# Summary Report

# APEC Workshop on Enhancing SMEs' Participation in GVCs in the Manufacturing Sector through Digital Technology

## APEC Small and Medium Enterprises Working Group

**November 2024**

Asia-Pacific
Economic Cooperation

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**November 2024**

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**29 and 30 August 2024**

**Summary Report**

## I. INTRODUCTION

On 29 and 30 August 2024, the APEC Workshop on Enhancing SMEs' Participation in GVCs in the Manufacturing Sectorthrough Digital Technology, initiated by Viet Nam and co-sponsored by Peru; Singapore; Chinese Taipei; Thailand was held in Ha Noi, Viet Nam. Speakers and participants came from global organizations and research institutions and representatives from APEC member economies' relevant Ministries and government's agencies, companies and business associations that relates to SME and/or has expertise in manufacturing in APEC economies and across the APEC region.

The Workshop aimed to provide an opportunity for stakeholders for sharing information, experiences on the participation of SMEs in manufacturing industry in GVCs through digital technology and provide recommendations for manufacturing SMEs and government to facilitate participation of manufacturing SMEs in GVC through digital technology.

## II. BACKGROUND

Small and medium-sized enterprises (SMEs) play a crucial role in every economy. The internationalization of production has reached an unprecedented extent, with the production of goods and services increasingly fragmented across enterprises and economies [1]. Therefore, every economy, especially developing ones, realizes that promoting the development of SMEs is critical.

Although SMEs represent a large number of firms worldwide, their participation in international trade remains limited. It is obvious that an effective way for SMEs to internationalize their activities is to participate in global value chains (GVCs). Global value chains (GVCs) have been a key driver of internationalization over the past several decades[2]. Since internationalization is a common concept for all economies, GVCs are also linked with every economy at different capacities, irrespective of economy status.

[1] https://www.ecb.europa.eu/home/pdf/research/compnet/Enhancing_the_role_of_SMEs.pdf?9235c9ba9b76a6a403bc10723d6dd11e

[2] Taglioni, D. and D. Winkler (2016), Making Global Value Chains Workfor Development, Washington, DC: World Bank. World Bank (2020), World Development Report 2020: Trading for Development in the Age of Global Value Chains, Washington, DC: World Bank

Since 2020, the COVID-19 Pandemic has had significant impact not only on public health but also on the global economy as all economies have suffered from supply and demand shocks, and disruption to their international trade and investment flows.The pandemic has significantly affected business, and manufacturing is no exception.More than anything else, it highlighted the need for manufacturers and businesses torespond and adapt to unexpected scenarios. Although manufacturers and businessesdo not know what will happen next, it is well within their reach that they know they have to prepare for better processes which can adapt and adjust to unpredictable, unexpected changes in market demand and supply chain issues.

The importance of GVC for SMEs is realized in almost every industry. However, we can say that in the manufacturing industry, the evidence of SMEs integrating into GVC is among the clearest, especially during and post COVID-19 pandemic. By breaking up the production processes, different steps can be carried out in different economies, which made manufacturing businesses easier to increase the level of products from commodities to higher – value - added manufactured goods. Developing economies are those that benefited the most from the linkage with GVCs. By joining the GVCs, manufacturing SMEs in one economy can take advantage by specialize in activities that they have comparative advantages.

In the globalized era and due to the effect of COVID-19 pandemic, the rise of the digital technology could open a range of new opportunities for SMEs, especially those in manufacturing industry to play a more active role in the GVCs. According to research by Lanz et al[3], digitally-connected SMEs in developing economies tend to import a higher share of their inputs than non-digitally-connected firms. Additionally, it is shown that this positive digital effect is greater for SMEs than it is for large firms. By adopting digital technology, SMEs in manufacturing can have lots of benefits such as improving efficiency, reducing costs, enhancing the quality of products, and better meet the needs of customers.

The revolution in digital technology leads to fundamental changes in the way that manufacturing SMEs operates. Through digital technology, SMEs in manufacturing industry can perform better in GVCs.

## III. OPENING REMARKS

In the opening remarks, Ms Mai Thi Thuy (Chairwomen, Hanoi Association of Women-owned Small and Medium Enterprises, Viet Nam) highlighted that SMEs contribute significantly to economic growth, with the proportion of GDP ranging from 40% to

[3] 2018, E-commerce and developing economy-SME participationin global value chains", Background paper

60% in most economies. SMEs play an important role in the economy through job creation, poverty reduction, women's economic empowerment, etc., but only account for about 35% of direct exports. This raises the need for further internationalization of SMEs and one effective solution is through participation in global value chains in the manufacturing sector.

Ms Thuy also mentioned that by participating in global value chains, small and medium-sized manufacturing enterprises in an economy can take advantage by specializing in the stages/products in which they have a comparative advantage, thereby allowing them to increase productivity and expand their business. Thanks to global value chains, SMEs in developing economies have the opportunity to access global markets as suppliers of components or services without having to build the entire value chain of the product. Even if they cannot participate directly in the global value chain, SMEs can still benefit from subcontracting to larger or foreign companies

Ms Pham Thi Thuy cited that the COVID-19 pandemic has impacted significantly not only on public health but also on the global economy as all economies have suffered supply-demand shocks, as well as disruptions in international trade and investment flows. In response to this pandemic, governments have introduced strict measures and policies related to the application of digital technology to ensure the safety of people. In addition, to restore operational efficiency and breakthroughs, businesses have also seized the opportunity of digital transformation with appropriate solutions and technologies. The application of digital technology brings many benefits to businesses such as improving efficiency, reducing costs, improving product quality and better meeting customer needs. This positive digital effect in SMEs is often greater than in large companies

Therefore, this Workshop is the contribution of the Vietnamese Government to APEC's collective efforts to address challenges and seize opportunities, support SMEs to internationalize and digitalize through GVCs.

