



**Asia-Pacific  
Economic Cooperation**

**Advancing** Free Trade  
for Asia-Pacific **Prosperity**

# **Embracing 4.0 Industrial Revolution in Boosting Economic Performance of Export-oriented SMEs**

**APEC Small and Medium enterprises Working Group**

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**Asia-Pacific  
Economic Cooperation**

**Embracing 4.0 Industrial Revolution in Boosting Economic  
Performance of Export-oriented SMEs**

**- Workshop Summary Report-**

**APEC Small and Medium Enterprises Working Group (SMEWG)**

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## **I. Introduction of the Project**

The two-day workshop was held on 6 to 7 April 2021 in a hybrid mode due to the COVID-19 pandemic. This workshop covered four main issues: 1) Providing knowledge of Industrial Revolution 4.0 (IR 4.0) and its impact on the export performance of SMEs; 2) Supporting SMEs to integrate their businesses by implementing IR 4.0; 3) Sharing experiences and best practices about the success stories of SMEs participation in IR 4.0; (4) Providing recommendations for APEC's program on developing export-oriented SMEs through the implementation of the IR 4.0.

## **II. Objectives of the Workshop**

The main objective of this workshop is to improve export-oriented SMEs' competitiveness in IR 4.0 era. Considering the new era of IR 4.0, SMEs need to improve themselves through constant innovation and improvement to be a more efficient and effective business model. Originally, this workshop was planned as a physical event in March 2020, however, due to the COVID-19 pandemic, it was held in a hybrid format.

Speakers and participants were gathered through the Zoom Virtual Meeting platform for two days. Participants were actively involved in the discussion and Q&A sessions with the speakers.

## **III. Briefings of the Presentations in the Workshop**

The speakers came from different areas of expertise, such as government representatives, academia, and business representatives. The Minister of Cooperatives and SMEs, Indonesia, Mr Teten Masduki, gave the opening remarks. There were four sessions of presentation and discussion from the speakers.

- **Opening remarks (Mr Teten Masduki, Minister of Cooperatives and SMEs)**

Mr Teten explained that small and medium enterprises (SMEs) are the engines of growth and innovation in the APEC member economies. SMEs account for over 97 percent of all businesses and employ over half of the workforce across APEC economies. They contribute significantly to economic growth, with their share of GDP

ranging from 20 percent to 50 percent in most APEC member economies. However, they only account for 35 percent or less of the direct exports. There are several major constraints experienced by SMEs, such as lack of capital, low managerial skills, and low technology. To face the challenges, SMEs must be able to accelerate themselves in embracing the digital economy in order to face the challenges of IR 4.0.

He also emphasized that the global economy has become a strong industry competitor in the Asia Pacific economies in recent years. It is no longer enough to produce faster, cheaper, and have higher product quality than competitors in maintaining competitive advantage. The industry should implement new type innovative and "digital" production strategies to maintain a long-term competitive advantage. It must be supported to pave the way for the digital transformation of traditional SMEs into smart factories.

Last but not least, he mentioned that this workshop provided knowledge and entrepreneurship training for SMEs to access the digital trade in industrial revolution 4.0. Along with this workshop, it is hoped that by exchanging views and identifying best practices in various APEC member economies, this event can provide comprehensive discussion and knowledge to increase the understanding of export-oriented SMEs to embrace IR 4.0 so they can have a competitive advantage.

- **Session 1:**

**The Introduction of Industrial Revolution 4.0 and Digital Economy Platform;  
How IR 4.0 Brings Impact to the Export Performance of SMEs**

**Moderator: Mutiara Probokawuryan – Lecturer in Economics Department, Bogor  
Agricultural University**

The first session aimed to give basic knowledge about the 4.0 Industrial Revolution era and its impact on the economic performance of export-oriented SMEs.

**Mr Dzulfian Syafrian - Economist at the Institute for Development of Economic  
and Finance (INDEF)**

- The IR 4.0 is a continued development of the IR 3.0 accompanied by automation. IR 3.0 is the use of electronics and information technology (IT) to automate the production process. IR 4.0 is a continuation of IR 3.0, which is driven by the digital revolution that has occurred since the middle of the 21st century (Klaus Schwab, 2015 in Syafrian).

