

Who Intends to Enter the Formal Sector the Most? Individual-Level Determinants of Formal Job Selection in Indonesia

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ABSTRACT

The informal sector in the labor market is often regarded as filled with low-quality, low-productivity, low-wage jobs. However, in Indonesia, the informal sector is important in absorbing more than half of the total workforce and providing subsistence wages for those not absorbed in the formal labor market. This study used SUSENAS microdata to determine the workforce determinants in working in the formal and informal sectors. The study results show that higher education, male gender, and living in an urban area increased one's chances of working in the formal sector. This study also found an inverted u-shaped curve on age, where a person's tendency to work in the formal sector would increase at the beginning of their productive age and decrease after entering the age of 27. Marital status in this study increased opportunities to work in the informal sector. This research may use to improve the labor policy and improve the job opportunity in both formal and informal sector.

1. INTRODUCTION

Employment is a fundamental aspect of human life because it includes social and economic dimensions. One of the important goals of economic development is the provision of sufficient employment opportunities to keep up with the growth of the labor force, which goes faster than the growth of employment opportunities. Based on economic activity, the employment sector can be classified into the formal and informal sectors. The formal sector is an economic sector occupied by legal entities, identically large-scale companies, and official permits (Guha-Khasnobis & Kanbur, 2006). Meanwhile, an informal-sector business is the activity of an individual, a family, or a group of non-blood-related people who run a joint enterprise to carry out economic activities that are based on trust or agreement and are not legally incorporated. The working relationship between informal-sector businesses and their workers is based on mutual trust and agreement as to wages and/or rewards or profit sharing. Statistics Indonesia (*Badan Pusat Statistik/BPS*) takes an approach through the main employment status of workers. The grouping of the informal sector carried out by BPS includes own-account workers and family workers, as well as casual workers and employers assisted by casual workers. The casual works in the informal sector in Indonesia are usually marked by inadequate wages, low productivity, and relatively poor working conditions (Sari, 2016).

The economic progress of an area is often indicated by a transformation towards a decrease in blue-collar workforce represented by informal-sector workers (Sari, 2016). By transforming jobs from the informal sector to the formal, hopefully it will increase workers' productivity and encourage economic growth. On the other hand, the low attachment nature of informal-sector employment makes it easy for workers to get jobs in this sector. As a result, even though they are considered low-quality jobs with minimal income, informal-sector jobs play a significant role in absorbing labor and providing subsistence wages for those not absorbed in the formal labor market (Richardson, 1984; Gutierrez et al., 2019).

The informal sector is an integral part of the labor market in Indonesia. Nationally, the working-age population dominates the informal sector. In 2020, there were 76,339,979 workers in urban areas,

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consisting of 46,680,040 males and 29,659,932 females. Among these, 46.28% of the male workforce and 54.4% of the female workforce worked in the informal sector (Sakernas, 2022). This fact is in line with Gundongan & Bicerli's (2009) statement that one of the most distinctive features of the economy in developing countries is that more than half of workers work in the urban informal sector, where the informal sector plays a major role in job creation, production, and income. In the same year, in rural areas, there were 37,343,350 male workers and 24,538,616 female workers, and more than 70% of these two categories worked in the informal sector. The informal sector absorbed most of the labor force in rural areas.

An individual's choice to allocate his time in the labor market is an effort to improve their family's welfare by utilizing the resources in their disposal. Various determinants can set the background of the choice of informal-sector workers, including education level. In economic development theory, education is a form of an individual's investment in abilities and skills with the hope that they will be able to improve their quality of life. Indirectly, the influence of education through competitiveness will increase the demand for its services in the labor market (Hakim, 2012). In 2020, the largest share of workforce was predicted to come from elementary school and its equivalents, reaching 37% of the entire workforce (Sakernas, 2022). The education level is indirectly used as the basis for assessing the productivity and ability of the workforce in the working world. In general, there are usually specific educational qualifications that the workforce must meet following the desired position and role. The higher an individual's educational level, the more job options they are exposed to. Demands for educational qualifications in the formal sector limit workers with low education from entering the formal sector. As a result, workers who do not meet these educational qualifications are only absorbed in the informal-sector labor market (Sari, 2016).