## IV. KEY ISSUES

### 1. Overview on SMEs' Participation in GVCs in the Manufacturing Sector

There were two speakers in the Session: Dr Rajan Sudesh Ratna, Deputy Head and Senior Economic Affairs Officer, United Nations ESCAP and Mr Tran Van Hien, Deputy Head of Board Training and Member, Viet Nam SME Association.

- **Mr Tran Van Hien** reiterated that SMEs play an important role in the value chains. SMEs participating in the Global Value Chain (GVC) can: (i) Improve production capacity, quality management, and access to international markets; (ii) Connect with big enterprises, intermediaries, and service providers; (iii) Utilize digital technology to improve efficiency, reduce costs, and expand markets; and (iv) Comply with regulations on quality, safety and origin of goods. The application of digital technology in production activities of SMEs can help to improve labor productivity, increase the market access and product quality control of SMEs, and improve the efficiency of supply chain management. In order to support SMEs to join the value chain, Mr Hien suggested that the Government should provide support in finance, investment and infrastructure development, promote cooperation and provide export support service. Lastly, Mr Hien mentioned that SMEs needed to meet international quality standards to compete in GVCs. These standards may relate to production processes, input materials, and final products. Businesses must comply with labor, environmental, and safety regulations in production. Legal compliance helps businesses avoid legal risks and build brand reputation. Businesses also needed to have an effective risk management system to control factors that can affect product quality and business reputation. To end the presentation, Mr Hien gave some examples of successful case studies where companies applied technology in GVCs.

- **Dr Rajan Sudesh Ratna** firstly gave some facts about SMEs. SMEs accounts for 90% of businesses worldwide, employ 70% of global workforce and contribute 50% to global GDP. In Manufacturing, 70% of manufacturing firms are SMEs, particularly in food processing, textiles and machinery. While in other sector, 90% of service-based firms are SMEs, 70% of agribusiness firms are SMEs, 80% of construction firms are SMEs and 90% of creative firms are SMEs. Lastly, Dr Rajan mentioned some challenges that SMEs usually face such as post COVID-19 recovery, high interest rate, power tariff, cross border connectivity, lack of timely information, entrepreneurship promotion, access to finance, etc.

**2. Opportunities for SMEs' Participation in GVCs in the Manufacturing Sector through Digital Technology**

There were three speakers in the Session: Mr Aminuddin Mohamed, Deputy Director, SME Corp. Malaysia; Mr Koko Haryono, Secretary Deputy for SME, Ministry of Cooperatives and SME, Indonesia and Associate Professor Dr Sitanon Jesdapipat, Director of Research Center for Economic Policy Reform, Rangsit University, Thailand.

- **Mr Aminudin** said that MSMEs representing 96.9% of business establishments in Malaysia. SMEs had been crucial stakeholders in manufacturing sector under Malaysia New Industrial Master Plan 2030 (NIMP). In order to build local SMEs in manufacturing, it's necessary to build local supply chain resilience, integrate with GVC and create high-value products and services. There are more than 300 Multinational Companies (MNCs) in Malaysia; and more than 20,000 SMEs integrated into various GVCs. There are lots of benefits and opportunities for SMEs to be part of GVC such as revenue generation; job creation and multiplier effect. Digitalization empowerment is crucial for SMEs to move into high value added GVC. There are 3 main pillars of digitalization initiative for SMEs in Malaysia: (i) Adoption of digital tools for enhancing SMEs' competitiveness; (ii) E-Commerce and Digital Marketing Integration and (iii) Enhancing supply chain through Enterprise Resource Planning. However, in Malaysia, there were several key challenges faced by SMEs in terms to move up into value chain such as shortage of skilled talent; lack of local R&D, product development activities; product development activities and data security and legal issues. Mr Aminudin pointed out some initiatives and strategies that SMEs in Malaysia had been put in place to address the challenges. He also suggested that in order to integrate into GVC, SMEs should be assisted in acquiring high-tech machineries, be supported for R&D activities, be consulted on Quality Management Systems (QMS), be collaborated with Digital Solution Organisation and with MNCs. Then he showed some programs which were implemented by SME Corporation Malaysia to support digital initiatives aimed at advancing SMEs into the GVC. Lastly, Mr Aminudin mentioned an initiative by SME Corp. Malaysia to encourage and accelerate the adoption of Environmental, Social and Governance (ESG) among MSMEs by developing the sustainability ecosystem of SMEs to be part of GVC.

- **Mr Haryono** delivered a presentation on Unlocking Opportunities for SMEs in manufacturing in GVC. First, he gave an overview on the performance of manufacturing industry in Indonesia, which was ranked among top 10 manufacturing economies in the world, accounting for 1.4 percent of global manufacturing output. There are some challenges that Indonesia's manufacturing sector have been faced. The contribution of Indonesia manufacturing sector to GDP dropped twice in the past decade, resulting in an accumulation in the structure of micro enterprises when MSMEs play a crucial role in creating job opportunities. MSMEs in Indonesia also fail to advance to the next level. The average global participation rate in GVC in the new normal baseline is 39.1%. However, Indonesia's participation is not yet optimal and

needs improvement. Indonesia is still heavily involved in the upstream sector (raw material) of the global supply chain, resulting in a higher forward GVC participation ratio compared to backward GVC. The Government, therefore, encourages MSMEs to adopt technologies in their production. However, there are some challenges in the adoption such as limited access to capital, digital skills gap and infrastructure challenges. Then, Mr Koko mentioned some Strategic program for enhancing MSME Supply Chain such as SMExellence program, KAMPUS Program. Indonesia is encouraging MSMEs to become part of BUMN (State-Owned Enterprises) supply chain by supplying raw material, supply components, constructions, supply food products, etc. There are some Funding Assistance programs for SMEs in Indonesia such as SMEEpic, SME IPO, BISNIS LAYAK. Lastly, the speaker gave some examples of SMEs that have successfully secured funding through digitalization.

