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Labor Market Structure in Indonesia: Segregation or Integration of Occupations?

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Abstract

This research discusses occupational segregation of workers based on gender in 2015 - 2018 in Indonesia. This study also aims to measure the level of dissimilarity or how much segregation occurs in the labor market in Indonesia. The sample data used were both males and females labor includes residents aged 15 years and over, namely workers aged 35-44 years. Measurement of occupational segregation is based on between occupational groups and provinces which is explained by a dissimilarity index. A dissimilarity index was constructed to measure occupational segregation. First, the percentage of all workers in each province where each occupation group is calculated. This index is then half the absolute value of the difference between the specific locations of the distribution. The occupational structure in Indonesia during the observed period shows that there is no occupational segregation based on gender where the index number D tends to be closer to zero. The occupation of the leadership and management of men and women workers is the most integrated. From the index number D, it means that female workers are less segregated in all types of occupation in the labor market in Indonesia. Integration is showing signs of increasing in Professional occupations, technicians and the like; Administration; Sales Business; and agricultural, forestry, hunting and fishery businesses.

Keywords: occupational segregation, occupational integration, gender, dissimilarity index
JEL classification: J16; J21

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1. Introduction

Occupational segregation becomes a public policy concern if it indicates an obstacle to the mobility of production factors. Public policies are designed to deal with obstacles from the actions of those who agree to manage to equalize the characteristics of human capital. It remains to be noted that the real difference in the distribution of occupation of men and women is a sub-optimal labor market outcome that creates systemic barriers to occupation choices. Thus occupational segregation is significantly responsible for the inequality of wages and income (Bridges, 2003; Fortin & Huberman, 2002)

The segregation of workers is expressed through occupations, each of which is in the form of a collection of tasks and roles marked with the label as doctor, lawyer, computer programmer, teacher, nurse, carpenter, plumber and so on. Since occupation is the source of identity and determines access to economic and non-economic rewards, it is important to question whether female and male end up with the same occupation. In other words, is there a lot of occupational segregation?

Several recent studies have shown that

the increasing participation of females in the labor market is accompanied by a decrease in occupational segregation based on gender. Occupational gender segregation is complex, and increasing women's labor market participation is not a straightforward path to creating an occupational structure that is less segregated by gender (Gedikli, 2020). About half of women would need to shift into a new occupation to eliminate all occupational segregation by gender (Weeden, Newhart, and Gelbgiser, 2018). Women combine continuing labor market participation with home and family responsibilities particularly during the childcare years. It can be argued that, in the context of women's work-family preferences, inferior conditions, notably lower pay, are not necessarily evidence of discrimination or disadvantage (Connolly and Gregory, 2008).

The level of participation in Indonesia shows a fluctuating situation but the trend is increasing (Table 1). In 2018 males LFPR was 82.68 percent, increasing slightly to 83.13 in the following year. Meanwhile, females LFPR in the same period did not change at 51.88 percent. In general, the LFPR (Labor Force Participation Rate) for males is still much higher than females LFPR, around 1.5 times females LFPR.

Based on occupation, female workers dominate in types of work (1) professional, technicians and related occupations; (3) Clerical and related occupations; (4) Sales worker and (5) Services worker. Male workers are more dominant in the type of work (2) Managerial and supervisory occupations; (6) Agriculture, forestry, hunting and fishing workers and laborers; (7) Production workers, operation of machinery workers; and (8) others.

The dominance of female in this type of work is 2 times more than that of male workers in this type of work (Table 2). The highest percentage of female workers is in the type of work (4) Clerical and related occupations, namely 26.53 percent, while male workers are mostly in the type of work (7) Production workers, operation of machinery workers namely 37.37 percent.

Several empirical studies provide evidence that females prefer working in certain jobs and firms, because they are associated with lower investment in job-specific training (Becker, 1971), less competitive environment (Niederle & Vesterlund, 2007), depreciation rate of human capital. lower levels (Görlich & de Grip, 2009, and Polachek, 1981), and more pleasant and family-friendly working conditions (Bender, Donohue, and Heywood 2005; Budig and England, 2001). For this desire, the non-cash job characteristics of female seem willing to accept lower wages.

Another explanation regarding occupational segregation is that the sex division is based on the different roles played by males and females due to biological factors. The allocation of men/women into already masculinised/feminised occupations may help in understanding this situation. In the case of women, they are basically concentrated in services-related occupations (more than 80% of female employment). The service sector is usually considered as offering more flexibility in the working day, allowing for greater compatibility of family responsibilities with paid work. It also allows for more interpersonal relationships, and possibly requires less physical effort. If working women choose occupations with certain preferred job attributes, then they may eventually reach a higher level of job satisfaction (Garcia, Mainar et al, 2015). Weeden, Newhart, and Gelbgiser (2018) stated occupational segregation factors include discrimination against women or mothers, gender-specific socialization, gender-linked traits or "natural" abilities, cultural beliefs about men and women's competence and double standards of evaluation, the household division of labor, and workplace experiences (e.g., sexual harassment). Based on this, occupational segregation decreases in industries where the physical attributes of workers become less important.