Apart from education, age is one of the determinants in choosing the formal employment sector. Age is intended as a measure of the potential for experience in the labor market, which at the same time can influence one's decisions in the labor market. In the findings of Williams et al. (2016), in the case of Pakistan, a higher degree of informality is associated with female and older workers. Other studies identified a u-shaped pattern concerning the age of informal business owners, where younger and older people are more likely to operate informally (Pakistan Federal Board of Revenue, 2008; Gennari, 2004) due to lacks of formal employment opportunities and alternative means of social support for the younger and older age groups, respectively (Ahmad, 2008).

By gender, the Indonesian population in 2020 was composed of 136,661,899 (50.6%) men and 133,542,018 (49.4%) women, indicating that the two genders were relatively balanced. Women in the workforce dominate the informal sector (Sakernas, 2022). Anand et al. (2016) found that African women aged at least 35 years and with lower educational attainment are significantly less likely to find work in the formal sector. Men dominate formal-sector jobs in public and private sectors, while women occupy the inferior informal sector go unemployed (Doğrul, 2012). Informal-sector jobs tend to involve flexible working hours and ease of joining, leading to a higher tendency for women to join the informal sector than men (Doğrul, 2012). However, the average wage/salary for the male workforce is relatively higher than that for the female workforce (Mankiw, 2014). Rodin et al. (2012), who observed female informal workers, found that informal work is not an option for many women who enter the informal labor market but forced upon them due to human resource constraints and family responsibilities. In addition, women usually face challenges in meeting the demands of their employers and families and, still, need to earn an adequate income.

Marital status in several empirical studies has also been counted as a determinant of the selection of labor market sectors. For example, Verick (2010), who predicted the probability of each labor force status, found that married Africans with low educational attainment are significantly less likely to work in the formal sector and Africans without qualifications are associated with a much greater likelihood of being employed in the informal sector. Another study, which looked specifically at the effect of marriage on the propensity to work for women in the Middle East and North Africa, found that women in Egypt, Jordan, and Tunisia often leave work upon entering a marriage. Women are also very likely to leave private-sector wage jobs after getting married. The implication is that changes are needed to match private wage employment with women's domestic roles (Assaad et al., 2022).

Spatial mismatch adds to the cost of job search because most individuals only look for work in the nearest area so they will not incur high relocation and transportation costs (Van Ham et al., 2001). Based on the explanation above, this study aimed to examine the determinant factors that influence workers' engagement in the formal and informal sectors. This study used the microdata collected through the 2018 National Socio-economic Survey (*Survei Sosial Ekonomi Nasional/SUSENAS*). SUSENAS data are annually collected individual data, and SUSENAS itself is a survey designed to collect relatively broad social demographic data, including the data on the formal-informal workforce. This research contributes to the formal-informal labor market literature in several ways. First, while several empirical studies observed

formal-informal labor market transition (e.g., Gutierrez et al., 2019; Sankaran, 2022; Sugiharti et al., 2022), this research's observation was fundamentally focused more on how the characteristics of individual workers influence their decision to choose either the formal or informal sector. Second, using the education variable from individual data, this research aimed to reveal how education affects individual workers' likelihood to enter the formal sector, contributing to higher wage formation.

2. LITERATURE REVIEW

From the division of economic activity into traditional and modern sectors, the dualistic approach has become the theoretical foundation in most of the literature in a neoclassical view, especially in third-world economies. In the early 1970s, Hart in Bromley (1979) presented a paper on urban occupation and introduced the term 'informal,' such as the expansion of the traditional sector, and 'formal,' closely related to the modern sector. The informal sector emphasizes entrepreneurship and small businesses.