- **Associate Professor Dr Sitanon Jesdapipat** talked about some opportunities for SMEs participation in manufacturing in Thailand through digital technology. He mentioned some impacts of digital technology including reducing overall costs, time, labor, energy, raw materials. Digital technology has already created "new competition" terrains, easy for SMEs to access. Thus, SMEs stand to gain from engagement and reap the benefit, as long as they have the technical, knowledge and financial capacities to do so. Linking to GVCs is a big plus. In Thailand, SMEs play an important role in contributing to 70% of employment, 70% for domestic market and 30% export. Then, Dr Sitanon discussed about the Thai SMEs Promotion Plan. The Plan aims to (i) Enhance SMEs economic significance further; (ii) Enhance competitiveness, including infrastructure and NPLs; (iii) Strengthen local SMEs and utilization of local resources, including cultures; (iv) Create more young entrepreneurs and networking. Besides, there are many domestic-level awards to recognize successful SMEs which are non-financial incentives. Thai SMEs begin to adapt to new normal, and technology literacy is wide and cheap access. Lastly, according to Dr Sitanon, the size of SMEs matters, including quality, committed volume and access to GVCs is not without limit. However, scaling up success may take generations to succeed, largely through changed business models, innovation, re-branding and digital application.

## 3. Obstacles in Enhancing SMEs' Participation in GVCs in the Manufacturing Sector through Digital Technology – Perspective of the Private Sector

There were four speakers in the Session: Mr Yung Jui Chen, Chairman, Everbiz, Chinese Taipei; Mr Amarit Franssen, Chairman, Digital Industry Club of the Federation of Thai Industries, Thailand; Mr Rami Amer G. Hourani, Director- Trustee, PhilExport, the Philippines and Mr Poirrier Benjamin Robert Francois, Founder and CEO, Prodima Viet Nam.

- **Mr Yung Jui Chen** mentioned about the 7 trends/obstacles that were affecting the supply chain, in which 4 out of 7 need digital transformation. Next, he discussed about the three dimensions of digital transformation: operational excellence, customer experience, and business model innovation. Then, he showed how Everbiz use digital transformation to maintain value activities, value systems, customer acquisition, business expansion, customer relationships, and new products. Everbiz has built a smart manufacturing factory by introducing digital systems into every stage of the product lifecycle. This aligns with the company's digital transformation framework, covering three dimensions of digital transformation architecture. Then he introduced the self-developed Manufacturing Execution System (MES) System which can collect information on the production line to allow managers to quickly grasp the current situation and make optimal adjustments to optimize production performance. Mr Yung Jui Chen also talked about the twin transformation which covers value activities, value systems and ecosystems through twin transformation to establish their position in the global supply chain. Everbiz's goal is to be carbon neutral by 2040. Small companies like Everbiz in Chinese Taipei face many challenges in reducing carbon emission because they can't achieve significant reductions just by upgrading equipment. This makes the efforts to cut carbon emissions less impactful, which is a common difficulty for small and medium-sized enterprises. The speaker then showed some solutions that his company has been applying to reduce carbon emission such as setting out Green Supply Chain Vision or holding Green Supply Chain Conference.

- **Mr Amarit Franssen** delivered a presentation focusing on the role of digital technology from the perspective of the private sector. SMEs face significant challenges in joining digital GVCs. These include limited access to advanced technology due to the digital divide, financial constraints that make it difficult to invest in necessary tools, skill gaps within their workforce, and complex regulatory issues that hinder global expansion. Overcoming these barriers is

essential for SMEs to fully participate and thrive in the digital economy. In addressing the challenges, Mr Amarit suggested some strategies focusing on enhancing access to technology for SMEs such as organizing a domestic Roadshow, which will gather technology solutions from various providers and hosting seminars and exhibitions in key cities. This initiative aims to reach SMEs that have yet to embrace technology, providing them with the opportunity to experience its benefits firsthand through knowledge sessions. Another solution is trial packages in collaboration with technology solution providers, allowing SMEs to test and adopt these technologies, which in turn fosters sustainable growth in their businesses; and partnering with the Digital Economy Promotion Agency (DEPA) to design coupons and financial support schemes that make technology solutions more accessible to SMEs, helping them to afford and implement these technologies effectively.

- **Mr Rami Amer G. Hourani** mentioned that there was an acute awareness of the structural challenges faced by the Philippines Government. There are laudable innovations in the field to address challenges including (i) Legislative Franchise System for Telecommunications Providers; (ii) Konektadong Pinoy Bill; (iii) Internet Transactions Act; (iv) Tatak Pinoy Law; (v) Mandanas Ruling; (vi) Single Window. Mr Rami then discussed more about each solution. First, regarding the Legislative Franchise System for Telecommunications Providers, the Philippines has a high penetration of internet enabled devices but this is only part of the equation. This means that wired/fixed connection penetration in the Philippines remains low whereas cellular connection remains a large percentage of the total bandwidth publicly available. Second, the passage of the Konektadong Pinoy Bill will reduce costs and expand access to high-quality internet services by lowering barriers to entry in the data transmission sector and encouraging more competition and investment in data transmission. The proposed law has as its aim the reform of the legislative franchise system. Third, the Tatak Pinoy Act is a law in the Philippines aiming at enhancing collaboration between the government and private sector. Enterprises certified within the framework of Tatak Pinoy are entitled to preferential treatment for government procurement. Fourthly, the Mandanas Ruling strengthens fiscal decentralization by providing local government units (LGUs) with more financial resources to assume devolved functions and services. While the ruling provides more resources to LGUs, it also reduces the fiscal resources available to the domestic government for its key priorities. Lastly, about the Single Window, in the Philippines, the effort to establish its own Single Window started in 2005 but achieved only limited success. Currently, there is as yet no final modality which

determines how specifically Single Window will be implemented. At the end of the presentation, Mr Rami pointed out that there was only a small window for market entrants in the manufacturing sector. He suggested that focus should be given to the sectors where there is room for growth and it is required structurally either greater coordination or a reimagining of structures as they relate to digital themes. Digital skills are one in a nexus of themes which needs to be covered in the context of the domestic government.

