

Tersedia online di

<http://ojs.unik-kediri.ac.id/index.php/jimek>

## Analysis of Odds Ratio for Employment Status Risen Migration

Dilla Ramadhani<sup>1</sup>, Kukuh Arisetyawan<sup>2</sup>

<sup>1,2</sup>Faculty Of Economics and Business, State University Of Surabaya

email: <sup>1</sup>dilla.22091@mhs.unesa.ac.id, <sup>2</sup>kukuharisetyawan@mhs.unesa.ac.id

### ABSTRAK

#### Artikel History:

Artikel masuk

Artikel revisi

Artikel diterima

#### Kata Kunci :

*Migrasi Risen,*

*Ketenagakerjaan, Sektor*

*Formal, Sektor Informal,*

*Logistik Biner*

Migrasi di Indonesia terus meningkat, dengan mayoritas migran berpindah untuk mencari pekerjaan yang lebih layak. Studi ini bertujuan untuk mengkaji karakteristik dan determinan migrasi *\_risen\_* di pasar tenaga kerja, dengan membedakan antara pekerja di sektor formal dan informal, menggunakan analisis regresi logistik biner berdasarkan data mikro dari Survei Angkatan Kerja Nasional (SAKERNAS) Agustus 2023. Analisis berfokus pada status ketenagakerjaan (sektor formal atau informal) migran *\_risen\_* sebagai variabel dependen. Cakupan penelitian meliputi seluruh 34 provinsi dan 514 kabupaten/kota di Indonesia. Definisi 'migrasi *\_risen\_*' mengikuti klasifikasi SAKERNAS: individu yang tempat tinggalnya saat ini berbeda dengan tempat tinggalnya lima tahun sebelumnya, yakni pada tahun 2018. Analisis data dilakukan dengan metode kuantitatif, menggabungkan pendekatan deskriptif dan inferensial melalui regresi logistik biner. Hasil penelitian menunjukkan bahwa semua variabel independen—yaitu usia responden, jenis kelamin, status perkawinan, pendidikan, pelatihan vokasi, pendapatan, dan pengalaman kerja—memberikan pengaruh signifikan, baik negatif maupun positif, terhadap keputusan mobilitas tenaga kerja. Secara spesifik, pekerja dengan tingkat pendidikan lebih tinggi, berjenis kelamin laki-laki, serta memiliki pendapatan dan pengalaman kerja lebih banyak, didominasi oleh sektor formal. Sebaliknya, status perkawinan dan usia non-produktif cenderung terkait dengan ketenagakerjaan di sektor informal.

#### Keywords :

*RisenMigration,*

*Employment,*

*Formal Sector,*

*Informal Sector,*

*Binary Logistic*

### ABSTRACT

*Migration in Indonesia continues to increase, with the majority of migrants moving in pursuit of more decent employment. This study aims to examine the characteristics and determinants of risen migration in the labour market, distinguishing between workers in the formal and informal sectors, using binary logistic regression analysis based on microdata from the August 2023 National Labour Force Survey (SAKERNAS). The analysis focuses on the employment status formal or informal sector of risen migration as the dependent variable. The research coverage spans all 34 provinces and 514 regencies/cities in Indonesia.*

---

*The definition of a 'risen migration' follows the SAKERNAS classification: an individual whose current residence differs from their place of residence five years prior, in 2018. Data analysis was conducted using quantitative methods, incorporating both descriptive and inferential approaches through binary logistic regression. The results indicate that all independent variables namely respondent age, gender, marital status, education, vocational training, income, and work experience exert a significant influence, both negative and positive, on labour mobility decisions. Specifically, workers with higher educational attainment, those of males, income and work experience are predominantly represented in the formal sector. Conversely, marital status and non-productive age are associated with employment in the informal sector.*

---



---

## INTRODUCTION

The large population of Indonesia poses a development challenge, as it is not accompanied by equitable distribution across all regions. Consequently, the disparity in population distribution has become a crucial issue in the country's demographic dynamics. Population census data from the Statistic Indonesia (BPS) indicates that Indonesia's population continues to increase steadily each year, largely influenced by inter-provincial mobility patterns. This phenomenon can lead to imbalances driven by push and pull factors, particularly in the pursuit of livelihood needs. Although migration decisions are influenced by various reasons, rapid and large-scale migration can result in unstructured regional development disparities. (Ottaviano & Peri, 2021)

In accordance with Presidential Regulation Number 153 of 2014, the government has formulated several major programs for population development. One of its primary initiatives is the Grand Design Pembangunan Kependudukan (GDPK). The GDPK serves as a guideline for formulating policies, which are subsequently implemented through five-year development plans, with these measures being pursued until 2045. A key objective is to manage population distribution and channel migration flows. (Muhyiddin, 2024), However, this implementation has not been fully carried out, particularly the equal distribution across every regency and city, given Indonesia's increasingly rising population each year.