Empirical studies regarding the size and determinants of segregation measurement are mostly varied, where the occupational segregation level decreases, remains or increases (Fortin & Huberman, 2002). When the key determinants of occupational choice and therefore occupational segregation are education level, age, location, they have generally been shown to be significant (King, 1992; Sprigss and Williams, 1996).

Table 1. LFPR by Gender in Indonesia

Gender	August 2018	February 2019	August 2019	February 2020	August 2020
Male	82.68	83.18	83.13	83.82	82.41
Female	51.88	55.50	51.89	54.56	53.13
National	67.26	69.32	67.49	69.17	67.77

Source: BPS Indonesia, 2019 and 2020

Table 2 Percentage of Workers by Occupation and Gender in Indonesia

Occupation	KBJI Code	Male	Female
Professional, technician and related occupations	1	5.77	10.59
Managerial and supervisory occupations	2	1.95	0.86
Clerical and related occupations	3	5.21	7,18
Sales worker	4	14.53	26.53
Services worker	5	4.22	9.66
Agriculture, forestry, hunting and fishing workers and laborers	6	27.96	24.35
Production workers, operation of machinery workers	7	37.57	20.68
Others	8	2.79	0.15

Source: BPS Indonesia, 2018

Well-known econometric studies on the role and contribution of gender shares in occupation to income include (Bayard et al., 2003), (Boraas & Rodgers III, 2003), (Johnson and Solon, 1986), (Kilbourne et al., 1994), (Macpherson and Hirsch, 1995), and Sorensen (1990) for the United States; (Busch & Holst, 2012) for Germany; Campos Soria and Ropero (2011) for Spain; (EC, 2002) for a combined sample of EU-12 countries; (Jurajda, 2003) for the Czech Republic and Slovakia; (Karamessini & Ioakimoglou, 2007) for Greece; and (Ogloblin, 1999) for Russia. These studies confirm lower earnings for females and males in female-dominated occupations. While the majority of studies show that the negative effects of working in female-dominated occupations on income are much more pronounced for female, studies by (Johnson and Solon, 1986) and (Sorensen, 1990) for the United States and (Busch & Holst, 2012) for Germany found that the negative effects were stronger for males. According to (Macpherson and Hirsch, 1995) study for the United States, the effect of gender composition on income is equally significant for female and male. The gender pay gap explained by occupational segregation varies widely across studies and countries. The share of gender in the occupational variable explains between 7 percent and 32 percent of the salary gap observed in studies in the United States, about 25 percent in cross-border studies of EU-12 countries (EC, 2002), also 50-56 percent in Greece (Karamessini & Ioakimoglou, 2007), and only 3 percent in Germany (Busch & Holst, 2012)

Various explanations have been offered in the literature for the prevalence of occupational segregation. Key factors include: choice of field of study that results in segregation in education and ultimately in occupation; female's preference for the job allows for flexible or intermittent working hours; immeasurable worker differences; skills or job characteristics that may be gender correlated; stereotypes of employment as appropriate for females due to discriminatory recruitment practices or social norms; and hidden barriers to entry and bias in organizational practice. (Karamessini and Ioakimoglou, 2007) emphasize that the extent to which gender-based occupational segregation occurs depends on institutions, culture, and history. They argue that gender relations are influenced by wage fixing and

collective bargaining practices. In the same vein, Ogloblin (1999) and Jurajda (2003) conclude that occupational segregation by gender in the labor markets of transition countries is more likely a legacy of communism in which central planners stereotype females into specific occupations and consequently shape social attitudes. Pailhé (2000) also argues that stereotypes are widely accepted as part of life by Central European women.

Meanwhile, the level of occupational segregation based on gender has shown a decreasing trend in most developed countries over the last few decades (Anker, 1998; Costa, 2000), the increase in female's employment in Spain has been accompanied by a steady increase in gender segregation so that Spain is currently a country where the gender differences in the distribution of employment among occupations are extraordinary (European Commission, 2009; García-Mainar et al., 2015)

Occupational segregation is more severe in Latin America and the Caribbean but less so in South Asia and Sub-Saharan Africa. In Latin America the Duncan index is the highest (.53), followed by the Middle East and North Africa (.50), Europe and Central Asia (0.46), East Asia and the Pacific (.39), Sub-Saharan Africa (.33), and South Asia (.30). Low employment segregation in South Asia and Sub-Saharan Africa may be related to the limited granularity of employment codes in the agricultural sector (Das and Kotikula, 2019).