- There are several key technologies in IR 4.0: artificial intelligence, the Internet of Things, robotics, autonomous vehicles, 3D printing, energy storage, nanotechnology, biotechnology, materials science, and quantum computing.
- Nine internationalization strategies can be applied by SMEs (Solberg, 1997 in Syafrin). They need to implement an internationalization strategy by considering two things: "Industry Globality" and "Readiness for Internationalization". The readiness for internationalization means SMEs' internal preparedness in applying IR 4.0. The three points that constitute the SMEs preparedness are: whether they can automate their key resources; the uniqueness of resources in terms of valuable, rare, inimitable, and non-substitutable; the competitiveness, which does not only come from IR 4.0 technology but also conventional resources such as human resources, skill, access to raw material, etc. Nine internationalization strategies can be explained as follow:
  - In the first window, SMEs that are still local and immature are better off implementing a stay-at-home strategy. The main focus of SMEs in this window should be on improving their performance and position in their home market.
  - In the second window, local SMEs in the adolescent stage should immediately consolidate the export market.
  - In the third window, SMEs that have attained leadership positions in the local market should immediately enter new businesses or diversify their products.
  - In the fourth window, immature SMEs with global potential should immediately identify a niche in the international market.
  - In the fifth window, adolescent SMEs with global potential should immediately consider expansion in the international market.
  - In the sixth window, the internationally mature SMEs in a potentially global market are well-positioned to prepare themselves for eventual shifts toward a more global market.
  - In the seventh window, SMEs that have found themselves in the global market and are local dwarves among the multinational giants must prepare for a buyout.

- In the eighth window, SMEs that are already in the adolescent stage and finding themselves in the global market should immediately seek global alliances.
- In the ninth window, SMEs that operate in global markets and are among the leaders in key markets should immediately strengthen their global position.
- Several recommended policies that can improve the export performance of SMEs are: (a) Increasing efficiency, value, and product diversification in the global value chain; (b) Supporting SMEs to develop their products through research and development; (c) Recombining SME's strategy with location-specific endowments.

**Presentation by Mr Akhmad Bayhaqi - Senior Analyst – APEC Policy Support Unit**

- The Boracay Action Agenda is APEC's commitment and priority to improve trade facilitation, trade finance, e-commerce, institutional support, and women's participation in SMEs. SMEs tend to vary between members, but the number of employees is a primary criterion frequently used in classifying businesses as SMEs in nearly all APEC economies.
- There are almost 150 million businesses considered to be SMEs across the APEC economies, accounting for around two-thirds of employment. In most APEC economies, over 98 percent of enterprises are considered to be SMEs. Micro-sized enterprises tend to make up the highest share of total SMEs, followed by small-sized enterprises and medium-sized enterprises often comprising a very low share of total SMEs.
- Several key characteristics distinguish micro, small, and medium enterprises, such as formality; organization & management; workers used; production process; market orientation; profile of the owner; technology used; owner; motivation; and spirit of entrepreneurship.
- SMEs contribute for more than 60 percent – 80 percent of the total employment in APEC economies. SMEs also contribute between 40 to 60 percent of GDP or value-added in most APEC economies. The total goods export value varies substantially across the APEC economies. Several have shares below 15 percent, whereas others have shares above 25 percent.

- Furthermore, SMEs often face a mix of internal and external barriers that prevent a greater level of participation in global trade. Typical constraints include a lack of access to finance, inadequate production capacity, and a lack of internal capabilities such as skills and time. According to the speaker's research on the case in Chile, there are four key challenges SMEs face when engaging in internationalization activities: management barriers, capital barriers, structural barriers, and lack of information. In Chile, 63 percent of large firms can continuously do export. In comparison, only 38 percent of SMEs can sustain themselves in their export market.
- IR 4.0 brings both opportunities and challenges for SMEs. Therefore, some policies can be applied in broad focus for general SMEs in developing economies or narrow focus for competitive SMEs in industrialized economies to motivate SMEs to keep improving and become more innovative.
- E-commerce and regional and global value chains can allow SMEs to overcome some of the major obstacles to trade by offering channels through which SMEs can more easily internationalize.

- **Session 2:**

**Supporting SMEs Integration to Harness and Benefit from 4.0 Industrial Revolution**

**Moderator: Mutiara Probokawuryan - Lecturer in Economics Department, Bogor Agricultural University.**

This session aimed to prepare SMEs in APEC economies to be digital-ready for an inclusive digital future. Speakers highlighted difficulties and barriers that SMEs face while integrating into cross-border trade, particularly in financial support and technological readiness.

**Presentation by Vidya Simarmata – Senior Manager of Public Policy and Government Relations Bukalapak.**

- There are 400 million internet users among the 583 million population in six economies in Southeast Asia (Indonesia, Malaysia, the Philippines, Singapore,

Thailand, and Viet Nam). Across six economies in Southeast Asia, digital engagement also increased by an additional hour of personal use per day during the COVID-19 pandemic.