Within demographic issues, the results from the extended 2020 Population Census long-form survey BPS, indicate that the lifetime migration rate has decreased to 9.83%, compared to the 2011 figure of 11.77%. Conversely, an increase was observed in risen migration. Three regions

recorded positive net recent migration: North Kalimantan (28.60%), East Kalimantan (29.52%), and the Riau Islands, which also emerged as a primary destination for recent migrants (40.55%). This interregional population disparity has consequential implications for potential economic growth, a correlation supported by various studies. (González & Miguel, 2022) The study found that migration can exacerbate interregional disparities. This occurs as the population movement predominantly flows towards major urban centers with superior economic prospects, while the regions of origin experience a loss of productive labour.

The interregional mobility of labour plays a critical role in balancing the supply of, and demand for, workers (Pratomo & Devanto, 2025). Labour migration is intrinsically linked to both the formal and informal sectors. The movement of labour between these two sectors is influenced by workers' personal characteristics and labour market conditions, leading many migrants to frequently transition between formal and informal employment. Conversely, (Gulek, 2025) Furthermore, it is emphasized that the presence of migrant workers in the informal sector also influences the dynamics of the formal labour market. Workers lacking formal qualifications predominantly occupy the informal sector, necessitating policies to facilitate their transition into the formal sector through the creation of more employment opportunities. Given the data indicating a rise in recent migration, this trend also impacts the recent migrant workforce in Indonesia, revealing a growing disparity between the formal and informal sectors each year.

Data from the Survey Angkatan Kerja Nasional (SAKERNAS) on labour mobility indicates a consistent upward trend. To illustrate, the 2023 data reveals that 53.5% of recent migrants were absorbed into the formal sector, compared to 46.6% in the informal sector. This signifies that an individual's likelihood of entering either the formal or informal sector varies significantly, contingent upon their personal characteristics and the availability of employment. Despite the high expectations for securing better employment, migrant workers often confront the stark reality of a severely limited job market. Correspondingly, (Pandi, 2017). Migrant workers frequently face labour exploitation, poor working conditions, and a lack of legal protection, which collectively impede their ability to secure decent work (Ennerberg & Economou, 2022) these obstacles, encompassing both formal and informal barriers, create significant challenges for migrants in specific areas such as the recognition of diplomas and professional certifications. Consequently, they are often compelled to accept unskilled positions, despite possessing qualifications for roles of a higher calibre.

Based on the previous talk, this paper looks at the different reasons that affect migrant jobs in formal and informal areas. The August 2023 Survey Angkatan Kerja Nasional (SAKERNAS) gives us new information such as work experience, income, and training. This paper will also provide further analysis by using the recent migrants as the object of study. Risen migration have rarely been used as the object of study in previous research. Second, this allows for the listing of the individual traits that seem to affect the ability to be in the formal sector, thus providing a more detailed account of the mechanisms of migrant labour mobility. Finally, the results will enlighten the opportunities available to recent migrants and outline the relationship between migration and the form of work found in the formal sector. It is hoped that the result of this study can help policymakers in policy making to address migration problems and the relationship of the formal and informal sector.

## LITERATURE VIEW

Employment status is categorized into two types: the formal and informal sectors. The formal sector labour force is characterized by structured work arrangements, legal protections, and benefits such as social security. Formal sector workers typically possess written contracts and are bound by established regulations (López-ruiz et al., 2015). Conversely, informal sector labour comprises work that is not regulated by formal labour legislation or social security programmes, encompassing activities that are legal yet lack formal recognition or protection (Tilly, 2024). Badan Pusat Statistik (BPS) The study categorizes the formal and informal sectors into distinct classifications. The formal labour force is classified into 'self-employed with permanent employees' and 'permanent employees/labourers,' while the informal sector comprises categories such as 'self-employed without permanent employees,' 'casual workers in non-agriculture,' 'unpaid family workers,' and 'other informal employment.' On average, employment tenure in the formal sector is longer than in the informal sector. This phenomenon serves as a strong indicator that formal sector jobs are perceived as more desirable and are highly sought after by the workforce. Formal sector workers exhibit a propensity for migration to seek better employment opportunities, a tendency influenced by individual characteristics such as age, gender, and marital status. This is supported by observed labour market mobility patterns, which reveal limited transitions into formal employment, a process shaped by factors including age, gender, educational attainment, and socio-economic background (Adair, 2024). Employment opportunities are a primary driver of migration, with individuals motivated by the prospect of higher and more stable income compared to what is available in their region of origin (Anggara et al., 2024). The Dual Labor Market Theory, pioneered by Michael Piore and

Peter Doeringer in the 1970s, posits that investment in education and experience enhances individual productivity and, consequently, labor market returns. This implies that the rate of return on education is higher in formal employment compared to informal work, underscoring the economic benefits of education and work experience (Shou & Gao, 2022).

