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Does FDI matter for Reducing Unemployment During 2016-2017 in Indonesia?

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ABSTRACT

This study analyses the development of foreign direct investment (FDI) during Jokowi's three-year reign, as well as the effect of FDI in Indonesian labor absorption. We discuss the influence of FDI in absorbing labor in the west-east Indonesia during 2016-2017. This paper seeks to answer whether the development of FDI in West Indonesia similar to that in East Indonesia. In addition, whether FDI make a significant contribution to the region's unemployment and what industry assign as the most important in terms of job opportunities also become an interesting topic to have furthered explanation. We add this important discussion in our main analysis. Our analysis showed that even though FDI increased in the West and East Indonesia regions in 2016 and 2017, this growth had only a limited impact on job creation and was insufficient to reduce unemployment during those two years.

Introduction

The reign of Jokowi records some great achievements that is worth to mention. When it was expanded in 2014, development of transportation facilities both land and sea transportation became the main priority in the early days of his reign. This is evidenced by the introduction of the concept of sea tolls and the construction of railways on the island of Sulawesi and the addition of the path on the island of Sumatra and the procurement of fast trains between Bandung and Jakarta.

Beside those great achievements, since Indonesia received higher investment rating from 3 international investment rating agencies (in 2011 by Fitch, in 2012 by Moody and in May 2017 by Standars & Poor2s (S&P) after 20 years waiting), Indonesia become more attractive country for foreign investor. This condition might be one of the reasons why investment increase in Jokowi period. For example, foreign investment reach 66,6% from total investment during January-September 2014, and only 33,4% contributed by domestic investment and according to the investment Coordinating Board Of The Republic Of Indonesia (BKPM), investment realization from January-December 2017 reach Rp 513,2 billion or 75,6% from investment target in 2017. Accordingly, foreign investment become an essential factor to support economic growth in Indonesia.

This achievement in investment and other development do not in line with achievement in creating job opportunities. Despite the fact that investment become one of the factors that can reduce unemployment for its ability to create job vacancy, the aggregate total of unemployment in Indonesia surprisingly increases. Data from BKPM shows that only 286 thousand people can be absorbed as employee on third quarter-2017. This number actually increase for about 3,78% compare to the same period in 2016 which only can absorb 276 thousand employees. However, the employee absorption on third quarter-2017 is lower than previous quarter in the same year.

The purpose of this paper is to discusses the development of foreign direct investment (FDI) during the three years of Jokowi reign and the role of FDI on labour absorption in Indonesian. My paper will be focused on the role of FDI in absorbing

labour between west Indonesia and east Indonesia region during 2016-2017. For more detail, does development of FDI in west Indonesia similar to East Indonesia? Does FDI contribute essentially for unemployment issue on those regions? What sector plays the most important role in providing job opportunity?

The reminder of this paper is organized as follows: in the second section, i will present theory that link between FDI and unemployment and some empirical studies regarding the impact of FDI on unemployment. Third section will discuss the development of foreign direct investment (FDI) from 2014-2017. The fourth section will discuss FDI contribution in reducing unemployment in west and east Indonesia, and the final section is conclusion.

FDI and unemployment: Some empirical studies

A number of the studies have been conducted to access the determinants of unemployment. Different theoretical models are used for assessing the determinants of unemployment. Mortensen (1970) and Lippman and McCall (1976) presented the job search model which modelled unemployment as a function of labour, education, work experience and the demand condition of local area. Downes (1998) analysed the unemployment issue in Trinidad and Tobago and concluded that economic growth plays a dominant role in unemployment reduction. Other factors deemed important by Downes include increases in real wages and real loan, which adversely affects the unemployment rate especially in the long-run

Teo et al. (2004) studied the unemployment-vacancy relationship for Singapore, Japan, Hong Kong and Taiwan and concluded that these countries are experiencing greater unemployment and low vacancies. According to the authors, the higher negative coefficient obtained for the vacancy rate in Singapore suggests that Singapore's labour market is experiencing higher matching efficiency compared to Japan and Korea. Another recent study by Maqbool et al. (2013) examined the determinant of unemployment in Pakistan. They considered that population, foreign direct investment, gross domestic product, inflation, and external debt as factors that may have influence the unemployment in Pakistan between 1976 and 2012 using Autoregressive Distributed Lag (ARDL) approach. They found that gross domestic product, population, inflation, and foreign direct investment are significant determinants of unemployment in Pakistan in short-run as well as long-run.