- Bukalapak is an Indonesian-based tech company that aims to establish a fair economy for all. Currently, it has more than 100 million customers and more than 13 million merchants across Indonesia. Bukalapak has an export program launched in 2019, which aims to expose Indonesian merchants & products to the global market. This program also facilitates both direct export and indirect export services.
- BukaGlobal feature facilitates direct export services that allow buyers from outside Indonesia to shop at Bukalapak. It provides delivery services to the following economies: Malaysia; Singapore; Brunei Darussalam; Hong Kong, China; and Chinese Taipei. Bukalapak also collaborates with e-commerce from Malaysia (Yubeli) and Singapore (Qoo10) to facilitate indirect export services.
- Through the BukaGlobal feature, Bukalapak aims to: expand Indonesian SMEs markets at the regional level; bridge the distance between Indonesia and diaspora through online platforms; and introduce local products to other economies.
- Currently, the indirect export services in Bukalapak only apply to sellers with specific criteria and product categories that are priority for export, such as Halal Cosmetics, Muslim fashion, food and Ingredients, home living, essential oils, herbal oils, herbal medicine (jamu), and handicrafts.

#### **Presentation by Arthur Adisusanto – VP Growth & Partnership Modalku.**

- The amount of SME credit needed annually reached IDR 1,700 trillion (USD 119 billion) in 2018. Currently, existing financial institutions can only meet IDR 700 trillion (USD 49 billion) of credit needs, so there is a shortage of funding for SMEs of around IDR 1,000 trillion (USD 70 billion) in Indonesia each year. Fintech in Indonesia has distributed a total loan of IDR 156 trillion (USD 10.9 billion). The number of borrowers reached 43 billion accounts in 2015.
- Modalku is a pioneer digital financing platform in Indonesia; Singapore; Malaysia; and Thailand. Modalku offers business capital loans for up to IDR 2 billion (USD 140 thousand) with competitive & affordable interest rates. These loans have a

tenor of up to 12 months and can be accessed without a fixed asset guarantee. Modalku also offers attractive interest rates to lenders, ranging from 10-17 percent. The funding program starts from IDR 100,000 (USD 7.02) per loan and can be done easily, anytime, and anywhere through the application.

- Overall, Modalku has funded projects worth IDR 22.36 trillion (USD 1.5 billion), with more than 4 million transactions, more than 200,000 borrowers' accounts, and a default rate of only 1 percent.
- The disbursement of SME loans has increased from 2016 to 2020. Modalku has facilitated the disbursement of SME loans amounting to IDR 67.3 billion (USD 4.7 million) in 2020. The number of unique borrowers has also increased from 2016 even though it experienced a decline in 2020. The number of unique borrowers facilitated by Modalku are 23,400 borrowers in total in 2020.
- Modalku has SME loan products as “pay later” facilities, working capital loans, and cash flow solutions. The maximum loan amount offered by each product tends to vary, but none of them requires collateral.

-end of day 1-

## **Day 2**

- **Session 3:**

**SMEs participation in 4.0 Industrial Revolution – Opportunity and Challenges from Private Sector’s Perspective.**

**Moderator: Fauziah Rizki Yuniarti – Lecturer in from Faculty of Economics and Business, University of Indonesia.**

This session presented the result of harnessing the opportunity in e-commerce and digital platform by SMEs straight from the experience of private companies.

### **Presentation by Nancy Margried – Founder Batik Fractal**

- Batik Fractal was founded in 2009 and has focused on transforming traditional arts through the use of technology. Batik Fractal created a parametric software called jBatik to help traditional artisans and smallholder designers to create modern new batik patterns, products and build a digital database for their businesses.
- Batik Fractal also provides market access for handmade products. Currently, more than 3,500 craftsmen have used this software, and it has had a positive impact on more than 10,000 batik handicraft workers in Indonesia.
- The main focus and activities of Batik fractal are: developing products through the use of digital technology, empowering women through the creative economy, and creating sustainable fashion products that have global competitiveness.
- In its training program, Batik Fractal already has 35 digital training centers spread across several provinces in Indonesia.
- Batik Fractal has also penetrated the global market. Its products have been marketed in 13 economies, including 9 APEC member economies (Canada; United States; China; Singapore; Thailand; Viet Nam; the Philippines; and Malaysia) and four other economies (Brazil; United Kingdom; Netherlands; and Switzerland).

- In utilizing industrial technology 4.0, Batik Fractal concentrates more on creative design and building design databases rather than using technology for production. Only 20 percent of products are produced using machines. Apart from that, Batik Fractal also utilizes an e-commerce platform to reach a wider market, online payments, and engage the customers using social media.
- Some of the obstacles that SMEs often experience in utilizing industrial technology 4.0 include lack of discussion of IR.4.0, false belief of technology and man work, and no IR framework. 4.0 for SME, and IR.4.0 key technology is not accessible to SMEs. However, IR 4.0 also offers good opportunities for SMEs, such as cost reduction, better business models, better products, and production automation.