The 15th International Conference of Labor Statisticians (ICLS) (ILO, 1993 in Charmes, 2012) defines the informal sector as referring to the characteristics of the economic unit where the person works. Some of the aspects are legal status (individual companies that are not legally incorporated in the household sector), registration of economic units or their workers, most of whom are in the informal sector and are not registered, the size of business under five paid permanent employees and production for the market. Furthermore, according to ILO (2018), the informal sector is a business owned by individual household members or several members of the same or different households. Usually, they operate at a low organizational level, on a small scale, and with little or no division between labor and capital as factors of production.

Unlike the informal sector, which refers to production units as units of observation, informal employment refers to work as units of observation (ILO, 2013). In the case of self-employed workers and employers, the informal employment status of the job is determined by the nature of the enterprise's informal sector. Thus, self-employed workers without wage workers who run informal businesses are classified as holding informal jobs. Similarly, an employer with wage workers operating an informal enterprise is classified as being in informal employment. All contributing family workers are classified as having informal employment, regardless of whether they work in a formal- or informal-sector enterprise.

In informal employment, there is considerable diversity in work groups and activities. The informal workforce mainly consists of construction workers, domestic workers, home producers, street vendors, transportation workers, scavengers, and informal workers, some of whom work in sweat factories or other hazardous work environments. These workers have some things in common: inadequate labor protection and access to social protection schemes; income, on average, is low and unstable; and many also live in informal settlements with inadequate basic services, so their risk exposure is high (Brown & Roever, 2017).

Related to the formal-informal labor market, the labor market allows workers to choose and decide for themselves, in line with neoclassical thinking, but here the range of choices is determined by constraints imposed by the demand side. This alternative perspective is not the broad and diverse demand for labor, as assumed in neoclassical theory, but instead, the existence of restrictions on employment, especially formal employment, because the modern sector demands only the jobs it requires (Uribe, Ortiz & García, 2007; Garcia & Badillo, 2017). Because there are restrictions on the number of jobs, the decision to work does not necessarily mean that the individual will be contracted; that is, the likelihood of wanting a job in a particular sector is not the same as the probability of being employed in that sector.

In the Harris-Todaro (1970) model, the primary sector represents the formal sector, and the secondary sector is the informal sector that arises as a consequence of setting wages above the market clearing rate, which can lead to unemployment in equilibrium, where the unemployed masquerade in the informal sector. Higher wages in the formal sector can attract workers from the informal sector who may not find jobs in the formal sector because of the rationing of formal jobs in the economy. It causes queues for the formal sector and informality to act as an escape from unemployment.

Meanwhile, according to the underground approach in Pitoyo (2007), the informal sector grows due to international competition among the world's major industries. Large industries dominate the market and are henceforth known as the formal sector. The existence of a large industry will certainly grow many small industries so that various forms of competition will emerge. This competition will force small industries to carry out various informal activities to survive. In the next stage, many informal activities, both institutional and medium-scale industries, will support large industries in world economic competition.

3. METHODS

This study used data from the National Socio-economic Survey (Survei Sosial Ekonomi Nasional/ SUSENAS) conducted by Statistics Indonesia (Badan Pusat Statistik/BPS) in 2018. One of the advantages of using microdata such as SUSENAS data is that it can avoid aggregation bias. The survey can provide information on a person's socio-economic condition, including employment. SUSENAS classifies main employment into six categories, namely, (1) own-account workers, (2) employers assisted by temporary workers/unpaid workers, (3) employers assisted by permanent workers/paid workers, (4) employees, (5) casual workers, and (6) family or unpaid workers. According to BPS, workers in the formal sector are citizens with their main job statuses being employers assisted by permanent workers/paid workers and employees. Workers with statuses other than these two can be categorized as working in the informal sector. Based on the results of data screening, a total sample of 497,355 workers was obtained, consisting of 205,311 workers working in the formal sector and 292,044 workers working in the informal sector. In accordance with the objectives of this study, logistic regression was used to see what factors could determine the decision to choose a job in the formal or informal sector in Indonesia. The model formed is as follows:

