1. Objectives: (i) discuss issues related to economic reform and development of Viet Nam in the newly emerging context; (ii) reflect on major issues of particular concern to businesses and people, particularly in this new context characterised by both new challenges and new opportunities; (iii) continue contributing to the formulation of the SEDS 2021-2030 and SEDP 2021 - 2025; and (iv) contribute to enhancing Viet Nam’s position in international and regional fora.

2. Venue: International Convention Centre (ICC), No. 11 Le Hong Phong Str., Ba Dinh Dist., Ha Noi;

3. Time: Half a day, from 08h00-13h00, Tuesday, September 29, 2020.

4. Co-Chairs and Moderators
   - Mr. Nguyen Chi Dung, Minister, Ministry of Planning and Investment (MPI) (Co-Chair, Opening Session, Sessions 1 and 2, and Closing Session);
   - Mme. Carolyn Turk, Country Director, the World Bank in Viet Nam (Co-Chair, Opening Session, Sessions 1 and 2, and Closing Session);
   - H.E. Robyn Mudie, Australian Ambassador to Viet Nam (Co-Chair, Opening Session, Sessions 1 and 2, and Closing Session);
   - Dr. Vu Thanh Tu Anh, Senior Lecturer, Fulbright School of Public Policy and Management in Ho Chi Minh City; Member of Prime Minister’s Economic Advisory Group 2016-2021 (Session 1 Moderator);
   - Prof. Duong Nguyen Vu, Professor of Aerospace Engineering, School of Mechanical & Aerospace Engineering; Director, Air Traffic Management Research Institute, Nanyang Technological University, Singapore; Advisor to Minister of MPI on Innovation Strategy (Session 2 Moderator).

5. Expected participants (approximately 400)
   - Representative from selected countries (government agencies) (if the travel ban due to Covid-19 is lifted);
   - Representatives of Viet Nam’s development partners;
   - Representatives from Party, National Assembly and Government agencies;
   - Representatives from international and domestic business sectors;
   - Representatives from academia (universities, research institutes, scholars, experts);
   - Representatives from technical departments/units of MPI;
   - Representatives from media organisations.
# TENTATIVE AGENDA

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Responsible person(s) (tentative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:30 - 08:00</td>
<td>Registration</td>
<td>Vietnam Institute for Development Strategies (VIDS) VIDS and Foreign Economic Relations Department (FERD), Ministry of Planning and Investment (MPI)</td>
</tr>
<tr>
<td>08:00 - 08:05</td>
<td>Introduction of VRDF 2020 objectives and participants</td>
<td>Mr. Pham Hoang Mai, Director General (DG), FERD (MPI)</td>
</tr>
<tr>
<td>08:05 - 08:20</td>
<td>- Opening remarks</td>
<td>- H.E. Nguyen Chi Dung, Minister of Planning and Investment</td>
</tr>
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<td></td>
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<td>- H.E. Robyn Mudie, Australian Ambassador to Viet Nam</td>
</tr>
<tr>
<td>08:25 - 08:30</td>
<td>Photo Session (Co-chairs, Moderators, Panelists)</td>
<td>Organizer</td>
</tr>
<tr>
<td>08:30 - 08:35</td>
<td>Introductory remarks for Session 1</td>
<td>Mr. Pham Hoang Mai, Director General (DG), FERD (MPI)</td>
</tr>
</tbody>
</table>

**Opening Session**

**Session 1: Covid-19 and Viet Nam’s Actions to Seize Opportunities and Move up the Global Value Chain**

**Moderator: Dr. Vu Thanh Tu Anh, Senior Lecturer, Fulbright School of Public Policy and Management in Ho Chi Minh City**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Responsible person(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:35 - 08:55</td>
<td>Presentation of Session 1 keynote speech: “Covid-19 and Impact on Global Trade and Production Networks” (Virtual (Zoom-based) presentation)</td>
<td>Dr. Victoria Kwakwa, Vice President of the World Bank for East Asia and Pacific Region; former World Bank’s Country Director for Viet Nam</td>
</tr>
<tr>
<td>Time</td>
<td>Activity</td>
<td>Responsible person(s) (tentative)</td>
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<tr>
<td>9:05-9:15</td>
<td><strong>Panelist 2</strong>: “Seizing the GVC shift opportunities: Viet Nam’s Actions for Inclusive Growth, Attraction of Quality FDI to Viet Nam and Development of Vietnamese Private Economic Sector and Enterprises”</td>
<td><strong>Dr. Jonathan Pincus</strong>, UNDP Senior International Economist - Advisor</td>
</tr>
<tr>
<td>9:15-9:25</td>
<td><strong>Panelist 3</strong>: “Resilient leaders - persistent businesses sustainable recovery and thrive”</td>
<td><strong>Mme. Ha Thị Thu Thanh</strong>, Chairperson, Deloitte Viet Nam</td>
</tr>
<tr>
<td>09:25 - 09:35</td>
<td>Quick comments or questions from Session 1 moderator to the keynote speaker and Session 1 panelists</td>
<td>Session 1 moderator, representative of Session 1 keynote speaker (from WB Viet Nam), and Session 1 panelists</td>
</tr>
<tr>
<td>09:35 - 10:15</td>
<td><strong>Plenary discussion and Q&amp;A</strong> The forum participants are invited to make comments and/or raise questions to the keynote speaker and the three panelists who will then respond to those comments/questions</td>
<td>Session 1 co-chairs and moderator will moderate/ facilitiate the discussion.</td>
</tr>
<tr>
<td>10:15 - 10:30</td>
<td>Tea break</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Session 2: Digital Transformation and Structural Change towards Inclusiveness and Sustainability</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Moderator: Prof. Duong Nguyen Vu, Nanyang Technological University (Singapore)</strong></td>
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</tr>
<tr>
<td>10:30 - 10:31</td>
<td>Invite moderator and panelists of Session 2 to take seat</td>
<td><strong>Mr. Pham Hoang Mai</strong>, DG, FERD (MPI)</td>
</tr>
<tr>
<td>10:31 - 10:35</td>
<td><strong>Introductory remarks for Session 2</strong></td>
<td><strong>Prof. Duong Nguyen Vu</strong></td>
</tr>
<tr>
<td>10:35 - 10:55</td>
<td><strong>Presentation of keynote speech</strong>: “Digitizing a nation. A personal account of how it was done, why and what can be learned from the process.”</td>
<td><strong>Mr. Toomas Hendrik Ilves</strong>, Former President, Estonia; Distinguished Fellow, Center for European Policy Analysis</td>
</tr>
<tr>
<td>10:55 -11:05</td>
<td><strong>Panelist 1</strong>: “Digital transformation for sustainable development”</td>
<td><strong>Mr. Nguyen Trong Duong</strong>, Deputy Director General, Authority of Information Technology Application, Ministry of Information and Communication</td>
</tr>
<tr>
<td>Time</td>
<td>Activity</td>
<td>Responsible person(s) (tentative)</td>
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<tr>
<td>11:05 - 11:15</td>
<td><strong>Panelist 2</strong>: “AI Development in Vietnam Opportunity for Sustainable Development”</td>
<td><strong>Dr. Bui Hai Hung</strong>, Director, Artificial Intelligence Research Institute (Vin AI Research), Vingroup</td>
</tr>
<tr>
<td>11:15 - 11:25</td>
<td><strong>Panelist 3</strong>: “Making Digital Transformation Inclusive”</td>
<td><strong>Mr. Winfrid Messmer</strong>, Expert IT, ERP, Finance &amp; Projectmanagement, Interim Head of IT-Department, Vietnamese-German University; Director, Institute for Applied Informatics, Germany; Chairman of Digital Sector Committee EuroCham Vietnam (recommended by EU)</td>
</tr>
<tr>
<td>11:25 - 11:35</td>
<td>Quick comments or questions from Session 2 moderator to the representative of Session 2 keynote speaker (from WB Viet Nam) and Session 2 panelists</td>
<td>Session 2 moderator, representative of Session 2 keynote speaker (from WB Viet Nam), and Session 2 panelists</td>
</tr>
</tbody>
</table>
| 11:35 - 12:20 | **Plenary discussion and Q&A**  
The forum participants are invited to make comments and/or raise questions to the representative in Viet Nam of the keynote speaker (WB Viet Nam) and panelists who will then respond to those comments/questions. | Session 2 co-chairs and moderator will moderate/ facilitate the discussion. |

**Closing Session**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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</thead>
<tbody>
<tr>
<td>12:20 - 12:50</td>
<td>Guiding speech by Minister of Planning and Investment Nguyen Chi Dung</td>
</tr>
</tbody>
</table>
| 12:50 - 14:00 | **Luncheon at the ICC**  
All participants |
Session 1:
Covid-19 and Viet Nam’s Actions to Seize Opportunities and Move up the Global Value Chain

MODERATOR
Dr. Vu Thanh Tu Anh,
Senior Lecturer, Fulbright School of Public Policy and Management in Ho Chi Minh City

SPEAKER
Dr. Victoria Kwakwa,
Vice President of the World Bank for East Asia and Pacific Region; former World Bank’s Country Director for Viet Nam

PANELIST
Dr. Jacques Morisset,
Lead Economist and Program Leader, The World Bank in Viet Nam

Dr. Jonathan Pincus,
UNDP Senior International Economist – Advisor

Mme. Ha Thị Thu Thanh,
Chairperson, Deloitte Viet Nam
Covid-19 and Viet Nam’s Actions to Seize Opportunities and Move up the Global Value Chain

- Global economic growth
- Shifting global demand
- Investment and trade policies
- Scientific - technological progress
- Environment and resilience

- The role of GVCs has slowed down since the 2007-2008 financial crisis
- Shift and reallocation of supply chains
- Disruptive technologies lead to GVC’s restructuring and power redistribution
- Suppliers are selected more carefully
- Strengthened role of services in GVCs
MAJOR DISCUSSION QUESTIONS

1. **What are the impacts of the Covid-19 pandemic** on the fundamental factors behind the transformation of global value chains?

2. **What are the opportunities and challenges** of the Covid-19 pandemic for Vietnam in its efforts to participate in and enhance its position in GVCs?

3. **What strategies and policies are needed** to seize opportunities and move up the global value chain for a sustainable and inclusive growth?
Good morning.

Thank you for inviting me to participate in the Vietnam Reform and Development Forum this year. It’s a delight to reconnect with you, Prime Minister Phúc, Minister Dũng and other friends in the Government of Vietnam in this important forum.

As the Chairs have emphasized, the VRDF 2020 takes place in a challenging context, which requires Vietnam to make difficult adjustments in the formulation of its medium-term development plan and long-term strategy. I am honored to be part of today’s discussion.

PM Nguyễn Xuân Phúc, Minister Nguyễn Chí Dũng, ladies and gentlemen,

• Globally, the Covid-19 crisis has had unprecedented negative impact on our health, economy and social lives. Yet the impact differs significantly across countries, largely due to the effectiveness of governments’ responses. Vietnam has done exceptionally well in quickly containing the pandemic, and limiting the negative impact on the economy. I would like to take this opportunity to congratulate you, Prime Minister Phúc and the Government of Vietnam for this important achievement.

• The pandemic has generated a combination of domestic demand and supply shocks with cross-border spillovers through travel, trade, finance, commodity markets and investor confidence. The disruption has severely hit major hubs of trade, FDI, and GVCs, as the countries with the highest COVID-19 cases are vital nodes in these global networks.
• It is still too early to understand the full impact of the virus on the global economy. Preliminary estimates by the World Bank suggest a much deeper global downturn than the Great Recession. Global FDI flows and trade in intermediate goods and services will take time to recover from the COVID-19 shock.

PM Nguyễn Xuân Phúc, Minister Nguyễn Chí Dũng, ladies and gentlemen,

The immediate consequence of the pandemic is that developing countries face strong headwinds. I want to draw your attention to the following five main channels of the impact on the global economy.

• First, Covid-19 compounds the existing slow down of trade, GDP, and productivity growth since the global crisis 2007-09. The impact on global output and trade is projected to be the worst in decades. The WBG baseline forecast envisions a 5.2 percent contraction in global GDP in 2020—the deepest global recession in 8 decades. Among the 14 global recession episodes of the past 150 years, it would rank as the fourth deepest (after the two World Wars and the Great Depression 1930-32). World merchandise trade could fall by 13% to 32% in 2020, depending on whether we have an optimistic scenario or a pessimistic scenario. For 2020, per capita income is expected to decline in about 93 percent of countries, the largest fraction in one and a half centuries. A recent World Bank study on global productivity showed that the four epidemics since the year 2000 (SARS, MERS, Ebola, and Zika) had significant and persistent negative effects on productivity, lowering productivity by 4 percent after three years. The COVID-19 pandemic may be significantly worse than most past disasters because of its global reach and the unprecedented containment measures put in place.

• Second, the main sources of financing for development: FDI, portfolio flows, and remittances have severely plunged. A massive flight to safety caused sharp declines in asset valuations and heightened financial market volatility around the world. External private finance inflows to developing economies could drop by USD 700 billion in 2020 compared to 2019 levels, exceeding the immediate impact of the 2008 Global Financial Crisis by 60%. Foreign direct investment inflows are projected to contract by 30% to 40% during 2020 and 2021. On average, FDI inflow to emerging market and developing economies will decline by 21.4 percent in 2020, and all regions will suffer decline in FDI, ranging from 5.2 percent for Sub-Saharan Africa to 36 percent for Middle East and North Africa.
Third, with a slower movement of people, trade and capital, the pandemic also exacerbates the current trend of protectionism and entrenches a bias to self-reliance and rebalancing toward the local economy. The pandemic has increased the costs of international transactions because of rising protectionism and mobility restrictions across borders, suggesting that more attention will be given to domestic markets. How severely the pandemic and implemented lockdowns and closures affect the mobility of the people can be illustrated by a statistic reported by the International Civil Aviation Organization (ICAO) about changes in monthly passengers traffic compared to 2019. In April 2020, the number of travelling passengers was only less than one seventh of the figure for April 2019.

Fourth, global production networks are being disrupted on a scale never witnessed before. On the one hand, the sharp declines in movements of capital, people, goods and services mentioned above contribute to that disruption of Global value chains (GVCs). On the other hand, China, along with Japan, the United States and the European Union, form the very core of the global production network. Coincidentally, all these GVC hubs are hit hardest by the virus. In addition, the global supply chains are excessively concentrated in quarantined areas, especially in China. Recent supply chain mapping shows that the world’s largest 1000 companies or their suppliers own more than 12,000 facilities (factories, warehouses, and other operations) in Covid-19 quarantined areas, mostly in China. This high level of supply chains concentration explains the severity of the disruption and in turn leads to the plunge in international trade, since GVCs account for more than 50 percent of international trade.

Finally, automation and disruption in global value chains can make the manufacturing and export-led growth further out of reach for emerging market and developing economies.

But at the same time, Covid-19 can also bring about opportunities on the global and regional stage:

A possible silver lining may be that changes in behavior from the pandemic will accelerate the adoption of new technologies, the automation of production, particularly in manufacturing, as well as the incorporation of digital technologies more broadly, greater efficiencies among businesses, and the pace of scientific innovation. The COVID-19 pandemic may trigger lasting organizational and technological changes to
the way businesses operate, eliminate the least efficient firms and encourage the adoption of more efficient production technologies

- Another opportunity for developing countries is the reallocation of production facilities by multinational companies that want to diversify the supply chains for their existing products and make new economic alliances. For countries with strong or credibly improving business climates and governance, this could be a new opportunity to strengthen their participation in global value chains.

- Finally, countries can also take this opportunity to build consensus around difficult reforms.

PM Nguyễn Xuân Phúc, Minister Nguyễn Chí Dũng, ladies and gentlemen,

What are the implications for Vietnam of the challenges and opportunities generated by the COVID 19? Let me draw your attention to the current conditions and performance of Vietnam.

With its stellar performance in the last 3 decades, Vietnam is a development success story and continues to perform well even in the pandemic on a range of indicators, including trade, growth and human capital.

However, there is notable room for further improvements in GVC development to meet Vietnam’s ambitious long-term development goal of becoming a high-income country by 2045 and narrow the development gaps with the advanced economies.

I want to emphasize two facts:

First, Vietnam’s participation in global and regional value chains remains limited, despite being one of the most open economies in the world. Vietnam’s level of participation in GVCs remains well below its ASEAN peers (Singapore, Thailand, Indonesia, Malaysia, and Philippines). In 2018, the country earned only US$ 20.4 billion through GVC, ranked 55th out of 174 countries. This is less than one quarter of the next ASEAN peer, the Philippines, with US$ 84.8 bn and ranked 34th.

Second, the level of Vietnam’s sophistication in participation remains low, limited in manufacturing and needs to move up to improve productivity. The next two levels of sophistication in GVC participation are advanced manufacturing and services and innovative activities. Vietnam’s ASEAN peers,
Malaysia, Thailand and the Philippines, are now at advanced manufacturing and services. The World Bank estimates that a 1% increase in GVC participation boosts per capita income levels by more than 1% - about twice as much as conventional trade, so strengthening GVC participation will be important for accelerating Vietnam’s productivity and growth.

Let me now offer my thoughts about how Vietnam can be well prepared for strong recovery and make most of the new emerging opportunities.