**Presentation by Amalia Prabowo - Managing Director Export Hub Ecosystem – ATT Group (Authorized Channel Partner of Alibaba.com).**

- Based on data from the Coordinating Ministry of Economic Affairs of Republic Indonesia, COVID-19 has caused 63.9 percent of MSME players to experience a decline in performance and face several major obstacles, such as raw material difficulties, distribution, capital difficulties, production constraints, and decreased sales.
- E-commerce is a shortcut to bounce back. It is estimated that online sales will continue to grow significantly. Global sales are projected to increase from USD 1,3 trillion in 2014 to USD 4,5 trillion in 2021. The global e-commerce penetration rates are forecasted to increase from 15 percent in 2020 to around 25 percent in 2025.
- The McKinsey survey shows that globally, 39 percent of manufacturers already have e-commerce sites, 29 percent of small businesses are selling online, and more than 90 percent of B2B buyers use mobile to shop.
- There are several ways to expand market penetration and attract global consumers, such as enter the B2C & B2B market through the global digital platform (Alibaba.com, WorldTrade, Amazon, Global Souces, Ecplaza, etc.), manage an online store with qualified e-commerce skills, and match the product to the global buyer's demand.

- Nowadays, e-commerce management is no longer considered a part-time job, but it has transformed into a full-time job. Therefore, digital marketers need to be empowered to have adequate skills in managing company profiles, designing mini sites, posting high quality products, researching keywords, and so on.

#### **Session 4:**

##### **Recommendation and Action Plan**

**Moderator: Fauziah Rizki Yuniarti – Lecturer in from Faculty of Economics and Business, University of Indonesia**

In this session, participants discussed and built recommendations with speakers for future action plans on SMEs' readiness for the global market.

##### **Presentation by Fixy - Assistant Deputy Minister for Market Expansion and Partnership of Ministry of Cooperatives and SMEs of Indonesia**

- SMEs account for over 97 percent of all businesses and employ over 50percent of the workforce across APEC economies. They contribute significantly to economic growth, with their share of GDP ranging from 20percent to – 50percent in most APEC economies. Besides direct exports, SMEs mainly engage in activities of indirect exports. Therefore, analyzing direct exports alone might underestimate SMEs' export capacity.
- Based on APEC Policy Support Unit, Policy Brief No 8-SMEs in the APEC region 2019, SMEs' share in total exports that exceeded 50 percent only happened in China. SMEs in Canada and Korea had a relatively high share in total exports at 41 and 35 percent, respectively. The share of SMEs in total exports ranged from 15 percent to 19 percent in Japan; Indonesia; Singapore; Chinese Taipei; and Malaysia. Meanwhile, in Australia, Chile and Peru, SMEs accounted for less than 10 percent of total export.

- Digital development strategies for SMEs can be classified into three main categories. They are High Touch (Medium Enterprise), Low Touch (Small and Medium Enterprise), and Cooperative Modernization. The High Touch strategy focuses more on market-driven, digital development, and penetration of the global market. Meanwhile, the Low Touch strategy focuses more on consultation, assistance, campaign, and business incubation. Then the Cooperative Modernization focuses more on developing new innovations and cooperative transformation.
- Indonesian Ministry of Finance has several strategic programs for the empowerment of cooperatives and MSMEs 2020-2024, such as expand market access, acceleration in financing & investment, ease of doing business & opportunity, improve competitiveness of product & services, development of HR management capacity, and cross-sector coordination.
- Inclusive policies need to involve all parties, including the private sector, government, financial institutions, and research & development institutions. The private sector plays a role in controlling product quality and cost efficiency. Financial institutions provide loans at affordable interest rates. The government provides training, marketing and standardization facilities. Meanwhile, research and development institutions develop competitive and efficient products.

**Presentation by Yunita Resmi Sari - Head Department of SMEs Development and Consumer Protection Bank Indonesia and Dwini Handayani - Head of the Magister Program on Population and Labor Economics Faculty of Economics and Business - University of Indonesia.**

- SMEs play an important role in Indonesia. MSMEs contributed 57.14 percent to Indonesia's GDP and 96.92 percent of Indonesian employment in 2019.
- Digitalization provides opportunities as well as challenges for MSMEs. Hootsuite (2020) data shows that 73.7 percent of Indonesia's population has an average internet usage of 5 hours per day. The MSME Go Digital program is projected to increase Indonesia's GDP by 2 percent. However, only 13 percent of MSMEs take advantage of marketplace services. In addition, 77.7 percent of MSMEs experience

problems with online marketing due to a lack of knowledge and limited infrastructure.