$$Sector_i = \beta_0 + \sum_{k=1}^n \beta_k X_{ki} + \mu_i$$

The dependent variable in this study was the sector, which was a categorical variable with scores 1 (formal sector) and 0 (informal sector). Several variables were used to identify the factors that influenced the decision to choose a job in the formal or informal sector, namely, education, age, age squared, gender, marital status, and area of residence. In the age variable, squaring was done to see the non-linear effect on the decision to choose the formal or informal sector, so that it could be estimated at what age the maximum possibility of working in the formal sector was. Then, by using the coefficient of estimation results from the logistic regression, the magnitude of the opportunity to work in the formal sector could be calculated for all independent variables set at an average value.

$$P_i = \frac{1}{1 + e^{-Sector_i}}$$

4. RESULTS AND DISCUSSIONS

Workers in the informal sector are often seen as less productive and vulnerable, so they are easily trapped in poverty (Cichello & Rogan, 2017). Dewi et al. (2020) revealed that there are several general characteristics of the informal sector, namely, (1) irregular activity patterns, (2) small business scale and the use of simple technologies, (3) irregular working hours, (4) non-permanent place of work, and (5) no requirement of expertise and skills based on formal education. By contrast, jobs in the formal sector involve special requirements and tend to be more stringent. Thus, workers who do not have the qualifications to enter the formal sector will decide to enter the informal sector. Some of the characteristics of formal- and informal-sector workers identified from the SUSENAS data are as follows.

From all the observations, it is known that 41.28% of all the workers worked in the formal sector, while 58.72% did in the informal sector. In terms of proportion, there was no significant difference, but informal-sector workers in Indonesia were still dominant. Viewed from the level of education, workers in the formal sector with secondary education and above outnumbered their counterparts in the informal sector. Meanwhile, the opposite was true at the elementary and junior high school levels. In the 15–27 age group, the majority of workers worked in the formal sector, while the 28–36 age group and above were dominated by workers in the informal sector. Male workers tended to work in the informal sector, and so did female workers. However, female workers in the informal sector had a greater percentage than male workers.

By age group, it is known that the older the age, the stronger the dominance of informal-sector workers was. Age had a non-linear effect on the sector. The older the age, the higher the likelihood to work in the formal sector was, but at a certain age, this likelihood would decrease, leading to the tendency of older workers to enter the informal sector. The estimation results showed that, on average, the age of 27 was where the possibility of working in the formal sector was at the maximum. Beyond that, the possibility of working in the formal sector would decrease. This finding is in line with Manning & Pratomo's (2013) statement that young people have a higher opportunity to work in the formal sector. Age is often a prerequisite for those who want to work in the formal sector. For example, a company may limit the maximum age at which prospective employees are considered eligible to apply, say, 28 or 30 years. Those

whose age exceeds this limit cannot enter the formal sector, so the only way to still get a job is to enter the informal sector, which does not involve an age-related requirement (low barrier to entry). Mabilo's (2018) findings revealed that health conditions will decrease with age.

Table 1: The Characteristics of Formal- and Informal-sector Workers in Indonesia

Variable		Percentage	
Sector	1 = Formal Sector	41.28%	
	0 = Informal Sector	58.72%	
		Formal	Informal
Education	Elementary School	23.84%	76.16%
	Junior High School	34.00%	66.00%
	Senior High School/Vocational High School	51.39%	48.61%
	D-I/D-II	69.38%	30.62%
	D-III	77.36%	22.64%
	D-IV/Bachelor's Degree	82.09%	17.91%
	Master's Degree	93.78%	6.22%
Age	Doctoral Degree	97.00%	3.00%
	15–27 Years	54.61%	45.39%
	28–36 Years	48.77%	51.23%
	37–45 Years	40.62%	59.38%
	46–54 Years	37.06%	62.94%
	55–63 Years	25.77%	74.23%
	64–72 Years	15.99%	84.01%
Gender	73–81 Years	12.47%	87.53%
	1 = Male	43.71%	56.29%
Marital Status	0 = Female	37.32%	62.68%
	1 = Married	39.02%	60.98%
Areas of Residence	0 = Not/Not Married	48.37%	51.63%
	1 = City	56.61%	43.39%
	0 = Village	29.71%	70.29%