- **In the short-term** the diversification of MNCs depends on the recovery prospects of alternative production bases. Vietnam has done well so far but needs to continue to contain the virus and consolidate activities that can accelerate a strong recovery. Vietnam needs to resist the temptation to become more protectionist – in fact, quite the reverse, we believe that Vietnam should continue to ease entry and operational FDI restrictions.

- **In the medium-term**, being well-prepared for the ‘new normal’ of GVCs is important. Supply chains cannot be established overnight, and companies still have to overcome the expensive and time-consuming process of relocation. For that, Vietnam can consider a range of measures, including:
  
  - developing strategies to proactively target and attract China-based investors (using Investment Promotion and Protection Agreements and special incentives).

  - taking measures to enable stronger linkages between FDI and domestic enterprises. Two specifically examples are the development of a system of quality certification required to enter into the supply chains of foreign firms, and improvement in digital infrastructure that allow firms to operate remotely both along global value chains and in reaching out to foreign markets.

  - the government could also revisit its Science, Technology and Innovation strategy. The ongoing support is biased towards pushing the technological frontier by focusing on R&D-based innovation by university and research institutions and FDI firms. However, at this stage, most of the gains in productivity in Vietnam are likely to come from adoption of existing technologies and upgrading managerial and production capacity. Rebalancing resources and policy instruments to support a wide base of Vietnamese firms to adopt and diffuse existing technology need to be a priority in Vietnam’s new Science, Technology and Innovation Strategy.
• *In the longer-term*, Vietnam needs to narrow the productivity gap and move towards the productivity frontier. On average, labor productivity in Emerging Markets and Developing Economies (EMDEs) is less than one-fifth of the level in advanced economies, and international experience indicates that only economies with characteristics such as high institutional quality or education levels may be able to approach this frontier.

For Vietnam, emphasis need be placed on skills development and R&D capacity building, as well as effective implementation of Vietnam’s breakthrough on institutional reform. Development of both technical and managerial skills, will allow Vietnam to move from limited manufacturing to advanced manufacturing and services. Adequate attention to R&D capacity and IPR protection will help Vietnam to prepare for the gradual transition to the final level of GVC participation: innovative activities.

*To continue to ensure inclusiveness of Vietnam’s development* technology-driven labor market disruptions, associated with emerging trends of automation and digitalization will need to be carefully managed. For example, new technologies can result in more insecure and precarious work arrangements, so legal and tax reforms or reforms of the traditional social security system will be needed to strengthen the rights of workers. Rapid technological change has contributed to increased wage inequality among workers, as well as between workers and firm owners and progressive tax policies could be used to ensure that benefits from new technologies, such as AI, are more widely shared.

PM Nguyen Xuan Phuc, Minister Nguyen Chi Dung, ladies and gentlemen,

• Covid-19 is expected to have long-term impact on global economy, and leave lasting scars through multiple channels, including lower investment, erosion of human capital, and a possible retreat from global trade and supply linkages. The pandemic may also offer opportunities and countries will need to take this into account when formulating their development strategies.

• Continued international cooperation to maintain an open and rules-based trading system will be essential for recovery and sustainable, inclusive development. Countries that remain globally integrated will be best placed to respond effectively in the short term, and to recover more rapidly over the medium and long term. There is a critical need for stronger global trade cooperation and the maintenance of open markets.
Vietnam needs to be prepared for the future shift in GVCs and mitigate potential adverse impact of accelerated adoption of technology on labor markets. As we approach the traditional Mid-autumn (Trung thu) festival, I would like to offer a special Moon cake recipe for Vietnam’s success for the next decade. The recipe includes: a vibrant and innovative Private Sector sector with strong linkage to FDI, effective Institutions and quality Education. And we hope that every Vietnamese get a fair share of this cake.

Vietnam has done remarkably well in the past and present, and I strongly believe that Vietnam can do even better in the future.

Thank you for your attention and Prime Minister Phuc, I wish you continued good health, happiness and success.
COVID-19 IMPACT ON GLOBAL TRADE AND SUPPLY CHAIN AND IMPLICATION FOR VIETNAM

VICTORIA KWAKWA, WB REGIONAL VICE PRESIDENT
SEPTEMBER 29, 2020

COVID-19: UNPRECEDENTED GLOBAL SHOCK TO HEALTH, ECONOMY, SOCIAL LIVES

Demand and supply shocks

Cross-border spillovers
COVID-19 compounds slowdown GDP and trade growth

**Strong Headwinds**

- Growth, trade, productivity
- Financing for development
- Protectionism
- Disrupted global production networks
- Automation

Substantial GDP contraction due to Covid-19...

World merchandise trade volume, 2005Q1-2021Q4

...Highest share of economies in recession since the end of 19th century...

Share of economies in recession, defined as an annual contraction in per capita GDP

Source: World Bank: Global Database of Shared Prosperity (Fall 2018)
Main sources of financing have plunged

Projected change in FDI inflows to EMDEs, by region

Change in remittance inflows in 2020, by EMDE region

EMDE portfolio flows

Deep decline in movement of people

Google mobility trends for retail and recreation...

Monthly passenger traffic, 2019 vs. 2020...

Google COVID-19 Community Mobility Reports; World Bank

Source: ICAO
Disruption of GVCs: Major GVC network hubs hit hardest

Disruption in supply chains due to geographical concentration

Dependence on Quarantined Areas...

- China (quarantined areas)
- Italy (all)
- South Korea (all)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Facilities</th>
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<tbody>
<tr>
<td>Automotive, Industrial, heavy machinery</td>
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<tr>
<td>Consumer goods</td>
<td>210</td>
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<tr>
<td>High tech, semiconductor, consumer electronics</td>
<td>252</td>
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<tr>
<td>Life science, health care, medical devices</td>
<td>230</td>
</tr>
<tr>
<td>Other</td>
<td>175</td>
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</tbody>
</table>

Chinese supply of raw and intermediate products dropped during the lockdown in 2020-Q1

The world’s largest 1,000 companies or their suppliers own more than 12,000 facilities – factories, warehouses etc. in Covid-19 quarantined areas

Source: Harvard Business Review, Resilinc
OPPORTUNITIES

ADOPTION OF NEW TECHNOLOGIES
DIVERSIFICATION OF SUPPLY CHAINS
ACCELERATION OF REFORMS

IMPLICATIONS FOR VIETNAM

Recent Performance
Priority Areas
Vietnam continues to perform well

**Deepening integration, HCI**
- FTAs of new generation concluded (EVFTA, CPTPP)
- Continued improvement in HCI

**Resilient FDI and trade**
- Value of merchandise export grew by 13% per month between January and mid-April, and 9% between April and June
- FDI inflow reached US$16 bn between Jan and Jun 2020, corresponding to a 15% contraction over the same period in 2019, far better than the estimated global FDI decline by UNTAD (30-40%).

**Robust performance**
- Domestic manufacturing production grew by 30% between April and June
- GDP growth reached 1.8% in the first half of 2020

Vietnam: top performer in improving FDI and GVCs

[Diagram showing a scatter plot with Vietnam highlighted as a top performer.]
Vietnam's level of GVC participation: limited manufacturing

Vietnam: prepare to seize opportunities

**Short-term: Open**
- Contain the virus, consolidate activities to accelerate a strong recovery
- Continue to ease entry and operational FDI restrictions

**Medium term: FDI, STI**
- Proactively target and attract China-based investors
- Enable stronger linkages between FDI and domestic enterprises
- Revisit Science, Technology and Innovation Strategy
Long-term: skills and reforms

- Skills development
- R&D capacity building
- Effective implementation of institutional reform
- Inclusiveness

Conclusion

- COVID-19 is expected to have long term impact, leaving lasting scars through multiple channels.
- Continued international cooperation to maintain an open and rules-based trading system will be essential.
Conclusion

- Key Ingredients of success for Vietnam:
  - Private sector
  - Institutions
  - Education

Thank You

Xin cảm ơn
Global value chains

Don’t be wrong – COVID-19 offers an opportunity for Vietnam

Key messages

1. COVID-19 is a game changer as it provides a unique opportunity for Vietnam
2. Vietnam has been doing well but can do better
3. Why shifting strategy is becoming more important
4. Convergence on five priorities for the longer term
5. There is a need to identify catalysts of change – how to go faster
COVID-19 a game changer

- Global trade is slowing down: 13-35% down in 2020 (WTO) even if rebound in recent months. FDI is expected to decline 5-15% worldwide in 2020 (UNCTAD).
- But this creates new opportunities for Vietnam:
  - The risk of supply chain disruptions may accelerate the shift of several multinationals from China to Vietnam, which was already a pre-COVID-19 trend due to rising labor costs in China and trade tensions between USA/China.
  - Vietnam’s exceptional performance in managing COVID-19 is the best promotion tool – the country is back at work (top 6 in ASEAN for COVID-19 security)
  - New sense of urgency can lead to acceleration of reforms on the domestic front – especially in digitization and better business environment- making Vietnam more attractive.
  - Regional trade agreements create new opportunities when barriers are rising in the rest of the world

Doing well but can do better

Strengths:
- One of the most open economies in the world in terms of merchandise trade
  - 1.5 X and 5X times more open than Thailand and China
- Pre COVID-19, Vietnam is already a proven FDI destination in ASEAN
  - Massive FDI inflows (2 % of GDP more than Malaysia or Thailand)
  - Global value chains account for 66 % of total trade
- A solid manufacturing export base (2/3 of exports value and 90% of global value chains)

Weaknesses:
- Low domestic content (and declining over time): 2 x times lower than China
- Excessive concentration in products, markets and firms.
  - Top four products (textile, electronics, chemicals, and metals) = 2/3 of GVC trade
  - Top four markets (China, Japan, Korea, and US) = 60% of GVC trade
  - Top four companies (Samsung, Foxconn, Intel, Panasonic) = 70 % of manufacturing GVC trade
- Barriers to entry for services
  - Low FDI inflows and trade in services (at the exception of tourism)

By 2018 Vietnam had integrated GVCs but with low domestic content

<table>
<thead>
<tr>
<th></th>
<th>Vietnam</th>
<th>China</th>
<th>Thailand</th>
<th>East Asia</th>
<th>EU</th>
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</thead>
<tbody>
<tr>
<td>Total Trade (US billion)</td>
<td>301</td>
<td>4090</td>
<td>476</td>
<td>5329</td>
<td>5044</td>
</tr>
<tr>
<td>GVC (% of trade)</td>
<td>0.66</td>
<td>0.62</td>
<td>0.61</td>
<td>0.62</td>
<td>0.59</td>
</tr>
<tr>
<td>Domestic content (% of trade)</td>
<td>0.28</td>
<td>0.46</td>
<td>0.36</td>
<td>0.49</td>
<td>0.50</td>
</tr>
</tbody>
</table>

Open for goods but not so much for services
Why shifting the existing strategy?

Up to today
Integrating GVCs has been the strategy to create wage jobs for a fast-growing labor force. Highly successful as export sector accounts for over 20 million (direct and indirect) jobs or approximately 40% of today’s labor force.

At risk of losing
Disruptive technologies have and will reduce the need for low skill jobs in manufacturing
1) Evidence in Vietnam (1 investor has doubled output in Vietnam over last 10 years, but reduced workforce by 40%)
2) International evidence: labor intensity in electronics has declined by half since early 1990s.

Greater attention on GVCs impact
- Boosting domestic content
- Backward linkages: using more domestic suppliers
- Forward linkages: using more domestic distributors
- Climbing the transformation chain into more complex products
- Diversifying into new products, markets, and operators
- Services
- Protecting the country’s natural capital
- Clean technologies
- Adaptation/mitigation climate change

What look like the new strategy?

Optimizing the impact of GVC for Vietnam

Long term priorities
- Skilled labor
- New technologies
- Connective infrastructure
- Service liberalization
- Clean and resilient activities

Catalyst of change
- Pricing mechanisms
- Digital tools
- Coordination mechanisms
Convergence on five long-term priorities

1. **Skilled labor**: Develop post secondary education and training programs because moving beyond assembly and building a base of domestic suppliers and distributors will require more competencies, which has been a key bottleneck according to most operators in Vietnam.

2. **New technologies**: R&D but, above all, catching up through acquisition of new technologies from global innovators since many domestic firms are lagging in terms of innovation and quality improvements.

3. **Connective infrastructure** (virtual and physical): This is necessary to link Vietnam with global markets but also to enhance linkages across firms within Vietnam.

4. **Service liberalization**: Removing barriers to entry and bias in favor of SOEs will improve competition and lead to productivity gains over time as well as enhance merchandise trade (think logistics and finance) as the frontier between products and services is becoming blurrier over time (D. Rodrik, 2020, J. Lin, 2020).

5. **Clean and resilient activities**: Focusing on environmental resilience to account for climate change and to improve living conditions (pollution).

The catalysts of change – how to go faster

- **Time is a challenge**: Because it takes time to achieve long term priorities, the transformation process should be accelerated by using catalysts of change.

- **What to do**: Private operators may underinvest or move not as fast as expected because of the “public good” element in several areas.
  - Investing in training of staff or suppliers can be discouraged because firms may be afraid that trainees will use their skills elsewhere
  - Price distortions due to subsidies or tax incentives may lead to misallocation of resources as private investors may select sectors with low impact.

- **One lesson from experience** is for the Government to address the above market failures by using the following measures:
  - Catalyst 1: Pricing mechanisms
  - Catalyst 2: Digital tools
  - Catalyst 3: Coordination mechanisms

Man made reforms that do not require much financing
Catalyst 1: Pricing mechanisms

- Using pricing mechanisms has proved useful to change behaviors (like in agriculture before) by sending right signal to markets.
- To optimize short-term impact of GVCs, Vietnam can consider:
  - **Action 1:** Modify the tax incentives schemes from entry to impact:
    - Today the focus is on attracting FDI by reducing entry costs through tax holidays and import duties/VAT rebates on raw materials, supplies, and parts used for projects.
    - New incentives should promote technology transfers (like in China by offering tax rebates on derived revenue) and skills development programs (e.g., for firms and for workers)
  - **Action 2:** Shift subsidies from infrastructure to post secondary education:
    - Today, infrastructure is relatively cheap (users charges are lower than supply costs) while post-secondary education is costly (one of the highest in Asia relative to per capita income).
    - In line with the country’s objective to promote skill development and responsible behaviors for environmentally sustainable development, moving subsidies from infrastructure to post secondary education.

Catalyst 2: Digital tools

- Today administrative costs of trading are estimated to be twice the costs of physically shipping containers.
- Digitalization can reduce these costs quickly as the innovation cycle is relatively short compared to other technologies:
  - **Facilitate procedures at borders:**
    - Example 1: The Malaysian Customs Department information system, known as uCustoms, enable effective information-sharing, streamlined procedures, and genuine collaboration among all agencies involved in the clearance process.
    - Example 2: the Korea Customs Service (KCS) decided to develop an electronic Customs clearance system called UNI-PASS, which computerizes Customs procedures and provides for the automation of the clearance process, as a solution to overcome the increase in trade volume and travelers, given the limited resources available. It enables the KCS to electronically process 430 million declarations and 50 million travelers per year.
  - **Enhance just-in-time information-sharing through digital platforms:**
    - Example 1: In areas like medicine and law, opportunities for cross-border telework could be created through the mutual recognition of licenses
    - Example 2: GTD (Global Trade Digitization) is a cross border trade platform for containerized shipping connecting the entire supply chain ecosystem
Catalyst 3: Coordination

- Institutional coordination is necessary for timely and efficient decision making, implementation and information sharing between:
  - Private/Public
  - Domestic/Foreign
  - Central/Local
- Coordination/cooperation requires:
  - Strong champion: whom? At what level?
  - Right representativeness: whom?
  - Effective reporting and monitoring: how?
    - One stop agency? Ireland’s IDA, an agency responsible for the attraction and retention of FDI, is involved in all steps of the investment cycle to attract strategic foreign investment - best country for high-value FDI for 6 consecutive years

CONCLUSION

- The race towards economic development requires new ideas.
- Up to the early 1980s, the conventional thinking in economics was that trading more across countries was beneficial for all parties whatever the product – A. Smith, D. Ricardo.
- This was challenged by P. Krugman (and co-authors) who argued that what a country trade also matter for its economic development. He received the Nobel Prize in 2008.
- Vietnam has pushed for more trade and integration in GVCs with great success over the past few decades, creating millions of more productive jobs – in line with conventional thinking.
- Today, the main challenge for Vietnam is not to trade more but better as suggested P. Krugman about 40 years ago – moving toward more sophisticated products, including services and local content.
- Because COVID-19 has increased the sense of urgency, the Government should act decisively by taking short term actions – what I have called the catalysts of change.
SEIZING OPPORTUNITIES FROM SHIFTS IN GVCS: INCLUSIVE GROWTH, ATTRACTION OF QUALITY FDI TO VIET NAM AND DEVELOPMENT OF THE VIETNAMESE PRIVATE SECTOR

Jonathan Pincus
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Introduction

The Covid-19 pandemic is the most severe economic shock that world has experienced since the Second World War. International economic integration has delivered tremendous economic benefits for developing countries over the past three decades, especially countries like Viet Nam that have participated actively in global value chains (GVC). However, economic interdependence also entails risks, some of which have become glaringly apparent during the Covid-19 crisis: supply chains were interrupted during the early stages of the pandemic; shortages of medical supplies and protective equipment emerged as governments threw up barriers to trade; and all countries have suffered job losses from the sharp drop in international demand for goods and services.