- **Mr Poirrier Benjamin Robert Francois** mentioned the main issues that SMEs face in order to participate in GVCs. They are production gaps (limited human resources and productivity, low financials, old or poor technologies) and digital marketing gaps (local market focus, low digitalization, global coordination failure). SMEs tend to supply their own economies and may miss international opportunities as they have no experiences working with foreign and not familiar with global regulations. SMEs also mostly lack digital knowledge and skills, which prevents them from expanding. They are lack of digital marketing training, have preference for traditional marketing and have low digital investment. SMEs barely know how to get information on potential international markets and buyers. They have no formal channel on FDI sourcing, lack of global business connections. Lastly, Mr Poirrier mentioned some solutions to solve these difficulties. He suggested that SMEs must promote the development of industrial cluster, the development of domestic industries and service network, technological capacity, skills development and FDI capital proportion, etc.

**4. Obstacles in Enhancing SMEs' Participation in GVCs in the Manufacturing Sector through Digital Technology – Perspective of the Academic Sector and International Organizations**

There were three speakers in the Session: Dr Rajan Sudesh Ratna, Deputy Head and Senior Economic Affairs Officer, United Nations ESCAP; Associate Professor Dr Sitanon Jesdapipat; Mr Nguyen Anh Duong, Director, Central Institute for Economic Management, Ministry of Planning and Investment, Viet Nam.

- **Associate Professor Dr Sitanon Jesdapipat** presented some obstacles faced by SMEs such as (i) Lack of management capacity; (ii) High costs, insufficient investment in machinery and technology; (iii) Human resources; (iv) Skilled workers; (v) Fierce competition, new producers face difficult challenges; (vi) Problems associated with quality and quality standards; (vii) Problems

associated with relevant government agencies; (viii) Lack of entrepreneurship. SMEs may also lack of business experience, lack of sound business plans, non-performing loan history, and high transaction per loan application are seen by banks as major stumbling blocks. According to Dr Sitanon, capacity is key to engage and reap some economic benefits from GVCs. Other common challenges include climate change, and global digital transformation pose significant challenges to emerging economies and their small and medium-sized enterprises (SMEs). Dr Sitanon summarized that manufacturing SMEs, which requires large-scale, capital intensive production amidst digital transformation, are facing challenges: Resource efficiency; Climate change; Sustainable Development Goals, and Fiercer global competition. At the end of the presentation, Dr Sitanon suggested that SMEs must (i) Choose 'right' partners in the GVCs, (ii) Reading the probable futures and act patiently, (iii) Diversify to reduce risks and to expand and (iv) Strategically filling the small gaps that large competitors ignore. At the end of the presentation, Dr Sitanon suggested some solutions, for example (i) Improve on SMEs policy paradox, as this is mostly treated as 'side issues' in policies of developing economies, despite importance of SMEs; (ii) Redefine business goals for SMEs; (iii) Find options for SMEs engagement; (iv) Broaden opportunities for SMEs participation in GVCs; (v) Focus on capacity development.

- **Mr Nguyen Anh Duong** mentioned some obstacles in enhancing SMEs participation in GVCs in the manufacturing sector through digital technology. The first obstacle is lack of appropriate awareness towards digitalization. The second obstacle is inadequate attention of SMEs to trade-offs in digital and green transition. Digitalization is seen as important for green transition. But there seems to be an over-emphasis on digitalization, without adequately recognition of trade-offs in digital and green transitions. The third obstacle is inadequate attention to Online Dispute Resolution (ODR) for resolution of cross-border Business to Business (B2B) disputes. According to Mr Duong, cross-border B2B dispute resolution can be costly for SMEs. During COVID-19 pandemic, due to travel restrictions, various economies paid more attention to ODR. Therefore, building awareness and skills for SMEs in adopting ODR is essential. Lastly, at the end of the presentation, Mr Duong recommended that: (i) A good strategy for digital transformation in manufacturing requires appropriate substance of capacity building for SMEs; (ii) SMEs must increase awareness and skills for digitalization, increase capacity building for ODR for cross border B2B dispute and (iii) Learning and adapting by doing, rather than aiming for perfection in the process.

- **Dr Rajan Sudesh Ratna** pointed out some obstacles in enhancing SMEs participation in GVCs including (i) limited resources; (ii) Lack of visibility; (iii) Challenging to meet international standard requirement; (iv) Difficult in managing logistics and transportation; (v) Lange and cultural barriers; (vi) Access to finance; (vii) Navigating complex international regulations and laws can be daunting for SMEs, (viii) Struggle to scale up production; (ix) Scalability; (x) Intellectual property protection; (xi) Risk management. Dr Rajan mentioned that the COVID-19 pandemic has accelerated the shift towards a more digital world and triggered changes in online shopping behaviors. Then, he pointed out some solutions to enhance SMEs participation in GVCs: (i) Provide training and resources for SMEs to develop essential digital skills such as e-commerce, digital marketing; (ii) Encourage SMEs to utilize e-commerce platforms and marketplaces to connect with global buyers; (iii) Implement digital payment solutions to facilitate secure, efficient and cost-effective transaction; (iv) Leverage digital technologies to enhance supply chain transparency; (v) Streamline trade procedures and documentations through digitalization, reducing administrative burdens and costs for SMEs; (vi) Provide SMEs with access to digital financial and secure, mitigating risks and facilitating access to capital. Lastly, the speaker mentioned some good practices in some economies and discussed the way forward to promote SMEs in GVC through digitalization, including access to information, enabling policies, access to finance, capacity building, access to technology and market intelligence.