The movement of a person from place of origin to destination either temporarily or permanently with the goal to fulfill certain socio-economic goals is termed as migration. Migration includes spatial mobility of population between one geographical unit to another involving a permanent change of residence. Movement of population internally within a country over different period of time is known as Internal Migration. Internal migration as classified by Badan Pusat Statistik (BPS) can be of two types. lifetime migration and risen migration. Lifetime migration is when the place of birth of a person is different from his present place of residence during the population census. While a risen migration is when a person's present place of residence is different from his previous place of residence five years before the census. This transition is caused based on certain push factors in the origin and certain pull factors in the destination as per the push-pull theory first explained by Everett S. Lee in his famous article "A Theory of migration" 1966 (Potti et al., 2023). In his migration theory, Everett S. Lee posits that an individual's decision to migrate is influenced by a combination of factors. First, push factors originating from the area of origin. Second, pull factors present in the destination area. In addition to these structural factors, Lee emphasizes the significant role of personal factors, such as age, gender, income, educational attainment, skills, work experience, and individual preferences. It is the complex interplay of all these elements that ultimately shapes the decision to migrate or to remain in one's place of origin. Based on the analytical research framework above, a research model was developed, consisting of the following eight hypotheses:

**H1:** The Respondent age variable has a significant effect on the employment status of risen migration.

**H2:** The gender variable has a significant effect on the employment status of risen migration.

**H3:** The educational attainment variable has a significant effect on the employment status of risen migration.

**H4:** The marital status variable has a significant effect on the employment status of risen migration.

**H5:** The vocational training variable has a significant effect on the employment status of risen migration.

**H6:** The income variable has a significant effect on the employment status of risen migration.

**H7:** The work experience variable has a significant effect on the employment status of risen migration.

**H8:** The variables of age, gender, educational attainment, marital status, vocational training, income, and work experience collectively have a significant simultaneous effect on the employment status of risen migration.

Subsequently, a conceptual framework is required to delineate the relationships between the variables in this study. As such, this framework serves as the conceptual foundation that substantiates the proposed hypotheses, as follows:

The conceptual framework of the research is described as figure 1

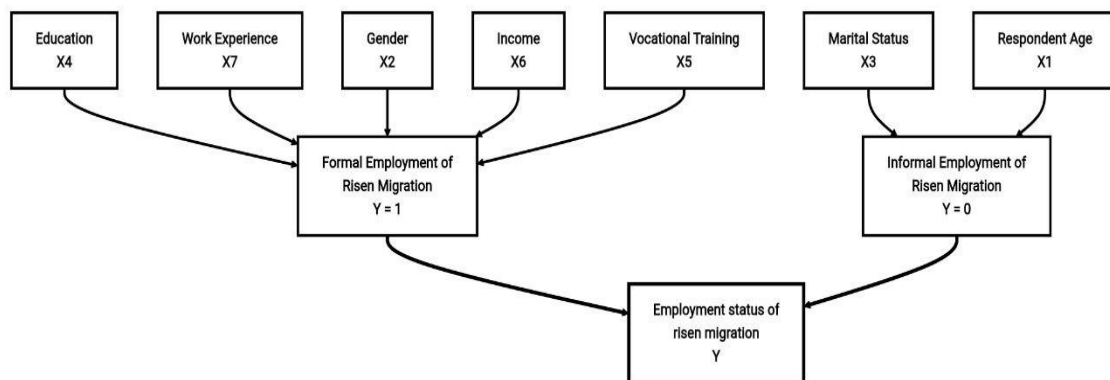


Figure 1. Research Thinking Framework

The figure illustrates that the dependent variable in this study is the employment status of risen migration, which is categorized into two groups: formal and informal employment. Formal employment is influenced by several independent variables, namely educational attainment, work experience, gender, vocational training and income. Meanwhile, informal employment is influenced by respondent age and marital status. Therefore, this framework demonstrates that a combination of demographic, social, and labour-market factors determines whether a risen migration is likely to be employed in the formal or informal sector.

## RESEARCH METHODOLOGY

### 1. Data and Data Sources

The data in this paper uses a binary logistic analysis. The data comes from the August 2023 SAKERNAS microdata. The unit of analysis is risen migration employment status (formal and

informal sector, which is the dependent variable), with 23,091 sample respondents. The coverage in this study include 34 provinces and 514 regency/cities in Indonesia. Risen migration in this context is using a SAKERNAS definition where SAKERNAS considers someone to be a risen migration if their current location of residence is different from their location of residence from 5 years ago (in this case, 2018).