Even before the current crisis, the relationship between trade, production and foreign investment was changing. Since the Global Financial Crisis of 2008, the import intensity of exports—a measure of the depth of international supply chains—has been falling. Foreign Direct Investment (FDI) to developing countries had also declined for several years prior to the pandemic. Some of the causes of reduced intensity of GVCs are contingent, and perhaps temporary, for example the rise of shale oil production in the US and the end of the commodity price boom in 2012. But others are more enduring, including rising trade tensions and the loss of momentum of the multilateral trading regime and labor-saving technological advances. Covid-19 may also have long-lasting effects if governments respond to the experience of critical shortages with trade bans and subsidies for domestic protection.

This paper considers the evolution of GVCs and its implications for development policy in Viet Nam. After briefly reviewing the rise of GVCs, we address the four main pressures on international integration and decentralized production in the short and long term. Foreign direct investment, the main driver of GVC participation, has delivered important benefits for Viet Nam as a labor surplus country. However, FDI also entails costs, and its association with productivity growth is weak. GVC participation has a more direct relationship to growth, but only in countries that sustain high rates of non-residential domestic
investment. The main implication for Viet Nam is that policies that promote domestic investment, especially domestic investments that contribute directly to productivity growth, are needed to capitalize on the opportunities presented by GVCs and FDI.

The Global Business Revolution

Global production systems have changed fundamentally over the past thirty years. In the 1980s, most foreign direct investment (FDI) entering developing countries was intended for the extractive industries (oil and gas, minerals) and the production of consumer goods and services for the domestic market. As late as 1990, exports of goods and services were only 17% of global gross domestic product (GDP). Barriers to trade and investment, the high cost of moving goods and the integration of finance, research and development and production capacity in home markets—mostly in the advanced countries—were thought to give rise to a stable international division of labor, in which developing countries produced raw materials and light manufactures, while advanced countries dominated capital and technology-intensive industries.

Three factors transformed manufacturing over the following decades. Trade and investment liberalization gathered pace in the 1990s, including successful completion of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) and the founding of the World Trade Organization (WTO), the dismantling of garment and textile quotas under the Multi-Fibre Agreement, and a slew of regional and unilateral measures to reduce restrictions on trade and investment. Second, containerized shipping and other advances in sea and air transport and logistics reduced the cost of moving goods around the world. The world had not witnessed such a dramatic decline in shipping costs since the invention of metal steamships and the opening of the Suez canal in the mid nineteenth century. Finally, digital technologies reduced the cost and increased the speed of transmitting large amounts of information over great distances. Designs, plans and instructions could now be issued from headquarters to decentralized production facilities, coordinating the activities of numerous locations in complex and geographically dispersed supply chains (Baldwin and Lopez-Gonzales 2015).

Reduced friction in moving goods across borders enabled multinational enterprises to divide production into multiple, discrete operations, some carried out within the firm and others subcontracted to suppliers and assemblers. Companies reduced costs by relocating labor-intensive operations to low wage countries, adopting “just in time” systems to minimize inventories, and using their market power to force suppliers to lower costs while improving quality. As
manufacturing decentralized, the share of trade in global GDP increased, reaching a peak of 31% in 2008 as the Global Financial Crisis (GFC) took hold. FDI recorded a new high of USD 1.5 trillion in 2007 (Figure 1). Production networks controlled by multinational enterprises accounted for 80% of world trade (WIR 13).

The reorganization of production and the emergence of Global Value Chains (GVC) created opportunities for developing countries to increase formal sector employment, redeploying workers from low productivity agriculture and services to jobs in export manufacturing. Fragmentation of production does not necessarily add to the number of manufacturing jobs globally; rather, it redistributes production activities, and hence employment, across and within countries. Decentralization of production entails relocating operations that need large numbers of unskilled or semi-skilled workers to labor surplus countries with comparatively low wages, or within advanced countries to regions with tighter restrictions on union organizing and collective bargaining. Although these jobs pay wages that are low compared to prevailing wage levels elsewhere, multinational enterprises often pay higher wages than small, local companies.¹ Labor-intensive manufacturing in garments, footwear and electronics expanded opportunities for women workers to obtain formal sector employment. The rise of GVCs has in this way contributed to poverty reduction in labor surplus countries like Viet Nam (see, for example, McCaig 2011).

Conversely, capital and technology-intensive operations are relocated to countries or regions with more mature industries, realizing economies of scale and lower unit costs in the process. Trade liberalization and participation in GVCs therefore results in employment gains in some industries or operations and losses in others: the net effects on jobs and incomes depend on factors governing the position of the country in the value chain.² The fragmentation of operations also widens the divide between countries and regions specializing in technology and capital-intensive operations versus those specializing in the labor-intensive segments of the value chain. To the extent that this has occurred, upgrading—or moving from lower to higher value-added operations—has become more difficult for developing countries (Shingal 2015, 17).

Fragmentation of production systems has intensified competition among suppliers, which has concentrated power in the hands of apex firms—or system integrators—to demand lower prices, faster deliveries, and constant product

¹ In Viet Nam, Kabeer and Tran (2003) found that garment workers in multinational enterprises and state owned enterprises received higher wages than those employed in small private or cooperative firms.
² Banga (2016), for example, found that increasing the import intensity of exports was associated with slower employment growth.
innovation from their contractors. The acceleration of product cycles in industries such as electronics and fashion has placed a premium on speed and innovation; for both system integrators and suppliers, failure to remain at the technological or design frontier is a serious threat to the survival of the firm. The wave of mergers and acquisitions over the past two decades, and the resulting concentration of control in technology-intensive sectors like pharmaceuticals, automobile assembly, aircraft, computer software, retailing and social media demonstrate the central importance of economies of scale and scope to keeping up with the pace of change. Concentration of market power among system integrators, and the immense pressure that they place on their suppliers, has compelled suppliers to acquire scale and enhanced technological capacities, a process that Peter Nolan refers to as the cascade effect (Nolan, Zhang and Liu 2007). And as first tier suppliers grow in size and sophistication, they increase pressure on second tier suppliers, and so on. For example, concentration in automobile assembly has stimulated mergers and acquisitions in the auto parts sector; more than 1,500 deals were struck among parts makers in the past three years alone (2017-2019).

The relationship between participation in GVCs and productivity growth in developing countries depends on a range of economic and industry-specific factors. GVCs create opportunities for countries to capitalize on their comparative advantage in abundant labor to create jobs and penetrate export markets that would otherwise not be accessible to them (Kowalski 2015). However, the liberalization of trade in goods, which makes modular manufacturing possible, also exposes domestic industries to international competition. There is some evidence that participation in GVCs accelerates technological learning in domestic firms, mostly due to vertical linkages (subcontracting) to foreign companies (Newman et al. 2015). Horizontal spillover effects, for example demonstration effects and the movement of trained workers between firms, are generally found to be weak. Low-skill assembly operations with long, global supply chains tend to have few linkages to domestic firms (Paus and Gallagher 2008).

Peak Globalization?

The decentralized, modular production system that has evolved over the past thirty years is highly efficient but depends on the speedy, frictionless movement of goods across great distances for its viability. Social distancing, border controls, lockdowns and other measures taken to control the spread of coronavirus had an immediate and severely negative impact on GVCs. Governments also directly intervened in markets for essential goods and medical supplies, banning exports and subsidizing conversion of production facilities to
meet local demand. Falling incomes around the world curbed demand for imports, idling factories producing everything from garments to automobiles.

But the pandemic is not the only challenge confronting GVCs: since the GFC in 2008, the import-intensity of production has declined, suggesting a reversal of the previous trends towards decentralization and longer, more complex value chains. The ratio of trade to global GDP was 21% in 2019, the level recorded in 1996. Foreign direct investment, which achieved a record $2 trillion in 2015, had fallen to $1.5 trillion by 2019 (Figure 1).

![Figure 1. Trade/GDP ratio and FDI, 1980-2019 (Source: UNCTADSTAT)](image)

The period after the GFC has seen a decline in the import intensity of production and resulting fall in the ratio of trade to global GDP (Figure 1). Weak global demand for consumer durables, falling commodity prices after 2013 and the surge in US oil production acted to reduce global import intensity, but even controlling for these factors production fragmentation came to a halt after 2011 (Timmer et al. 2016). This indicates that more enduring factors are at play. Multinational companies may be approaching the limits of feasible fragmentation of production given new developments in technology, industrial deepening in China, rising trade tensions and the growing share of services in international trade.

This year’s *World Investment Report* includes a detailed discussion of three long-term challenges to decentralized production and GVCs: technological advances that reduce the benefits of modularity; trade disputes and the growing threat to multilateral trade and investment institutions; and climate change (UNCTAD 2020). The interaction of these factors and the effects of the Covid-19
crisis have intensified pressure on multinational enterprises to rethink, at least partially, some of the concepts underlying the Global Business Revolution (Figure 2).

GVCs showed considerable resilience during the Covid-19 pandemic, recovering quickly from interruptions to transportation and logistics during the early stages of the crisis in China. However, the crisis underscored the vulnerability of production systems for essential medical supplies, and in response governments have introduced restrictions on exports of some goods and subsidized domestic production of equipment and supplies that were previously mainly imported. Many of these trade restrictions will continue after the pandemic, both as a precaution in advance of future health crises, and in response to political pressure from domestic producers seeking to reduce exposure to foreign competition.

Technological advances in fields such as automation, 3D-printing and artificial intelligence have already been incorporated into production systems in some goods and services, and their use will increase as capital costs fall and new applications are perfected and disseminated. Robotics have already transformed manufacturing in automobile assembly and some product lines in machinery and electronics, and new developments in machine learning will eventually lead to the automation of more complex tasks. Over the long-term, the cost advantage of labor-surplus countries and regions will decline, which could encourage multinational companies in some industries to relocate production facilities closer to consumers to speed up deliveries and reduce transportation costs.

Figure 2. Challenges to GVCs and the decentralization of global production systems
Companies are already facing pressure to “reshore” production operations to high-income countries from governments concerned about the impact of the Global Business Revolution on jobs and within-country income inequality. The loss of high-paying manufacturing jobs has fueled protectionist sentiment in the advanced countries, especially where governments have underinvested in alternative sources of skilled employment like health care, education and other public services. A broad consensus now exists in the US that trade liberalization—previously a fundamental tenet of American foreign policy—has benefited China more than the US and damaged the standing and economic prospects of the middle classes. Declining support for multilateralism has encouraged the current US administration to ramp up efforts to undermine the capacity of the World Trade Organization to monitor implementation of trade agreements and adjudicate trade disputes.\(^3\) As support for multilateralism has receded, countries have increasingly resorted to bilateral trade and investment restrictions, often couched in terms of national security and the retain domestic control over core technologies. Investment restrictions in information and telecommunications, biotechnology, agriculture and financial services have been introduced by advanced and developing countries.

Climate change is another challenge to the decentralization of production systems and GVCs. Public awareness of the impact of GVCs on carbon emissions is still limited but has risen with the increasing frequency of climate-related disasters. Pressure will increase from consumers for greater business transparency regarding the use of fossil fuels in the production of goods and services. The transition from fossil-fuel based to renewables also entails uncertainties. Oil prices are low in 2020 but may not remain so for long: upstream investment in oil gas exploration is down 58% from its peak in 2014 according to the International Energy Agency, increasing likelihood of supply constraints in the future. Higher fuel prices would create another incentive to companies to reduce the length of supply chains. Corporations will seek to reduce production risk by introducing redundancy in supply chains. The severe floods in northern Thailand in 2011, when 400 multinational companies were forced to suspend operations, was an important lesson.

Even with the confluence of these factors, we do not know for certain that the import-intensity of exports and production will continue to decline. The impact of Covid-19, trade tensions, technological change and climate change are serious challenges to decentralized production systems, but the impact of these factors vary among sectors and regions. Some companies caught up in US-China

\(^3\) The US government has blocked new appointments to the WTO appellate body, crippling the ability of the organization to resolve disputes between members. The US maintains that WTO has failed to support efforts to protect the intellectual property of American companies in China.
Trade tensions will seek to diversify production platforms, but the attraction of China’s growing consumer market will motivate others expand operations there. Automation will affect employment levels, but not necessarily all low-skilled jobs: in garment manufacturing, for example, design, pattern-making and cutting are already automated in modern facilities, while assembly is still carried out mostly by hand. Globalization will remain an important fact of economic life; but the reconfiguration of production that began in the 1990s has already reached its apogee, and national boundaries will play a larger role in the next phase in the evolution of GVCs and trade.

The Benefits and Costs of FDI

FDI has played an important role in Viet Nam’s economic growth over the past three decades. The causal relationship between FDI and growth moves in both directions. FDI stimulates growth by providing access to export markets, new technologies, products and processes, and investment capital. But growth also generates FDI, as multinational companies move in to serve growing industries and consumer markets. Thus, Viet Nam’s high rate of absorption of FDI until the GFC was both a cause and effect of the country’s high rate of growth.

In the period after the GFC, FDI flows to Viet Nam have continued to increase, but at a slower rate. This mirrors similar trends in the region and among developing countries globally (Figure 3). Slower growth of FDI is indicative of changes in investment policies in recipient countries, for example a resurgence in resource nationalism among exporters of energy and minerals. Since the GFC, FDI flows to developing countries have become increasingly concentrated in a small number of economies, including Viet Nam and other Southeast Asian countries. Weak demand in the advanced countries has suppressed all forms of investment in the developing world, including FDI (UNCTAD 2019).

FDI is usually seen as the main driver of participation in GVCs, and so developing countries are encouraged to assign a high priority to FDI attraction. Steps suggested to attract FDI include contract enforcement, protection of property rights including intellectual property, deregulation to reduce the cost of doing business, trade liberalization, relaxation of labor protection, devaluation of exchange rates and selective promotion policies, including fiscal incentives. Industrial policies to promote domestic capabilities such as local content requirements are discouraged because they are market distorting (World Bank 2020).
FDI delivers important benefits including access to GVCs, but it also entails costs (Table 1). As discussed earlier, modular manufacturing has provided a channel for developing countries to penetrate export markets and create steady, formal sector jobs for workers drawn from low-productivity employment in agriculture and traditional services. However, exports generated by FDI firms are import-intensive, especially in Viet Nam where the imported value added in exports is higher than in Thailand and Malaysia in manufacturing and agriculture (Table 2). Therefore, the impact on the balance of payments is positive but, in some products, domestic value added is small. FDI provides investment capital, but is expensive relative to other sources, with rates of return from remitted profits higher than interest rates on bank loans. Profit remittances are a liability equivalent to foreign debt which need to be financed like any other liability. Transfer pricing is also a problem in Viet Nam as shown by the large errors and omissions on the balance of payments. Foreign investors often demand tax holidays from central and local government, which reduces their positive impact on government revenue.

Forward and backward linkage effects are an important benefit of FDI. Foreign invested firms purchase goods and services from domestic companies, increasing demand and potentially stimulating the production of products that had previously been imported. Domestic companies also purchase inputs from FDI firms, and some of these may also have been imported in the past. These
relationships can accelerate technological development among domestic firms to the extent that they acquire new technologies and skills to service MNE customers. The evidence for “horizontal linkages,” for example skills sharing that occurs when workers trained in FDI firms move to domestic companies, is more limited. Linkage effects of all varieties are most limited when FDI is concentrated in labor-intensive segments of supply chains.

Table 1. Benefits and costs of FDI

<table>
<thead>
<tr>
<th>Benefits of FDI</th>
<th>Costs of FDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creates steady, formal sector jobs for un/underemployed workers</td>
<td>FDI is an expensive source of finance in the long run (profit remittances)</td>
</tr>
<tr>
<td>Generates tax revenue</td>
<td>If FDI investors demand tax holidays, revenue effect may be small</td>
</tr>
<tr>
<td>Generates exports, access to foreign exchange</td>
<td>Import intensive, may not improve balance of payments</td>
</tr>
<tr>
<td>Creates demand for domestically produced inputs and inputs for downstream industries</td>
<td>If FDI specializes in labor-intensive segments, linkages may be small (e.g. Mexico automobile industry)</td>
</tr>
<tr>
<td>Demonstration effects for domestic companies and skills development in labor force</td>
<td>Limited empirical evidence of horizontal technology spillover effects from FDI to local firms</td>
</tr>
<tr>
<td>FDI increases domestic investment rate (unlike portfolio flows, which do not)</td>
<td>FDI tends to be higher in countries with weak capital markets</td>
</tr>
</tbody>
</table>

Table 2. Import intensity of exports, Viet Nam, China, Thailand and Malaysia, 2017

<table>
<thead>
<tr>
<th></th>
<th>Viet Nam</th>
<th>China</th>
<th>Thailand</th>
<th>Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>52%</td>
<td>17%</td>
<td>41%</td>
<td>42%</td>
</tr>
<tr>
<td>Services</td>
<td>24%</td>
<td>8%</td>
<td>12%</td>
<td>28%</td>
</tr>
<tr>
<td>Agriculture and aquaculture</td>
<td>31%</td>
<td>5%</td>
<td>9%</td>
<td>19%</td>
</tr>
<tr>
<td>Energy and mining</td>
<td>11%</td>
<td>10%</td>
<td>11%</td>
<td>17%</td>
</tr>
<tr>
<td>Processed food</td>
<td>36%</td>
<td>8%</td>
<td>17%</td>
<td>42%</td>
</tr>
<tr>
<td>Construction and construction materials</td>
<td>44%</td>
<td>12%</td>
<td>29%</td>
<td>48%</td>
</tr>
</tbody>
</table>

(Source: UNCTAD-Eora Global Value Chain Database)
Productivity and GVCs

The ultimate driver of income growth and development is growth of labor productivity. It is therefore appropriate to query the relationship between GVCs and productivity growth in developing countries, and the role of FDI in this relationship. Figure 4 illustrates this relationship for large developing countries that participate actively in GVCs.\(^4\) GVC participation in this instance is measured as an index incorporating foreign value added in each country’s exports together with value added generated in each country embodied in the exports of its trading partners.\(^5\) The figure suggests that a positive relationship exists between participation in GVCs and labor productivity growth. Countries like China, Philippines and Viet Nam that participate actively in global value chains record higher rates of productivity growth than countries that participate less actively. However, there is no relationship between the share of FDI in national output and productivity growth. Although Viet Nam achieved high rates of labor productivity growth during this period, other favored FDI destinations like Mexico, Chile and Colombia have not.