Before Maqbool et al. (2013), Akhtar and Shahnaz (2005) examined the determinants of youth unemployment in Pakistan. By using data from 1991-2004, they fund that the growth rate of GDP, growth rate of services sector and private sector investment have greater impact than the public sector investment to reduce youth unemployment. Subramaniam and Bahrumshah (2011) examine determinant of Unemployment in The Philippines by using Autoregressive Distributed Lag (ARDL). They used data from world development indicator, publish by world bank and covers the periode from 1974 to 2003. Their studied reveal that there is a positive relationship of unemployment with job vacancy which suggests that an increase in job vacancy does not contribute towards a reduction in unemployment.

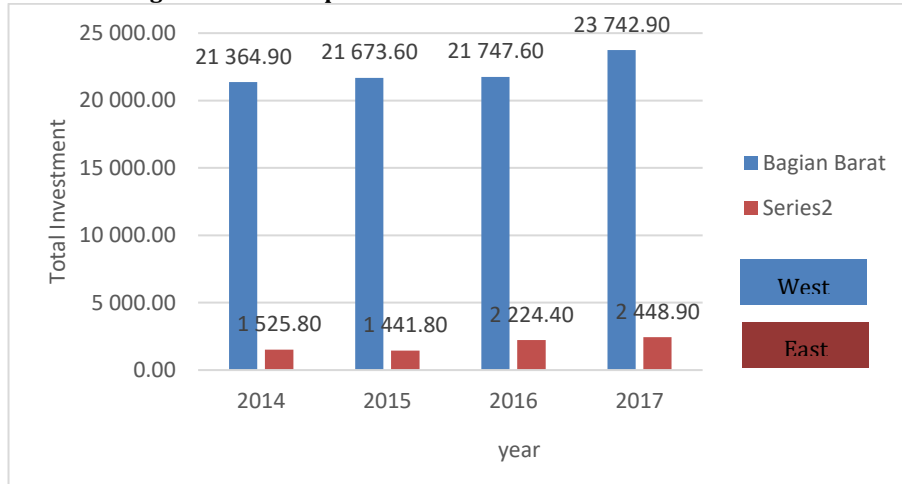
Pratomo (2015) examine determinant of underemployment in Indonesia. He used data from National Socio-Economic Survey in 2011 to examine two main purposes of his study. Firs, he examines demographic factors and economic factors that influence the underemployment In Indonesia by using A multinomial logit model to see the probability of being underemployed. Second, he tries to examine the effect of the underemployed on the welfare of workers as measured by their poverty status. The result of his examination finds that underemployed is more likely to be categorized as poor households because of their lower utilization in the labour market.

Development of foreign direct investment (FDI)

The attractiveness of investing depends on many factors. The results of the Komite Pemantau Pelaksanaan Otonomi Daerah (KPPOD) stated that the natural resources of oil and gas, the security factor, and the conducive business climate are the top priority for investors. In addition, the aspect of political stability and security, even if not sufficient, is a very important prerequisite for the sustainability of investment. On the other hand, the urgency of the decentralization program indirectly also has an impact on investment interest in which the policy aspect is characterized by a large diversity of inter-regional investment policies. This diversity that ultimately leads to differences in investment attractiveness between regions (Wartaman and Koestoer, 2007).

If we implemented these condition in Indonesia, there is possibility that these factors might influence investor's decision to choose west Indonesia more than east region of Indonesia. For more details, Figure I compare the total of FDI between west and east Indonesia from 2014 to 2017 in million US dollar, while table 1 and table 2 provide the exact number of FDI in the same years between two regions. As can be seen from the table, total of FDI in west Indonesia reach US \$87,577.70 million dollars while in East Indonesia the FDI reach only \$7,640.90. This number shows that total FDI in west Indonesia is ten times more than total investment in East region and this condition indicates that there is still a huge gap in investment even after three years Jokowi settled the agenda to support massive infrastructure development and improvement in investment administration.