Source: SUSENAS, 2018 (processed)

Weak health conditions lead individuals to look for work with flexible working hours, so the informal sector is a possible option. Descriptive data show that 15–27-year-olds mostly worked in the formal sector. Meanwhile, in the age group above 27, more workers were in the informal sector, with the gap increasing as the group aged. Regionally, the proportion of informal workers was more common in rural areas than urban areas. Based on the logistic analysis, the following estimation results were obtained:

Table 2: Determinant Estimation Results of Formal-Sector Workers

Dependent Variables: Sector	β	S.E.	Prob	Odds Ratio	95% Conf. Interval	
					Lower	Upper
Constant	-2.8300***	0.0317	0.000	0.0590***	-2.8922	-2.7678
Education	0.1968***	0.0010	0.000	1.2198***	0.1948	0.1988
Age	0.0259***	0.0015	0.000	1.0384***	0.0228	0.0291
Age Squared	-0.0005***	0.0000	0.000	0.9993***	-0.0006	-0.0005
Gender	0.3902***	0.0067	0.000	1.4809***	0.3770	0.4034
Marital Status	-0.1635***	0.0087	0.000	0.8439***	-0.1806	-0.1464
Area of Residence	0.8793***	0.0065	0.000	2.4124***	0.8664	0.8922
Pseudo R ²			0.1569			
Prob > Chi ²			0.0000			

note: significance level ***1%, **5%, *10%

Source: Analysis Results, 2022

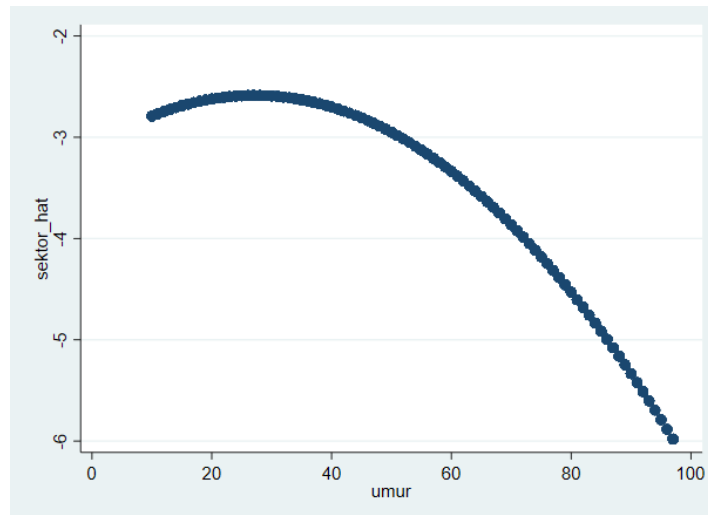
The estimation results show that all independent variables significantly affected the sector. Education had a significant positive influence on the sector. The higher the education level, the more likely it was to enter the formal sector. Jobs in the formal sector generally require certain criteria, such as higher education and work experience (Wang, Cooke, & Lin, 2016; Zhou, 2013). Meanwhile, working in the informal sector does not require any special requirements such as higher education. Amin et al. (2020) found that those with secondary and higher education have a greater chance of entering the formal sector than those with low education. Findings by Manning & Pratomo (2013) also show that higher education could significantly increase the chances of obtaining employment in the formal sector. This effect is in accordance with the theory put forward by Lutz & Samir (2011) that a high educational background will also increase economic opportunities in a better direction, one of which is earning income. The results of this study are supported by data showing that the number of workers with secondary and above education (senior high school/vocational high school, D-I, D-II, D-III, D-IV/Bachelor's Degree, Master's Degree, Doctoral Degree) in the formal sector was greater than in the informal sector. Vice versa, the number of workers with elementary and junior high school education in the informal sector was greater than in the formal sector. The higher-educated the human capital, the more reluctant they are to enter the informal sector. Therefore, the informal sector is dominated by people with low levels of education who had low incomes (Jati et al., 2021).