- Bank Indonesia provides intensive assistance to support export-oriented MSMEs through capacity building, product curation, and creating a digital ecosystem for MSMEs.
- Meanwhile, Survey Laporan Keuangan UMKM (MSME's Financial Report Survey) contains MSME financial reports, MSME financial performance, policy recommendation, and respondent database. This survey found that of 1,456 respondents, 69 percent have their own business, 94 percent are individual business entities, 76.46 percent employed paid workers, 70.5 percent of SMEs have no written agreement with workers, and 50 percent of SMEs owners are middle school graduates. In contrast, 37.71 percent do not have a bank account, 34.34 percent already have a bank account and use it for business. Almost half of SMEs have a simple financial report. Among those, half produce a balance sheet. The proportion of SMEs with a balance sheet increases, the higher the owner's education.
- This survey found that 50 percent of respondents do not use the internet for business purposes, while only 25 percent of respondents use the internet for business purposes. In the group of internet users for business purposes, 75.5 percent of respondents market their products through social media, while only 20 percent of respondents market their products through digital platforms.
- Some actions that can be taken to support MSMEs in embracing IR 4.0 are (1) Providing intensive assistance to support export-oriented MSMEs (capacity building, product curation, onboarding program and market access); (2) Creating a digital ecosystem for MSMEs, especially for sales channels (e-commerce) and payment systems (QRIS); and (3) Facilitating global market access (business matching, overseas exhibitions, trade missions, etc.)

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- **Closing Remarks**

**Hanung Harimba Rachman - Deputy Minister for Small and Medium Enterprises (SMEs), Ministry of Cooperatives and SMEs of Indonesia**

On the second day, Mr Hanung closed the event and conveyed that Industrial revolution

4.0 offers great opportunities for SMEs to improve their competitiveness. An excellent opportunity for the future lies in the transfer of IR 4.0 concepts and technologies to small and medium enterprises (SMEs). Flexibility, cost efficiency, quality, and competitive advantage are the main benefits of implementing IR 4.0. At the same time, industrial revolution 4.0 also brings challenges for SMEs, such as financial and knowledge constraints. By analyzing the opportunities, challenges, and difficulties in IR 4.0, strategic steps can be planned and implemented to facilitate SMEs in utilizing IR.40.

He expected that by this 2-day event, the participants would have a better understanding of the role of IR 4.0 in increasing the competitive advantage of export-oriented SMEs. It is also hoped that all economies could improve policies and regulations, particularly in enhancing the competitive advantage of export-oriented SMEs.

#### **IV. Briefings on Discussions at the Workshop**

In this session, the participants were actively participating in the discussion.

##### **Q&A / Discussion**

- **Session 1**

The participant asked Mr Dzulfian Syafrian on How SMEs can expand their business due to limitations on SMEs?

Mr Dzulfian responded that there are two choices for SMEs: (a) Stay at home or (b) stitch for a global product. Those who choose a stay-at-home strategy will have better local knowledge and safe from foreign competitors. In every economy, there have always been cultural differences. As a local enterprise, you will certainly have a better understanding of the local culture. Based on these two advantages, you have a higher chance of getting investment from large companies. Either you grow it by yourself or joint venture with a big company and do re-branding for the products. Mr Dzulfian used one of Indonesian products as an example, Kecap Bango. In the Kecap Bango case study, the business started as a small household business, but now, two-third of their shares were acquired by Unilever because the product is attractive and loved by the market

The next participants asked Mr Akhmad Bayhadi about the strategies that can be used for Food and Beverage SMEs to survive?

First, SMEs have to survive before they grow then they can adopt different strategies and be more innovative in capturing the product development.

The problem of Food and Beverage is the supply chain. Basically, SMEs have to have a good supply chain and partner with a certain good brand. In addition, standards are also challenging that need to be met. If SMEs want to get foreign markets, they need to meet various standards, such as quality, hygiene, and halal standards.

- **Session 2**

In this session, one of the participants asked Ms Vidya Simarmata about the SMEs in the textile industry during the pandemic. What can Bukalapak do to support SMEs to survive in the digital business? Does Bukalapak provide incentives to SMEs by reducing product delivery costs?

Ms Vidya replied that Bukalapak is aware of the condition and willing to support SMEs regarding the shipment cost. For instance, Bukalapak has reduced the shipment cost from Malaysia to Indonesia.

Related to this question, Mr Arthur Adisusanto added that some cooperation in finance through cross-border in B2B and B2C overseas are something that needs to be done, so it can support SMEs to meet their capital resources.

The next participant asked Ms Vidya Simarmata regarding Bukalapak market orientation. What are the basic requirements for a product to be marketed abroad? Is Bukalapak currently planning to enter the market in other economies?

Ms Vidya replied that Bukalapak has different channels. BukaGlobal and Partnering still focus on the five destinations overseas, which are Malaysia; Singapore; Brunei Darussalam; Hong Kong, China; and Chinese Taipei. There are several types of products that are priority for export, such as Halal Cosmetics, Muslim Fashion, Food and Ingredients, Home living, and Handicrafts.

Bukalapak will give the sellers and the targeted SMEs an invitation, which are located in Jabodetabek (Jakarta; Bogor; Depok; Tangerang, Bekasi) and have stock of at least 10 per products.

The participant asked Mr Arthur Adisusanto about minimalizing Non-Performing Loan (NPL) for there is no collateral and how to reach customers if there is an issue about awareness of P2P?