Figure I : FDI Comparison Between West and East Indonesia



**Table 1: FDI In East Indonesia (each Province) from 2014-2017
(In million Dollar Rupiah)**

Province	Investment				
	2014	2015	2016	2017	total
Maluku	13.10	82.40	102.60	212.00	410.10
Maluku Utara	98.70	203.80	438.90	228.10	969.50
Papua	1 260.60	897.00	1 168.40	1 924.10	5 250.10
Papua Barat	153.40	258.60	514.50	84.70	1 011.20
Total	1 525.80	1 441.80	2 224.40	2 448.90	7 640.90

**Table 2: FDI In East Indonesia (each Province) from 2014-2017
(In million Dollar Rupiah)**

Province	Investment				
	2014	2015	2016	2017	total
Aceh	31.10	21.20	134.50	23.20	210.00
DI Yogyakarta	64.90	89.10	19.60	36.50	210.10
Bengkulu	19.30	20.60	55.70	138.70	234.30
Jambi	51.40	107.70	61.00	76.80	296.90
Kepulauan Bangka Belitung	105.00	82.70	52.70	153.10	393.50
Sumatera Barat	112.10	57.10	79.30	194.40	442.90
Lampung	156.50	257.70	85.70	120.60	620.50
Kepulauan Riau	392.10	640.40	519.10	1 031.50	2 583.10
Kalimantan Tengah	951.00	933.60	408.20	641.00	2 933.80
Kalimantan Barat	966.10	1 335.70	630.70	568.40	3 500.90
Riau	1 369.50	653.40	869.10	1 061.10	3 953.10
Sumatera Utara	550.80	1 246.10	1 014.70	1 514.90	4 326.50
Jawa Tengah	463.40	850.40	1 030.80	2 372.50	4 717.10
Sumatera Selatan	1 056.50	645.80	2 793.50	1 182.90	5 678.70
Jawa Timur	1 802.50	2 593.40	1 941.00	1 566.70	7 903.60
Banten	2 034.60	2 542.00	2 912.10	3 047.50	10 536.20
DKI Jakarta	4 509.40	3 619.40	3 398.20	4 595.00	16 122.00
Jawa Barat	6 562.00	5 738.70	5 470.90	5 142.90	22 914.50
Total	21 198.20	21 435.00	21 476.80	23 467.70	87 577.70

In addition, even though FDI gap obviously exist between west and east Indonesia, but the trend of FDI keep on growing in each year and each region. In east Indonesia, for example, even though FDI in this region decrease for about US \$81 million in 2015 compared in 2014 but years after the decreasing, east Indonesia achieve improvement. The FDI become US \$ 2,224,40 million in 2016 and still growing in 2017. The similar condition also experienced in west Indonesia. This region always achieve improvement in total FDI every year, from 2014 to 2017. The highest investment in this area occurred in 20117 and increase for about US \$1.991 million from previous year.

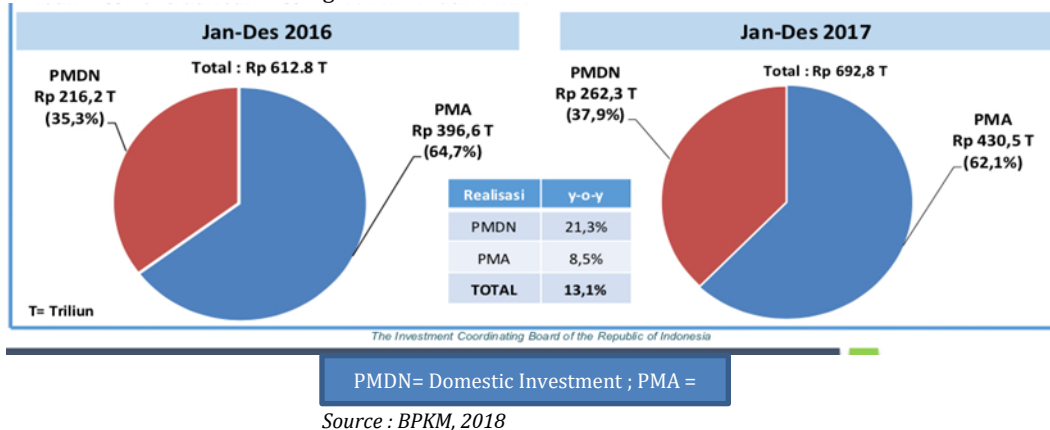
FDI and employment

The link between investment and employment can be seen from its role in absorbing employment from inside or outside the

region where FDI exist. This part will discuss about the role of FDI in absorbing employment.