Furthermore, this study found that men tended to work in the formal sector more than women. These results are in line with the findings of Setyanti (2020). Generally, men are the heads of households with economic responsibilities, so working in the formal sector with a higher and more secure income is the choice for men. Similarly, Sheikh & Gaurav (2020) found that gender plays an important role in determining participation in the informal labor market. From a gender perspective, women are more likely to work in the informal sector than men because women in developing countries generally have lower education and skills (Chen, 2001). In addition, cultural and social factors limit women's ability to do household work, thereby limiting investment in women's education and skills training (Chen, 2001).

This study found that marital status significantly reduced a person's tendency to work in the formal sector. In another study, marital status was even found to reduce the tendency to work, especially for women. Such is the finding of Assaad et al. (2017) that marriage reduces the likelihood of working for women by 47 percent in Jordan, 33 percent in Tunisia, and 16 percent in Egypt. Difficulties in aligning household responsibilities in marriage and the types of jobs available to women in the labor market are among the main contributors to low female labor force participation rates (Assaad et al., 2017). The challenges women face in carrying out work and household roles are obstacles to fully utilizing human resources in a context where women's education is starting to catch up with, even surpassing, men's education.

Rural and urban areas of residence were also found to significantly influence the tendency to work in the formal sector, where opportunities would increase when someone lived in urban areas. As in McCaig & Pavcnik's (2015) findings, younger, educated, male, and urban workers are more likely to switch to the formal sector than other workers initially in the informal sector. Lower-educated, older female rural workers have fewer prospects of formalization. In addition, the characteristics of rural and urban areas in Indonesia tend to have gaps in economic development. It seems that the problem of creating jobs in rural areas will always be a tough challenge for the government based on the inability of the non-agricultural sector to absorb an increasingly abundant workforce. This condition is also a consequence of the increasingly limited agricultural land due to the ongoing high rate of conversion (transfer of function) of land to non-agricultural uses (for industrial areas, economic infrastructure, and settlements) (Elizabeth, 2007).

Based on the age of the workers, it was found that there was a decreasing tendency to work in the formal sector after a certain age. It is indicated by the direction of the age coefficient, which was initially positive but became negative in the squared age variable. The figure above shows an increasing tendency to enter the formal labor market when the workforce was relatively young up to the age of 27. After that, there was a decreasing trend (diminishing return). Even at the youngest age, the tendency to work in the formal sector was not very high. It was generally due to a lack of experience and skills to enter the formal sector. As stated by Permatasari (2018), most young people, for reasons of age and limited abilities, work in the informal sector, such as working on family land, as hawkers, and in other jobs with low wage levels. In addition, young workers who choose to work are also self-driven; it is the practical mindset of those who prefer to work and migrate to cities rather than continue their studies. This condition causes the level of education to be low. If the population's formal education level is low, it will impact the population's skills and abilities, so productivity will be low, which will also cause low income. If the young population chooses to go to school, it will improve the young workforce's quality because education can produce a high-quality workforce, making it easier to be accepted into the formal sector.

Figure 1: The Non-Linear Effect of Age of Workers on the Formal Sector

Source: Estimated Results, 2022

5. CONCLUSION

The dominance of the informal sector in the Indonesian labor market is a dilemma that, on the one hand, absorbs workers who do not meet formal labor market qualifications but, on the other hand, results in low productivity. This research concludes that better quality human resources, reflected in higher levels of education, will increase their chances of working in the formal sector. This opportunity also increases for male workers, young workers, and workers living in urban areas. From the aspect of education, the link and match of secondary and tertiary education with the labor market is a significant implication because, in addition to low education, the incompatibility of higher education with the available job opportunities in the formal labor market may encourage someone to enter the informal labor market to avoid unemployment. From the regional aspect, economic development needs to be continuously pursued so that the development of human resources in rural areas can anticipate the need for professional workers to complement various types of work, like formal workers in the industrial sector, which are currently the dominant choice.