Occupational segregation is the result of "push" and "pull" factors that are rooted in social interactions and social structures. These factors include discrimination against women or mothers, gender-specific socialization, gender-related traits or "natural" abilities, cultural beliefs about male and female competence and multiple evaluation standards, household divisions of the workforce, experience in the workplace, government policies prohibiting discrimination in employment but allowing different wages for comparable work and worker family policies (Weeden, Kim. A; M. Newhart and D. Gelbgiser, 2018).

This research examines whether there is segregation or integration in the labor market in Indonesia and measures the degree of segregation or integration. This is important because the phenomenon of inequality still occurs, especially in many developing countries, including Indonesia.

2. Research Method

This study measures the level of dissimilarity index or how much occupational segregation that occurs in the labor market in Indonesia.The data presented was obtained from the National Labor Force Survey (Sakernas) which was carried out throughout the Republic of Indonesia in 2015-2018. The target sample size for Sakernas is 200,000 households, and is intended to produce estimates down to the district / municipality level. This publication uses a weighting of the results of population projections for 2010□2035. The sample data used were both male and female labor includes residents aged 15 years and over. For this study, the sample is reduced to workers who are in the "prime age" group, namely workers aged 35-44 years because they constitute a significant portion of the labor market (Gabriel & Schmitz, 2007).Types of work are divided into 8 groups according to KBJI (Classification of Indonesian Occupation Standards) 2002 and simplification is carried out in this study, namely: code 1 is Professional, technician and related occupations; code 2 Managerial and supervisory occupations; code 3 is Clerical and related occupations; code 4 Sales worker; code 5 is Services worker; code 6 is Agriculture, forestry, hunting and fishing workers and laborers; code 7 is Production workers, operation of machinery workers; Code 8 is others. Measurement of occupational segregation based on between occupational groups and provinces is described by (Duncan & Duncan, 1955). A dissimilarity index was constructed to measure occupational segregation. First, the percentage of all workers in each province where each occupation group is calculated. This index is then half the absolute value of the difference between the specific locations of the distribution,

$$IDij = 0.5 \sum \left| Fij / Fj - Mij / Mj \right| \quad (1)$$

where ID is the Dissimilarity index; Fi is the number of female workers in occupation i, Mi is the number of male workers in occupation i; Fj is

the number of female workers in j province; Mj is the number of male workers in the province j. The absolute value of the sum of the difference between the percentage distribution of males and females in each occupation is halved (because there are two groups of males and females) to produce values that range in the index from 0 (perfect integration) to 1 (perfect segregation).

3. Results And Discussion

3.1 Results

In Figure 1, it is shown that the types of occupation with codes 4 to 8 experience changes in the average wage of male workers with a negative slope. The largest decrease occurred in the occupation of Agriculture, forestry, hunting and fishing workers and laborers (code 6). During the 2015-2018 period, the same decline occurred in the occupation of Production workers, operation of machinery workers (code 7). Male workers in these two occupations experienced a decrease in wages of about half of the wages in 2015 which lasted until 2018. Meanwhile, the downward trend occurred in Services worker (code 5); Sales worker (code 4) and others (code 8) is 30 percent. Clerical and related occupations is a type of work that provides a constant average wage during that period. Meanwhile, Managerial and supervisory occupations (code 2) and Professional, technician and related occupations (code 1) showed a generally positive trend.

The pattern of changes in the wages of male workers based on occupation during this period also occurred for female workers. However, nominally female workers only receive wages between one-third and two-thirds of the male workers' wages (Figure 2).

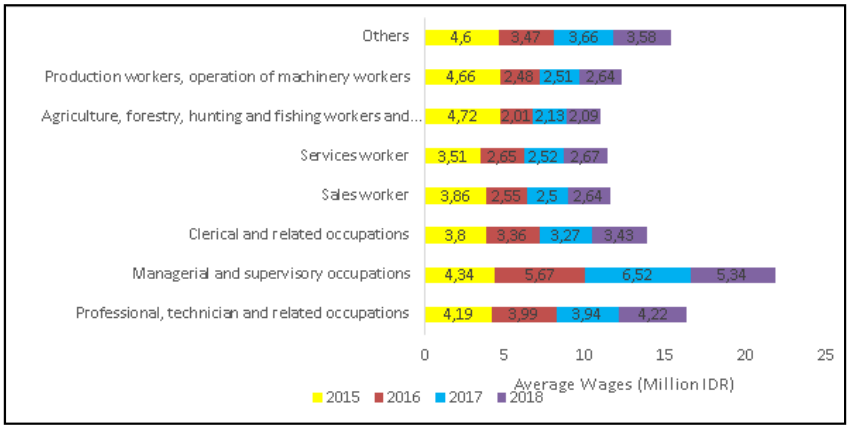

Figure 1. Average Wages of Males by Main Occupation in Indonesia, 2015-2018
Source: (BPS Indonesia, 2018)