Data from BKPM shows that investment realization from January to December 2017 reach Rp 513,2 billion or 75% from investment target in that year. Throughout the fourth quarter of 2017, an additional investment of Rp 179,6 trillion was added. When compared to the same period of 2016, investment grew for about 12.7%. Especially for FDI (figure 2) this investment throughout 2017 grew for 8.5% to Rp 430.5 trillion compared to the previous year.

Figure 2: Investment Growth from 2016-2017



Source : BPKM, 2018

Based on the business sector, the top five investment realizations from July to September 2017 were electricity, gas and water at Rp 22.1 trillion (12.5%), housing, industrial estates and offices of Rp 19.9 trillion (11.3%). Industrial metals, machinery and electronics Rp 18.9 trillion (10.7%), mining Rp 18.2 trillion (10.3%), and chemical and pharmaceutical industries Rp 16.3 trillion (9.2%). In 2016, Industrial metals, machinery and electronics also mining industry become the most popular sectors for FDI, which accounted for about 14,3 % for each sector. Electricity, gas and water seated in second position, by giving contribution for about 11,5%

According to the province, Java dominates the investment throughout 2017 while Java and Sulawesi Selatan dominate in 2016. West Java, DKI Jakarta, and Banten are the area that have the largest FDI in two years, while Central Java and Papua are in fourth and fifth position in 2017. Beyond that, East Kalimantan, North Sumatra, South Sumatra, Papua and Central Sulawesi are among the top 10 highest investments. These 10 regions account for 75% of Indonesia's overall investment outcomes in 2017. Detail of FDI in every province described in table 3.

Figure 2 and table 3 witnessed the improvement of FDI in two selected years. If we see based on region, it is clear that West Indonesia receive more attention from FDI investors compared to East Indonesia. In 2016, the top three FDI in West Indonesia contributed for about \$1,1781.2 million or around 41% from the total of FDI in the year, while in 2017 the investment decreases slightly become 40%. The contra situation experience by East Indonesia, where this area give contribution for only 8% in both years. However, if we see from the value of FDI, there are improvement in total FDI in both areas.