**5. Case Studies in Some APEC Member Economies**

There were five speakers in the session: Dr Jutharat Ahchawarattaworn, Director of Logistics Information Technology Subdivision, Ministry of Industry, Thailand; Mr Yung Jui, Chen, Chairman, Everbiz, Chinese Taipei; Mr Vu Van Phu, Deputy Chairman, Viet Nam Aluminum Association; Mr Fei Chen, Deputy General Manager, Inspur Industrial Internet Company Limited, China; Mr Rami Amer G. Hourani, Director, PhilExport – Cebu, the Philippines.

- **Dr Jutharat Ahchawarattaworn** insisted that digital transformation initiatives will support SMEs in engaging with digital technology, help SMEs in capacity building, consultation service and financial support. In agriculture industry, Department of Industry Promotion (DIPROM) has assisted SMEs by training them through programs such as Agro Genius Academy, Agro Genius Challenge and Agro Machinery and Technology. Regarding the logistics information technology, DIPROM has helped SMEs in managing the logistics and supply

chain by developing Supply Chain Visibility, Logistics Information System, Logistics Data Analytics, Green Transport, Logistics and Supply Chain Traceability, etc. Then, Dr Jutharat mentioned the Product, Process and People (PPP) Transformation Scheme, which includes product transformation, process transformation and people transformation. At the end of the presentation, the speaker mentioned some benefits that DIPROM can offer. For example, the DIPROM is a source of fund for Startups. It is also a place offering online training, in-house training and E-library for SMEs to increase their capacity building. DIPROM also pay soft loan for SMEs and have connection with many Divisions and Departments to mostly support SMEs in Thailand.

- **Mr Yung Jui Chen** introduced a case study of Everbiz where the digital technology has been applied in GVC. Everbiz introduces digital systems from each process of the product life cycle to establish a smart manufacturing factory. Enterprise Resource Planning (ERP) is the most important and primary system for an enterprise's digital transformation. The system covers corporate finance and accounting, procurement, human resources, production, warehousing and sales. Using ERP helps Everbiz truly grasp business conditions and make timely adjustments to make profits for the company. Eberbiz also developed a cloud-based computer-aided design (CAD) platform. They collected parts information from low-carbon manufacturers in our green supply chain and created a gallery that showcases them. At the production line, the Manufacturing Execution System (MES) gives tablet to each operator as an operating interface for reporting work, reporting errors, recording, taking photos, and setting equipment production parameters. Then, Mr Yung Jui Chen showed some technology solutions in his company such as Digital Kanban, Machine Networking, Photo Capture Parameter AI Recognition, Activities Based Management, Overall Equipment Effectiveness (OEE), On-site Production Status, AI Identifies Wire Color, AI Detection Terminal Crimping Defect Detection, Robot Arms, etc. In order to save energy and reduce carbon, Everbiz has established and energy management system called Smart Meters Capture Energy Consumption. Since Everbiz started implementing carbon inventory and energy management, the MES system has already integrated it, so after each work order/batch production is completed, the energy consumption and carbon emissions can be obtained immediately on the system. Then, the speaker demonstrated the Digital Transformation Maturity Model and the level where his company has reached in each criteria. Lastly, at the end of the presentation, Mr Yung Jui Chen talked about an Introduction Program. He said that the digital transformation process included knowledge building, maturity assessment, needs discovery, planning,

and execution. In the end, digital transformation is not something that can be done quickly. Companies need a strategy and patience.

- **Mr Vu Van Phu** presented a case study of Viet Phap, a company under the Aluminum Association of Viet Nam. Viet Phap saw a potential on applying digital technology in their company to increase the revenue and orders from foreigners. They have identified some existing problems which affecting the costs of production such as large inventory; large amount of capital; unable to circulate; fast cash flow; high bank interest rates. The company realized that although the company has to bear the high costs, customers still compare prices with other suppliers while requiring the same quality and company must guaranteed the profit. Since then, the company decided to digitalize to reduce the cost and increase profit. Now, the company is applying NO CODE platform software to digitalize each work step. Thanks to digitalization, production costs has reduced and company profit has increased. The customers can pick up goods on time as planned. Therefore, the company can remain the quality and quantity of export goods as well as creating competitive advantage with other domestic company.

- **Mr Fei Chen** delivered a presentation on a case of Inspur Yunshou. Inspur Yunzhou have been recognized as “China Cross Industry and Cross Technology Industrial Internet Platform” in the last 5 years, connected 3 million devices and 1.3 million enterprises. Digital Transformation Master (DT Master) is a bundle of digital transformation services which are based on Inspur key expertise of new industrial infrastructure and manufacturing intelligence, drive by investment to service model. Inspur has built software & hardware integrated device, deployed them to SMEs, can finish low-cost and rapid implementation within hours/days, and provide digital diagnostics, computing power, industrial apps, etc. lifecycle services for SMEs digital transformation. This model have been promoted since June 2024. Within 3 months, Inspur has deployed DT Master and provided services to more than 1,000 SMEs. Lastly, Mr Fei Chen talked about the innovative investment-to-service model solves the challenges of SMEs on “no idea how to transform", “fear to transform", and “unwilling to transform. In the packaging industry, the product quality has been enhanced through offline batch digital transformation, and the supply chain efficiency has been improved through online order aggregation. As a result, the quality of supply chain order matching increased 15%, and the order volume increased 10%. This model has already been replicated and promoted in Shandong and Jiangsu provinces.