6. REFERENCES

- Ahmad, Nabil A. (2008). Dead men working: time and space in London's (illegal) migrant economy. *Work, Employment and Society*, 22(2), 301-318.
- 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.
- Anand, R., Kothari, S., & Kumar, N. (2016). *South Africa: Labor market dynamics and inequality*. International Monetary Fund.
- Assaad, R., Krafft, C., & Selwaness, I. (2017). *The impact of early marriage on women's employment in the Middle East and North Africa* (No. 66). GLO Discussion Paper.
- Assaad, R., Krafft, C., & Selwaness, I. (2022). The Impact of Marriage on Women's Employment in the Middle East and North Africa. *Feminist Economics*, 28(2), 247-279.
- Bromley, R. (1979). *Urban Informal Sector*. London: Pergamon.
- Brown, A. M. B., & Roever, S. (2017). Enhancing productivity in the urban informal economy. DFID-ESRC Joint Fund for Poverty Alleviation Research, RES-167-25-059 Making Space for the Poor: Law, Rights, Regulation and Street-Trade in the 21st Century.
- Charmes, J. (2012). The informal economy worldwide: Trends and characteristics. *Margin: the journal of applied economic research*, 6(2), 103-132.
- Chen, M.A. (2001). Women and informality: A global picture, the global movement. *SAIS Review* 21 (1): 71-82.
- Cichello, P., & Rogan, M. (2017). Informal sector employment and poverty in South Africa: identifying the contribution of 'informal' sources of income on aggregate poverty measures. *Southern Africa Labour and Development Research Unit (SALDRU), University of Cape Town, Cape Town, South Africa*.
- Dewi, S., Listyowati, D., & Napitupulu, B. E. (2020). Sektor informal dan kemajuan teknologi informasi di Indonesia. *Jurnal Mitra Manajemen*, 11(1).