Table 3:
FDI In Each Province In Indonesia In 2016 and 2017

NO	LOKASI	INVESTASI (US\$ Juta)	PROYEK	NO	LOKASI	INVESTASI (US\$ Juta)	PROYEK
1	Jawa Barat	5.142,9	5.309	1	Jawa Barat	5.470,9	5.369
2	DKI Jakarta	4.595,0	8.803	2	Daerah Khusus Ibukota Jakarta	3.398,2	6.751
3	Banten	3.047,5	2.479	3	Banten	2.912,1	2.161
4	Jawa Tengah	2.372,5	955	4	Sumatera Selatan	2.793,5	251
5	Papua	1.924,1	135	5	Jawa Timur	1.941,0	1.473
6	Jawa Timur	1.566,7	1.750	6	Sulawesi Tengah	1.600,3	252
7	Sulawesi Tengah	1.545,6	161	7	Papua	1.168,4	169
8	Sumatera Utara	1.514,9	564	8	Kalimantan Timur	1.139,6	466
9	Kalimantan Timur	1.285,2	340	9	Jawa Tengah	1.030,8	1.054
10	Sumatera Selatan	1.182,9	261	10	Sumatera Utara	1.014,7	688
11	Riau	1.061,1	285	11	Riau	869,1	394
12	Kepulauan Riau	1.031,5	812	12	Kalimantan Barat	630,7	569
13	Bali	886,9	1.429	13	Kepulauan Riau	519,1	880
14	Sulawesi Selatan	712,8	196	14	Papua Barat	514,5	126
15	Sulawesi Tenggara	693,0	92	15	Bali	450,6	1.371
16	Kalimantan Tengah	641,0	246	16	Nusa Tenggara Barat	439,0	636
17	Kalimantan Barat	568,4	323	17	Maluku Utara	438,9	67
18	Sulawesi Utara	482,9	167	18	Kalimantan Tengah	408,2	341
19	Kalimantan Selatan	243,8	117	19	Sulawesi Utara	382,8	209
20	Maluku Utara	228,1	28	20	Sulawesi Tenggara	376,1	210
21	Maluku	212,0	34	21	Sulawesi Selatan	372,5	309
22	Sumatera Barat	194,4	146	22	Kalimantan Selatan	249,4	189
23	Kepulauan Bangka Belitung	153,1	86	23	Kalimantan Utara	160,8	65
24	Kalimantan Utara	149,0	75	24	Aceh	134,5	111
25	Nusa Tenggara Timur	139,0	166	25	Maluku	102,6	50
26	Bengkulu	138,7	60	26	Lampung	85,7	129
27	Nusa Tenggara Barat	132,1	604	27	Sumatera Barat	79,3	198
28	Lampung	120,6	133	28	Jambi	61,0	161
29	Papua Barat	84,7	87	29	Nusa Tenggara Timur	58,2	164
30	Jambi	76,8	103	30	Bengkulu	55,7	59
31	Gorontalo	41,3	37	31	Kepulauan Bangka Belitung	52,7	93
32	D.I. Yogyakarta	36,5	179	32	Sulawesi Barat	20,6	28
33	Aceh	23,2	89	33	Daerah Istimewa Yogyakarta	19,6	252
34	Sulawesi Barat	11,4	16	34	Gorontalo	12,7	76
TOTAL		32.239,8	26.257	TOTAL		28.964,1	25.321

If it is obvious that the increasing not only take place in West Indonesia, but also in East Indonesia, the next question is

that: *does the improvement in FDI also in line with the decreasing in unemployment? Or does the increase in FDI also cause the increase in labour force in the region?*

In terms of employment, BKPM noted that only 286 thousand people could be absorbed in the third quarter of 2017. The amount is higher about 3.79 percent from the same period of 2016, which can absorb 276 thousand employees. However, the absorption of the quarter is actually lower than the previous quarter which reached 345 thousand people. Detail of Labour force absorption from FDI can be seen in table 4

Table 4
Labour Force absorption from FDI in 2016 and 2017

No	Period	2016	2017
1	Q1	190.610	126.327
2	Q2	267.700	241.068
3	Q3	184.006	176.786
4	Q4	309.623	223.171
	Total	951.939	767352

Source: BKPM, 2018

The national unemployment rate according to the Central Bureau of Statistics (BPS) per August 2017 reach 5.5% or 7.04 million people. The figure is increase from February 2017 which amounted to 5.33%. But compared to the previous year, the unemployment rate fell for 5.61%. In West Java, as the region with the largest Investment, there was a decrease in unemployment by 0.27%. However, in DKI Jakarta as the second highest investment area, experienced an increase of 1.78% in Unemployment.

In general, even though FDI increase during two selected years, 2016 to 2017, and this investment create job opportunity for society, however this improvement does not enough to decrease unemployment. This mean, the role of FDI does not that matter in absorbing labor force between 2016 and 2017. One of the reasons that can explain this phenomenon, as the ministry of Coordinator of Economics said, is that this might be happened because investors focus on technology investment. This kind of investment cause highly labor intensive and new investments do not really need additional employee. In addition, it is probably because many new investments are in non-agriculture sector. Since this sector provide almost 40% of job vacancy for employment, so when new investment come and this sector become less priority than other sector, then less employment will also be needed for the new project.

Conclusion.

Considering the importance of FDI in absorbing labour force according to economics theory, it is essential for Indonesian government to support and motivate investors to invest in Indonesia. Even though FDI in 2016 and 2017 increase in West and East Indonesia region, however this increasing give only limited contribution in creating job opportunity and not essential enough to reduce unemployment during those two selected years. Two possible reason are FDI invest in highly intensive technology and in those two years, the focus on FDI is not in agriculture sector (in 2017 the most popular sector for FDI is electricity, gas and water, while in 2016 metals, machinery and electronics industry and mining industry).

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