- **Mr Rami Amer G. Hourani** presented some successful case studies of SMEs applying digital technology in GVC in the Philippines. First, Bamboo Bike (Bambike) has leveraged-commerce platforms and digital marketing to reach a wider audience and increase sales. They use social media and online marketplaces to promote their eco-friendly bamboo bicycles and utilize digital tools to streamline their production processes, ensuring sustainability and efficiency. Second, Rags2Riches (R2R) uses digital design tools to create their fashion and home accessories allowing for more precise and innovative designs and established a strong online presence through their website and social media, making it easier for customers to purchase their products. Third, Habi Footwear has integrated e-commerce into their business model, allowing them to sell their handmade shoes online and reach a global market. They employ digital marketing strategies to build brand awareness and engage with customers through social media platforms. Forth, the Leather Collection (TLC) uses digital tools for designing and crafting their leather products, ensuring high quality and precision and offer online customization options for their products, allowing customers to personalize their purchases through their website. Fifth, Balik Batik employs digital marketing strategies to build brand awareness and engage with customers through social media platforms. Therefore, they are able to tap into the global market. Lastly, the speaker mentioned about the Inclusive, Competitive and Responsible Digital Philippines (Digital – PINAS) - the first ever joint project on digital transformation in the Philippines. Its impact is supporting inclusive economic growth and sustainable development through transformation. It seeks to uplift 15,000 MSMEs through increased usage of digital technologies/service. Digital-PINAS has three-pronged, targeted approaches. It implements targeted training programs to build competencies among MSMEs, fostering inclusivity and enhancing competitiveness. It also establishes community-based digital hubs providing essential access to digital service, tools and government services, facilitating digital adoption; and advocates for and assist in shaping policies and regulatory frameworks that support digital transformation, creating an enabling environment that allows MSMEs to thrive in the digital economy.

## 6. DISCUSSIONS

- Speakers and delegates discussed different options to assist more effective digital transformation of SMEs in the agricultural production sector. A participant from the Philippines highlighted that businesses in the manufacturing sector had a higher rate of digital adoption compared to those in the agricultural sector.

- A Vietnamese speaker emphasized the importance of training and awareness raising of business owners about the necessity of digital transformation. Training could begin with sharing case studies of SMEs that had successfully undergone digital transformation, helping businesses understand the concept, practical processes, and find suitable pathways for their own development.
- Vietnamese SMEs in the agricultural sector are often family-run and led by older family members. Once these leaders understand the value of digital transformation, they are more likely to send younger staff to participate in the training programs and to explore new technologies.
- Regarding government policies, the importance of customizing services and leadership models specifically to industry needs was highlighted.
- In the food and beverage sector, digital transformation involved optimization of production processes and transition from manual to semi-automated and automated systems. It would facilitate SMEs' better control of product quality, ensuring food safety and compliance with global standards.
- In Viet Nam, the Government, with technical assistance of a donor-funded project, built a saline water intrusion warning system in the coastal provinces in the Mekong Delta. The total investment was approximately USD 4 million. Sensors were installed at the river mouths to give notice to farmers and agricultural producers through a smartphone-based alert application. When salinity intrusion signals are detected, farmers and smallholder producers in the provinces of Tra Vinh and Ben Tre can close the gates of their river water intake systems, stop irrigating with river water and consider to purchase alternative fresh water supplies for their high-value crops.
- The Viet Nam SME Association has connected around 100 farming households to the clean production system in Hanoi through a digital app. This initiative allows them scaling up production, facilitating access to GVCs, gaining access to safe fertilizers, managing the entire production process, tracking the products' origins, and monitoring temperatures via mobile applications.
- Regarding access to capital, as much as 80% of agricultural and manufacturing businesses in the remote areas of Viet Nam seek financial support such as soft loans, compared to 60-70% in more developed areas. This reveals a significant demand for expanding investment in production in the remote areas due to differences in business models.
- The role of collaboration, R&D development and measuring its outcomes were suggested by a speaker from the Philippines as the key factors to drive digital transformation forward.
- According to the Viet Nam SME Association, about 35% of SMEs in Viet Nam got into partnership with scientists from universities and research institutes.
- In Indonesia, the government prioritized SMEs in the economy's industrial development roadmap. Digital transformation was considered essential,

particularly through financial support in technical and vocational education and training (TVET). An Indonesian speaker also emphasized the importance of close coordination among ministries to develop effective SME strategies and attract foreign investment.

- The government of Indonesia launched and promoted the use of online platforms and e-catalogues for SMEs that wished to supply goods and services for government contracts, the total value of which was estimated at around IDR3 billion per annum. There is a requirement that 40% of public procurement for consumption must be supplied by SMEs. Those State-owned enterprises that wish to participate in government procurement must select SMEs as second-tier suppliers from these online platforms.
- In Malaysia, the government, through collaborations with such service providers like Oracle, Microsoft and some domestic suppliers, has been supporting SMEs in adopting ERP systems to improve inventory management, invoicing, financial management and enhance access to foreign direct investment (FDI) and participation in GVCs.
- The obstacles to enhancing SMEs' participation in GVCs in the manufacturing sector through digital technology were extensively discussed by speakers and participants. They identified the main challenges, including training, access to finance, business model shifts and innovation.
- Participants from the Philippines commented that SMEs often missed the step to assess their operational needs or to identify which parts of their business should be digitized. The biggest challenge was to shift their mindset towards digital transformation and to adapt their operations accordingly.
- Few business participants from Viet Nam and Chinese Taipei emphasized the importance of knowledge sharing and training to help SMEs overcome such challenges.
- In Chinese Taipei, businesses initially focused on providing IT services but later found themselves short of management skills. Their first step towards digital transformation involved adopting ERP systems and promoting their services through platforms like Google and Facebook. To align with their goals, they allocate 5% of their annual revenue to digital technology, gradually advancing their digital transformation.
- Participants from the Philippines emphasized the need for financial support from the government, highlighting that this support was critical for SMEs' success.
- The speaker from the Philippines emphasized that making SMEs recognize the value of proactive adoption of digital technologies was crucial and conducive to their participation in GVCs. While government interventions were important, they should not have been seen as the only solution due to limited resources. Instead, the government should facilitate forums to help SMEs address their challenges. The awareness, willingness and experience of SMEs were equally

important for their success in GVCs through digital technologies. The COVID-19 pandemic accelerated digital transformation, and the Department of Trade and Industry (DTI) responded by providing online workshops to support SMEs.