\(^4\) All of the countries included in the figure have a total population of at least ten million.

\(^5\) See De Backer and Miroudot (2013) for the derivation of the index.
both active GVC participation and high rates of productivity growth; South Asia, where productivity growth is also high but GVC participation less active; and Latin America, which records both low rates of productivity growth regardless of the level of GVC participation.

One reason that China and Southeast Asia have recorded higher rates of productivity growth has been mentioned throughout this paper. Participation in GVCs is particularly important for labor surplus countries in that GVCs enable them to capitalize on their comparative advantage in abundant labor, relocating workers from low-productivity agriculture and traditional services into steady, formal sector employment in labor-intensive industry. While intersectoral reallocation of labor also occurs in Latin America, prevailing wages in these countries are still much higher than in Southeast Asia.\(^6\)

Even more important is the rate of productivity growth within the industrial sector. What separates Latin America from Asia is the capacity of the latter (with some exceptions) to achieve steady growth of productivity within manufacturing. Figure 5 presents average labor productivity growth per annum in industry for selected Asian and Latin American countries for the post-GFC period (2010-2019). Even in countries with large role for FDI, Latin American countries have recorded low or even negative productivity growth rates, while South, Southeast and East Asian countries sustained high rates of growth even during this period of weak global demand.

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**Figure 5.** Labor productivity growth per year in industry, 2010-2019 (ILOSTAT and World Development Indicators)

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\(^6\) Hourly compensation costs in Mexico were nearly twice as high as the Philippines in 2016 according to the Conference Board (see [https://conference-board.org/ilcprogram/](https://conference-board.org/ilcprogram/)).
As we have seen, the relationship between the volume of FDI and productivity growth is weak. However, productivity growth at the sectoral and national levels are closely related to the rate of investment. Latin America’s slow productivity growth relative to Asia is explained by low rates of investment per worker in manufacturing (Palma 2010). Although the relevant statistics are not readily available for the countries considered here, we use as a proxy gross fixed capital formation at the national (rather than sectoral) level. Even these figures show a marked difference between Latin America and Asia (Figure 6).

![Figure 6. Gross fixed capital formation and foreign direct investment as share of GDP, 2010-2018 (Source: World Development Indicators)](image)

Another difference between Latin America and Asia that is worth mentioning is the growth rate of labor productivity in agriculture, which has contributed significantly to national productivity growth in China, Indonesia, Thailand and Vietnam. In general, productivity growth in Latin American agriculture has been slower than Asia in recent years, with the exception of Brazil (Figure 7). As in the case of manufacturing, countries that have sustained a higher rate of investment in the sector have outperformed in terms of productivity growth, although in this case the regional divide is less apparent than in industry.
Sustaining Investment and Productivity Growth

Economic growth requires increases in productivity. GVCs and FDI can contribute to productivity growth, especially in labor surplus economies that capitalize on their comparative advantage in abundant supplies of low-cost labor. However, liberalization of trade and investment, which is a prerequisite for participation in GVCs, can increase import penetration of domestic markets and therefore have a negative impact on domestic production and employment.

In Viet Nam, participation in global garment GVCs has generated millions of steady jobs in manufacturing and has contributed to exports and poverty reduction. However, competition from imported textiles has had a negative impact on domestic fiber and cloth industries (Nadvi and Thoburn 2004). As shown in Figure 8, labor productivity growth in industry was extremely rapid during the early stages of reform but came to a halt after the introduction of trade reforms that exposed upstream domestic producers to foreign competition. In the period after the GFC productivity growth in industry has averaged 1.8% per annum.

The challenge facing labor surplus economies is to leverage GVCs and FDI to move beyond assembly operations and into the technology and capital-intensive segments of value chains before domestic wages rise and the country loses competitiveness in labor-intensive tasks. Economists diverge on the nature of industrial deepening or “upgrading.” For some, technological learning is a natural outcome of “hyperspecialization” of developing countries in labor-
intensive segments of GVCs (World Bank 2020). The main obstacles to upgrading, in this view are failure to create a conducive business environment, skills shortages resulting from underinvestment in education and infrastructure constraints. Once these obstacles are removed, upgrading will occur as a matter of course.

![Figure 8. Labor productivity growth, Viet Nam, 1991-2019](Source: ILOSTAT and World Development Indicators)

Yet relatively few countries have successfully made the transition from specialization in low-skill, labor intensive processes to higher-valued added segments of value chains. Market signals on their own have not been sufficient to induce domestic firms to invest in the technology and skills required to move up the value chain. Successful developing countries in East Asia, from Korea in the 1960s to China today, have found ways to shape incentives to increase domestic investment in upstream industries while using market signals to impose discipline on firms that fail to compete.

The development of Thailand’s automobile industry is an important Southeast Asian example of industrial deepening. The industry developed based on Japanese FDI mainly for the domestic market. Local content requirements (LCR) were established in 1975 for passenger cars and pickups, which forced foreign automobile assemblers to encourage their suppliers to come to Thailand. Domestic firms also moved into the sector, and by 1994 72% of the content of diesel pickup trucks was produced domestically (Thoburn 2012). Beyond numerical targets, the government targeted capacity development in specific components through training programs and licensing to avoid overcapacity. The development of the Laem Chabang Port and integrated investments in highways
and power created an economic corridor that reduced costs for foreign and domestic firms in the sector, and the government offered duty-free imports of part for exported vehicles (Warr and Kohpaiboon 2017). Policy shifted from import protection to export promotion in the 1990s and after the East Asia Financial Crisis. LCRs were eliminated in 2000 and additional financial incentives were offered to exporters, including foreign firms. Thailand growing importance as an export platform persuaded several Japanese automobile assemblers to establish research and development facilities in the country. Thai firms are still integrated into supply chains, but with consolidation in the assembly and auto parts industries local firms cannot achieve the economies of scale required to compete. FDI firms, still producing in Thailand but foreign owned, are the main first tier suppliers, while Thai firms have been relegated to the second or third tier (Hassler 2011).

Although LCRs are not permitted under the Trade Related Investment Measures of the WTO, the Thai example demonstrates the role of government in creating incentives to encourage productivity-enhancing investment and through the development of infrastructure to facilitate the formation of industrial hubs. The existence of domestic upstream capacity made possible a shift from import protection to export promotion and the continued growth of the industry. However, consolidation within the auto parts sector has gradually marginalized smaller, domestically-owned suppliers in favor of multinational enterprises that work closely with systems integrators in the auto sector.

Mexico is another country that has emerged as an automobile export platform owing to its proximity to the United States and frictionless trade under the North American Free Trade Agreement (NAFTA). However, unlike Thailand, the Mexican automobile industry has remained locked in low value-added assembly operations and labor-intensive components such as car seats and wire harnesses. Domestic value added represents less than 25% of export value and there are few backward linkages (Fujii-Gambero and Cervantes-Martinez 2013). Productivity growth in the sector is negligible, and new assembly plants have introduced automation that calls into question the capacity of the sector to create jobs in the future.

Conclusion

Foreign direct investment and participation in global value chains have contributed to job creation, export growth and poverty reduction in Viet Nam. The country now faces the challenge of leveraging participation in these networks to increase domestic value added and develop the capabilities of domestic firms. Making the transition from a labor surplus country specializing in low-cost labor
to a technologically advanced economy is fraught with risks. Advances in automation could narrow the window available to Viet Nam to move from assembly operations to more sophisticated segments of the value chain.

Industrial deepening requires creating incentives for domestic companies to invest in new technologies and skills. While the traditional instruments of national innovation policy are no longer available, the government must think creatively about the tools at its disposal to promote domestic investment and upgrading within the confines of existing agreements. Government must also build physical infrastructure to foster the development of industrial hubs to achieve economies of scale and attract investment in research and development activities.

References


“Seizing the GVC shift opportunities: Viet Nam’s Actions for Inclusive Growth, Attraction of Quality FDI to Viet Nam and Development of Vietnamese Private Economic Sector and Enterprises”

Jonathan Pincus
UNDP Viet Nam

Peak globalization?

- Global manufacturing production transformed 1990-2008
- Declining trade/GDP ratio after GFC 2008: Fall in import intensity of exports
Changing patterns of international production and Global Value Chains

- Covid-19 pandemic
- Technological change
- Trade barriers
- Sustainability

- Supply chain disruption
- Trade/investment restrictions in health industries
- Weak demand
- Automation
- 3D printing
- Artificial intelligence
- US-China dispute
- Investment/trade restrictions
- Lost momentum of multilateralism
- Carbon emissions and protectionism
- Adverse weather events
- US-China dispute
- Investment/trade restrictions
- Lost momentum of multilateralism

FDI already slowing before pandemic

- Modularity achieved in MNE production; process matures
- End of commodity boom in 2013
- Trade disputes, concerns over security and intellectual property
- UNCTAD: FDI could fall by 40% in 2020; and 5-10% in 2021

Average annual growth of net FDI flows

Source: UNCTADSTAT
Implications for Viet Nam are mixed

- Viet Nam still attractive to MNEs seeking low-cost export platforms as wages rise in China and trade disputes with US intensify.
- Challenges to multilateral trading regime will favor regional FDI; Viet Nam’s participation in regional/bilateral trade and investment agreements is an asset.
- From the long-term perspective (ten years):
  - FDI in Asia will be increasingly market-seeking as incomes rise.
  - Importance of labor-intensive manufacturing will decline with automation and reshoring.
  - Fewer opportunities to leverage GVCs to develop domestic manufacturing capabilities.
- Importance of ambitious Industrial policy to build capacity in sustainable industries with long-term growth potential.

FDI delivers benefits, but also entails costs

<table>
<thead>
<tr>
<th>BENEFITS OF FDI</th>
<th>COSTS OF FDI</th>
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<tbody>
<tr>
<td>Creates steady, formal sector jobs for un/underemployed workers</td>
<td>FDI is an expensive source of finance in the long run (profit remittances, transfer pricing)</td>
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<tr>
<td>Generates tax revenue</td>
<td>If FDI investors demand tax holidays, revenue effect may be small</td>
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<tr>
<td>Generates exports, access to foreign exchange</td>
<td>Import intensive, may not make net contribution to balance of payments</td>
</tr>
<tr>
<td>Creates demand for domestically produced inputs and inputs for downstream industries</td>
<td>If FDI specializes in labor-intensive segments, linkages to domestic firms is small (e.g. Mexico automobile industry)</td>
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<tr>
<td>Demonstration effects for domestic companies and skills development</td>
<td>Limited empirical evidence of horizontal technology spillover effects from FDI to local firms</td>
</tr>
<tr>
<td>FDI is more resilient to financial shocks than portfolio investment and foreign borrowing</td>
<td>FDI tends to be higher in countries with weak capital markets</td>
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Viet Nam’s needs to strengthen capabilities of domestic companies to capture value added from FDI exporters.

<table>
<thead>
<tr>
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<th>Viet Nam</th>
<th>China</th>
<th>Thailand</th>
<th>Malaysia</th>
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<tbody>
<tr>
<td>Manufacturing</td>
<td>52%</td>
<td>17%</td>
<td>41%</td>
<td>42%</td>
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<tr>
<td>Services</td>
<td>24%</td>
<td>8%</td>
<td>12%</td>
<td>28%</td>
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<tr>
<td>Agriculture and aquaculture</td>
<td>31%</td>
<td>5%</td>
<td>12%</td>
<td>19%</td>
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<tr>
<td>Energy and mining</td>
<td>11%</td>
<td>10%</td>
<td>11%</td>
<td>17%</td>
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<tr>
<td>Processed food</td>
<td>36%</td>
<td>8%</td>
<td>17%</td>
<td>42%</td>
</tr>
<tr>
<td>Construction and construction materials</td>
<td>44%</td>
<td>12%</td>
<td>29%</td>
<td>48%</td>
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</tbody>
</table>

Source: UNCTAD-Eora Global Value Chain Database

GVC participation, productivity growth and FDI

Size of each bubble represents FDI as % of GDP

Source: UNDP Viet Nam, ILOSTAT, UNCTADSTAT, World Investment Report 2018
Productivity growth sustained by agriculture

- Dependence on FDI not associated with productivity growth
- Productivity growth exceptionally rapid in Vietnamese agriculture
- Productivity growth in industry (including manufacturing) fastest before trade liberalization and arrival of labor-intensive manufacturing for export

Conclusions

- GVCs will continue to adapt to technological, economic, political and ecological trends
- Some of these trends favor Viet Nam as FDI destination; others do not
- Heavy reliance on FDI is not associated with productivity growth
- Over to long term, regional and market-seeking FDI will increase in importance,
- The challenge is to strengthen capabilities of domestic firms to capture value added among both FDI and non-FDI exporters
- Industrial policy and infrastructure investment to build capacity in sustainable growth industries
Thank you
RESILIENT LEADERS - PERSISTENT BUSINESSES
SUSTAINABLE RECOVERY AND THRIVE

(Initiatives and Actions for Vietnamese businesses to overcome challenges, grasp opportunities, recover with resilience and sustainability)

Mrs. Ha Thi Thu Thanh,
Chairperson of Deloitte Vietnam

I – HIGHLIGHTS OF THE SOCIO-ECONOMIC AND BUSINESS ENVIRONMENT IN VIETNAM.

1. The COVID-19 has caused profound impact with negative consequences on the socio-economic development of Vietnam in particular and the world at large.

According to the General Statistic Office (GSO), “The first half of 2020 Vietnames socio-economic experienced tremendous impacts of the COVID-19 pandemic.”. Likewise, on a wider scale, major economies in the world, such as the US, Japan, the European Union, are plunging into the deepest recession in decades; global trade continues to decline; global supply chain is disrupted; oil prices plummet due to decline in demand while unemployment rate soars”. Meanwhile, Vietnam’s “GDP during the first 6 months of 2020 increased by only 1.81%, the lowest six-month growth rate since 2011.”1.

Also, according to GSO, update data continues to show the economic devastation from the coronavirus pandemic: (1) Vietnam's industrial production continued to face difficulties in August 2020 when the COVID-19 epidemic broke out again in late July in Danang. The Index of Industrial Production (IIP) in August increased by about 3.5% over the previous month and decreased by 0.6% over the same period last year. For the first eight months of 2020, the IIP increased by approximately 2.2%, the lowest over many years; (2) Trade and services activities in August 2020 tend to decrease compared to the previous month due to the negative impact of the COVID-19 outbreak again; (3) The complicated development of the COVID-19 pandemic in Vietnam as well as around the world has had a negative impact on Vietnam’s imports and exports. Total imports and exports of products in 8 months 2020 are estimated at US

$336.32 billion, down 0.3% over the same period, in which exports reached USD 174.11 billion, increased by 1.6%; imports reached USD 162.21 billion, decreased by 2.2%; (4) Logistics activities such as transport is August has been hit hard by the second surge to COVID-19, with a 19.3% decrease in passenger traffic and a 3.4% decrease in cargos from July. In the first 8 months of 2020, passenger transport decreased by 29.3% and cargos decreased by 7.3% compared to the same period last year; (5) International visitors to Vietnam in August estimated 16,300 arrivals, increased by 16.9% over the last month, but down by 98.9% over the same period last year. This is due to the country’s strict measures with closure of tourism to combat the COVID-19. Foreign tourists to Vietnam decreased sharply by 66.6% to merely 3.8 million tourists in the first 8 months of 2020.

A survey conducted by the Private Sector Development Research Committee found that 20% of businesses surveyed said that they had to temporarily suspend their businesses; 76% were not able to balance cashflows; 2% were shut down, and only 2% were unaffected by the pandemic (Figure 1).

**Figure 1**: Proportion of enterprises by their ability to balance cashflows

![Cashflow Proportion Chart](attachment:image.png)

The survey also identified key obstacles that businesses have and will continue to face in the next 6 months: (1) No customers, orders, and contracts for goods and services (accounted for 81% of the answers); (2) Unable to keep up with payments, other financial obligations as well as operational expenses such as: salary, social insurance, health insurance, unemployment insurance, union fundings (72%); (3) Bank loan principal and interests (53%); (4) Electricity, water, and fuel inputs; and (5) Rental fees for warehouses, factories, offices, and equipment (42%) (Figure 2).
As a result, layoffs are growing at an alarming rate. The same reports show that among all participants, over 47% have experienced downsizing, in which 33% have had to lay off more than 50% of their workforce. In addition, 27% respondents stated that they have retained their workforce while reducing wages and working hours (Figure 3)².