## 2. Operational Definition and Measurement of Variables

This paper also uses the independent variables of age, gender, marital status, education, vocational training, income, and work experience. Descriptive analysis of the variable is as follows:

**Table 2.** Variable Description

Variable	Description	Category
Employment status of risen migration (Y)	Y=1, Formal employment of risen migration Y=0, Informal employment of risen migration	Nominal
Respondent age (X1)	X1= 0, Age Productive (15-64) X1 = 1, Age Nonproductive (>64)	Ordinal
Gender (X2)	X2=1 (Male) X2=2 (Female)	Nominal
Marital status (X3)	X3=1. (Married) X3= 0. Not married (encompassing never married, widowed, or divorced)	Nominal
Education (X4)	Baseline (SD/MI/Paket A) Secondary (SMP/MTs/SMA/SMK/ Paket B/C) Higher (D1–S3)	Ordinal
Vocational training (X5)	X5=1 (received vocational training Certificate) X5=0 (Did not receive vocational training certificate)	Nominal
Income (X6)	X6=1 (Get paid according to the minimum wage rule)	Nominal



	X6=0 (do not get paid according to the minimum wage rule)	
Work Experience (X7)	X7= 1 (Has previous work experience) X7= 0 (Has no previous work experience)	Nominal

*Source: processed by the authors, 2025*

### 3. Analysis Method

In a binary logistic model, the dependent variable is dichotomous, meaning it has two possible outcomes. According to Gujarati (2011) in regression analysis, the response variable is often influenced not only by ratio-scale variables but also by qualitative variables, or it is inherently nominal in scale (Wulandari et al., 2022) Consequently, the binary logistic regression model is used to estimate probability for classification, as follows:

Y=1 denotes a formal sector worker among risen migration,

Y=0 denotes an informal sector worker among risen migration, which is established as the baseline (reference) category. The general form of the binary logistic model is as follows:

$$Y = \ln \left[ \frac{\pi(x)}{1 - \pi(x)} \right] = \beta_0 + \beta_1 RA + \beta_2 GEN + \beta_3 MS + \beta_4 EDUC + \beta_5 VoT + \beta_6 INC + \beta_7 WE \dots \dots \dots (1)$$

MFWS = Risen migration workers in the formal and informal sectors. The independent variables used consist of: Respondent's Age (RA); Gender (GEN); Marital Status (MS); Educational Attainment (Educ); Vocational Training (VoT); Income (INC); Work Experience (WE). In this equation,  $\pi(x)$  represents the probability of an individual being a formal sector worker (MFWS = 1). The coefficient  $\beta_0$  is the constant (intercept), while to  $\beta_7$  are regression coefficients indicating the magnitude and direction of the influence of each independent variable on the log-odds of a risen migration being in the formal sector. The analysis in this study encompasses both descriptive and inferential statistics. The descriptive analysis provides a general profile of the research units, while the inferential analysis tests the relationships and effects of the independent variables (respondent age, gender, marital status, education, vocational training, income, work experience) on the dependent variable (employment in the formal or informal sector among risen migration).



## RESULTS AND DISCUSSION

### Result

**Table 3. Descriptive Statistic**

Variables	Obs	Mean	Std. Dev	Min	Max
Employment status	23.091	.670521	.4700342	0	1
Respondent age	23.091	15.88701	6.53289	15	64
Gender	23.091	.4948248	.499984	0	1
Marital status	23.091	.294617	.4558803	0	1
Education	23.091	1.07628	.4700342	0	2
Vocational training	23.091	.268373	.4431224	0	1
Income	23.091	.0490667	.2160121	0	1
Work experience	23.091	.610974	.4875398	0	1

*Source: SAKERNAS, 2023 (processed by authors).*

Based on the processed data, the employment status variable (Y) has a maximum value of 1 and a minimum of 0. This indicates that a majority of risen migration work in the formal sector, with approximately 67.05% employed formally and a standard deviation of 0.470. The mean age of respondents is 15.9 years, with an age range spanning from 15 to 64 years. The gender variable (X2) has a mean of 49.48%, signifying that the risen migration workforce is predominantly male, the characteristic of marital status (X3) shows that 29.46% of all respondents in the sample are married

Furthermore, In terms of educational (X4) attainment, the majority of respondents have a mean score of 1.076, indicating that the average respondent falls just above the intermediate level and approaches the high education category. On the other hand, vocational training (X5) indicates that 26.84% of the risen migration workforce has undergone certified vocational training; this condition suggests that access to such training remains limited among risen migration. The variable for income (X6) has a mean of 4.91%, signifying that a small proportion of risen migration those who receive the minimum wage in their region. Meanwhile, work experience (X7) has a mean of 61.10%, indicating that the majority of risen migration workers in Indonesia have prior work experience.

