaire used to collect data using structured interviews contains a list of questions covering socio-economic characteristics, survival strategies and job mobility variables for tourism sector workers.

Socioeconomic characteristic variables include: Age, Gender, Marital Status, Last level of education, Education/Professional Training held, Type of work before and during the COVID-19 Pandemic, Type of work in the tourism sector refers to HRM Tourism Occupations by National Occupational Classification for Statistics (NOC-S) 2006 [20], Employment status before and during the COVID-19 pandemic, Respondents' net income (rupiah/month) before and during the COVID-19 pandemic, Changes in respondents' income during the COVID-19 pandemic compared before the pandemic (decreased, constant, increased). The dependent variable in this research is job mobility before and during the COVID-19 pandemic. The data analysis technique uses descriptive analysis and the Chi-Square Test.

### III. RESULT AND DISCUSSION

#### A. Description of Respondent Characteristics

Data collection was carried out in 8 districts and 1 municipality in Bali Province, Indonesia. Respondents in this study were individuals who met the criteria as formal and informal workers in the tourism sector before the COVID-19 pandemic and at the time of the survey the respondents worked in other jobs in the tourism sector and outside the tourism sector. This is to look at job mobility, by comparing information about the jobs held by individuals at two different points in time. Respondents' employment at two different points in time includes the type and status of employment in the tourism sector before the pandemic and the type and status of employment of respondents during the COVID-19 pandemic. Thus four types of results were obtained in relation to respondents' job mobility, including: (1) respondents who had the same job in both periods, (2) had different jobs, (3) were unemployed; and (4) inactive/ laid off. The total number of respondents surveyed was 151 workers.

An overview of the socio-economic characteristics of tourism sector workers based on the results of data analysis shows that the average age of workers is 38.8 years with the lowest age being 22 years and the highest being 70 years. The gender of the respondents was 29.1 percent female and 70.9 percent male. The marital status of research respondents was dominated by workers with married status (81.5 percent), while unmarried status was 15.2 percent, and divorced status was 3.3 percent.

The education level of respondents was dominated by workers with a college level of 58.9 percent, high school education level 37.7 percent, while workers with a junior high school education level were 3.3 percent, there were no respondents with an elementary school education level and no schooling. Respondents' answers to previous professional education/training related to their current job, the majority of respondents stated that they had never attended professional education/training (62.3 percent), while 37.7 percent stated that they had attended professional education/professional training.

Respondents' answers regarding whether they had job mobility (changing/moving jobs from one job to another) from before the pandemic to during the COVID-19 pandemic, the majority of 59.6 percent said they had job mobility, while the rest said they had not experienced job mobility (40.4 percent). Some respondents (51.0 percent) stated that they had experienced 1 job change from

## Occupational Mobility of Tourism Sector Workers during the COVID-19 Pandemic

before the pandemic to during the COVID-19 pandemic, 2.6% of respondents stated that they had experienced 2 job changes, 6.6% had experienced 3 job changes, and 39.7 percent stated that they had never experienced job mobility. How long does it take to change jobs from the initial job to the next job, 31.8 percent of respondents said they experienced it in less than 6 months, 21.9 percent said it took more than 6 months to 1 year, as many as 6.6 percent said they experienced job mobility in a period of more than 1 year, while 39.7 percent did not experience job mobility.

Respondents' types of work in the tourism sector before the COVID-19 pandemic were categorized into 5 categories, namely: 1) accommodation, 2) transportation, 3) food and beverage services, 4) Recreation and entertainment, and 5) Travel services. The results of data analysis showed that 33.8 percent worked in accommodation, 25.2 percent in recreation and entertainment, 16.6 percent in food and beverage services, 13.9 percent in transportation, and 10.59 in travel services. Details are presented in Table 1.