2. The US-China Trade War brings both opportunities and challenges to Vietnam’s economy and its businesses.

In a report published in June 2019, economists from Nomura Investment Bank stated that Vietnam is the winner during the first year of the US-China Trade War. However, this prolonged war between the two leading economies has brought the Vietnamese economy both great opportunities and challenges.

An analysis by Dr. Nguyen Xuan Thanh, Public Policy Lecturer, Fulbright School of Public Policy and Management, published on Forbes Vietnam on July 2.

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² Tourism is most affected according to the President of Vietnam Tourism Association (VITA). Most micro/small tour services or ticket agents laid off 100% of their employees, about 80% for international travel companies, and and 40-50% for large and average size firms. (Committee IV Report).
2, 2019, acknowledged that while Vietnam benefits by replacing as a major textile and garment exporter to the US, its domestic producers will face increased competition from an influx of cheap Chinese imports.  

Further, “data shows that there is an increase in transshipment of Chinese goods through Vietnam to the US to avoid punitive taxes. Many of Vietnam’s main exports to the US are also main imports from China”. This poses a major risk to Vietnam.

The movement of FDI inflows to Vietnam also indicates another significant impact of the trade war. UBS and experts have forecasted that at least 20% of manufacturing facilities in China will be moving to other countries in the coming years. Almost 80% of US companies have plans or are already in the process of moving their production plants out of China. Despite this shift, China remains the largest exporter globally. Hence, although Vietnam is a beneficiary from the shifting of investment flows, it will also expect increased competition from Chinese companies for both export and domestic markets.

3. “New-generation” trade agreements are the foundation for Vietnamese Businesses to Transform, Integrate, and Grow.

After the CPTPP Agreement, Vietnam – the EU Free Trade Agreeemtn (EVFTA) will open up opportunities for Vietnam to enage in equal partnership with the world’s largest economies.

Especially, Vietnam is the second country in ASEAN and the first emerging economy in the region to sign an FTA with the EU. These new-generation FTAs are expected to offer new market opportunities and a long-term plan for Vietnamese businesses to be deeply involved in the regional supply chain, to enhance production, export capacity and competition, and to affirm a position on a global scale. More importantly, as the competitive advantage is no longer about low labor cost and abundant natural resources, Vietnamese businesses need to improve their brand and product quality to compete globally.”

According to the Steering Committee 35 of the Ministry of Industry and Trade, when the EVFTA Agreement comes into effect, opportunities for Vietnam’s exports will be improved for the following reasons: (1) EVFTA facilitates the restructuring of export and import markets: Currently, Vietnam’s import and export activities are mainly with the Asian region (accounting for 80% of the imports and 50% of the exports). EVFTA will provide new market

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access for Vietnam’s exports. (2) EVFTA opens up opportunities for Vietnam to join the global supply chain. EVFTA is critical to raise the level of economic development, from increasing labor productivity, gradually reducing outsourcing, participating in higher value added production, to developing electronics, high technology, and green agricultural products; (3) EVFTA creates a driving force for the development of supporting industries: Vietnamese products need to meet the globally established standards in order to be able to enjoy preferential import tax under EVFTA. This is both a challenge and an incentive for Vietnamese businesses to enhance localization rate as well as added value of exports.

In addition to these opportunities, Vietnamese businesses will also encounter numerous challenges once EVFTA comes into effect, particularly: (1) Vietnamese businesses need to overcome the mandatory requirements on technical barriers such as food safety, labeling, environment, etc. These regulations are extremely strict with high requirements, therefore, Vietnamese products must be improved in quality to comply with these barriers; (2) Competitiveness from EU imports brings in two sides to consider. On one hand, competition will rule out low-tech and low-production businesses. On the other hand, the competition gives businesses continuous innovation and creativity, while creating more choices for consumers; (iii) The brand of Vietnamese products in the EU market is still less competitive compared to other exporting countries; while the EU market focuses on branding issues; (iv) The intellectual property commitments in the EVFTA (and also CPTPP Agreement) are also at a higher and more comprehensive level, with a diverse range of regulatory issues, covering more fields than before, requiring businesses to transform to be able to comply with transparent and strict rules of the “Global Competition”.

4. Although the private sector in Vietnam has had experienced impressive growth, it still faces constraints and barriers.

Like the majority of Vietnamese businesses, private businesses’ ability to invest in Research & Development is still low, with self-reported innovation rate lower than expected. In Vietnam, productivity gaps between large and small companies, among different industries, and within each industry are widen.4

Skills shortages are also a major obstacle to the performance of Vietnamese private businesses, especially those that have participated in import and export activities. In particular, managerial skills shortages are high. These shortages are

4 According to IFC in August 2020
rapidly increasing partly because of the training issue. With the FDI relation “wave” into Vietnam, Vietnam’s private sector face intense competition to attract skilled workers. However, current education and training are inadequate to meet the demand.

In addition to constraints, private businesses also face obstacles from business environment that hinder this sector from development. Currently, Vietnam ranks at the 70th in the World Bank’s business environment chart, far from the rankings of Malaysia and Thailand, almost on par with India and Indonesia, the two countries that are considered hard to do business. Time, process, legal compliance cost, and non-official cost are prevalent phrases that need to be addressed around this topic.

II – PRACTICAL SOLUTIONS AND ACTIONS FOR BUSINESSES TO OVERCOME CHALLENGES, SEIZE OPPORTUNITIES, AND RECOVER WITH RESILIENCE AND SUSTAINABILITY

1. Practical actions to minimize the impact of the COVID-19 pandemic and help businesses to seize opportunities, recover with resilience and sustainability

The COVID-19 pandemic has exposed weaknesses within Vietnamese businesses including challenges that are beyond their control arising on a large regional and global scale that impacts all businesses.

Various studies conducted nationally and internationally have all come to similar conclusions: (i) COVID-19 imposes different levels of impact on each enterprise by sector, industry, scale, health, and liquidity; (ii) There are many uncertainties ahead. The pandemic is not yet under control despite efforts to combat the virus with vaccines and anti-epidemic measures; (iii) Businesses has no control of their future all they can do is control their own actions to mitigate further damages.

Deloitte Vietnam has researched into the above context and pointed out 9 practical actions that businesses should take to minimize the negative impacts of the pandemic. We also suggest that every enterprise should review and apply these actions with or without the threat of the COVID-19 to promote sustainable development, especially during the competitive period of the Trade War and the “new generation” of FTAs.

These 9 actions have been divided into 3 groups with different levels of impact on the businesses, including:
**Group 1 – High-priority actions to optimize operations, generate immediate efficiency, and be implemented within ability of the businesses.**

(1) Review to optimize business cash outflows, cut back unnecessary expenses.

(2) Debts reconciliation to optimize the financial supply chain, to build a plan to recover debt or to freeze and reschedule more effectively.

(3) Optimize operations, focus on maintaining core operations and directly related to the supply chain of businesses.

**Group 2 – Measures to optimize the system that businesses can take full control in implementation**

(4) Reimagine customers and markets because these subjects/factors carry within changes in demand and behavior.

(5) Develop and renew programs focusing on “customer retention” strategy based on the previous demand and behavior analysis.

(6) Develop policies to closely engage (in terms of interests) with buyers/suppliers in the same chain.

**Group 3 – Strategic, long-term measures for sustainable and resilient enterprise recovery**

(7) Adjust the products/services to be more efficient.

(8) Review the price strategy and restructure the products/services offerings portfolio.

(9) Expand the marketing & distribution channels to become more accessible, especially online channels.

Companies need to consider their current situation, market liquidity, and position in the supply chain when choosing the appropriate measures from these 9 proposed actions. One of the prerequisites that assist business leaders make a decision and effectively implement any measures rely greatly on the perseverance and resilience they could establish for their own businesses.

Businesses operating in a relatively favorable investing environment like Vietnam have hardly ever experienced any medical and economic crises similar
to the COVID-19 pandemic. As a result, business leaders could inevitably be passive, even panicked, when resolving this comprehensive crisis.

However, when the leader consistently and resolutely maximizes the qualities of "resilience" in the art of operation, maximize the level of resilience of the team and business, it would be possible to seize the greatest opportunities to both manage crisis and build the future, helping the business thrive either in the response and recovery phase of the crisis or under normal operating/growing conditions.

Experts’ recommendations are limited to advising business owners in planning their actions and choosing appropriate measures.

2. Recommended solutions for the key industries and sectors

2.1. Agriculture and Agri-food sector

Although the evolution of diseases and natural disasters are still two major risks in agricultural economic development in the coming future; according to the statistics of the Ministry of Agriculture and Rural Development, in the first 6 months of 2020, the production value of the industry increases by 1.18% compared to the same period last year. The GDP growth rate of the agriculture, forestry and fisheries sector in the first 6 months of the year is expected to reach over 1%. The Ministry of Agriculture and Rural Development also reported the export situation and provided the figures of exported products in this sector in the first 6 months of the year as followed:

- **Rice exports**: this year is a bumper year for rice exports and the price is high due to the world’s increasing demand. Many big contracts that Vietnam could not win in previous years are now successfully achieved. Such markets like the Philippines and China have a relatively growing demand for food.

- **Wood exports**: Although having difficulties in orders and logistics, wood exports have a large turnover, and still maintain their growth. In June only, the export turnover of wood and wood products reached nearly USD 1 billion, despite the prior estimation of nearly USD 700 million.

- **Fruit exports**: Although the quantity exported-to high-quality markets like Japan, the US, and Australia is not high, the sector is having great potential. Notably, the prestige of Vietnamese fruits on the Australian market is increasing, with the potential for growth not only in this year but in the coming years.
• **Seafood exports**: Facing difficulties in the EU market due to the application of a "yellow card", seafood export activities are still maintained.

Despite the signals that can be assessed as "particularly optimistic" in the above pandemic context, along with the fact that agriculture, forestry, and fishery produce mostly essential goods leveraging by EVFTA, CPTPP; the biggest problem that businesses in the agriculture and agri-food sector are facing is how to optimize operations, increase competitiveness, build the products' brand name and to thrive on the global "game". The practical actions that businesses in this sector should prioritize to dominate the game in our home field are actions in Group 2 and Group 3.

Typical stories below are examples of businesses "on the right track" that need to be encouraged and replicated:

**PHUC SINH GROUP AND ITS EFFORTS TO "DOMINATE THE GAME IN BOTH DOMESTIC AND GLOBAL GAMES".**

Phuc Sinh Group, known as the "king of pepper", is currently the world's pepper exporter with the highest market share. In the pandemic context, many "competitors" have been suffering and gone bankrupt, Phuc Sinh is still receiving even more orders thanks to its pre-built brand name and prestige among international customers. At the same time, Phuc Sinh Group is also making efforts to develop domestic branded products, especially deep-processed products with high added value because this is still a "void" of Vietnamese products.

With the motto of putting product quality at first, taking care of customers with devotion and dedication, delivering with prestige, Phuc Sinh focuses on hastening all the delivery processes, improving packaging, and launching aesthetic and convenient products, reorganizing the supply chain to limit the dependence on raw materials and to be more proactive in processing stages, strengthening the online direct sales channels, prioritizing high-level personnel recruitment

Phuc Sinh business owner is confident that the revenue in 2020 is expected to reach the US $250 million. He added, "During the COVID-19 pandemic, what I hear every day is that people are losing orders, losing their jobs, getting salary cut, and even getting fired. Many of our customers could not reach the office due to the lockdown and many factories in India, Jordan is almost closed; however, we are still allowed to produce, and sell products; our staff can still
work and earn a full salary. They even have more tasks to do because the demand for export orders is still high.

That is great luck. Thanks to that, Phuc Sinh domestic market continues to grow with great customers’ supports. We have no choice but to strive to overcome difficulties. In the pandemic, we keep launching new products that are welcomed by our relatives, friends, colleagues, and consumers. We keep nearly 400 managers, workers, we pay their salary in full and still recruit more. Nothing is happier than that.

**HOPE, THE ONLINE EXHIBITION PLATFORM FOR WOOD AND FURNITURE INDUSTRY, AND VIETNAMESE BUSINESSES SELF – TRANSFORMATION.**

Digital transformation is a strong shifting trend of the economy and many businesses to create a breakthrough in many industries. In the context of the Covid19 pandemic, this is the "only option" for businesses to maintain operations because of social distancing and border closure between countries. Thus – creating constraints in business operations, such as marketing, transactions … Consequently, this problem has put Vietnamese businesses in a very difficult situation. However, through a preliminary assessment from major associations in the timber and timber processing industry in Vietnam, the timber industry has the lowest digital conversion capacity compared to other industries, because of slow conversion speed and applicability within and beyond business.

The US-China trade war has opened up huge opportunities for wood products from Vietnam to replace similar products from China. Besides, Vietnam's participation in important FTAs like the EVFTA also brings new opportunities for Vietnam. However, to be able to expand exports in key markets and join the global value chain, Vietnam's timber industry must overcome challenges at a rapid rate but also need to maintain sustainability.

Because of this issue, the Handicraft and Wood Industry Association of Ho Chi Minh City (HAWA) has actively discussed with the Vietnam Timber and Forest Products Association, Binh Duong Timber Association (BICA) ... to develop a strategic cooperation program with digital service providers, to strengthen digital transformation capacity and solve traceability problems in the timber industries. One of the key products is HOPE, the online exhibition platform for Vietnamese wood products. The world is going through the
pandemic with lots of difficulties in traveling and connecting, however, with this approach, businesses are confident that Vietnamese wood products can still be able to reach out to customers all over the world. This is not only about solving the current shortcomings of Vietnamese businesses but also about a 'one step ahead' solution when compared to other businesses in the region. HOPE has formed and initially focused on B2B activities. Next year, HOPE will be developed to expand with B2C functions to allow businesses to directly approach end-consumer through the platform.

2.2. Hospitality Sector

Tourism and tourism services are among the sectors most affected by the pandemic, although it has seen impressive growth before. According to the GSO, in the first 8 months of 2020, revenue from hospitality and catering service was estimated at 322.5 trillion VND, account for 10% of the total revenue from the industry and drop 16.4% when compared with the data from the same period last year; Revenue from tourism was estimated at 13,1 trillion VND in 8 months, account for 0.4% of the total and decrease 54.4% over the same period last year. Due to the second outbreak of COVID-19 in Vietnam at the end of July, policies, and efforts to stimulate domestic tourism cannot be done, many tourists call off their tours and many cultural festival events have been canceled, and some tourist attractions must be closed again.

In the situation where all of the tourism activities are at a ‘frozen’ state, besides action 1 & 2 (in the list of 9 practical actions mentioned above) to keep business survive through difficulties, Action 4, 7, 8, 9 should be prioritized by businesses operating in the tourism industry.

Evidence for this recommendation, several studies from Google and Tourism Advisory Board (TAB) published at the end of May 2020 have pointed out 5 Vietnamese tourism trends after the social distancing period, which is: First is the recovery of the market demand since mid-April with over 50% of visitor said that they are ready to travel again. Second is the demand for safety and promotion activities when using these services. Thirdly, the ocean and nature are the preferred destinations for most tourists. Next is the demand for short-day tours to tourist attractions near where they live, with a small group of friends; Last but not least is the shift toward the usage of the digital platform for tour booking and hotel reservations instead of booking or making reservations via a travel agency or a third-party. These trends are not new. However, it has

changed significantly compared to the pre-pandemic context, requiring businesses to adapt to the new behaviors of their target customers as well as competition in the market to renew/re-orient/make a change to current product and service portfolio, this also includes making an adjustment to the product price and optimizing marketing channel… to recover when the opportunity arrives.

In case the pandemic is controlled, businesses can operate again, Action 6, the affiliation between stakeholders should also be prioritized for businesses in this sector. In the matter of fact, on the occasion of stimulating domestic recently, many large businesses in tourism, aviation, hotels have also pioneered in designing a premium service package which comes with many pricing incentives as well as the flexibility that is suitable for tourist.

**RECOMMENDATIONS:**

- Encouraging tourism business to restructure: (a) Restructuring/renewing tourism product portfolio: Family tour, small group tour, nature tour…; (b) Restructuring tourism business: e-commerce, online payment, online travel agencies (OTAs), travel agencies for business, promoting tourism via digital marketing, social media..

- Encouraging affiliation between partners to create added service value to customers, such as aviation service affiliated with accommodation service or travel agencies.

- Large businesses (airlines, travel groups) need to cooperate and commit to 1) Do not sell unsafe and poor quality products; 2) Do not deceive customers with false advertising; 3) Do not sell at prices below the production cost.

- Local – tourist attractions – businesses join hands to create attractive promotion packages in terms of quality and price to attract tourists.
RESILIENT LEADERS - PERSISTENT BUSINESSES
SUSTAINABLE RECOVERY AND THRIVE
Panelist: Ha Thi Thu Thanh – Chairperson of Deloitte Vietnam

Content

I. Vietnam socio-economic highlights.

II. “Turning challenges into opportunities” solutions for Vietnamese businesses.
I. Vietnam socio-economic highlights

1. The COVID-19 pandemic
2. The US-China Trade War
3. The “new-generation” FTAs
4. The growth of private sector
1. The COVID-19 pandemic

The first 8 months of 2020 Vietnamese socio-economic experienced tremendous impacts of the COVID-19 pandemic. VN GDP VN H1/2020 increased by 1.81% - the lowest six-month growth rate since 2011.