**Table 4.** Binary Logistic Regression Analysis (Coef)

Employment status	Coef	Std. Err	Z	P>z	[95% Conf.	Interval]
Respondent age	-.0334895	.0022579	-14.31	0.000	-.0380752	-.0289038
Gender	1.642886	.033137	49.58	0.000	1.577938	1.707833
Marital status	-.8055828	.0361008	-22.31	0.000	-.8763389	-.7348266
Education	.3927295	.0263237	14.92	0.000	.341136	.4443229
Vocational training	.3686522	.0401021	9.19	0.000	.2900535	.4472509
Income	.2228968	.0773763	2.88	0.000	.0712421	.3745515
Work experience	.4469481	.0330754	13.51	0.000	.3821214	.5117747
_cons	.017674	.0555238	0.32	0.750	-.0911507	.1264986

Source: SAKERNAS, 2023 (processed by authors)

From the results of the parameter coefficient analysis, the following logistic regression model equation was obtained:

$$Y = \ln \frac{\pi(x)}{1-\pi(x)} = 0.017 - 0.033RA + 1.642GEN - 0.805MA + 0.392EDUC + 0.368VoT + 0.222INC + 0.446WE$$

Uji Goodness Of Fit Test

Logistic model for formal, goodness-of-fit test		
number of observations	=	23091
number of groups	=	3
Hosmer-Lemeshow chi2(8)	=	1.62
Prob > chi2	=	0.2031

Source: SAKERNAS, 2023 (processed by authors)

The Goodness-of-Fit Test is used to evaluate how well a model aligns with the observed data. One such test is the Hosmer-Lemeshow test. Based on the analysis, the test statistic obtained was 1.62 with a probability value (p-value) of 0.2031. Since this p-value exceeds the alpha level of 0.05, the conclusion is that the model demonstrates a good fit and is acceptable for use.

### Uji Likelihood Ratio (Uji G)

The Likelihood Ratio Test was used to assess the joint significance of all independent variables. At the 5% significance level, the obtained probability value (Prob > chi2) was 0.0000. As this value is less than 0.05, it can be concluded that there is strong evidence that the combined set of variables age, gender, educational, marital status, vocational training, income, and work experience has a statistically significant influence on formal sector employment in Indonesia.

### Uji Wald (Z-statistic)

The Wald test, which follows a normal distribution, was employed to evaluate the individual contribution of each independent variable in the model. At a 5% significance level ( $\alpha=0.05$ ), the partial analysis demonstrates that all independent variables analysed exert a statistically significant influence. This conclusion is drawn as the probability value (p-value) for each variable is less than 0.05, indicating that each variable individually influences the labour force participation in the formal and informal sectors among risen migration in Indonesia.

### Pseudo R-square or McFadden R-Square

Based on the estimation results, the obtained Pseudo R<sup>2</sup> (McFadden R<sup>2</sup>) value is 0.1551. This value indicates that approximately 15.51% of the variation in the employment status variable can be explained by the independent variables included in the model, namely age, gender, marital status, vocational training, income, and work experience. The remaining 84,49% is accounted for by other factors outside the model not examined in this study.

**Table 6.** Binary Logistic Regression Analysis (Odds Ratio)

Employment status	Odds Ratio	Std. Err.	Z	P>z	[95 Conf. Interval]
Respondent age	.1564594	.0180392	-16.09	0.000	.1248134 .1961292
Gender	5.474181	.1843458	50.48	0.000	5.124536 5.847683
Marital status	.454096	.0166326	-21.55	0.000	.4226395 .4878939
Education	.7670013 2.132778	.0328808 .1173869	-6.19 13.76	0.000 0.000	.7051892 1.91468 .8342314 2.375721

Vocational training	1.313891	.0531002	6.75	0.000	.7064051	1.422199
Income	1.249988	.0971151	2.87	0.004	1.073429	1.455586
Work experience	1.584306	.0529742	13.76	0.000	1.483808	1.691612
_cons	.8964401	.0404633	-2.42	0.015	.8205403	.9793606

*Source: SAKERNAS, 2023 (processed by authors)*

Workers in the non-productive age group have a 15.6% lower probability of being employed in the formal sector compared to those in the productive age group. The gender variable has an odds ratio of 5.474, indicating that male workers are 5.474 times more likely to be absorbed into the formal sector than their female counterparts. the factors of marital status, married workers have a 45.4% lower probability of formal sector employment, Furthermore, individuals with secondary education are 0.767 times less likely to be employed in the formal sector compared to the baseline group, whereas those with tertiary education are 2.132 times more likely to be employed in the formal sector than the baseline group with secondary or lower education, while those who have undertaken vocational training are 1.31 times more likely to be in the formal sector. In contrast, income emerges as the strongest reinforcing factor, with formal sector workers being 1.249 times more likely to receive a wage equal to or greater than the provincial minimum wage. Furthermore, each additional unit of work experience increases a worker's odds of being in the formal sector by a factor of 1.584.