**Table 1. Types of Work of Respondents Before the COVID-19 Pandemic**

		Types of Work Before the COVID-19 Pandemic			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	Accommodation	51	33.8	33.8	33.8
	Transportation	21	13.9	13.9	47.7
	Food & Beverage Services	25	16.6	16.6	64.3
	Recreation and entertainment	38	25.2	25.2	89.5
	Travel services	16	10.59	10.59	100.0
Total		151	100.0	100.0	

Respondents' employment status was categorized into: 1) Self-employed (self-employed with unpaid family workers), 2) Self-employed with temporary workers, 3) Self-employed with paid workers, and 4) Employee/worker. Respondents' answers regarding employment status before the COVID-19 pandemic were obtained by the majority, namely 90.73 percent of respondents with employee/worker employment status, 5.96 percent with self-employed status (self-employed with unpaid family workers), and 3.31 percent with self-employed status with workers are paid.

**Table 2. Respondents' Employment Status Before the COVID-19 Pandemic**

		Employment Status Before the COVID-19 Pandemic			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	self-employed with unpaid family workers	9	5.96	5.96	5.96
	Self-employed with paid workers	5	3.31	3.31	9.27
	Employees/workers	137	90.73	90.73	100.0
	Total	151	100.0	100.0	

The employment status of respondents during the COVID-19 pandemic was 45.03 percent with employee/worker status, 38.41 percent with self-employed status (self-employed with unpaid family workers), 13.25 percent unemployed, and the remainder with self-employed status with temporary workers (0.66 percent) and self-employed with paid workers (2.65 percent).

**Table 3. Respondents' Employment Status During the COVID-19 Pandemic**

		Employment Status During the COVID-19 Pandemic			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	self-employed with unpaid family workers	58	38.41	38.41	38.41
	Self-employed with temporary workers	1	0.66	0.66	39.07
	Self-employed with paid workers	4	2.65	2.65	41.72
	Employees/workers	68	45.03	45.03	86.75
	unemployed	20	13.25	13.25	100.0
	Total	151	100.0	100.0	

Respondents' income during the Covid-19 pandemic was compared with income before the Covid-19 pandemic. Most respondents (94.7 percent) stated that their income had decreased, 3.3 percent said it remained the same, and 2.0 percent stated that their income had increased during the Covid-19 pandemic. when compared to income before the Covid-19 pandemic. The average income of respondents before the pandemic was IDR. 5,788,741 rupiah and income during the pandemic was IDR. 1,875,496.

## Occupational Mobility of Tourism Sector Workers during the COVID-19 Pandemic

Survival strategies during the COVID-19 pandemic, in this research, are categorized into: 1) Negative coping strategies such as selling assets, 2) Taking loans from informal lenders, 3) Relying on/applying for government social assistance programs (direct cash assistance, basic necessities, and other assistance programs), 4) Relying on other family members, and 5) Switching to other types of work.

Respondents' answers to survival strategies with negative coping such as selling assets showed that 37.1 percent carried out this strategy, while 62.9 percent said they did not. The survival strategy of taking loans from informal lenders was carried out by 19.2 percent of respondents, while the majority (80.8 percent) did not take this strategy. The strategy of relying on/applying for government social assistance programs (direct cash assistance, basic necessities and other assistance programs) was carried out by 29.8 percent of respondents, while the majority (70.2 percent) did not use this strategy. The survival strategy of relying on help from other family members was carried out by 51.7 percent of respondents and some (48.3 percent) did not use this strategy. The survival strategy of switching to another type of job was carried out by the majority of respondents (70.9 percent) while the remaining 29.1 percent did not switch types of work.

Cross tabulation analysis between respondents' marital status and survival strategy by switching types of work showed that most respondents with marital status took a survival strategy by switching to other types of work. Likewise, a cross tabulation between education level and the strategy of switching types of work shows that workers with a high school and higher education background take this strategy to survive.