- From a policy analyst's perspective in Viet Nam, businesses need to be prepared for information security risks when joining GVCs through digital means. The issues should be resolved quickly, with businesses invest in what they can. At the same time, the government addresses its responsibilities through policy making and enforcement. International data sharing should be promoted with cybersecurity standards, and policies should avoid placing excessive demands on SMEs.
- To facilitate AI access, data must be categorized as shareable or secured, and SMEs need to understand the AI technologies and standards they employ. The government should take the lead in ensuring cybersecurity, and digital transformation should not be implemented in a piecemeal manner. A speaker from Thailand expressed the concern about AI involvement.
- SMEs can invest in AI. In the Philippines, many businesses have the standard operating procedures for this. Data security training is crucial and beneficial for SMEs.
- In Viet Nam, the rapid growth of digital transformation during the Covid-19 pandemic overwhelmed SMEs. Startups, which is more risky than usual businesses, need the most support. A business owner shared their failure story during this period. Since it is hard for SMEs to stay updated daily, having a dynamic team is essential.
- A speaker from the Philippines emphasized that finance and accounting should be the first areas to undergo digital transformation. This would allow businesses to make informed decisions about investment and resource allocation based on their development stage. This would both boost current revenue and accumulate funds for further digital upgrades.
- From Chinese Taipei's perspective, ERP was an extremely useful tool for SMEs. To improve production efficiency, SMEs need comprehensive data on production resources, finance and quality management. Although ERP is widely used, it is challenging to implement due to its complexity and due to the fact that it integrates multiple stages of the production process.
- A China software company highlighted that the pilot programs in selected cities had successfully promoted small and cost-effective apps to boost efficiency. For example, businesses with large amounts of equipment and workers can use apps to monitor machine temperatures and manage older equipment. Although these apps focus on specific processes, they can gradually accelerate digital transformation, especially when financial resources are limited.
- A government representative from Thailand pointed out that although many technologies were available, SMEs often struggled to understand how to use

them effectively. Thailand categorizes SMEs into three levels, with the highest level companies being ready to invest in advanced technologies. The government supports data management systems to improve business decisions. However, quite a number of companies that initially struggled with ERP have shifted to simpler tools that better suit their needs.

- A Vietnamese speaker highlighted the usefulness of smartphones for providing real-time updates on inventory and stock movement, making them essential for small businesses.
- In the Philippines, SMEs can access funding through private companies offering loans between PHP600 to PHP2,000 or government sources like state-owned banks and ministries offering between PHP20,000 to PHP2,000,000, depending on business size. These funds are often used to purchase equipment. However, banks are hesitant about lending to SMEs, allocating only 1-2% of their loan portfolios to smaller businesses, as they prioritize larger corporations.
- In Thailand, the digital transformation process for SMEs is supported by easier access to government funding, particularly for micro-businesses. The government provides financial aid through various departments, making it simpler than going through traditional banks.
- In China, SMEs can obtain digital transformation loans from financial companies, but this requires detailed reporting and risk management to avoid financial risks for the lenders. The Chinese government initiated a pilot cities campaign to encourage digital transformation and launched programs offering discounts from service providers, pushing banks to invest in these cities. Despite that over 10,000 new SMEs opening daily in China, around 5,000 also close each day, leading to stricter regulations for businesses seeking loans due to the high risk of failure.
- A speaker from Viet Nam highlighted the lack of direct government support for MSMEs in obtaining loans for digitalization, noting potential support in communication strategies for digital transformation. They cited an example from their own business, where digital transformation cost approximately VND3 billion (over USD120,000), emphasizing the high financial investment required. Despite this, SMEs often struggle to see tangible results from digitalization. The speaker stressed that digital transformation must be driven internally and shared challenges faced by their company's digital transformation team, such as inefficiencies with inventory management, which required a custom solution. They also mentioned difficulties in accessing bank loans due to a lack of collateral.
- In the Philippines, the government has a registration system where all movable assets must be used as collateral for transactions. For example, farmers can register their produce as collateral. These assets are also digitized and accessible.

However, other elements within the financial ecosystem create challenges for SMEs, and specific reasons exist why these issues have not improved.

- SMEs often lack awareness of the financial support available from the government, and vice versa. In Thailand, for instance, around THB80 million in funding has not been effectively utilized due to a lack of mechanisms for connecting the two sides based on actual needs..

## V. RECOMMENDATIONS

During the final session, there were 3 panelists in this Session: Mr Aminuddin Mohamed; Mr Poirrier Benjamin Robert Francois and Associate Professor Dr Sitanon Jesdapipat.

- **Mr Aminudin** pointed out some key take-aways and some recommendations to APEC economies. First, it is important for SMEs to be part of GVC as it will contribute significantly to the economic wellbeing of the economy. Second, digitalization empowerment is crucial for SMES to move into high value-added GVC. Activities such as adoption of digital tools, e-commerce and digital enterprise resource planning can enhance SMEs capability in the GVC. Third, a structured and more defined approach in Government intervention should be implemented to meet the digital needs of all SMEs to be part of GVC. MSMEs are at important crossroads to support economy's aspirations for sustainable economic growth with more equitable distribution of opportunities to all. Hence, a holistic ecosystem is required and most importantly is the creation of demand from larger buyers and consumers to bring MSMEs onboard under the sustainability initiative.

- **Mr Poirrier Benjamin Robert Francois** gave some recommendation for APEC and governmental entities to boost SMEs participation in the GVCs through digital technologies:
  - ✓ Build a team of digital consultants to coach SMEs about digital solutions and why and how to effectively implement them;
  - ✓ Coordinate with the other APEC economies to replicate the winning digital strategies in different locations and industries;
  - ✓ Develop and promote online marketplaces to connect SMEs with MNCs with angel investors and financial institutions;

- ✓ Invite SMEs along with bigger manufacturers (for example: 30% SMEs and 70% big manufacturers) to join trade fairs, supply chain events, etc. so SMEs are better represented;
- ✓ Simplify the access to finance of digital technologies for SMEs (communication and awareness programs, lower restrictions or interest rates);
- ✓ Partner with reputable companies offering digital solutions for SMEs. APEC could approach the suitable companies and select them and propose them to suitable SMEs.