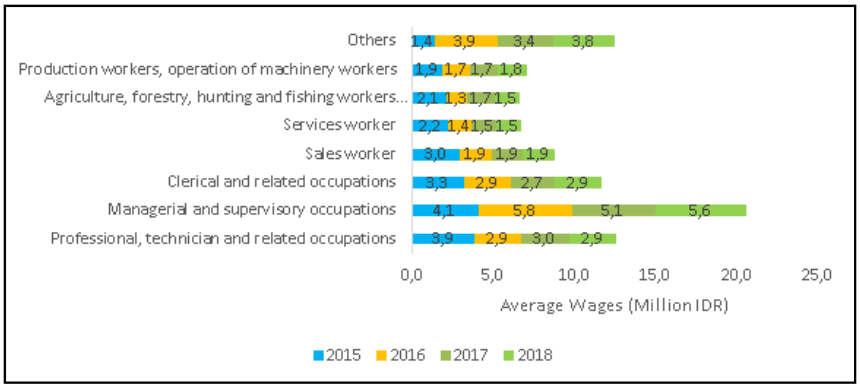

Figure 2. Average Wages of Females by Main Occupation in Indonesia, 2015-2018
Source: BPS Indonesia, 2018

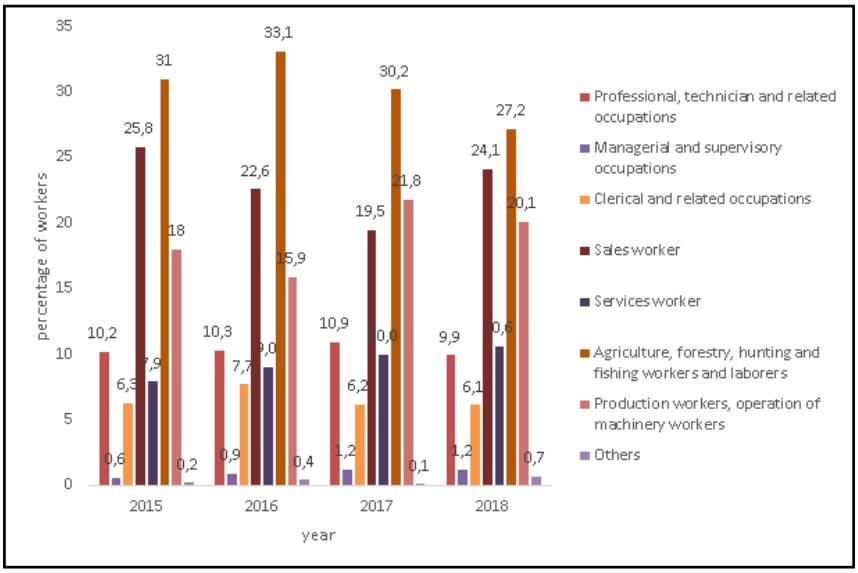

Figure 3. Percentage of Female Workers by Occupation in Indonesia, 2015-2018
Source: BPS Indonesia, 2018

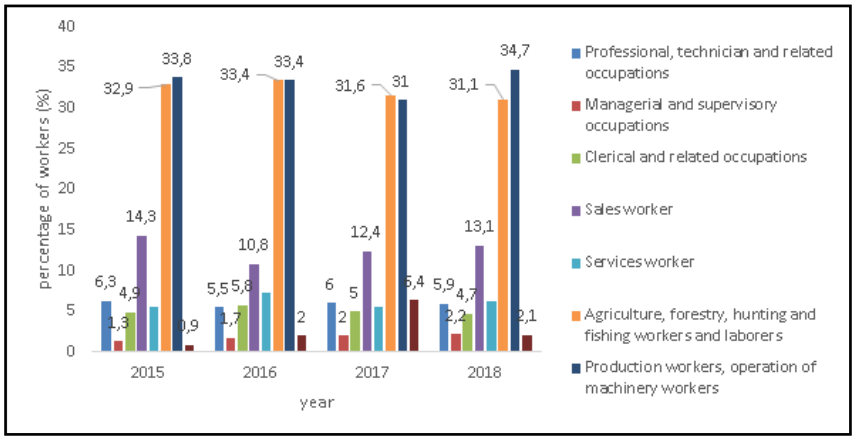

Figure 4. Percentage of Male Workers by Occupation in Indonesia, 2015-2018
Source: BPS Indonesia, 2018

To further analyze the segregation problem based on gender, it can be seen using the Dissimilarity Index (D-Index). Table 3 shows the results of the D index calculation based on gender. In the 2015-2018 period, the level of segregation decreased in professional and clerical occupations. In contrast to managerial and other occupations. Meanwhile, the level of segregation fluctuates in sales, services, agriculture and production occupations. The highest segregation is found in the occupation of production workers.