### B. Association of Job Mobility of Tourism Sector Workers with Socio-Economic Characteristics

Cross tabulation analysis between occupational mobility variables, namely the question item: Did you experience job mobility (change/moving work from one job to another) from before the pandemic to during the COVID-19 pandemic? (Yes/No) with the respondents' socio-economic characteristics variables, the following results were obtained:

#### a) Crosstab Yes/No Occupational Mobility by Gender

**Table 4. Crosstab Yes/No Occupational Mobility by Gender**

			Yes/No Mobility		Total
			Yes	No	
Gender	Female	Count	16	28	44
		Expected Count	26.2	17.8	44.0
		% within Gender	36.4%	63.6%	100.0%
		% within Yes/Nomobility	17.8%	45.9%	29.1%
	Male	Count	74	33	107
		Expected Count	63.8	43.2	107.0
		% within Gender	69.2%	30.8%	100.0%
		% within Yes/Nomobility	82.2%	54.1%	70.9%
Total	Count	90	61	151	
	Expected Count	90.0	61.0	151.0	
	% within Gender	59.6%	40.4%	100.0%	
	% within Yes/Nomobility	100.0%	100.0%	100.0%	

The results of the Chi-Square test in Table 5 obtained a calculated Chi-Square value of 13,927, with a significance value of 0.000, indicating a significant result meaning there is a relationship between the presence/absence of job mobility and the gender of the worker.

**Table 5. Chi-Square Tests**

	Value	df	Asymptotic Significance (2- sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	13.927 <sup>a</sup>	1	.000		
Continuity Correction <sup>b</sup>	12.598	1	.000		
Likelihood Ratio	13.830	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	13.835	1	.000		
N of Valid Cases	151				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 17.77.

b. Computed only for a 2x2 table

## Occupational Mobility of Tourism Sector Workers during the COVID-19 Pandemic

### b) Crosstab Yes/No Occupational Mobility with Marital Status

**Table 6. Crosstab Yes/No Occupational Mobility by Marital Status**

			Yes/No Mobility		Total
			Yes	No	
Maritalstatus	Single	Count	18	5	23
		Expected Count	13.7	9.3	23.0
		% within Maritalstatus	78.3%	21.7%	100.0%
		% within Yes/Nomobility	20.0%	8.2%	15.2%
	Married	Count	70	53	123
		Expected Count	73.3	49.7	123.0
		% within Maritalstatus	56.9%	43.1%	100.0%
		% within Yes/Nomobility	77.8%	86.9%	81.5%
	Divorced	Count	2	3	5
		Expected Count	3.0	2.0	5.0
		% within Maritalstatus	40.0%	60.0%	100.0%
		% within Yes/Nomobility	2.2%	4.9%	3.3%
Total	Count	90	61	151	
	Expected Count	90.0	61.0	151.0	
	% within Maritalstatus	59.6%	40.4%	100.0%	
	% within Yes/Nomobility	100.0%	100.0%	100.0%	

**Table 7. Chi-Square Tests**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.494 <sup>a</sup>	2	.106
Likelihood Ratio	4.754	2	.093
Linear-by-Linear Association	4.434	1	.035
N of Valid Cases	151		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 2.02.

The results of the Chi-Square test of the association between Yes/No job mobility and the marital status variable (Table 7) obtained a calculated Chi-Square value of 4.494, with a significance value of 0.106 showing that the results were not significant, meaning there was no association between the presence/absence of job mobility and respondent's marital status.

### c) Crosstab Yes/No Job Mobility with Education Level

**Table 8. Crosstab Yes/No Job Mobility with Education Level**

			Yes/No Mobility		Total
			Yes	No	
Educationlevel	JuniorHighSchool	Count	5	0	5
		Expected Count	3.0	2.0	5.0
		% within Educationlevel	100.0%	0.0%	100.0%
		% within Yes/Nomobility	5.6%	0.0%	3.3%
	SeniorHighSchool	Count	40	17	57
		Expected Count	34.0	23.0	57.0
		% within Educationlevel	70.2%	29.8%	100.0%
		% within Yes/Nomobility	44.4%	27.9%	37.7%
	College	Count	45	44	89
		Expected Count	53.0	36.0	89.0
		% within Educationlevel	50.6%	49.4%	100.0%
		% within Yes/Nomobility	50.0%	72.1%	58.9%
Total	Count	90	61	151	
	Expected Count	90.0	61.0	151.0	
	% within Educationlevel	59.6%	40.4%	100.0%	
	% within Yes/Nomobility	100.0%	100.0%	100.0%	

## Occupational Mobility of Tourism Sector Workers during the COVID-19 Pandemic

**Table 9. Chi-Square Tests**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.056 <sup>a</sup>	2	.011
Likelihood Ratio	10.889	2	.004
Linear-by-Linear Association	8.844	1	.003
N of Valid Cases	151		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 2.02.