Proportion of enterprises by their ability to balance cash flows

- Inflows cover < 25% of expenses: 34%
- Inflows cover > 75% of expenses: 7%
- Inflows cover from 50% - < 75% of expenses: 15%
- Inflows meet from 25% - < 50% of expenses: 20%
- Temporarily suspended operation: 2%
- Dissolution: 2%
- Not affected: 2%

Source: the 2nd Enterprise Survey Report (published March 2020) and the 3rd Enterprise Survey Report (published Sept 04, 2020) by the Private Sector Development Research Committee (Committee IV, under the Advisory Council on Administrative Procedure Reform to the Prime Minister)

1. The COVID-19 pandemic

Major challenges for businesses in the next 6 months

- No customers/contracts/orders for goods and services: 81%
- Payments for employment compensation and related insurance duties: 72%
- Payments for bank loan principal and interests: 53%
- Payments for the electricity & water bills, fuel inputs: 45%
- Payments for warehouse/factory/office rental, equipment: 42%
- Supply chain management (input factor): 15%
- Payments for land rental to the state: 9%

Key personnel initiatives adopted by businesses

- Others: 3%
- 100% job cuts: 5%
- 70% - < 100% jobs cut: 15%
- 50% - < 75% jobs cut: 13%
- 25% - < 50% jobs cut: 10%
- No job cuts and welfare retained: 23%
- No job cuts but less working hours: 27%
- 4%

Source: the 3rd Enterprise Survey Report (published Sept 04, 2020) by the Private Sector Development Research Committee (Committee IV, under the Advisory Council on Administrative Procedure Reform to the Prime Minister)
2. The US-China Trade War

Opportunities
- Vietnam benefits by replacing as a major textile and garment exporter to the US.
- The movement of FDI into Vietnam:
  - At least 20% of manufacturing facilities in China will be moving to other countries in the coming years.
  - Almost 80% of US companies have plans or are already in the process of moving their production plants out of China.
  - Vietnam - the attractive destination by high-quality, low-cost workforce, near-China location.

Challenges
- Vietnam domestic producers will face increased competition from an influx of cheap Chinese imports.
- Transshipment Chinese goods through Vietnam to export to the US to avoid punitive tax. Many of Vietnam's main exports to the US are also main imports from China.
- China will remain the world's largest producer. Vietnam will expect increased competition from Chinese companies for both export and domestic markets.


3. The “new-generation” free trade agreements

These new-generation FTAs are expected to offer new market opportunities and a long-term plan for Vietnamese businesses to be deeply involved in the regional supply chain, to enhance production, export capacity and competition, and to affirm a position on a global scale.

Restructuring of export and import markets

A driving force for supporting industries

A opportunity to participate in the regional & global supply chains

80% of the imports and 50% of the exports are mainly with the Asian region. EVFTA will provide new market access for Vietnam’s exports.

Vietnamese products need to meet the origin criteria to be eligible for preferential import tax under EVFTA becoming a challenge and an incentive for Vietnamese businesses to enhance localization rate & added value of exports.

EVFTA helps to enhance the level of economic development, from increasing labor productivity, gradually reducing outsourcing, participating in higher value-added production, electronics, high technology, green agricultural products... will be developed.

Source: the Steering Committee 35 of the Ministry of Industry and Trade
3. The “new-generation” free trade agreements

- Vietnamese businesses will also encounter numerous difficulties once EVFTA comes into effect.

  - To overcome the mandatory requirements on technical barriers: food safety, labelling, environment, etc.  
    ⇒ Improving the product’s quality

  - Vietnamese brands in the EU market are still less competitive than other countries.  
    ⇒ Focusing on building a strong brand.

  - A “huge” pressure on low-tech and low-production businesses.  
    ⇒ Creating the driver to innovation in production to offer the market with more choices.

  - A higher degree and comprehensive commitment covering more fields.  
    ⇒ Requiring businesses to transform to be able to comply with transparent and strict rules of the “Global Competition”.

4. The growth of private sector

- Although the private sector in Vietnam has had experienced impressive growth, it still faces constraints and barriers.

**Top Challenges Facing VN Private Companies**

<table>
<thead>
<tr>
<th>#</th>
<th>Challenge</th>
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| 01 | **Low Innovation Index**  
  In Vietnam, productivity gaps between large and small companies, among different industries, and within each industry are widen. |
| 02 | **Skill shortages are also a major obstacle**  
  This skill shortage is rapidly increasing due to the process and quality of training that is slow to adapt to the demand and competitiveness for skilled, high-quality labor accompanied by the foreign investment transition into Vietnam. |
| 03 | **Business environment barriers**  
  Improvements in the policy are required to boost the development of private sector, such as: Time, process, legal compliance cost, and non-official cost... |
II. “Turning challenges into opportunities” initiatives for Vietnamese businesses

1. Practical actions to minimize the impact of the COVID-19

Group #1 – High-priority accessible actions to optimize operations with immediate results.

1. Review to optimize the cash outflows, cut out unnecessary expenses.
2. Debts reorganization to optimize the financial supply chain, build a plan to recover debt or to freeze and reschedule more effectively.
3. Optimize operations, focus on maintaining core operations and directly related to the supply chain of businesses.

Group #2 – Actions to optimize the system that businesses can take full control in implementation

4. Reimagine Clients & Markets
5. Develop and renew programs focusing on "customer retention" strategy based on the previous demand and behavior analysis.
6. Develop policies to closely engage (in terms of interest) with buyers/suppliers.

Group #3 – Strategic, long-term actions for sustainable and resilient business recovery

7. Adjust the products/services to be more efficient.
8. Review the price strategy and restructure the products/services offerings portfolio.
9. Expand the marketing & distribution channels to become more accessible, especially online channels.

Companies need to consider their current situation, market liquidity, and position in the supply chain when choosing the appropriate measures from these 9 proposed actions. Experts’ recommendations are limited to advising business owners in planning their actions and choosing appropriate measures.
When the leader persistently and resiliently maximizes the qualities of “resilience” in the art of operation, maximize the level of resilience of the team and business, it would be possible to seize the greatest opportunities to both manage crisis and build the future, helping the business thrive either in the response and recovery phase of the crisis or under normal operating/growing conditions.

2. Recommendations for business in key industries

2.1 Agriculture and Agri-food sector

- **In H1/2020, the production value of the industry increased by 5.18% y-o-y.**

- **The expected GDP growth** rate of agriculture, forestry and fisheries in the first six months will reach over 1%.

- **Wood**: the export turnover of wood and wood products reached nearly USD 1 billion.

- **Fruits**: Although the export volume of high-quality products to Japan/US/Australia markets is not high, the sector is having great potential.

- **Rice**: a bumper year for rice exports and the price is high due to the world's increasing demand. Philippines and China have a high demand for food.

- **Fisheries**: facing difficulties in the EU market due to the application of a “yellow card”. seafood export activities are still maintained.

With the "optimistic" signal, the characteristics of goods from agriculture, forestry and fisheries are essential commodities, and viewed from the leverage of EVFTA, CPTPP, this is the time to optimize operations, increase competitiveness, build the products' brand name to thrive on the global "game".

**Recommended Actions:**
**Group #2 & Group #3** to dominate the game in our home field.
Case study

PHUC SINH GROUP

“King of Pepper” – The largest pepper exporter

HOPE

(HAWA Online Platform for Exhibition)
Online platform for wooden product exhibition

2. Recommendations for business in key industries

2.2 Hospitality Sector

The COVID-19 Wave 2 in Vietnam makes policies and efforts to stimulate domestic tourism impossible, tours cancelled and cultural festivals cancelled. Some attractions must be closed...

Recommended Actions: Action 1 & 2 for immediate results and strategic actions 4, 7, 8 & 9 will be the preferred selection for hospitality companies.

When the operations resume, Action 6 the affiliation between stakeholders should also be prioritised.

Specific Recommendations:

- Restructuring:
  (a) Services offerings: Family tour, small group tour, nature tour...
  (b) Sales & Marketing channels: e-commerce, online payment, online travel agencies (OTA), travel agencies for business, promoting tourism via digital marketing, social media...

- Local – tourist attractions – businesses join hands to create attractive promotion packages in terms of quality and price to attract tourists

- Large businesses (airlines, travel groups) need to cooperate and commit to:
  1) Do not sell unsafe and poor quality products;
  2) Do not deceive customers with false advertising;
  3) Do not sell at prices below the production cost.

- Encouraging affiliation between partners to create added-value services to customers, such as aviation service affiliated with accommodation service or travel agencies.
Useful Reports

Scan the QR code to download Deloitte Reports

Thank you
Session 2:
Digital Transformation and Structural Change towards
Inclusiveness and Sustainability

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Allow me to begin with a paradox. For the past three years I have lived in the middle of Silicon Valley, considered the world’s center of IT innovation. In a twelve kilometer radius of my office at Stanford you find the headquarters of Tesla, Apple, Google, Facebook, Palantir and Youtube. As well as countless other companies and commercial services making somewhat fewer billions. It is rightly seen as the center of the digital revolution that in less than three decades has completely remade our world, a world unrecognizable to anyone who was alive before it. Nearly all of these companies provide us with the services we use day in, day out, morning to night, while almost no one recalls that 20 years ago none of them existed and would have seemed fantastical just 30 years ago at the end of the Cold War.

Yet living in the heart of Silicon Valley, if I need to register a child for school or get a driver’s license or indeed have any interaction with any level of government – local, state or national – I most likely have to drive to a government office, wait or stand in line, often for hours. Followed by filling out forms and applications by hand, standing in line to hand them in and then waiting for weeks for them to be processed.

In short, unlike the wonders of the digital lives we live with our smartphones and apps, our public services and means of governance hardly differ from the 1950s and 60s. This is true in most of the world today, not only in the developing world but in many of the richest and otherwise most “advanced” nations.

Attempts have been made to bring governance into the 21st Century. Yet these have been inadequate, where at best, it is occasionally possible to accomplish a government or public service-related task online using a shaky and inevitably insecure website based on an email address and an easily hackable single password. If my data are stored on a government server, I don’t know how secure they are, or if, as in the case of 23 million past and present Federal employees in 2015, or as we read yesterday, another 200,000 from the Defense
Information Security Agency, (which also manages the IT systems of the White House), my data are simply stolen, presumably by a foreign power.

In other words, digitization of governance is not just about “putting government online”. Nor is it merely turning paper records into PDFs. Digitization of government ultimately means rethinking how governance works, a point I shall come to at the end of this essay.

In contrast to the United States and most of Europe, in my own country, Estonia, an individual who needs to interact with the government or public services needs to show up in person in only three instances: to get married, to get divorced or to transfer physical property. The latter, incidentally, is to prevent anonymous shell companies with dubious owners from buying up real estate, as we have seen happen in the UK, Canada and the US.

All other interactions and transactions between citizens and the state as well as between agencies and ministries in Estonia are digitized and can be and in almost all cases are done online, and as securely as at the highest levels of security currently available. In the almost 20 years we have used this system, Estonia has had no breaches, the system has never been “down”. Moreover, our system is set up so that the government may never ask you for any information it already has, our so-called “once only” regulation. Never for your address, your date of birth or anything else (see below).

All this even remains true, if all histories of cyber conflict begin with the massive DDOS attacks on Estonia by Russia in 2007. A DDOS or Distributed Denial of Service attack, restricts access to servers by maliciously flooding them with thousands of near simultaneous queries; such attacks do not, however, constitute a breach nor a compromise of data; no one gets inside. Indeed, our e-governance systems remained intact throughout the massive attack on our country. On the other hand, if we take Carl von Clausewitz’s, a German military general, definition of war as the “continuation of policy by other means”, then as the first public instantiation of using a cyberattack as a policy measure, writers rightfully see this as a first case of cyber war. It was the first public case, it was hardly the last. The attack was a continuation of policy by other means and most publicly. Yet Estonia’s digital government was not affected.

Let me address another paradox. Whenever I talk about digitization of governance I inevitably hear about “Big Brother”, government surveillance, the KGB, Stasi, Gestapo and since 2013 and Edward Snowden’s revelations, the NSA. These are legitimate fears, if you don’t do digitization of governance right.
The paradox is that, as Shoshona Zuboff describes in her book *Surveillance Capitalism*, all of that *paies* before the surveillance by all those same wonders of the private sector services and social media we all use. The collection of data on each and every one of us via Google searches, Facebook, the free apps on our phones (there are no free apps) and the cookies on almost every commercial website, not to mention your location data used for finding your way driving when you use Google maps… is simply astounding. Add to that in the US, where governance and public services are basically undigitized, you can find new forms of Public-Private partnerships: the US government is not Big Brother, it does not surveil you but instead, ICE simply buys individuals’ locations surveillance data from private sector surveillance companies to find you.

I shan’t go into this but it is important to point out that with all the scraped metadata and digital exhaust we produce and which goes into creating the highly granular profiles of each of us that tech companies sell for advertising, the primary the source of their income *You yourself do not know what that all that information about you is, or who has it, to whom it has been sold to or who is using it.*

Digital governance differs from all the data tracking and scraping done by private sector social media platforms, web page cookies and smartphone “apps” in that knowing who accesses your data is a key feature of its success.

**The Estonia case**

How and why did Estonia embark upon this path to digitizing government? Primarily it was a question of development, or more precisely developmental economics, catching up with the West. In 1938, the last full year before the Second World War, Estonia and its northern neighbor Finland, were calculated to have the same GDP per capita. Neither country was particularly well off, but their levels of development were quite close. In contrast, in 1992, the first full year after the restoration of Estonian independence, Finnish GDP per capita stood at approximately 24 thousand USD and Estonia’s 2800 USD per capita, an eight-fold difference.

Moreover, as is the case with all developing countries, Estonia faced Zeno’s paradox of the fleet-footed Achilles who must catch up with the slow Tortoise who has started before him. In this Paradox, like Achilles, we would never catch up because the tortoise or the Finns, and more broadly, the developed nations of the world, which of course would continue to develop anyway and so, forever remain ahead of us no matter what we did.
For me, the solution to catching up lay in digitization of the country. Inspiration came two sources, one from my own life and the second from understanding a major leap in technology, the first internet browser.

I was lucky enough to learn to program computers at what at the time was an unheard of age - in 1969 as a 15 year old in a one-off experiment by my mathematics teacher who was pursuing a PhD in math education at Columbia University. Fifty years ago, learning to program entailed renting a stand-alone teletype machine that ran perforated tape, a large telephone modem that involved sticking the phone receiver into 10 cm wide suction cups, which in turn was connected to a mainframe computer some 30 miles away. Yet our small group of high school students all learned to code in BASIC, a simplified version of FORTRAN. Writing a program to print a graph of $y=x^2$ and to see the parabola print out was one of the wonders of my 10th grade.

Later, in college, I saw an ad on a bulletin board to program a laboratory computer for 10 hours a week. Thinking what could be so difficult, I applied and soon found myself before a coffee-table size box. The computer was a PDP-8, the earliest of commercially sold small computers, used in 1970s laboratories and so named because of its maximum memory capacity of 8 kilobytes. Today, this would be the size of an empty e-mail message. Because of this limitation, all commands had to be written in ASSEMBLER language, a hexadecimal (base 16) programming language with all commands written in alphanumerical code. Yet with my knowledge of programming from high school, it was not an insurmountable challenge. Twenty-five years after learning to code, and despairing over how Estonia could ever catch up with Western Europe, I hit upon the idea that if I could do learn to do this as a high school student, then all children can and should learn to use computers.

The second source of inspiration for digitizing Estonia came in in 1993, when the first-ever web browser, Mosaic, came out. Mosaic went on sale for $29.95 or something like that – back in 1993 you physically had to buy the browser in a store and boot it up to your computer with floppy discs. Which, as a geek, I did. What struck me, though, when I finally got it to work, was that here was something so new, so different, yet at the same time so promising, where all countries, rich and poor – the US, Finland, Estonia, Germany, Japan were in the same position, starting out on a level playing field. That was when I realized that Estonia needs to digitize and that the way to do it was through the schools.

While the internet was just beginning, you could nonetheless see it work. I knew then and there that while it would take time, it would take off and...
dominate life. This was all a mere 4 years after Tim Berners Lee, father of the world wide web, had invented the Hyper Text Transfer Protocol, the “http” you see before every internet address and is what allows the internet to work. Sure, the West had its interstate highways and autobahns, its developed infrastructure in general, but here was something that would be everyone’s future, yet gave no one the advantage of half a century of development that Estonia had been left without. At least if we got on board quickly.

Out of these two insights, I proposed to the government that it begin to digitize. Knowing that this would take years, and based on how quickly my classmates and I had learned to program, I thought the best way was to first begin with young people proposed Estonia begin by bringing computers and computer education to all students. The idea carried the name Tiger leap, to connote that through computerization the country, or at least education would make a dramatic leap into the future. Fortunately, Estonia had an enlightened minister of education, Dr. Jaak Aaviksoo, at the time in 1995, who was willing to take risks and who pushed the government to accept my proposal to put computers in all schools and connecting them all up.

The idea was not met with universal approval. The school teachers’ union was vehemently opposed to computers in schools, saying they would ruin education; for almost a year not a single issue of the teachers’ union weekly appeared without an article lambasting the idea or me. Indeed, for much of the next twenty years, opposition parties seemed to pick on digitization as something to criticize – at least when they were in opposition.