The occupational structure in Indonesia during the observed period shows that there is no occupational segregation based on gender where the index number D tends to be closer to zero. The occupation of the leadership and management of male and female workers is the most integrated. However, a trend segregation in this occupation from 2015 to 2018 increased as a whole. The same thing also happened to the service business occupation.

Generally on the index number of D means female workers are less segregated in all kinds of occupations in the labor market in Indonesia. Integration is showing signs of increasing in Professional, technician and related occupations; Clerical and related occupations; Sales worker; and Agriculture, forestry, hunting and fishing

workers and laborers. In Professional occupation, if the annual average rate decreases since 2015 continue, it will take 15 years to achieve full integration, it will take 10 years for Clerical and related occupations; Meanwhile, for the occupation of the Agriculture, forestry, hunting and fishing workers and laborers, it will take 130 years.

Table 3 Dissimilarity Index in Indonesia by Gender

Occupations	ID			
	2015	2016	2017	2018
Professional, technician and related occupations	13.01	10.99	10.99	10.07
Managerial and supervisory occupations	1.79	3.66	3.66	4.48
Clerical and related occupations	4.96	3.66	3.66	3.36
Sales worker	25.85	17.58	17.58	19.03
Services worker	4.35	16.85	16.85	14.93
Agriculture, forestry, hunting and fishing workers and laborers	13.86	18.68	18.68	13.43
Production workers, operation of machinery workers	33.90	25.27	25.27	29.48
Others	2.32	4.03	4.03	5.22

Source: BPS Indonesia, 2018 (processed)

Table 4 Dissimilarity Index for Each Province in Indonesia 2015-2018

Province	ID				Average
	2015	2016	2017	2018	
Aceh	18.95	20.90	21.01	24.47	21.33
North Sumatra	29.50	26.04	23.55	25.33	26.11
West Sumatra	23.00	23.57	24.91	24.08	23.89
Riau	30.15	37.99	31.41	32.85	33.10
Jambi	23.25	24.03	24.90	25.58	24.44
South Sumatra	21.65	21.36	22.97	26.92	23.23
Bengkulu	19.05	56.26	48.82	39.67	40.95
Lampung	27.30	28.81	28.23	29.75	28.52
Bangka Belitung	28.00	28.04	31.50	32.84	30.09
Riau islands	36.75	30.34	28.90	26.25	30.56
DKI Jakarta	26.55	29.50	29.09	28.10	28.31
West Java	22.40	22.52	30.30	15.57	22.70
Central Java	23.60	19.39	19.40	20.22	20.65
Yogyakarta	21.80	14.73	20.34	24.10	20.24
East Java	19.00	22.93	20.05	20.18	20.54
Banten	21.85	26.24	26.45	26.05	25.15
BALI	16.75	12.44	12.44	15.52	14.29
East Nusa Tenggara	9.25	25.53	11.80	10.85	14.36
West Kalimantan	18.30	15.33	21.19	20.52	18.83
North Sulawesi	43.20	53.51	43.71	40.65	45.26
South Sulawesi	26.20	26.95	29.92	37.40	34.37

Province	ID				Average
	2015	2016	2017	2018	
Gorontalo	41.70	37.66	39.88	37.29	39.13
West Sulawesi	23.15	30.65	29.00	26.50	27.33
Maluku	26.15	32.72	30.34	32.99	29.80
North Maluku	22.00	26.71	26.71	24.30	25.97
West Papua	28.05	23.31	27.88	30.12	27.34
Papua	18.40	18.40	18.40	19.31	18.63

Source: BPS Indonesia, 2018 (processed)

Based on Table 4, Bengkulu, North Sulawesi and Gorontalo are the three provinces with the highest level of segregation. However, some provinces in the islands of Java and Nusa Tenggara (Central Java, Yogyakarta, East Java, Bali and East Nusa Tenggara) have a segregation rate of only half of the three highest provinces in Indonesia.

On Java, the relatively stagnant D index number also occurred in the provinces of DKI Jakarta, Central Java, East Java, and Banten, but the downward trend occurred in West Java province in 2017-2018 (down 50 percent) and Yogyakarta fell 30 percent in the 2015-2016 period. Other regions such as the provinces of Bali, West Kalimantan, Gorontalo, West Sulawesi, and Maluku are relatively stagnant. East Nusa Tenggara has doubled in size and North Sulawesi has increased by a quarter higher in 2015-2016 then decreased in the next 2 years. On the other hand, South Sulawesi province had a D index of twenty-five percent in 2015-2016 and fluctuated in 2017-2018. The regions showing an increasing trend (increasingly segregated) are the provinces of South Sulawesi and Papua.

3.2 Discussion

Occupational segregation based on gender is caused by males and females doing different jobs and tasks in the labor market (Chapman & Harding, 1985). Occupational segregation also refers to the unequal distribution of female and male workers across and in types of work. Segregation can be horizontal, with females and males concentrating across different sectors, industries, occupations, product types and business sizes; and vertically, with gender differences in positions of different status, managerial responsibilities, or promotion potential.