## Discussion

It is shown, that the non-productive age control variable has a significant negative effect on risen migration participation in official sector. An odds ratio of 0.156 means that workers above the productive age (Over 64 years) are about 40% less likely to work in formal sector compared to those within the productive age (15–64 years). This is in line with human capital considerations in assessing the role of skills and physical strength on an individual's position in the labour market. Productivity and skill relevance decrease with age, hence older workers' ability to compete in the formal labor market become weaker. In addition, age-based discrimination in formal sector hiring practices also contributes to the overrepresentation of the non-productive age group in the informal sector. (Gustafsson & Bjorn, 2017). Younger demographic cohorts exhibit a higher propensity to migrate, which can be attributed to greater

flexibility and career development objectives. In contrast, older cohorts often prioritise existing social ties and familial responsibilities (Li Shen, 2024). Migrant workers frequently transition between formal and informal employment. A significant number ultimately gravitate towards the informal sector due to encountering various qualification barriers in the formal economy. This finding is corroborated by (Moiseeva, 2025) which examined 85 constituent subjects of the Russian Federation. The results identified the working-age population as the demographic most responsive to socio-economic conditions. Individuals within this productive age bracket form the core cohort in economically driven migration, primarily motivated by the pursuit of stable income and formal social security protections within the formal sector.

The analysis of the gender variable reveals a positive and significant coefficient, indicating that male risen migration have a higher probability of being absorbed into the formal sector compared to their female counterparts. This reflects a persistent gender bias within the labour market, where men have greater access to formal employment, while women are often channelled into the informal sector due to domestic responsibilities. This finding is consistent with studies by (Kosyakova & Salikutluk, 2023) which affirm the existence of a consistent gender gap in access to the formal labour market across various developing countries. Within the context of employment-related decision-making, male migrant workers tend to prioritise the types of careers available in the formal sector, largely driven by expectations of financial and familial responsibility. In contrast, female migrant workers are more likely to consider opportunities for skills development and greater work flexibility, often found within the informal sector (Longmei, 2021).

Conversely, the marital status variable exhibits a significant negative influence on the probability of formal sector employment. Specifically, married individuals have a lower likelihood of working in the formal sector compared to their unmarried counterparts. This phenomenon can be attributed to the constraints on geographical mobility and flexibility often faced by married workers, particularly women, due to domestic responsibilities, which are less compatible with the demands of the formal sector. This result is corroborated by (Srivastava & Cheema, 2019) Women with young children are frequently perceived as more vulnerable and less capable of performing professional roles effectively. This perception hinders their career advancement and perpetuates gender-based disparities within the labour force. Married women often experience a decline in earnings following relocation, whereas their male counterparts typically see an increase. (Pereira, 2022). This indicates that households often prioritise the husband's career over the wife's, a dynamic which ultimately influences outcomes in the informal labour market. (Sun & Hairuo, 2023) which posits that marital status can diminish

formal labour force participation. The descriptive data in this study substantiates this assertion, as the informal sector inherently presents lower barriers to entry for married workers.

Based on the findings, educational attainment has a positive and significant effect on the status of risen migration in the formal sector. This holds true for both secondary and tertiary education levels when compared to basic education as the reference category. Furthermore, educational level is itself a significant determinant of migration, with highly educated individuals demonstrating a greater propensity to migrate than those with lower levels of education. Consistent with (Bernard & Bell, 2018), This indicates that an individual's level of educational attainment drives labour mobility, as it provides the opportunity to secure formal sector employment. This relationship can be explained by the fact that the formal sector generally requires more complex skills, knowledge, and competencies. Consequently, workers with secondary and tertiary education are better equipped to meet the qualifications stipulated by employers. The findings of this study are supported by research from (Psacharopoulos & Patrinos, 2018) that higher educational attainment yields significant returns in the form of wages, job quality, and access to formal employment.

The findings of this research suggest that vocational training has a strong and favorable influence on the prospects of migrant workers for getting employment in the formal sector. That is, the higher the amount of training a migrant gets, the higher his or her probability for obtaining formal sector employment. The vocational training plays an essential role in building technical skills, soft skills, and flexibility required by the modern labor market. With improved skills, migrant workers become more competitive and better matched to the demands of the formal labor market. These findings align with the results of (Tasli-Karabulut & Sancak, 2024), which show that Vocational Education and Training (VET) programs effectively improve the economic integration of migrants and increase their chances of finding formal sector jobs. This success comes from the programs' focus on the labor market, which tackles skills gaps. Additionally, (Santini et al., 2022) found that a mix of vocational training and network support like job referrals and connections to employers greatly increased migrants' chances of getting formal jobs in Italy. These results support human capital theory, which argues that investing in skills development boosts productivity and improves access to formal job opportunities for migrant workers.

These findings indicate that income exerts a positive and significant influence on the likelihood of return risen migration securing employment in the formal sector. This implies that as the income level in a region rises, the incentive for return migrants to enter the formal sector also

increases. Higher income makes formal employment more attractive, as it offers more certain and regulated compensation, thereby leading migrants to prefer the formal sector for its income stability and job security. This outcome aligns with push-pull migration theory, wherein economic factors, such as wage levels, function as a significant pull factor, attracting migration to regions or sectors offering higher remuneration. Study (Guriev et al., 2019) which found that migrants in Italy had greater access to formal employment when living wage policies and robust labour protection standards were in place, suggesting that higher minimum wages enhance the attractiveness of formal sector work. Furthermore, a study by (Katzkowicz et al., 2021) also indicates that migrants working in regions with relatively higher wages and robust labour regulations are more likely to be employed in the formal sector. This is because minimum wage standards help maintain the competitiveness of formal sector wages compared to those in the informal sector.