- **Associate Professor Dr Sitanon Jesdapipat** gave some recommendations to APEC economies. He emphasized that the policy of economy should not be the policy paradox, meaning that policy need to be changed so that policies are coherent and be precise. Need to ensure that policies must be trustable, meaning that any measures from government should to be put in place of governance and inform to the public. Second, the GVC that would also take into account the social benefit of SMEs. Policies should take into account the benefit and social benefit of economy. Dr Sitanon mentioned 3 activities that should be taken among APEC economies. First, APEC economies should create the Workshop where members can exchange information. Second, APEC economies should enhance digital literacy of people. Third, APEC economies should promote marketing network of priority sector.

Participants also shared overall views and recommendations on (i) take-aways from the Workshop, (ii) what economies/ APEC should do in term of policies and actions.

- Speakers and participants recognized the crucial role of digital data and technologies for SMEs across various industries. They emphasized that understanding each member economy's specific economic context was essential to develop tailored digitalization strategies for maximum impact.
- Regarding funding and financial support mechanisms, promoting the digital transformation of manufacturing SMEs and their integration into global value chains (GVCs) requires backing from various sources. Governments, non-profit organizations, and investment funds should provide direct grants, subsidies, preferential loans, and loan guarantee programs to foster innovation and facilitate market expansion. Additionally, export incentives, tax benefits, and venture capital investments are recommended to support SMEs entering international

markets. Some participants highlighted the necessity of government-supported financing programs tailored to the digitalization of SMEs, addressing sector-specific obstacles that hindered digital transformation.

- A significant proposal was the establishment of "One-Stop-Shop" solutions to streamline the digitalization process for SMEs. This included creation of a centralized government web portal to act as an information hub for financial support programs, training, consulting services, and partnership opportunities. The establishment of business support centers, offering consulting services, financial support, and skills training in one location, was also recommended. The role of trade associations is vital in this setup, as they can provide training and development programs, facilitate network connections, offer guidance on financial support, and keep SMEs informed of regulations and industry trends. Additionally, trade associations could organize events and seminars to connect businesses with industry experts.
- For capacity building and technical support, the focus should be on government and development-led training programs to enhance SMEs' management and technical skills, enabling them to adopt new technologies and optimize production processes. A collaborative platform within APEC was also suggested to facilitate knowledge sharing, technical assistance, and capacity-building efforts for MSMEs. Standardizing processes, products, and company culture was advocated to benefit employees and ensure informed participation in GVCs.
- Networking and collaboration were identified as key strategies to address digitalization challenges. Trade associations can connect SMEs with potential partners, investors and customers to foster cooperation and market expansion. An APEC platform could be instrumental to integrate MSMEs into GVCs effectively.
- Further recommendations include developing programs for digitizing accounting processes, implementing sector-specific data collection methods, and promoting government-supported financing initiatives. Strengthening local MSMEs through targeted funding, investment, technical assistance, and capacity building is essential. Government teams equipped with specialized consultants can provide the necessary guidance and support for digitalization, ensuring successful implementation.

## VI. CONCLUSIONS

In her closing remarks, Ms Pham Quynh Mai (Viet Nam’s Senior Official to APEC) observed that the Workshop’s participants have had great opportunities to learn various perspectives from relevant stakeholders, including academic and international

organizations, business communities, and so on, on a number of important issues including sharing an overview on SMEs' participation in GVCs in the manufacturing sector; opportunities and challenges for SMEs' participation in GVCs in the manufacturing sector through digital technology; sharing case studies; as well as discussing and making recommendations to promote their participation in a more efficient and effective manner.

According to a report by the WTO,[4] there are many reasons why access to digital technologies can increase SMEs' participation in trade. Internet access can reduce barriers and costs to trade for all firms as well as increase access to foreign markets through online sales and e-commerce. The rise of smartphones has also allowed leapfrogging of some capital or infrastructure-intensive technology, especially by firms in developing economies. Additionally, the digital economy itself is creating new opportunities by increasing the number of participants in international trade, as well as creating new business models that affect the structure of supply chains, including being "born global." However, only SMEs with resources and managers willing to adopt these new technologies are in the position to take advantage of these opportunities.

Through the sharing and discussion of speakers and experts on policies, best practices, case studies and experiences from member economies, a number of key findings and recommendations have been highlighted to promote SMEs' participation in GVCs in manufacturing sector through digital technology. Those might include, but not limited to, the followings:

- It is important to raise public awareness among people, enterprises and governments of the importance of digital technology and its benefits to enhance SMEs' participation and competitiveness in GVCs in manufacturing sector.

- Digitalization empowerment is crucial for SMEs to move into high value-added GVC. Activities such as adoption of Digital Tools, E-commerce and digital enterprise resource planning can foster SMEs capability in the GVC.

- Enhance financial capacity for SMEs through a special fund to support SMEs' efficient participation into the manufacturing GVC.

- Enhance low-cost universal access to digital technologies for well-performed SMEs in prioritized sectors and sub-sectors so that they could jump start and spearhead for others to follow.

[4] https://www.wto.org/english/res_e/booksp_e/gvc_dev_report_2019_e_ch6.pdf

- Assist SMEs in harnessing and leveraging digital marketing to increase their performance in the GVCs.

- Develop customized training programs to enhance digital skills, hence improve SMEs' capacity and competitiveness.

- A structured and more defined approach in Government intervention could be implemented to meet the digital needs of all SMEs to be part of GVC.

Through the sharing, participants could have a more in-depth knowledge of the issues, hence promoting further efforts to support SMEs, subject to our specific domestic circumstances and long-term development strategies. By hosting this Workshop, Viet Nam wishes to join and strongly support APEC's common efforts in pursuing sustainable and inclusive growth and development.