This is reflected in Figures 3 and 4 where males are mostly represented in managerial jobs, plant and machine operators, and other basic occupations. However, females are mostly concentrated on support workers. Figure 3 shows the percentage of females in different occupations from 2015 to 2018. In this figure, occupations are grouped in detail into large categories such as Sales Worker; Agriculture, forestry, hunting and fishing workers and laborers; and Production workers, operation of machinery workers. Horizontal segregation often puts females disproportionately into work in occupations that emphasize non-manual skills. On average, 10 percent of females work as Agriculture, forestry, hunting and fishing workers and laborers, but only about 1 percent work in Managerial and supervisory occupations. Horizontal segregation also occurs if, within the main groups such Professional, technician and related occupations, females are more likely to work in occupations that are "people-oriented" than "object-oriented". Thus, in Indonesia, there are contrasts based on these two things. However, because the percentage of females who are included in the second criteria is only one-tenth of the first criteria, it can be said that there is no horizontal segregation.

A slightly different pattern occurs in male workers who work in leadership and management positions (Figure 4). There is about 2 percent of male workers in this occupation and three times the number of workers who work in occupations of Professional, technician and related occupations.

The occupations that are mostly carried out by female and male workers are the same, namely Agriculture, forestry, hunting and fishing workers and laborers. This is not surprising because the absorption of labor in Indonesia is still dominated by the agricultural sector, and the contribution of national income from the production side is also still the dominant contribution of this sector.

Significant differences occur in the following matters: (1) the occupation of the sales workers, between 20 and 25 percent of female workers work in this occupation, while only 10 to 14 percent of male workers. This is possible because females are more likely to work in occupations that are "people-oriented" than "object-oriented"; (2) the occupation of Production workers, operation of machinery workers is carried out by one-third of male workers while only one-fifth of female workers. This fact also confirms that more men work in occupations object-oriented.

The labor market according to the occupation, based on Table 3, is the most segregated in the occupation of production workers, operation of machinery workers. However, the trend has decreased in those four years. This is quite logical because this type of work requires physical strength, which is more male workers than female workers. According to this measure of occupational segregation, more than a third of women or men have to change jobs so that there can be true gender parity across jobs. Not much different from the findings of (Hegewisch & Hartmann, 2014) and (Weeden, Newhart, and Gelbgiser, 2018), which state that nearly half of females in the workforce have to change different jobs to eliminate all occupational segregation according to gender.

Changes in index scores can reflect changes in the composition of jobs or changes in the workforce mix of jobs that are more or less integrated among all occupations (Blau & Hendricks, 1979). Assuming all other variables are constant, the index decreases when more females move to jobs where they are underrepresented, such as in construction.The occupational segregation indicator makes it possible to determine the percentage of workers who have to be transferred to different sectors of the economy, sections or occupations in order to eliminate occupational segregation based on gender. The index is based on occupational segregation as the difference in employment between males and females in a given region. The lower the observed difference (the index value is close to zero), and hence, the more evenly the distribution of the labor force is, the smaller the scale of occupational segregation (Domagala, 2018)

Gender-based occupational segregation between black female and male workers was much higher than among white female and male workers during the first two decades, but gender segregation indexes have converged for these two racial groups over the last decade. Overall, occupational segregation by gender is much stronger than occupational segregation based on race (Hegewisch & Liepmann, 2013).

To examine the occupational segregation in Indonesia it can also be done in the context of the region (province). By calculating the Duncan index, each province can be assessed the level of horizontal segregation based on occupation as shown in Table 4. Bali, East Nusa Tenggara and West Kalimantan provinces are the three most integrated regions with an average index value of 0.1429 each; 0.1436 and 0.1883. On the other hand, the three most segregated regions are Bengkulu, North Sulawesi and Gorontalo provinces, namely 0.4095; 0.4033 and 0.3526.

The trend of increasing segregation during this period was shown by almost all provinces on the island of Sumatra, namely Aceh, West Sumatra, Jambi, South Sumatra, Lampung and Bangka Belitung. Generally, all provinces in Java show a fluctuating index. Other areas in Indonesia also show fluctuations in the phenomenon of occupational segregation, except for Papua. So, it can be stated that more than half of the provinces in Sumatra are increasingly segregated, while three provinces have stagnated in the D index (North Sumatra, Riau and Riau Islands) and Bengkulu province has increased sharply in 2016 and has decreased in the last two years.