Yet the government proceeded, using a 50-50 matching grant scheme I proposed, where municipal governments that were willing to pay for half the price of a computer would have the other 50% paid for by the national government. By 1998, three years later, all Estonian schools were on line with computer labs. Soon thereafter Estonian banks noticed the success and popularity of the project and decided to get involved. That was self-interest, pure and simple: every tiny village had at least two brick and mortar banks with accompanying staff, an increasingly expensive proposition that was simply not sustainable. Along with some government financing and strong NGO participation the banks developed a program to ensure every village had computer banks in municipal offices or libraries, also connected to the internet. In addition, the banks supported an educational program for older and rural to learn to do use computers and, of course, to bank online.
The big leap into the digital governance

With banking, access to the web and commercial web services, Estonia was by the end of the 1990s fairly advanced; access had increased dramatically. Yet, we were all using the standard forms of security, an e-mail address and a password and rickety architecture that has made the web as insecure and as clumsy as it is in most of the world today.

By the end of the century it had become clear that digitization was indeed a way to develop the country but that it needed to be done dramatically differently to take into account the myriad of issues that would arise were we genuinely to digitize governance. First of all, if we were to digitize governance, we needed the trust of a population that had just emerged from a half century of totalitarian control, of police state surveillance with disastrous consequences for those whose privacy was violated and discovered to harbor the wrong opinions. They had experienced all the things that people in the West raise as objections when I talk about digital governance.

The challenge was: How do you build a Digital Democracy? You know you have certain tools that previously did not exist but how do you do it? Moreover, it is not simply a matter of technology. That exists. The question is how do you do it politically? Digitization, after all, is a political decision. Do you start from scratch? Is merely replicating the paper world in digital form, which consists of putting paper documents into PDF form? What kind of social contract do you need? How can you redo governance that since the invention of bureaucracy 5000 years ago always has been a serial or sequential process, with a document going from one office to the next to be stamped or signed off on in the case of an “interagency process”. All these were questions that arose when trying to take digitization of governance to the next level.

Most importantly: what do you need to guarantee Trust? So, your citizens are willing to use the system. If there is no trust, there will be no uptake by the population. Trust is critical, the sine qua non.

What provides trust?

First and foremost, transparency. Long before one addresses the concrete issues of which technology to use, trust in digitization above all means is that you as a citizen have to know who can look at your data, what is legitimate to look at, what is not legitimate to look at and who in fact is looking at your data? Based on this you can begin to build trust in the system so your citizens are
willing to use the system. You need clearly to define which agencies may or not look at your data. Rushing to “buy a solution” will not resolve the legal and regulatory issues that inevitably will arise, upon which trust in the system will depend.

Nor must a country treat this as merely a legal or regulatory issue. What is culturally acceptable to make public also varies. For example, in Northern Europe we tend more to favor transparency and hence consider something such as property ownership, public information. In Southern Europe this is a taboo. In Estonia anyone can access someone else’s property records; in Greece you cannot. You need to design your system to follow your laws but also to meet the cultural expectations of your population.

The elements of Estonia’s system

Secondly, trust is based on the security of your identity, that no one can impersonate you, that no one else can change your data, that online only you are you. What then, are the essentials of Estonia’s system, which the UN also rates as Europe’s most cyber secure?

- A secure and unique digital Identity for every resident.

- An architecture based on both legal as well as culturally acceptable norms on what is private and what is public, along with mutual, reciprocal transparency. I can log on and find out who has been looking at my data.

- Data Integrity, meaning data cannot be changed without authorization.

That is why, since their initial implementation nearly 20 years ago, we have had no breaches. The solutions are technological, but the technology can, has, and as technology advances, will be changed, but the issues to resolve remain the same, regardless of technology. That is, whatever technology is used – and technology will change and improve – these same questions will have to be addressed, no matter what.

First, Identity: What is a secure Digital Identity? In the first place it belongs only to one person, i.e. it is unique. It cannot be duplicated; it cannot be forged. As opposed to the classic New Yorker cartoon, where one dog sitting in front of a computer screen, says to a second dog: “On the internet no one knows you’re a dog”, digital governance cannot work without a secure identity. Funny as the joke was 27 years ago, this is the fundamental problem of any interaction that is not face-to-face: you do not know who you are dealing with. Is the
government dealing with you over the computer? Or someone impersonating you? Are you as a user dealing with a public service or your bank? Or some entity pretending to be the government, a bank or a credit card company?

Every resident of Estonia is issued a unique, secure digital identity used to access all government services, be they health records, automobile registration, taxes, social services, property records and a myriad of private sector services, first and foremost financial services, securely.

Currently, until better technologies emerge, the most secure system is one where all communications are encrypted throughout the process of digital connection, known as End-to-End or E2E encryption, using a Public Key Infrastructure, a mathematical encryption model so unbreakable that when it was invented, the US National Security Agency tried to ban its publication in a scientific journal.

The second component to a secure identity is to require 2 factor authentication: in order to guarantee that someone on the internet is who he or she says they are, it is necessary to use a chip, possessed uniquely by the user, that matches a code known only to them: the principle is that something in your possession – a chip ID – and something only you know, your code, match. Only then will you be able to connect.

The unique digital identity is used to access all services through two-factor identification using a chip, either in an ID card or using a smartphone, which of course is also contains a chip, the SIM card, which needs to be programmed uniquely for the user. Communication with a Certification authority authenticates each interaction and allows access to all government and many private sector services through end-to-end encryption using public key infrastructure. The digital identity allows legal signing of documents, equivalent to a wet signature, together with a time stamp.

I should add here that sadly unwillingness of governments such as the US, as well as most leading, highly developed countries to implement this initial sine qua non of cyber security, a unique ID with 2FA and E-2-E encryption means that the most elementary cyber security of the public sector and critical infrastructure is doomed. Unencrypted communication with a single password linked to an email address cannot be the basis of any e-governance system.

A final aspect of digital identity necessary for a digital governance system to work is a political decision. Digital IDs must be mandatory. EU countries,
for example, are currently mandated to offer citizens digital identities in addition to the government issued ID documents all European countries have. Unfortunately, in most EU countries, digital identities are voluntary, optional IDs. As a result, uptake rates are low, typically 20-25% of the population possesses a digital identity. This in turn means there is no incentive for either government agencies or the private sector to invest in developing digital services: if 25% possess a digital identity, then 75% don’t and that proportion of the population therefore will continue to demand and require analog services and staff to process their paper applications and needs. The private sector, too, will opt not to undertake the investments required to offer digital services when a cost/benefit analysis shows minimal savings for the investment required to digitize services that is used only by some people.

This is a Catch-22. Without enough users there is no incentive to develop services; without services there is no incentive for citizens voluntarily to get digital identities. This is one step where the government needs the political courage or will to make digital identities part of any mandatory ID, either an ID document as in Europe or the driver’s license in countries such as the US.

**Architecture**

A secure digital identity, however, is only the first step. The second crucial aspect of any **digital governance system** is the architecture. Secure communication is too unwieldy and expensive for every government agency to implement on its own. So ministries and agencies need a single gateway that certifies the user’s identity, and then allows him or her to access what it is that they need. This is not as easy as it perhaps sounds. How do you connect the various ministries and agencies and the citizen? Who should be permitted to see what? Which agency can see tax records? What can the police be able to see? What is completely public information? What is strictly private?

This is not a trivial problem to solve, for it means designing and connecting all the various public and private sector entities in a way that corresponds to the nation’s laws. Indeed, this is the most time-consuming task – building your digital data access architecture and insuring the sought are in the proper digital form. It depends on the country’s legal, regulatory and in fact the cultural constraints of a country. Yes, the citizen must be allowed to see his own data – his health care records, his tax and property records. But you need also to ensure how agencies can legally access the information they are entitled to access, but not access what they are not entitled to.
To ensure that, a country needs also to keep logs of all access so regulatory agencies and the citizen can always check to see who has looked at someone’s data. The key here is transparency for the citizen. I as a citizen can see who has accessed my data, which largely solves the biggest fear of citizens: privacy. I know who looks at my data. It is also necessary for the government to be able to police its own officials.

Ministries and agencies also need to digitize their records so that citizens and agencies can access them. Undigitized data or records that remain on paper represent data people cannot access and thus remain outside the digitization process. This process of digitizing records too, will take time.

Once data and record are digitized, however, the government can implement an additional and crucial benefit of a well-designed architecture where access requires identification with a strong ID: the once only-rule. This rule or regulation means that no data that already exists in the system may be asked from the citizen. Because data bases all depend on the unique identifier of a citizen user, it is possible to eliminate the tedious duplication of effort in interacting with the government. The standard procedure in most countries where various public services constantly asked for one’s address, phone number, date of birth, etc… is eliminated. When I fill out my tax form, all relevant data is already there: my salary, my tax-deductible charitable donations, my dependent children. This is a fundamental source of citizen satisfaction with digital governance.

One final point on architecture of data exchange. Estonia’s architecture, the digital data exchange system called X-Road, an open-source, non-proprietary platform, has now been implemented to one degree or another by 15 countries. Indeed today, using this platform, Estonians and Finns can take out their medical prescriptions in any pharmacy in the other’s country. This, I believe is the wave of the future, and which would begin to take public services to the level of the private sector – connecting services across borders and doing so on a highly secure interoperable platform.

The particular architecture used, however, is not important. Since the creation x-road almost 20 years ago, a number of other systems have been devised. A government needs to decide which is best, though open-source, non-proprietary software costs less and gives governments far more flexibility. What is important, is that connections between agencies and citizens follow the laws and regulations of the country, exactly as is done with traditional paper-based bureaucracies.
Privacy and Data Integrity

Probably the greatest concern raised by people when discussing e-governance is the question, but what about privacy? Generally, I answer that given the mutual and reciprocal transparency of the Estonian system, where I can see who has looked at my data, I feel more secure about my privacy with a digital system than with a paper system, where there few if any records of who has accessed them. Consider the case of the Formula One racing car driver Michael Schumacher, one of the best-known public figures in Europe, who suffered serious brain damage in a horrific ski accident in 2013. Within hours of the accident the yellow press was full of pictures of his x-rays and medical records. It was impossible to trace where these came from because they were paper records. In a properly digitized system, this would be impossible. All records are digital and access to them is always restricted to authorized doctors via their ID and every person who does access is logged. So too, in Estonia, property ownership records are public; anyone can look at what property I own and indeed, when I was in office, journalists frequently peered in those records, perhaps in the hope of finding a scoop. Privacy in other words, relies on transparency, the understanding that all access is logged.

People’s emphasis of, if not fears about privacy in digital governance, however, misses a far more serious issue that accompanies digitization: data integrity, the third pillar of trust and security in public services. Privacy is the principle that no one without your permission can see your data; data integrity means that no one without your permission can change it. Too little attention has been paid to this crucial difference. Yes, privacy is important and you would be right to be concerned if someone accessed your health care records or your bank account. What, though, if someone changed your health care record? If your blood type for example, were changed, or the amount of money in your bank account. We should all be far more concerned about data integrity than we are.

This does not simply apply to personal data. It also applies for example to laws and court cases, which exist only in digital form. Imagine if someone changes a law or the particulars of a court case. How would anyone know if it has been changed? Since 2008, 12 years now, Estonia has put all critical data on a private distributed ledger, or private “blockchain” as it is commonly known. The population register, health, property and court records, tax and pension records are all secured as well. This is a vital step for digitized public services to take: digital records are of course the heart of any modern society and we are all
concerned about breaches. Yet it is not enough. We need to pay far more attention to data integrity in case systems are breached.

**Digitization changes 5000 years of governance**

The key to understanding how digitization represents a dramatic change in governance lies in the nature of the state. The development of the state – more or less at the same time 5000 thousand years ago in China, Mesopotamia and Egypt – emerged in parallel with writing and record-keeping. Indeed, we can posit it was record-keeping, necessary for management of the proto-state, that led to the development of writing. Proto-governments needed to collect taxes, needed to know how much grain was grown, how many men were available for military service. All functioning states need to keep records, and management of a state required a bureaucracy, a set of people keeping track of affairs of state, who could make sense of records. Writing as literature, be it the *Epic of Gilgamesh* or the *Analects of Confucius* came later.

To understand the magnitude of the revolution offered by digitization we need to understand how governance, or in other words, the management of the state, which in this case can be a city, a province or a state’s smaller units, has always been a *serial* or *sequential* process.

Be they in a modern (but undigitized) state in digital form as excel tables or pdfs, or on paper, papyrus or cuneiform clay tablets, since the beginning of the state, documents, records, statistics, orders have been processed sequentially or serially or one step, one action at a time. A document is submitted to one office (agency, ministry, etc.), where an Egyptian scribe or Department of Motor Vehicles clerk processes it, enters data by hand or computer and then sends it – via courier or interoffice snail or e-mail to the next office, whence it would be sent to another bureaucratic entity. The process could continue through any number of offices. In the United States State Department, for example, the approval of a government position on an international issue could easily require 15 different offices to sign off on it, (not all of them necessarily in the State Department itself) before the statement could be issued or become policy or be used in a speech by the President.

Or consider what parents have to go through when a child is born. First one has to obtain a paper birth certificate. You may have to provide a marriage certificate to ensure the child carried the father’s name. With the birth certificate, one can apply for health insurance. In many countries you need to register the newborn as a resident. One needs a doctor. You may need to apply
for social services; if your country offers it, as many countries do, also to apply for paid maternal leave, etc. The necessary approvals are processed in serial fashion but not by the government. Rather, you have to do it yourself. A copy of the birth certificate goes to the relevant official in an agency. Before the computer era the official would have to look up and check the parent’s data in a file cabinet; today, the bureaucrat can possibly consult a computer database. Once approved, the new mother or father then proceeds to the next stage of the process.

In a digitized society, all the serial steps are taken in parallel. Each agency or department or sub-department receives the information at the same time and does whatever needs to be done. The foreign ministry official gives his approval to a statement, a motor vehicle official verifies an applicant has no outstanding speeding tickets. The birth of a child is registered digitally by the hospital, all the parent has to do it tell the hospital the name of the child. From there, the state issues a birth certificate, registers the child’s place of residence, offers a doctor, all relevant social and health services begin automatically and the parents need to indicate whether the mother or father will take family leave. All instantaneously. The processing is done in parallel. The relevant data for the parents are already in the relevant registries, the computer merely makes a binary decision: is the parent or child eligible for one or another service.

Parallel processing is the key to understanding why digitization of governance dramatically increases efficiency and reduces time wasted on bureaucratic, human-mediated sequentially performed administration.

This is where the savings in time come in: dramatically reducing the work needed to run governance, but more importantly the time and labor of being a citizen. This is also probably the most important lesson for governments and their leaders to take on board for it will change governance forever.

**Conclusion**

What can be learned from all of the above? Five takeaways.

1. Digitization of governance will work if it has the support of the public. Not of all of the public will necessarily come on board, but it is important to have the support of key actors in the private sector and among segments of the population such as youth and the technical elite, i.e. engineers, scientist, academics. Banks are a natural ally since digitization led by the government makes transactions more secure than methods they could use but equally
importantly, allows banks to cut both labor and rental costs. Indeed, the banking sector is and will be the one part of the private sector for which digitization offers the greatest advantages in security as well as savings.

Youth support helps with mobilizing society and with their energy to modernize and try new things are always good to have involved in the process. All elements, academics/technical elite, the private sector and youth, were instrumental in building popular support for digitization in Estonia.

2. Governments need to make digitization a public priority. They succeed when digital transformation is a stated policy goal, led and articulated as a priority from the top by the head of state and/or government as the political driver of the process. Because digitization is an all-government process, everyone in the government – ministers and senior officials need to be on board on digitization. Too many countries fail when they push the task on to one entity, appoint a “digital minister” on an equal footing with all other ministers. This almost guarantees failure: other ministers will ignore what the digital minister says, while efforts to digitize ministries will always have the excuse for slow progress that it is the “digital minister’s problem, not mine”. The only way to avoid this is for the primus inter pares in the government to be at the head of the process, at least politically. Practically and technically, the head of state/government would be the political driver, but his appointed project director is the one to manage the process. The project director is the expert in charge of the process and should be only subordinate to the head of state or government who has the executive authority to make it happen.

3. Digitization succeeds when governments quickly offer public services that the population likes, e.g. easy tax filing, digital prescriptions, anything that simplifies interactions with bureaucracy (registering births, getting a child’s health insurance, registering a car or renewing drivers licenses). Simply digitizing government so that ministries themselves are more efficient but without offering better services to the public will be a digitization program with little public appeal. One way to determine what will be most popular is to look at which government offices are the ones where you have lots of citizens waiting for something or for a service, or where the backlog for processing citizens’ applications is long.

4. Digitization stalls when there is a lack of political will on the part of the government. Governments fear to take the initial steps that may not be popular and so demur. For example, many governments in Europe and in the US were or
are afraid of issuing mandatory secure digital IDs. Since this is a *sine qua non* for any kind of secure form of digital governance, this simply means digitization will fail. A second failure is the inability to communicate adequately to assuage irrational fears (“This will destroy privacy”, “This is Big Brother”, etc.) and explain that done right, there is no need to have these fears.