Mr Arthur responded that there are essential differences between a traditional loan and a fintech loan. The disbursement of the traditional loan is based on the collateral while the fintech loan is based on the cash flow. The focus is not on the value of the asset but the consumer cash flows. He also explained that Modalku does not only serve its clients but also partner's clients, for it acquires customers by having partnerships, and there are many unicorns join with it.

The participant asked the speaker about the reason why the shipping price from Indonesia to Brunei was higher than to Chinese Taipei. He also asked if Bukalapak's products could also be sent to the ports of Tarakan, Inland Brunei, Lawas, and Sarawak, Malaysia.

Ms Vidya answered that the rate is determined by their logistic partner. Bukalapak's current logistics partner is Janio and it is based in Singapore. At that time, she did not know if Janio could make deliveries to that location.

The Moderator asked Mr Arthur on how to monitor the loan to prevent NPL? and is there any pandemic impact on loans in Modalku?

Mr Arthur responded that Modalku has a credit and service team to do monitoring and evaluation on a daily and monthly basis for the active credit in Modalku. Modalku implements rigorous Standard Operation Procedures (SOP) that comply to Otoritas Jasa Keuangan (OJK) rules, so the NPL rate is not high, about 1 percent from the total loan disburse. Modalku focuses on a well-known target market: Reaching potential unbankable clients.

Credit performance during a pandemic has not been affected at all. Modalku tightens the T&Cs for applying for the credit. The NPL did increase slightly, but it can be overcome because the loan is focused on productive debt. Restructuring can also be done by communicating with the debtor.

- **Session 3**

The participant asked Ms Nancy, whether Batik Fractal has an agreement or cooperation with Batik Tanah Liat artisan in Minangkabau? Does Batik Fractal have a plan to expand its business to Minangkabau and create new products in the form of Songket Fractal?

Ms Nancy replied that she didn't have the opportunity to work with Batik Tanah Liat artisan in Minangkabau. She hoped that she can immediately connect and collaborate with Minangkabau artisan in the near future. Then she also explained that her second start-up, Digital Tenun Nusantara, had created a software that could design all traditional Indonesian fabrics, including Songket.

The participant asked Ms Nancy if there were any challenges in training her workers and how to deal with the large number of low-skilled workers in Indonesia?

Ms Nancy answered that the main challenge she faced was barriers to accessing technology. Infrastructure and technology are difficult to access, especially outside the Java Island. The second challenge arises because of a false belief in technology. There is a belief that technology will kill traditions and replace human jobs. This belief has hindered the learning process. Therefore, apart from providing technology, we also provide digital literacy. This step is carried out step by step to change the mindset. This pandemic has driven everyone to adapt to technology and Batik Fractal are using this momentum to increase digital literacy learning.

The participant asked Ms Amalia and Ms Nancy about certain parameters and criteria for SME products to be marketed in a global market?

Ms Amalia responded that the export hub has invited many young people to get involved in global marketing. Basically, SMEs in Indonesia already have many superior products that meet global standards. Unfortunately, Indonesia does not have sufficient human resources who are skilled in global marketing. The Export hub has worked for three years with SMEs, but many of them do not yet know how to open an online shop in the global market. Therefore, the younger generation needs to assist SMEs in accessing global markets. SMEs need to focus on product quality while the younger generation will focus on marketing in the global market. In this respect, the

young generation needs to gain global marketing skills and understand how to find global buyers. At the end of her answer, she also offered participants to get her personal contacts if they are interested in becoming an expert in global marketing.

Ms Nancy responded that she has three employees to manage e-commerce, and they need to be trained first. They need to take pictures of the product attractively from all angles and update it regularly. They also need to create stories that explain how the products being sold are manufactured. Some of these things might increase the value of the product and help it reach the global market. She also believed that SMEs in general have difficulty reaching the global market. Batik Fractal can reach the global market because they have personal connections. They have not been able to reach the global market through e-commerce.

The participant asked Ms Nancy and Ms Amalia how big are the regulatory barriers for SMEs that the government needs to support? Have they ever experienced regulatory obstacles?

Ms Nancy responded that Batik Fractal had not experienced significant regulatory barriers in marketing their products. However, there are several things that should be made easier for SMEs. As an archipelago economy, logistics costs in Indonesia tend to be expensive. If anything can be done to lower logistics costs, it will be of great help to SMEs. The government needs to implement a tax policy that is favorable to SMEs.

Ms Amalia answered that regulatory barriers are one of the challenges in carrying out export activities for SMEs. In this case, there is no easy and comprehensive access to the regulations on export activities. In many cases, SMEs have obtained buyers from digital platforms, but they lack information regarding export permits. The government needs to improve its communication related to regulations and also facilitate SMEs in exporting. The government needs to provide trade assurance for buyers and SMEs as suppliers.