3. Conclusions

The occupational structure in Indonesia shows that there is no occupational segregation

based on gender where the index number D tends to be closer to zero. The occupation of the leadership and management of males and females workers is the most integrated. However, a trend segregation in this occupation from 2015 to 2018 increased as a whole. The same thing also happened to the service business occupation. According to the occupation, the labor market is the most segregated in the occupation of Production workers, operation of machinery workers. Integration is showing signs of increasing in Professional, technician and related occupations; Clerical and related occupations; Sales Workers; and Agriculture, forestry, hunting and fishing workers and laborers. In the regional context (province), Bali, East Nusa Tenggara, and West Kalimantan are the three most integrated regions, while the three most segregated regions are Bengkulu, North Sulawesi, and Gorontalo provinces.

The results of this research were conducted by examining the level of segregation based on gender and occupation of workers in Indonesia in almost all provinces. So that a more detailed picture can be obtained regarding the level of segregation to the provincial level. However, there are still limitations to this research, namely using only one approach to measure the dissimilarity (D-Index).

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5. References

Anker, R. (1998). *Gender and Jobs. Sex Segregation and Occupations in the World. International Labor Office, Geneva.*.

Bayard, K., Hellerstein, J., Neumark, D., & Troske, K. (2003). New Evidence on Sex Segregation and Sex Differences in Wages from Matched Employee-Employer Data. *Journal of Labor Economics*, *21*(4), 887–922. https://econpapers.repec.org/RePEc:ucp:jlabec:v:21:y:2003:i:4:p:887-922

Becker, G. (1971). *The Economics of Discrimination* (2nd ed.). University of Chicago Press. https://econpapers.repec.org/RePEc:ucp:bkecon:9780226041162

Bender, K., S. Donohue and J. Heywood. (2005). Job Satisfaction and Gender Segregation. *Oxford Economic Papers*, *57*, 479–496. https://doi.org/10.1093/oep/gpi015

Blau, F. D., & Hendricks, W. E. (1979). Occupational Segregation by Sex: Trends and Prospects. *The Journal of Human Resources*, *14*(2), 197–210. http://www.jstor.org/stable/145642

Boraas, S., & III, W. M. (2003). How does gender play a role in the earnings gap? An update. *Monthly Labor Review / U.S. Department of Labor, Bureau of Labor Statistics*, *126*, 9–15.

BPS Indonesia. (2018). *Keadaan Pekerja di Indonesia*. https://www.bps.go.id/publication/2018/11/30/de7c87ed6a6ec2513667033e/keadaan-pekerja-di-indonesia-agustus-2018.html

BPS Indonesia. (2019). *Keadaan Angkatan Kerja di Indonesia*. https://www.bps.go.id/publication/2019/11/29/96138ece33ccc220007acbdd/keadaan-angkatan-kerja-di-indonesia-agustus-2019.html

Bridges, W. P. (2003). Rethinking gender segregation and gender inequality: Measures and meanings. *Demography*, *40*(3), 543–568. https://doi.org/10.1353/dem.2003.0020

Brosnan, P. (2018). Maori Occupational Segregation. *Stanford Center on Poverty and Inequality*, *23*(1), 1–4. https://doi.org/10.1177/144078338702300106

Budig, M. J., & England, P. (2001). The Wage Penalty for Motherhood. *American Sociological Review*, *66*(2), 204–225. https://doi.org/10.2307/2657415

Busch, A., & Holst, E. (2012). Gender-Specific

Occupational Segregation, Glass Ceiling Effects, and Earnings in Managerial Positions: Results of a Fixed Effects Model. *SSRN Electronic Journal*, *5448*. https://doi.org/10.2139/ssrn.1750260

Campos Soria, J., & Ropero, M. A. (2011). Occupational Segregation And The Gender Difference: A Decomposition By Occupational Areas And Responsibility Levels. *International Conference on Applied Economics-ICOAE, University of Malaga*, *48*, 15–17. https://doi.org/10.1080/00036846.2016.1153789

Chapman, B., & Harding, J. (1985). Sex Differences in Earning: An Analysis of Malaysian Wage Date. *The Journal of Development Studies*, *3*, 362–376.

Connolly, S., & Gregory, M. (2008). Moving Down: Women's Part time Work and Occupational Change in Britain 1991–2001. *The Economic Journal, 118*(526), 52–76. https://doi.org/10.1111/j.1468-0297.2007.02116.x.

Costa, D. L. (2000). From Mill Town to Board Room: The Rise of Women's Paid Labor. *Journal of Economic Perspectives*, *14*(4), 101–122. https://doi.org/10.1257/jep.14.4.101

Das, Smita and Kotikula, Aphichoke. (2019). Gender-Based Employment Segregation: Understanding Causes And Policy Interventions. The World Bank. http://documents1.worldbank.org/curated/en/483621554129720460/pdf/Gender-Based Employment-Segregation-Understanding-Causes-and-Policy-Interventions.pdf accessed on 17 October 2020.

Domagala, W. (2018). Measuring Gender Occupational Segregation: OECD Countries in Comparative Perspective. *Economist*, *6*, 493-503.

