Shaping The Future of Employment In The New Era of Digital Technology

Director of Labor and Employment Creation
Ministry Of National Development Planning/Bappenas

Jakarta, 19 July 2018
The service sector proved able to absorb the formal workforce. The high proportion of formal service sector workers is one of them due to the rapid development of the digital economy that provide alternative formal employment opportunities.

It is also indicated as a result of the rapid development of the digital economy that provide alternative formal employment opportunities, such as courier services and online transport and trade services.
Rapid Development of Digital Economy in Indonesia

Internet users in Indonesia keep increasing

- 2013: 71.2 million
- 2014: 88.1 million
- 2015: 93.4 million

70% searching for online shopping information (2015)

- 7.4 million online shoppers with 79.8% individual buyer (2015)

Transaction value up to US$3.5 miliar (2015) with the most popular one (Clothes: 67.1%)

The Internet’s Effects on SMEs (2016 - Projection)

- 16%: High-Web
- 14%: Medium-Web
- 7%: Low-Web and No-Web

E-commerce Retail Transaction Value in Indonesia 2013-2018

Source: Boston Consulting Group, 2012

Top 10 Countries with Highest Internet User

<table>
<thead>
<tr>
<th>Country</th>
<th>Million internet users</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>731.4</td>
</tr>
<tr>
<td>India</td>
<td>462.1</td>
</tr>
<tr>
<td>United States</td>
<td>236.9</td>
</tr>
<tr>
<td>Brazil</td>
<td>139.1</td>
</tr>
<tr>
<td>Indonesia</td>
<td>132.7</td>
</tr>
<tr>
<td>Japan</td>
<td>118.4</td>
</tr>
<tr>
<td>Russia</td>
<td>104.5</td>
</tr>
<tr>
<td>Nigeria</td>
<td>93.6</td>
</tr>
<tr>
<td>Germany</td>
<td>71.7</td>
</tr>
<tr>
<td>Mexico</td>
<td>69.9</td>
</tr>
</tbody>
</table>

Source: Internet World Stats, March 31 2017
DIGITAL ECONOMY LANDSCAPE

Digital economy has the potential to reach US$130 billion by 2020.

FINANCIAL TECHNOLOGY (FINTECH)

Transaction projection 2016
US$ 14.5 billion (Rp190 trillion)

Transaction nominal per individual 2014
US$ 56.98 billion (Rp747.000)

E-COMMERCE

Transaction potentials
2013
US$ 8 billion (Rp104 trillion)
2016
US$ 20 billion (Rp261 trillion)
2020
US$ 130 billion (Rp1.700 trillion)

ON DEMAND SERVICES

High market demand

63.4 million
Internet users

132.7 million
Smart phone users

INTERNET OF THINGS (IOT)

Asia Pacific market potentials

2015
US$ 250 billion
2020
US$ 583 billion

Players

Source: IDEA, 2017
• ICT sector grows more than 9% and continues to do so for the last 2 years.
• Transportation and warehousing sector also grows fast, i.e. 8%, which indicates the growth of start-up e-commerce and transportation, such as Gojek, Grab, Uber.
• FinTech industry grows positively. There are 184 FinTech companies; 42% are payment-based FinTech companies, 18% are loan-based, and others are aggregators and crowdfunding.
• In 2016, revenue of e-commerce amounted to USD 6 billion, and 78% of current Internet users made online purchases.
• E-commerce is expected to grow by approximately 18% p.a. in the next five years, reaching a market volume of USD 16.4 billion by the end of 2020.
The digital economy has potential: on growth and job creation...

McKinsey (2016) estimates that digital technology will be able to create 3.7 million jobs by transforming informal jobs, employing inactive population, and reducing unemployment. It will also increase Indonesia’s GDP by USD35 billion in 2025.

52.6 million (51.8%) Jobs that will potentially be replaced

Job lost ≠ unemployment

Technology encourages the creation of new, more productive and larger amounts of new jobs.

Potential automation

By sector

- Agriculture, forestry, fishery, hunting: 49%
- Processing/manufacturing: 65%
- Retail trade: 53%
- Construction: 45%
- Transportation and warehouse: 64%

Potential automation

By occupation

- Farmers, fishers, breeders, handicraft workers
- Tailor, stationery machine operator, las & solder
- Sales, cashier, tickets
- Construction worker, blacksmith
- Administration worker, warehouse clerk, etc
Indonesia still left behind for: labor market efficiency pillar. From the 137 nations, Indonesia is at 96th position.