The Chi-Square test results in Table 9 obtained a calculated Chi-Square value of 9.056, with a significance value of 0.011 indicating a significant result, meaning there is a relationship between the presence/absence of mobility and the respondent's education level.

### d) Crosstab Yes/No Job Mobility with Education/Professional Training held

**Table 10. Crosstab Yes/No Job Mobility with Professional Education/Training**

			Yes/No Mobility		Total
			Yes	No	
Training	Yes	Count	13	44	57
		Expected Count	34.0	23.0	57.0
		% within Training	22.8%	77.2%	100.0%
		% within Yes/Nomobility	14.4%	72.1%	37.7%
	No	Count	77	17	94
		Expected Count	56.0	38.0	94.0
		% within Training	81.9%	18.1%	100.0%
		% within Yes/Nomobility	85.6%	27.9%	62.3%
Total	Count	90	61	151	
	Expected Count	90.0	61.0	151.0	
	% within Training	59.6%	40.4%	100.0%	
	% within Yes/Nomobility	100.0%	100.0%	100.0%	

**Table 11. Chi-Square Tests**

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	51.487 <sup>a</sup>	1	.000		
Continuity Correction <sup>b</sup>	49.061	1	.000		
Likelihood Ratio	53.652	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	51.146	1	.000		
N of Valid Cases	151				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 23.03.

b. Computed only for a 2x2 table

The Chi-Square test results in Table 11 show a calculated Chi-Square value of 51,487, with a significance value of 0.000 indicating a significant result, meaning there is a relationship between the presence/absence of mobility and the education/professional training that one has.

### e) Crosstab Yes/No Job Mobility with Frequency of changing/moving jobs from one job to another from before the pandemic to during the COVID-19 Pandemic

**Table 12. Crosstab Yes/No Job Mobility with Frequency of Experiencing Change/Job Transfer**

			Yes/No Mobility		Total
			Yes	No	
FreqMobility	Never	Count	0	60	60
		Expected Count	35.8	24.2	60.0

## Occupational Mobility of Tourism Sector Workers during the COVID-19 Pandemic

	% within FreqMobility	0.0%	100.0%	100.0%
	% within Yes/Nomobility	0.0%	98.4%	39.7%
1time	Count	76	1	77
	Expected Count	45.9	31.1	77.0
	% within FreqMobility	98.7%	1.3%	100.0%
	% within Yes/Nomobility	84.4%	1.6%	51.0%
2times	Count	4	0	4
	Expected Count	2.4	1.6	4.0
	% within FreqMobility	100.0%	0.0%	100.0%
	% within Yes/Nomobility	4.4%	0.0%	2.6%
3times	Count	10	0	10
	Expected Count	6.0	4.0	10.0
	% within FreqMobility	100.0%	0.0%	100.0%
	% within Yes/Nomobility	11.1%	0.0%	6.6%
Total	Count	90	61	151
	Expected Count	90.0	61.0	151.0
	% within FreqMobility	59.6%	40.4%	100.0%
	% within Yes/Nomobility	100.0%	100.0%	100.0%

**Table 13. Chi-Square Tests**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	146.901 <sup>a</sup>	3	.000
Likelihood Ratio	193.052	3	.000
Linear-by-Linear Association	89.345	1	.000
N of Valid Cases	151		

a. 3 cells (37.5%) have expected count less than 5. The minimum expected count is 1.62.

The test results in Table 13 obtained a calculated Chi-Square value of 146,901, with a significance value of 0.000, showing significant results, meaning that there is a relationship between the presence/absence of job mobility and the frequency of experiencing changes/job transfers from one job to another from before the pandemic. until the COVID-19 pandemic.