Subsequently, work experience demonstrates a statistically significant positive effect on the likelihood of formal sector employment. This finding indicates that labourers with prior experience are more readily absorbed into the formal sector compared to their inexperienced counterparts. Furthermore, experienced workers are typically more accustomed to job demands, can adapt to corporate procedures more rapidly, and possess relevant practical skills. Employers exhibit a distinct preference for candidates with a proven employment track record, which ultimately enhances these candidates' prospects of securing formal sector work (Amini et al., 2020). Consequently, migrants with prior work experience tend to possess greater confidence to transition into the formal sector. A study by (Dwork et al., 2024) which reinforces this finding by demonstrating that work experience significantly contributes to the expansion of professional networks and access to formal job opportunities. This enables individuals to forge new connections, acquire valuable knowledge, and advance their careers.

## CONCLUSIONS AND SUGGESTIONS

This study examines the demographic characteristics of individuals who become risen migration into the formal labour force. It confirms that the formal sector remains more desirable than the informal sector, as it offers distinct advantages such as stable income, access to social security benefits, and clear employment contracts. The focus on recent migrants is particularly pertinent, as data from the Badan Pusat Statistik (BPS) indicates their numbers are increasing annually. The results demonstrate that all independent variables (respondent age, gender, educational attainment, marital status, vocational training, income, and work experience) have a significant influence on the dependent variable (the employment status of recent migrants), with coefficients showing both negative and positive interactions.



Given Indonesia's persistently growing population, which exacerbates regional disparities and the difficulty for individuals to find employment matching their specific skills, training, experience, and education, it is imperative for the government to prioritize this issue. A critical analysis and prudent implementation of existing and ongoing policies are essential. The ultimate objective of these policies should be to generate sufficient employment opportunities and achieve a more equitable distribution of the population across all regions.

A limitation of this study is the use of the Hosmer-Lemeshow test, as it can be overly sensitive. A model that is practically adequate may be rejected by the HL test merely because minuscule and practically insignificant differences are detected as being statistically significant. A further limitation stems from the exclusive use of 'risen migration' data, which only captures mobility over a five-year period. For subsequent research, it is recommended to incorporate data on circular and commuter migration. This would allow for the analysis of non-permanent mobility by focusing on movements with durations of just several days or more. Such an approach would be strengthened by including a more complex set of social, economic, and labour market variables.

## REFERENCES

- Adair, P. (2024). *Labor market segmentation and occupational mobility in Algeria : Repeated cross-sectional and longitudinal analyses ( 2007 to 2012 )*. April. <https://doi.org/10.1111/rode.12519>
- Amini, A. F., Sugiharti, L., Aditina, N., & Meidika, Y. A. (2020). Analisis migran risen di sektor formal dan informal: Hasil Sakernas 2018. *Jurnal Ekonomi Dan Bisnis*, 23(1), 37–52. <https://doi.org/10.24914/jeb.v23i1.2697>
- Anggara, R., Mulyana, S., Gayatri, G., & Hafiar, H. (2024). Understanding the motivations of being Indonesian migrant workers. *Cogent Social Sciences*, 10(1). <https://doi.org/10.1080/23311886.2024.2333968>
- Bernard, A., & Bell, M. (2018). *DEMOGRAPHIC RESEARCH Descriptive Finding Educational selectivity of internal migrants : A global assessment Aude Bernard*. 39(October). <https://doi.org/10.4054/DemRes.2018.39.29>
- Dwork, C., Hays, C., Kleinberg, J. O. N., & Raghavan, M. (2024). *Equilibria , Efficiency , and Inequality in Network Formation for Hiring and Opportunity*. 347–371.

<https://doi.org/10.1145/3670865.3673451>

Ennerberg, E., & Economou, C. (2022). Career Adaptability among Migrant Teachers Re - Entering the Labour Market : a Life Course Perspective. *Vocations and Learning*, 341–357. <https://doi.org/10.1007/s12186-022-09290-y>

González, & Miguel. (2022). Interregional migration of human capital in Spain. *Regional Studies, Regional Science*, 9(1), 324–342. <https://doi.org/10.1080/21681376.2022.2060131>

Gulek, A. (2025). *Formal Effects of Informal Labor : Evidence from Syrian Refugees in Turkey*. July. <https://doi.org/10.2139/ssrn.4264865>

Guriev, S., Speciale, B., & Tuccio, M. (2019). How do Regulated and Unregulated Labor Markets Respond to Shocks? Evidence from Immigrants during the Great Recession. *Journal of Law, Economics, and Organization*, 35(1), 37–76. <https://doi.org/10.1093/jleo/ewy017>