**Position of Indonesia in the Global Competitiveness Rank (1/2)**

**Labor Market Efficiency Ranking**

<table>
<thead>
<tr>
<th>Country</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapura</td>
<td>2</td>
</tr>
<tr>
<td>Malaysia</td>
<td>26</td>
</tr>
<tr>
<td>Laos</td>
<td>36</td>
</tr>
<tr>
<td>Brunei...</td>
<td>47</td>
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<tr>
<td>Kamboja</td>
<td>48</td>
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<tr>
<td>Vietnam</td>
<td>57</td>
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<tr>
<td>Thailand</td>
<td>65</td>
</tr>
<tr>
<td>Filipina</td>
<td>84</td>
</tr>
<tr>
<td>Indonesia</td>
<td>96</td>
</tr>
</tbody>
</table>

Source: Global Competitiveness Report, World Economic Forum, 2017-2018
POSITION OF INDONESIA IN THE GLOBAL COMPETITIVENESS RANK (2/2)

Cooperation in labor-employer relations

Flexibility of wage determination

Women in Labor Force, Ratio to Men

Hiring and firing practices

Source: Global Competitiveness Report, World Economic Forum, 2017-2018
CHALLENGES & GOVERNMENT ACTIONS ON DIGITAL ECONOMY

Reduce Digital Gap

- Economic Connectivity, including Palapa Ring Project, Pipa Bersama and Wireless Connectivity Pilot Project for Rural Area
- Government Connectivity in the form of Integrated Government Network and Data Center

Improve Human Resources Capability

- Development of Human Resources and National ICT Industry e.g. through establishment of an innovation development center: Nongsa Digital Park (NDP) in Batam for creative digital industry players
- Improving skills of workers
- Creating new jobs by promoting technology-based entrepreneurship
- Improving employment social protection

Formulate Suitable Regulation and Incentive

- Presidential Decree No. 74/2017 on e-Commerce Road Map 2017-2019
**FUTURE OF JOBS**

**Labor Projection by Sector**

- 2015: Agriculture 21.30%, Manufacturing Industry 14.60%, Services 64.20%
- 2030: Agriculture 20%, Manufacturing Industry 20%, Services 60%
- 2045: Agriculture 14%, Manufacturing Industry 10%, Services 76%

**Labor Projection by Education**

- Low: SMP and below; Middle: SMA/SMK & Diploma; High: University
- 2015: Low 20%, Middle 70%, High 10%
- 2030: Low 20%, Middle 70%, High 10%
- 2045: Low 10%, Middle 70%, High 20%

**Soft Skills**

- Complex problem-solving
- Critical thinking
- Creativity
- People management
- Coordinating with others
- Emotional intelligence
- Judgment and decision-making
- Service orientation
- Negotiation
- Cognitive flexibility

**Technical skills**

- Computer and Mathematics
- Architecture
- Engineering (Science, Technology, Engineering, Mathematics) **STEM**

**Notes:**

- Labor with middle-high education will reach 90%, based on Vision 2045 projection.
- The required annual growth of labor with university education is **3.7%** (McKinsey, 2012) or around **700,000** p.a.
- Service sector will continue to grow and reach 64.2% in 2045.

Source: Bappenas Calculation, 2017

Source: *Future of Jobs Report, WEF*
IMPROVING SKILLED WORKERS: STRATEGIC POLICIES

1. To enhance the training curricula for improving soft skills and hard skills

2. To promote competency-based vocational training and apprenticeship program

3. To improve the qualification, requirement and the operation of professional certification institutions across the country

Tech improves labour productivity

Tech creates more productive and larger amounts of new jobs with higher income

Tech improves access of MSMEs to finance

Tech widens the inclusivity of decent jobs opportunities

Information & Technology Impact on SDGs
STRATEGIES: WHAT SHOULD BE DONE?

Improving skills of workers:
1. New automation-supporting skills;
2. Human-specific skills (soft skills, logical thinking, coaching, problem solving, creativity, etc.);
3. Improvement of education, with emphasis on STEM and soft skills;
4. Facilitation of retraining and income benefits.

Creating new jobs by promoting technology-based entrepreneurship.

Improving social protection scheme, coverage and deliveries.

Facilitating knowledge transfer from high-skilled expatriates.

Promoting more flexible labor market by improving labor regulation, quality of labor market information, and TVET system.
THANK YOU.