- Doğrul, H. G. (2012). Determinants of formal and informal sector employment in the urban areas of Turkey. *International Journal of Social Sciences and Humanity Studies*, 4(2), 217-231.
- Elizabeth, R. (2007). Revitalisasi ketenagakerjaan dan kesempatan kerja terkait strategi dan kebijakan pembangunan pertanian dan pedesaan. *None*, 7(3), 44057.
- García, G. A., & Badillo, E. R. (2018). Rationing of formal sector jobs and informality: The Colombian case. *Journal of International Development*, 30(5), 760-789.
- Gennari, P. (2004). The estimation of employment and value added of informal sector in Pakistan. Paper presented at 7th Meeting of the expert group on informal sector statistics, February, 2-4. New Delhi: Delhi Group.
- Guha-Khasnobis, B., & Kanbur, R. (Eds.). (2006). *Linking the formal and informal economy: concepts and policies*. OUP Oxford.
- Gundogan, N., & Bicerli, M. K. (2009). Urbanization and labor market informality in developing countries.
- Gutierrez, I. A., Kumar, K. B., Mahmud, M., Munshi, F., & Nataraj, S. (2019). Transitions between informal and formal employment: results from a worker survey in Bangladesh. *IZA Journal of Development and Migration*, 9(1), 1-27.
- Hakim, L. (2012). Perkembangan tenaga kerja wanita di sektor informal: Hasil analisa dan proxy data sensus penduduk. *Among Makarti*, 4(1).
- Harris, J.R. and Todaro, M.P. (1970). Migration and Unemployment: a Two-Sector Analysis. *American Economic Review* 60, 126-142.
- ILO. (2013). *The Informal Economy and Decent Work: A Policy Resource Guide*. Geneva: ILO.
- ILO. (2018). *Women and men in the informal economy: a statistical picture (third edition)* / International Labour Office – Geneva: ILO.
- Jati, J. H., Giyarsih, S. R., & Muta'ali, L. (2021). The Influence of Characteristics of Worker and Business on the Income of Informal Sector Workers in Yogyakarta. *Populasi*, 29(1), 77-92.
- Lutz, W., & Samir, Kc. (2011). Global human capital: Integrating education and population. *Science*, 333(6042), 587-592.
- Mabilo, M. (2018). *Women in the informal economy: Precarious labour in South Africa* (Doctoral dissertation, Stellenbosch: Stellenbosch University).
- Mankiw, N. G. (2014). *Principles of economics*. Cengage Learning.
- Manning, C., & Pratomo, D. S. (2013). Do migrants get stuck in the informal sector? Findings from a household survey in four Indonesian cities. *Bulletin of Indonesian Economic Studies*, 49(2), 167-192.
- McCaig, B., & Pavcnik, N. (2015). Informal employment in a growing and globalizing low-income country. *American Economic Review*, 105(5), 545-550.
- Pakistan Federal Board of Revenue. (2008). *Informal economy in Pakistan*. Directorate General of Training and Research, Syndicate Report 36th STP.
- Permatasari, A. D. (2018). *Determinan Pekerja Anak di Provinsi Jawa Barat* (Doctoral dissertation, Universitas Airlangga).
- Pitoyo, A. J. (2007). Dinamika Sektor Informal Di Indonesia Prospek, Perkembangan, dan Kedudukannya dalam Sistem Ekonomi Makro. *Populasi*, 18(2).
- Richardson, H. W. (1984). The role of the urban informal sector: An Overview. *Regional Development Dialogue*, 5(2), 3-40.
- Rodin, D. L., McNeill, K., Vite-Leon, N., & Heymann, J. (2012). Determinants of informal employment among working mothers in Mexico. *Community, Work & Family*, 15(1), 85-99.
- Sankaran, Kamala. (2022). Transition from the Informal to the Formal Economy: The Need for a Multi-faceted Approach. *The Indian Journal of Labour Economics (2022)* 65:625-642.
- Sari, N. P. (2016). Transformasi pekerja informal ke arah formal: Analisis deskriptif dan regresi logistik. *Jurnal Ekonomi Kuantitatif Terapan Vol.9 No.1*, pp 28-36.
- Setyanti, A. M. (2020). Informality and the education factor in Indonesian labor. *Journal of Indonesian Applied Economics*, 8(2), 71-80.
- Sheikh, R. A., & Gaurav, S. (2020). Informal work in India: A tale of two definitions. *The European Journal of Development Research*, 32, 1105-1127.
- Sugiharti, L., Aditina, N., & Esquivias, M.A. (2022). Worker Transition Across Formal And Informal Sectors: A Panel Data Analysis In Indonesia. *Asian Economic and Financial Review*, 2022, 12(11): 923-937.
- Survei Angkatan Kerja Nasional (Sakernas) 2022. (2022). Jakarta: Badan Pusat Statistik.
- Uribe J, Ortiz C, García G. 2007. La Segmentación del Mercado Laboral Colombiano en la Década de los Noventa. *Revista de Economía Institucional* 9(16): 189-221. e, timber and mining (pp. 1-28). IIED Working Paper.
- van Ham, M., Mulder, C. H., & Hooimeijer, P. (2001). Spatial flexibility in job mobility: macrolevel opportunities and microlevel restrictions. *Environment and Planning a*, 33(5), 921-940.

- Verick, S. (2010). *Unraveling the impact of the global financial crisis on the South African labour market*. International Labour Organization.
- Wang, J., Cooke, F. L., & Lin, Z. (2016). Informal employment in China: recent development and human resource implications. *Asia Pacific Journal of Human Resources*, 54(3), 292-311.
- Williams, C. C., Shahid, M. S., & Martínez, A. (2016). Determinants of the level of informality of informal micro-enterprises: Some evidence from the city of Lahore, Pakistan. *World Development*, 84, 312-325.
- Zhou, Y. (2013). The state of precarious work in China. *American Behavioral Scientist*, 57(3), 354-372.