### f) Crosstab Yes/No Job Mobility with a time span of how long it takes to move from the initial job to the next job

**Table 14. Crosstab Yes/No Job Mobility with Time Range for Changing Jobs**

TimeSpan			Yes/No Mobility		Total
			Yes	No	
Never	Count		0	60	60
	Expected Count		35.8	24.2	60.0
	% within TimeSpan		0.0%	100.0%	100.0%
	% within Yes/Nomobility		0.0%	98.4%	39.7%
LessThan6 months	Count		47	1	48
	Expected Count		28.6	19.4	48.0
	% within TimeSpan		97.9%	2.1%	100.0%
	% within Yes/Nomobility		52.2%	1.6%	31.8%
MoreThan6 monthsto1 year	Count		33	0	33
	Expected Count		19.7	13.3	33.0
	% within TimeSpan		100.0%	0.0%	100.0%
	% within Yes/Nomobility		36.7%	0.0%	21.9%
Morethan1 year	Count		10	0	10
	Expected Count		6.0	4.0	10.0
	% within TimeSpan		100.0%	0.0%	100.0%
	% within Yes/Nomobility		11.1%	0.0%	6.6%
Total	Count		90	61	151
	Expected Count		90.0	61.0	151.0



## Occupational Mobility of Tourism Sector Workers during the COVID-19 Pandemic

% within TimeSpan	59.6%	40.4%	100.0%
% within Yes/Nomobility	100.0%	100.0%	100.0%

**Table 15. Chi-Square Tests**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	146.933 <sup>a</sup>	3	.000
Likelihood Ratio	194.005	3	.000
Linear-by-Linear Association	101.642	1	.000
N of Valid Cases	151		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 4.04.

The results of the association test in Table 15 obtained a calculated Chi-Square value of 146.933, with a significance value of 0.000 indicating a significant result, meaning there is a relationship between the presence/absence of mobility and the time span of how long it takes to change jobs from the initial job to the next job.

### g) Crosstab Yes/No Job Mobility with Changes in Income During the Covid-19 Pandemic when compared with Income Before the Covid-19 Pandemic

**Table 16. Crosstab Yes/No Job Mobility with Changes in Income**

			Yes/No Mobility		Total
			Yes	No	
IncomeChanges	Decrease	Count	90	53	143
		Expected Count	85.2	57.8	143.0
		% within IncomeChanges	62.9%	37.1%	100.0%
		% within Yes/Nomobility	100.0%	86.9%	94.7%
	Donotchange	Count	0	5	5
		Expected Count	3.0	2.0	5.0
		% within IncomeChanges	0.0%	100.0%	100.0%
		% within Yes/Nomobility	0.0%	8.2%	3.3%
	Increase	Count	0	3	3
		Expected Count	1.8	1.2	3.0
		% within IncomeChanges	0.0%	100.0%	100.0%
		% within Yes/Nomobility	0.0%	4.9%	2.0%
Total	Count	90	61	151	
	Expected Count	90.0	61.0	151.0	
	% within IncomeChanges	59.6%	40.4%	100.0%	
	% within Yes/Nomobility	100.0%	100.0%	100.0%	

**Table 17. Chi-Square Tests**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12.464 <sup>a</sup>	2	.002
Likelihood Ratio	15.169	2	.001
Linear-by-Linear Association	10.948	1	.001
N of Valid Cases	151		

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is 1.21.

The Chi-Square test results in Table 17 show a calculated Chi-Square value of 12.464, with a significance value of 0.002. The results are significant, meaning there is a relationship between the presence/absence of job mobility and changes in income during the Covid-19 pandemic when compared with income before the Covid-19 pandemic.

Research findings show that there is an association between the presence/absence of job mobility and the variables: 1) gender, 2) level of education, 3) education/professional training held, 4) frequency of experiencing changes in job changes/movements from one job to another from the time before the pandemic until the time of the COVID-19 pandemic, 5) the time span of how long it takes to change jobs from the first job to the next job, and variable 6) changes in income during the Covid-19 pandemic when compared with income before the Covid-19 pandemic. Meanwhile, the marital status variable has no association with the presence/absence of the respondent's job mobility.

## Occupational Mobility of Tourism Sector Workers during the COVID-19 Pandemic

The findings of this research are supported by the results of research by Gabriel [8] and Parrado & Wolff [21] which found differences in mobility patterns between different population groups, gender, race and income levels. It goes on to explain that in general, mobility appears to be higher among men than among women.