- **Session 4**

The participant asked Ms Fixy and Ms Sari regarding the special requirements for SMEs to get assistance from Bank Indonesia. Then she also asked whether there is a possibility of an increase in the number of SMEs receiving assistance from Bank Indonesia? What kind of assistance is provided by Bank Indonesia to SMEs during the pandemic? Are there any special programs aimed at SMEs in general during the COVID-19 pandemic?

Ms Fixy responded that there are a lot of assistance programs provided to SMEs. Almost every ministry has a program for SMEs, such as exhibitions and promotions. The Ministry of Trade also has the same program as Bank Indonesia in providing support assistance to SMEs. The challenge is how to make it easier for SMEs to find information and participate in programs.

Ms Fixy also answered that there is no connection between programs and participant data in each institution. So, there is a possibility that SMEs that receive assistance programs at the Ministry of Trade are the same SMEs that also receive assistance programs at Bank Indonesia. Hence there might be SMEs that continue to get government assistance programs, but also SMEs that have never even got assistance at all.

Ms Sari answered that she agrees with Ms Fixy's argument, which is coordination and synergy between SMEs policy is needed to maximize the performance of a program. Bank Indonesia has an assistance program for SMEs to support their main policies, which is monetary and macroeconomic stability. For example, the main policy of Bank Indonesia is to control the inflation rate from volatile foods. In this respect, Bank Indonesia has an assistance program for SMEs that are engaged in agriculture and produce volatile foods.

There is a possibility that the number of SMEs receiving assistance programs under Bank Indonesia will continue to increase. There are 46 branches of Bank Indonesia spread across all provinces in Indonesia and each branch can provide assistance programs for SMEs.

Bank Indonesia provides intensive facilities for SMEs, not only in the form of technical and management training but also provides information on the Post-COVID-19 economic recovery program initiated by the government.

A participant highlighted a survey that showed 42 percent of SMEs have not implemented a specific strategy in dealing with the COVID-19 pandemic. Then she asked whether the speakers have a recommended strategy for SMEs to face future risks?

Several strategies can be implemented by SMEs in anticipating future risks. In mitigating risks, SMEs need to have fast and reliable Internet access. This will help SMEs to be able to sell their products online and find information about loans at peer-to-peer lending institutions or other lending institutions. Then, SMEs also need to open a bank account and implement digital payments. Nowadays, almost everyone no longer uses cash in payment transactions. On the operational side, SMEs can also diversify products and create simple financial reports. By doing this, the business owner can check and assess the performance of the business on a regular basis.

The next participant asked all the speakers about what government programs should be given to SMEs in order to have a global mindset and be able to compete with the global market, not only selling their products through online platforms but also beyond that?

Ms Sari responded that Bank Indonesia is aware of this situation. Therefore, they have committed to continuously improve the capacity of SMEs through comprehensive training. Bank Indonesia is also collaborating with other institutions to provide various training materials. They also collaborate with customs to provide SMEs with an understanding of export regulations. In addition, Bank Indonesia also encourages SMEs to continuously improve the quality of their products and identify global market trends.

Ms Fixy answered that Indonesia's economic growth is supported by strong domestic consumption. In this case, SMEs can market their products domestically first. If they have become a market leader in several cities, they can be considered to penetrate the global market.

Ms Dwini agreed with Ms Fixy. that the market potential in Indonesia is very large and needs to be explored further. The uniqueness and quality level of a product can be critical success factors in reaching the global market.

## **V. Summary of the Workshop**

Some key findings resulted from the discussion are:

1. There are nearly 150 million businesses considered SMEs across the APEC economies, counting around two-thirds of employment. In most APEC economies, over 98 percent of enterprises are considered to be SMEs. SMEs account for over 60 percent - 80 percent of total employment in APEC economies. SMEs also contribute between 40 to 60 percent of GDP or value-added in most APEC economies. The total goods export value varies quite substantially across the APEC economies, with several having shares below 15 percent, while others have shares above 25 percent.
2. SMEs still often face a mix of internal and external barriers that prevent a greater level of participation in global trade. Typical constraints include a lack of access to finance, inadequate production capacity, and a lack of internal capabilities such as skills and time. In terms of finance, the existing financial institutions only meet about one-third of the fund needed by SMEs. Some key challenges SMEs face when engaging in internationalization activities include management barriers, capital barriers, structural barriers, and lack of information.
3. IR 4.0 brings many opportunities to SMEs, such as reducing the cost of production, changing the business model to more efficient, and resulting in better products and means of production.
4. However, SMEs' level of understanding regarding IR 4.0 and how implementing it in SMEs activities is still limited due to some reasons. One of them is the lack of discussion of IR 4.0 for SMEs and the inadequate model of implementing IR 4.0 for SMEs. Furthermore, digitalization, digitation and IR 4.0 features such as the internet of things and big data have not reached the SMEs level.
5. SMEs also face challenges in implementing IR 4.0 in their productive activities, such as lack of human resources capable of adopting and operating new technologies; the technology is expensive for SMEs; most SMEs are highly related

to handicraft and craftsmanship industry and manual labor. Thus, IR 4.0 must be adjusted to be a supporting platform to leverage the industry.