Duncan, O. D., & Duncan, B. (1955). Residential Distribution and Occupational Stratification. *American Journal of Sociology*, *60*(5), 493–503. https://doi.org/10.1086/221609

European Commission. (2002). Employment in Europe 2002: Recent Trends and Prospects. Office for Official Publications of the European Communities, Luxembourg.

European Commission. (2009). *Gender segregation Root causes , implications and policy responses in the EU*. Office for Official Publications of the European Communities, Luxembourg.

Fortin, N. M., & Huberman, M. (2002). Occupational gender segregation and women's wages in Canada: An historical perspective. *Canadian Public Policy*, *28*(SUPP). https://doi.org/10.2307/3552342

Gabriel, P. E., & Schmitz, S. (2007). Gender differences in occupational distributions among workers. *Monthly Labor Review*, *130*(6), 19–23.

García-Mainar, I., García-Martín, G., & Montuenga, V. (2015). Over-education and Gender Occupational Differences in Spain. *Social Indicators Research*, *124*(3), 807–833. https://doi.org/10.1007/s11205-014-0811-7

Görlich, D., & de Grip, A. (2009). Human capital depreciation during hometime. *Oxford Economic Papers*, *61*, 98-121. https://econpapers.repec.org/RePEc:oup:oxecpp:v:61:y:2009:i:suppl_1:p:i98-i121

Hegewisch, Ariane and Liepmann, Hannah. (2013). Occupational Segregation and Gender Wage Gap in the US. Chapters. In Deborah M. Figart and Tonia, L Warnecke (Ed). *Handbook of Research on Gender and Economic Life*, Chapter 13, 200-217. Edward Elgar Publishing.

Hegewisch, Ariane and Liepmann, Hannah. (2013). Occupational Segregation and Gender Wage Gap in the US. Chapters. In Deborah M. Figart and Tonia, L Warnecke (Ed). *Handbook of Research on Gender and Economic Life*, Chapter 13, 200-217. Edward Elgar Publishing.

Johnson, G., & Solon, G. (1986). Estimates of the

Direct Effects of Comparable Worth Policy. *American Economic Review*, *76*(5), 1117-1125

Jurajda, S. (2003). Gender wage gap and segregation in enterprises and the public sector in late transition countries. *Journal of Comparative Economics*, *31*, 199–222. https://doi.org/10.2139/ssrn.1514469

Karamessini, M., & Ioakimoglou, E. (2007). Wage determination and the gender pay gap: A feminist political economy analysis and decomposition. *Feminist Economics*, *13*, 31–66. https://doi.org/10.1080/13545700601075088

Kilbourne, B., England, P., & Beron, K. (1994). Effects of Individual, Occupational, and Industrial Characteristics on Earnings: Intersections of Race and Gender. *Social Forces*, *72*(4), 1149–1176. http://www.jstor.org/stable/2580296

King, M., (1992). Occupational Segregation by Race and Gender, 1940-1988. *Monthly Labor Review,* (115). 30-36.

Macpherson, D., & Hirsch, B. (1995). Wages and Gender Composition: Why Do Women's Jobs Pay Less? *Journal of Labor Economics*, *13*(3), 426–471. https://econpapers.repec.org/RePEc:ucp:jlabec:v:13:y:1995:i:3:p:426-71

Niederle, M., & Vesterlund, L. (2007). Do Women Shy Away From Competition? Do Men Compete Too Much?*. *The Quarterly Journal of Economics*, *122*(3), 1067–1101. https://doi.org/10.1162/qjec.122.3.1067

Ogloblin, C. G. (1999). The Gender Earnings Differential in the Russian Transition Economy. *ILR Review*, *52*(4), 602–627. https://econpapers.repec.org/RePEc:sae:ilrrev:v:52:y:1999:i:4:p:602-627

Pailhé, A. (2000). Gender Discrimination in Central Europe during the Systemic Transition. *Economics of Transition and Institutional Change*, *8*(2), 505–535. https://doi.org/10.1111/1468-0351.00053

Polachek, S. (1981). Occupational Self-Selection: A Human Capital Approach to Sex Differences in Occupational Structure. *The Review of Economics and Statistics*, *63*(1), 60–69. https://econpapers.repec.org/RePEc:tpr:restat:v:63:y:1981:i:1:p:60-69

Sorensen, E. (1990). The Crowding Hypothesis and Comparable Worth. *Journal of Human Resources*, *25*(1), 55–89. https://econpapers.repec.org/RePEc:uwp:jhriss:v:25:y:1990:i:1:p:55-89

Sprigss, W., & RM, W. (1996). A Logit Decompotition Analysis of Occupational Segregation: Result for 1970s and 1980s. *The Review of Economics and Statistic*, *78*, 348–354

Weeden, Kim A., Newhart, Mary and Gelbgiser, Dafna. (2018). Occupational Segregation. *Stanford Center on Poverty and Inequality,* 1-4.