Gustafsson, & Bjorn. (2017). *Age at immigration matters for labor market integration — the Swedish example*. 1–23. <https://doi.org/10.1186/s40176-016-0078-7>

Katzkowicz, S., Pedetti, G., Querejeta, M., & Bergolo, M. (2021). Low-skilled workers and the effects of minimum wage in a developing country: Evidence based on a density-discontinuity approach. *World Development*, 139, 105279. <https://doi.org/10.1016/j.worlddev.2020.105279>

Kosyakova, Y., & Salikutluk, Z. (2023). *Research in Social Stratification and Mobility Gender employment gap at arrival and its dynamics : The case of refugees in Germany*. 87(November 2022). <https://doi.org/10.1016/j.rssm.2023.100842>

Li Shen. (2024). Dynamics of Intercity Migration Propensity in China : Evidence from an Age - Period - Cohort Analysis. *Population Research and Policy Review*, 43(5), 1–24. <https://doi.org/10.1007/s11113-024-09912-4>

Longmei, S. (2021). *Impact of promoting employment quality on new generation migrant workers ' settlement intention*. 02054.

López-ruiz, M., Artazcoz, L., Martínez, J. M., Rojas, M., & Benavides, F. G. (2015). Informal employment and health status in Central America. *BMC Public Health*, 1–12. <https://doi.org/10.1186/s12889-015-2030-9>

Moiseeva, E. M. (2025). Push Factors of Population Migration in Russian Regions in Terms of Age Structure. *Spatial Economics*, 21(2), 114–137. <https://doi.org/10.14530/se.2025.2.114-137>

Muhyiddin, M. (2024). *Challenges in Indonesia ' s Development Planning ( RPJMN 2020-2024 )*. September 2019. <https://doi.org/10.36574/jpp.v3i2.79>

Ottaviano, & Peri. (2021). *Rethinking the Effects of Immigration on Wages Gianmarco I.P. Ottaviano and Giovanni Peri NBER Working Paper No. 31(F22), 61*.

<http://www.nber.org/papers/w12497>

Pandi, S. J. (2017). *Issues of migrant workers in the context of origin and destination - Evidence from a survey in Coimbatore City , India*. 6(1), 1–10.

Pereira, C. T. (2022). *Migração e atividade econômica das esposas de militares da União e de trabalhadores dos setores público e privado no Brasil em 2010 \**. 1–23.

Potti, A. M., Nair, V. K., & George, B. (2023). Re-Examining the Push-Pull Model in Tourists' Destination Selection: COVID-19 in the Context of Kerala, India. *Academica Turistica*, 16(2), 173–189. <https://doi.org/10.26493/2335-4194.16.173-189>

Pratomo, & Devanto. (2025). *Determinants of Commuting and Circular Labour Migration in Gerbangkertasusila Region*. 14(2), 240–247.

Psacharopoulos, G., & Patrinos, H. A. (2018). Returns to investment in education : a decennial review of the global literature. *Education Economics*, 26(5), 445–458. <https://doi.org/10.1080/09645292.2018.1484426>

Santini, S., Finco, M., & Galassi, F. (2022). Education and Employment of Refugees and Migrants in the Formal Elderly Healthcare Sector: Results from an Online Survey in Italy. *Sustainability (Switzerland)*, 14(6). <https://doi.org/10.3390/su14063540>

Srivastava, R., & Cheema, S. (2019). How Gender Integration Can Reduce the Income-Inequality Gap. *Australasian Accounting, Business and Finance Journal*, 13(2), 32–52. <https://doi.org/10.14453/aabfj.v13i2.3>

Sun, & Hairuo. (2023). *The Impact of Marital Status and Fertility Status on Female Employment in China*. 0, 108–114. <https://doi.org/10.54254/2753-7064/8/20230977>

Tasli-Karabulut, V., & Sancak, M. (2024). Vocational education and training: A pathway for refugees' integration in the labour market? Lessons from Syrian refugees in Tarsus, Turkey. *Industrial Relations Journal*, 55(6), 401–424. <https://doi.org/10.1111/irj.12442>

Tilly, C. (2024). *El trabajo informal en los Estados Unidos : informalización , inmigración y emprendimiento en el trabajo \* Informal work in the United States : Informalization , immigration , and entrepreneurship at work*. XCI(4), 765–807. <https://doi.org/10.20430/ete.v9i1i364.2584>

Wulandari, T. N., Nurmalina, R., Pasaribu, S. M., Ekonomi, F., Bogor, I. P., Dramaga, J. R., Dramaga, K. I. P. B., Barat, J., Tentara, J., No, P., & Barat, J. (2022). *USAHA TANI PADI DI KABUPATEN KARAWANG Determinants of Farmers ' Decisions to Become Participants of the Rice Crop Insurance in Karawang Regency*. 20(1), 25–37.