Theodossiou and Zangelidis's [12] research also confirms the above, that individual characteristics are empirically proven to be important determinants of labor mobility, including gender and other demographic differences. For example, men were shown to be more mobile across occupations, while women showed higher rates of exit to non-occupation across six European countries.

Age demographics is another important aspect of labor mobility, supported by Eryar and Tekguc [22] that in Turkey, men also transition from job to job more frequently than women. Lalé [23] shows the importance of the effects of demographic composition in occupational mobility, with a higher probability of mobility with increasing age. Bergin et al [24] show that younger groups are less likely to exit unemployment, but also have a lower risk of becoming unemployed if they already have a job.

Education also plays an important role in job mobility. This is supported by research by Ashton and Sung [13] in the UK, for example, the type of educational qualification helps explain the likelihood and direction of employment transition from unemployment or for lower segments of the labor market, but not for higher segments. Theodossiou and Zangelidis [12] show that women with lower education have job transitions to lower jobs in six European countries.

## IV. CONCLUSION

Most of the 59.6 percent of respondents stated that they carried out job mobility. Some respondents (51.0 percent) stated that they had experienced 1 job change from before the pandemic to during the COVID-19 pandemic. How long does it take to change jobs from the initial job to the next job, 31.8 percent of respondents said they experienced it in less than 6 months, 21.9 percent said they experienced a job change in a period of more than 6 months to 1 year, as many as 6.6 percent said they experienced changing jobs within a period of more than 1 year, while 39.7 percent did not experience job mobility. The type of work of respondents in the tourism sector before the COVID-19 pandemic was found to be 33.8 percent working in accommodation, 25.2 percent in recreation and entertainment, 16.6 percent in food and beverage services, 13.9 percent in transportation, and 10.59 percent in travel services.

Respondents' answers regarding employment status before the COVID-19 pandemic were obtained by the majority, namely 90.73 percent of respondents with employee/worker employment status, 5.96 percent with self-employed status (self-employed with unpaid family workers), and 3.31 percent with self-employed status with workers are paid. The employment status of respondents during the COVID-19 pandemic was 45.03 percent with employee/worker status, 38.41 percent with self-employed status (self-employed with unpaid family workers), 13.25 percent unemployed, and the remainder with self-employed status with temporary workers (0.66 percent) and self-employed with paid workers (2.65 percent).

The association between the job mobility of tourism sector workers and the socio-economic characteristics of respondents shows that there is an association between the presence/absence of job mobility and the variables: 1) gender, 2) level of education, 3) professional education/training held, 4) frequency of experiencing change/ changing jobs from one job to another from before the pandemic to the time of the COVID-19 pandemic, 5) the time span of how long it takes to change jobs from the first job to the next job, and variable 6) changes in income during the COVID-19 pandemic if compared to income before the COVID-19 pandemic.

Based on several research findings above, recommendations for sustainable policies that make it possible to improve the welfare of tourism sector workers so that they can maintain their businesses in similar conditions in the future include: 1) variations in the type of social assistance that is more directed towards business capital assistance that can assist tourism sector actors affected by the COVID-19 pandemic in creating business opportunities in the informal sector post-pandemic. 2) post-COVID-19 pandemic business recovery program with various empowerment programs facilitated by the government including training, business capital and social assistance for small businesses with the right targets.

## V. ACKNOWLEDGE

Highest appreciation to the Institute for Research and Community Service at Udayana University and the Faculty of Mathematics and Natural Sciences at Udayana University for funding this research through the "Excellent Research Study Program" Grant, year 2022.

## REFERENCES

1. UNWTO. (2020d). International tourism down 70% as travel restrictions impact all regions. World Tourism Organization
2. UNWTO. (2020a). Covid-19 and tourism - assessing the economic consequences. World Tourism Organization.
3. UNWTO. (2020e). Supporting jobs and economies through travel & tourism. World Tourism Organization.
4. UNWTO. (2020c). An inclusive response for vulnerable groups. World Tourism Organization.
5. UNWTO. (2020b). How are countries supporting tourism recovery? World Tourism Organization.