6. In recent years, some marketplace platforms in APEC economies are cooperating their business with other marketplaces in different economies to expand SMEs' export penetration. These activities widen the SMEs' opportunity to access the export market. However, the number of SMEs eligible is still limited due to technical requirements in the exporting market.

## VI. Pre-Test and Post-Test Evaluation

Pre- and post-tests consist of 10 matched true/false, and multiple-choice questions were designed to test similar areas of knowledge with each pre-/post-question set. The participants were asked to complete and turn in the pre-test before any instruction began. The post-test was collected at the workshop conclusion session, along with the workshop evaluation survey. For the final indicator, the test scores were used as comparative data to measure the participants' level of knowledge before and after the workshop. The targeted level increase of this workshop is 30 percent. The committee recommended the participants take the pre-test before the event began and take another post-test upon completing the event. A total of 276 participants attended the workshop, with a total of 263 valid (95.3 percent) matching pre-/post-comparisons available for analysis.

The result in Table 1 shows the percentage of participants with the correct answers. The post-test results show 92.66 percent of correct answers. Thus, the knowledge gain of participants in the workshop is 33.47 percent.

**Table 1. Percentage of Correct Results**

Question	Pre-Test	Post-Test
	percent Correct	percent Correct
Q1	55.7	91.3
Q2	57.1	93.6
Q3	62.2	90.2
Q4	61.6	90.6
Q5	57.2	93.4

Question	Pre-Test	Post-Test
	percent Correct	percent Correct
Q6	59.2	92.3
Q7	57.5	93.6
Q8	62.8	95.1
Q9	61	92.4
Q10	57.6	94.1
<b>Average</b>	<b>59.19</b>	<b>92.66</b>

## VII. Recommendation

Based on the discussion on the workshop, the recommendation is differentiated between SMEs entrepreneurs and policy makers. Some recommendations to SMEs entrepreneur are given as follow:

1. SMEs need to consider their internal preparedness in implementing IR 4.0 to enter the global market. Three things that measure internal preparedness are: First, what key resources that SMEs own; are they can be automated; Second, the uniqueness of SMEs resources, are they valuable, rare, inimitable, and non-substitutable; Third, internal preparedness does not only come from IR 4.0 technology but also their conventional resources as their competitiveness advantages such as human resources, skills, and access to raw material. If SMEs do not apply IR 4.0 technology in their business model, they can cooperate with other SMEs or companies or outsource the IR 4.0 technology.
2. To improve their export performance, SMEs need to upgrade their performance in the Global Value Chain (GVC). By involving in GVC, SMEs could capture higher value due to transfer knowledge and technology from the leader firms in the related GVC.
3. Three fundamental ideas to accelerate SMEs export through the digital platform are: SMEs should have bilateral cooperation (B2C or B2B), especially in terms of access of SMEs to the global buyers. SMEs should manage an online store with qualified e-commerce skills by actively engage in capacity-building cooperation. The last one is matching products with global buyer demand.

Some recommendations for the government and policymaker to increase SMEs utilization in IR 4.0 in enhancing SMEs export competitiveness are given as follows:

1. The government can choose the following strategies to improve SMEs in implementing IR 4.0 in their export activities. The first strategy is increasing the number of SMEs that utilize IR 4.0 to strengthen their export competitiveness. The second one is to enable the high potential SMEs to grow. Otherwise, the government could undertake both strategies simultaneously.
2. Since technology is relatively expensive for most of SMEs, home government could undertake a policy that is called “entrepreneur state” which means the government could fund some research or provide technology that local SMEs can use.
3. Some actions that the government can take to support SMEs in embracing IR 4.0 are (1) Providing intensive assistance to support export-oriented SMEs (capacity building, product curation, onboarding program, and market access); (2) Creating a digital ecosystem for SMEs, especially for sales channels (e-commerce) and payment systems (QRIS); and (3) Facilitating global market access (business matching, overseas exhibitions, trade missions, etc.)
4. The inclusive business recommendation needs to be implemented by involving the private sector, government, financial institutions, and research & development institutions. The private sector provides quality control, supply sustainability, cost-efficiency. Financial institutions provide loans at affordable interest rates. The government provides training, marketing, and standardization facilities. Meanwhile, research and development institutions develop competitive and efficient products.
5. The cooperation in the APEC forum should explore the possibility of facilitating the collaboration between the digital marketplaces in all APEC economies to increase SMEs' opportunity to connect the global market.

-end of summary-