## Occupational Mobility of Tourism Sector Workers during the COVID-19 Pandemic

6. Lam, S.S., Ng, T.W., & Feldman, D.C. (2012). The relationship between external job mobility and salary attainment across career stages. *Journal of Vocational Behavior*, 80(1), 129-136. <http://dx.doi.org/10.1016/j.jvb.2011.05.002>
7. Zampoukos, K. (2017). Hospitality workers and the relational spaces of labor (im)mobility. *Tourism Geographies*. DOI: 10.1080/14616688.2017.1331259
8. Gabriel, P.E. (2003). An examination of occupational mobility among full-time workers. *Monthly Labor Review*, 129(9), Washington, D.C., Bureau of Labor Statistics.
9. Holzer, H.J., Lane, J.I., & Vilhuber, L. (2003). Escaping low earnings: the role of employer characteristics and changes. Discussion Paper, No.1269-03, Institute of Research on Poverty
10. Volodina, A., & Nagy, G. (2016). Vocational choices in adolescence: The role of gender, school achievement, self-concepts, and vocational interests. *Journal of Vocational Behavior*, 95, 58–73.
11. Fitzenberger, B. & Kunze, A. (2005). Vocational training and gender: wages and occupational mobility among young workers. *Zew Discussion Papers*, No. 05-66, Mannheim, Zentrum für Europäische Wirtschaftsforschung (zew).
12. Theodossiou, I., & Zangelidis, A. (2009). Should I stay or should I go? The effect of gender, education and unemployment on labour market transitions. *Labour Economics* 16(5), 566-577.
13. Ashton, D. N., & Sung, J. (1992). The Determinants of Labour Market Transitions: An Exploration of Contrasting Approaches. *Work, Employment & Society* 6(1), 1-21.
14. Cali, M., Hidayat, T., & and Hollweg, C.H. (2019). What is behind labor mobility costs? Evidence from Indonesia. World Bank Group.
15. Oliveira, A.M.H.C., & Machado, A.F. (2000). Mobilidade ocupacional e rendimentos no Brasil metropolitano: 1991/96. *Pesquisa e Planejamento Econômico*, 3(1), Institute of Applied Economic Research (ipea)
16. Monsueto, S.E., Bichara, J. da S., Cunha, A.M. (2014). Occupational mobility and income differentials: The experience of Brazil between 2002 and 2010. *Cepal Review* 113
17. Paci, P. & Serneels, P. (ed.) (2007). *Employment and Shared Growth: Rethinking the Role of Labor Mobility for Development*, Washington, D.C., World Bank.
18. Sun, Y.-Y., Sie, L., Faturay, F., Auwalin, I., & Wang, J. (2021). Who are vulnerable in a tourism crisis? A tourism employment vulnerability analysis for the COVID-19 management. *Journal of Hospitality and Tourism Management*, 49, 304-308. <https://doi.org/10.1016/j.jhtm.2021.08.014>
19. BPS. (2021). Tabel Dinamis Banyaknya Pengangguran Provinsi Bali Menurut Kabupaten/Kota. <https://bali.bps.go.id/site/resultTab> diakses pada 30 Juli 2021.
20. ILO. (2013). Issue: Proposal for Identifying Characteristic Occupations of the Tourism Industries as a Tourism Thematic View within ISCO-08 and National Occupational Classification Systems. 19th International Conference of Labour Statisticians, Geneva, 2-11 October 2013
21. Parrado, E. & Wolff, E. (1999). Occupational and industry mobility in the United States, 1969-1992. Working Papers, No. 99-20, New York, C.V. Starr Center for Applied Economics, New York University.
22. Eryar, D. & Tekgüç, H. (2014). Gender Effect in Explaining Mobility Patterns in the Labor Market: A Case Study of Turkey. *Developing Economies*, 52(4): 322-350.
23. Lalé, E. (2012). Trends in occupational mobility in France: 1982–2009. *Labour Economics*, 19(3), 373–387.
24. Bergin, A., Kelly, E., & McGuinness, S. (2015). Changes in labour market transitions in Ireland over the Great Recession: what role for policy? *IZA Journal of European Labor Studies*, 4(1): 9.



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.