5. This is where political courage and leadership come in. Changing the way people do things is always difficult. Political leaders feel unsure of themselves and don’t want to take steps they fear will be unpopular. Civil servants used to one way of doing things will be reluctant to change. Citizens will not necessarily understand what the new policies mean.

For this, the political “leadership” of a country needs to show genuine *leadership*, explaining what digitization means, how it works, what it will for people. This also means leaders should at least have an understanding of the basic aspects of what is entailed and if called upon explain why which steps are being taken.

None of this will be easy. I personally was attacked for digitization for almost ten years continuously, beginning with promoting computerization of the schools through the whole digitization of governance process. Generally, it was the political opposition that did this. A decade later, though, all of the changes enacted in Estonia had come to be considered “normal”. And, as was inevitable in these cases, people immediately forgot who had been pushing for digitization and came to believe it was natural to do things digitally and that all this would have happened “anyway”. Two decades after proposing school digitization, the same one-time opposition that criticized me itself was in power and now goes around the globe proclaiming how Estonia is “the world’s first Digital Republic”.

Finally, digitization will happen around the world. The covid19 crisis and the need for reducing physical contact and crowding in government offices is already pushing digitization faster than one would have thought before the crisis. Governments that move quickly will be ahead of those that stall and drag their feet. Those countries will also be better ready to deal with new challenges that inevitably arise digitized or not.
DIGITAL TRANSFORMATION FOR SUSTAINABLE DEVELOPMENT

AUTHORITY OF INFORMATION TECHNOLOGY APPLICATION
MINISTRY OF INFORMATION AND COMMUNICATIONS

Content

DIGITAL TRANSFORMATION: AN OVERVIEW

NATIONAL DIGITAL TRANSFORMATION PROGRAM

STRATEGY FOR DIGITAL GOVERNMENT DEVELOPMENT

RECOMMENDATIONS
DIGITAL TRANSFORMATION: AN OVERVIEW

COVID 19 - CHALLENGES AND OPPORTUNITIES

IMPACTS OF COVID - 19:
- Interruption and disruption of the activities of the government, businesses and people’s lives.
- Disruption of supply chains within the country and abroad: tourism, manufacturing, foreign trade, education, public service provision, culture, etc.
- Interruption of cooperation between/among countries

- Formation of digital skills. People get into the habit of using digital devices to interact, study and work.
- Change in awareness of the whole society about Digital transformation

WORKING IN DIGITAL ENVIRONMENT
Formation of awareness, habits and skills for digital transformation; evidence of the efficiency and benefits of digital transformation.

COMMUNITY AND ENTERPRISES JOINING TOGETHER
Developing platforms and applications for preventing and fighting Covid-19
Developing technological platforms to support the continuity of social and economic activities and provision of services in digital environment: online meeting, online learning, remote medical consultation, etc.

INTRODUCING POLICIES AND GUIDANCE FOR MAINTAINING ACTIVITIES IN DIGITAL ENVIRONMENT
- Launching the promotion campaign of the application of Vietnamese technologies for the digital life;
- Promoting the provision of level-4 online public services;
- Working together with enterprises to develop digital services and encourage the society to use them.
What is digital transformation?

**Digital transformation** is the employment of data and digital technologies to comprehensively change how we live, work and how individuals and organizations produce and create value.

Digital Transformation is comprehensive and all-encompassing

Quick
Convenient
Easy

What we need to do

What we see

- Digital skills
- Data interoperability
- Technologies, applications
- Information safety
- Digitalization
- Investment efficiency
- Process design
- Embracing novel things
Digital transformation: opportunities and challenges

Disruption of old relations; emergence of new, unprecedented relations
Lack of human resources; people do not have digital skills
Cyber security and safety, personal data, personal privacy

Opportunities
- Efficient and effective digital government with more transparency and less corruption
- Digital economy creates new values and brings about new drivers of growth
- Digital society with equal opportunities to access knowledge and services

Who is responsible for digital transformation?

Digital transformation is a comprehensive and all-encompassing change process. For an organization, because digital transformation means a change, it should be initiated by the leader - the head of the organization. No one else dares to do or can do so. On the other hand, because digital transformation is comprehensive and all-encompassing in nature, all members of the organization should be involved in the process.
How to implement digital transformation?

1. Changing awareness and the way of thinking
2. Developing digital government
3. Leading digital transformation in each of the sectors
4. Developing digital enterprises

NATIONAL DIGITAL TRANSFORMATION PROGRAM

- National strategy for digital government development
- National digital economy development program
- Scheme for supporting digital transformation in SMEs
- Scheme for training and developing human resources for national digital transformation
# Digital Government: Current Status

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| **1** | The level of concern of the leadership | - The Prime Minister is the Chairman of the National Committee on E-Government  
- Ministers of line ministries and Chairmen of Provincial People’s Committees are the Heads of the Steering Committees on E-government of their respective ministries and provinces. |
| **2** | Policy, strategy on Digital Transformation, Digital Government | - National Digital Transformation Program  
- Formulation of the Strategy for Digital Government Development |
| **3** | Human resources in public agencies | The system of dedicated agencies from central to local level |
| **4** | Budget for information technology | Currently. < 0.5% of the total budget expenditure |
| **5** | Computer for staff | Most staff members are equipped with computers |
| **6** | National Transmission Network | Dedicated Data Transmission Network of Party and State agencies and organizations |
| **7** | Local Government Service Platform (LGSP) | 22 line ministries and 55 provinces and cities have Local Government Service Platforms |
| **8** | Email | Line ministries and provinces have their email systems |
| **9** | The System of Administration and Document Management | Electronic documents are transmitted across levels of government from central to local within a national unified system. |
| **10** | Public service portal | Establishment of the National Public Service Portal connected with Public Service Portals of ministries, provinces, cities. |
| **11** | Percentage of online public services | September 2020: 19.10% public services are provided online at level 4 |
Digital Economy: Current Status

**The number of IT companies:** There was an estimated number of 45,500 companies as of June 2020 (up 11% compared to 2018)

**Total revenue of industrial ICT enterprises:**
- Total revenue of industrial ICT, electronics, telecommunications enterprises (both domestic and FDI) in the first half of 2020 was estimated to reach nearly 50 billion USD, an increase of 2.2% year-over-year.
- Of that total figure, the revenue made by FDI sector stood at 47 billion USD, accounting for 95% of the total (the annual revenue for 2019 was 107,905 billion USD).

**Estimated size of digital economy:** 12 billion USD in 2019, up 09 billion USD compared to 2015.

Digital Society: Current status

The number of active mobile cellular subscriptions: 126,946,598
The number of mobile cellular subscriptions that only use call and message service: 60,591,062
The number of mobile cellular subscriptions that use data: 66,355,536
The number of fixed broadband Internet subscriptions: 15,709,685
“Vietnam becomes a digital country characterized by stability and prosperity and a pioneer in experimenting with novel technologies and models; the management and administration activities of the Government, the production and business practices of enterprises and the way people live and work are renovated fundamentally and comprehensively; the established digital environment is safe, humane and all-encompassing.”
Vietnam is to join the top 70 in E-Government Development Index (EGDI) rankings among 193 nations.

**LEVEL-4 ONLINE PUBLIC SERVICES**
80% of public services are to be available online at level 4 and can be accessed through mobile devices.

**WORK DOSSIERS**
90% of ministerial- and provincial-level work dossiers; 80% of district-level ones and 60% of commune-level ones are to be processed in virtual environment.

**REPORTING SYSTEM**
100% of regular reports, periodic socio-economic indicators, statistical reports are to be integrated in and shared on the information system for reporting of the Government.

**NATIONAL DATABASE FOR DIGITAL GOVERNMENT**
100% of the national databases which lay the foundation for e-government development are to be completed and connected and shared nationwide; the data stored and managed by state agencies are to be gradually opened.

**DIGITAL ENVIRONMENT**
50% of inspection activities by state agencies are to be carried out through digital environment and the information systems of supervisory authorities.

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**Digital Economy**
- Digital economy is to account for 20% GDP.
- Digital economy is to account for at least 10% of each sector.
- Productivity is to increase by at least 7% per annum.
- Vietnam is to join the top 50 in ICT Development Index (IDI) rankings.
- Vietnam is to join the top 50 in Global Competitiveness Index (GCI) rankings.
- Vietnam is to join the top 35 in Global Innovation Index (GII) rankings.

**Developing Digital Economy, improving the competitiveness of the national economy**
- Digital economy is to account for 20% GDP.
- Digital economy is to account for at least 10% of each sector.
- Productivity is to increase by at least 7% per annum.
- Vietnam is to join the top 50 in ICT Development Index (IDI) rankings.
- Vietnam is to join the top 50 in Global Competitiveness Index (GCI) rankings.
- Vietnam is to join the top 35 in Global Innovation Index (GII) rankings.

**Digital Society**
- More than 80% of households and 100% of communes are to have access to fiber optic internet infrastructure.
- Universal usage of 4G/5G services and smart phones.
- More than 50% of the population are to have accounts for electronic payment.
- Vietnam is to join the top 40 in Global Cybersecurity Index (GCI) rankings.

**Developing Digital Society, narrowing the digital divide**
- More than 80% of households and 100% of communes are to have access to fiber optic internet infrastructure.
- Universal usage of 4G/5G services and smart phones.
- More than 50% of the population are to have accounts for electronic payment.
- Vietnam is to join the top 40 in Global Cybersecurity Index (GCI) rankings.
Tasks - Measures

a. Creating the foundation for Digital Transformation

1. Changing awareness
   ✓ Heads of organizations take direct responsibility for digital transformation;
   ✓ Maintaining the effective functioning of Digital Transformation Alliance;
   ✓ Creating the Identity Pack for the Digital Transformation Program;
   ✓ Experimenting digital transformation.

2. Institutional building
   ✓ Adopting the Sandbox approach;
   ✓ Improving the legal framework

3. Developing digital infrastructure
   ✓ Broadband infrastructure;
   ✓ 5G network;
   ✓ VNIIX connection;
   ✓ IPv6 adoption;
   ✓ IoT infrastructure;

4. Developing digital platforms
   ✓ The national system of electronic identity and authentication;
   ✓ Electronic payment systems (mobile money);
   ✓ Digital platforms for sectors

5. Establishing trust, ensuring cyber security and safety
   ✓ Code of conduct in digital environment, digital culture;
   ✓ Cyber security and safety systems.

6. International cooperation, research and development, and innovation in digital environment

b. Developing Digital government

1. Developing the infrastructure for digital government
   ✓ Dedicated Data Transmission Network, data centers;
   ✓ Restructuring the IT infrastructure of line ministries and provinces with the application of cloud computing.

2. Accelerating the implementation of resolutions, programs, plans, schemes, projects for e-government development


4. Developing, perfecting the Reporting Information System of the Government

5. Adopting new technologies to provide best experiences for users

6. Carrying out pilot implementation of some services on smart city platforms
c. Developing digital economy

Developing digital technology enterprises of four kinds

Shifting from product assembly and processing to "Make in Viet Nam" manufacturing

Developing digital contents, digital communications products, digital advertisement, creative industries

Formulating and implementing a scheme for supporting SMEs, enterprises in traditional business lines and manufacturing enterprises in digital transformation

Developing e-commerce: Establishing a healthy e-commerce market; Developing value chain-based e-commerce platforms; Establishing the system of electronic postcode down to the household level

Tasks - Measures (cont.)

d. Developing digital society

1. Training of at least 1000 experts on digital transformation in different sectors

2. Training, re-training of leadership skills and digital transformation management skills for heads of organizations

3. Enhancing the training of IT bachelors and engineers in the universities; introducing the training of new digital skills into the curriculum.

4. Developing STEAM/STEAME education

5. Training, re-training, further training of digital skills for employees; creating massive open online courses (MOOCs)
e. Digital transformation in priority sectors

Digital transformation in Healthcare
Digital transformation in Education
Digital transformation in Finance - banking
Digital transformation in Agriculture
Digital transformation in Transportation and logistics
Digital transformation in Energy
Digital transformation in Natural resources and Environment
Digital transformation in Manufacturing

"Digital government is a pillar in the socio-economic development model; digital government is closely connected with digital economy and digital society, which helps to develop its capabilities to serve and enable to the level of being customized to the needs of users and enterprises; public administration and management is renovated based on data analysis."

Vision 2030
Orientations for digital government development

Basically completing digital transformation in Party and State agencies and organizations, Viet Nam Fatherland Front, and socio-political organizations

Building e-government, starting to develop digital government

Top 4 of ASEAN in United Nations E-Government Development Index (EGDI) rankings

Having digital government in place

Major objectives for 2025
- The operation, decision-making and digital service delivery of the government is to be optimized to the needs of citizens and enterprises based on data.
- Open data
  - Top 70 in the United Nations E-Government Development Index (EGDI) rankings
  - 80% of state agencies are to provide open data
  - 50% of inspection activities by state agencies are to be carried out through digital environment

Major objectives for 2030
- Digital government with multiple components and multiple channels for providing new digital services based on ecosystem.
  - Top 50 in the United Nations EGDI rankings
  - 50% of public services are to be provided with the engagement of non-state organizations.
  - 30% increase in data-based creative services
  - 70% of inspection activities by state agencies are to be carried out through digital environment

Legal framework

Shared infrastructure: Transmission | Storage | Databases | Platforms

National services and applications

Human resources | Communication | Collaboration with enterprises | Monitoring, measurement | Restructuring operational processes | Financing

Draft Digital Government Strategy up to 2025, with orientations to 2030

Digital government is a pillar in the socio-economic development model; digital government has the capabilities to serve and enable to the level of being customized to the needs of people and enterprises based on data analysis.
RECOMMENDATIONS

Recommendations

Give priority to resources for implementing national digital transformation:

1. At least 1% of the annual budget of the government should be earmarked for the application of information technology.
2. Supporting programs from the World Bank, UNDP, international organizations.

Developing a strategy for digital government: The National Digital Government Strategy should be soon submitted to the Prime Minister for approval, so that line ministries and provinces can have the basis to develop their annual plans for implementing digital government.

Developing infrastructure for Digital government: line ministries and provinces should combine investing into infrastructure with leasing infrastructure.

Developing human resources for Digital transformation:

1. The Government should give priority to human resource development.
2. Support for human resource development from international organizations.
Assigning responsibilities in digital transformation: Line ministries and provinces should officially assign responsibilities in relation to digital transformation to dedicated IT units and Departments of Information and Communications soon.

Regional digital transformation centers: Each key economic region should establish a regional digital transformation center as the core for digital transformation in the region.

THANK YOU FOR YOUR KIND ATTENTION!

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WHAT IS AI?

Artificial intelligence (AI) is a wide-ranging branch of computer science concerned with building smart machines capable of performing tasks that typically require human intelligence.

- Object Detection
- Facial Recognition
- Voice Understanding
- Recommendation system
- Robotics
“AI is capable of radically increasing productivity across industries and enabling entirely new solutions to unsolved problems; in some ways it can be compared to the next wave of electricity.”

Source: The Innovation Fund Denmark and McKinsey & Company, 2019
Al and the sustainable development of Vietnam

- Solving Vietnamese problems: Vietnamese text & voice, urban transportation, health care, education, manufacturing, etc.,
- Solving issues of national security: information confidentiality, biometrics
- Creating a competitive advantage for Vietnam in the international arena when mastering new technology

AI Development in Vietnam: Success Factors

- Talents in both quality and quality
- Fundamental & in-depth AI research
- Training AI for younger generations
- A ecosystem fosters innovation in AI product development & commercialization
ABOUT VinAI RESEARCH

- A leading AI research lab in Vietnam.
- More than 100 staff members.
- Offices in Hanoi and HCMC.
- Global ambition.

Our Missions

1. Conducting world-class breakthrough research in AI and machine learning, effectively putting Vietnam on the AI world map.
2. Building a concentration of leading AI expertise for VinGroup and Vietnam.
3. Providing consultation and knowledge technology transfer to VinGroup and other strategic partners.
4. Identifying and training the top future AI talents for Vietnam.
Conclusion

- The gap between AI research and application is relatively close. Investing in AI research and training is essential for a country.

- Develop policies to promote the enterprise ecosystem to develop products and apply AI.

- Building a legal corridor for data management and sharing within enterprises, between the state and related units.
Preface

Digital transformation and the fourth industrial revolution are having an enormous impact on the economy and society. Many questions are waiting for answers such as, What does digitization mean for the workplace?, What comes, what goes, what stays?, Will jobs be lost? Who will be affected? What should young people do to prepare for their job?

Many people are concerned and fear for their jobs, others see significant opportunities and growth potential. Fact is, that a positive development of the digital transformation does not come by itself, it is a social and economic design task. Everyone contributes to this: each individual, all employers, the education sector, politics and the economy.

IT infrastructure is the basic element of the digital economy and thus essential to any Digitization or Digital transformation. Broadband infrastructure enables economic growth by providing easier and faster access to information and by increasing efficiencies and productivity in the economy. The underlying broadband infrastructure has direct impact on jobs, education, efficiency, and an inclusive economic growth.

If technology is to be a force for development for everyone, it must reach everyone. Without digital connections and without digital devices, people can't participate in digital work platforms, benefit from new technologies in education, or engage with government services online. Women, people with lower levels of education, people in rural areas and people in poverty are usually those who lack digital access.

1. Challenges to digital transformation / digitization and implications of digitalization on employment/labour market and digital divide

Digitization is fundamentally changing production and value creation processes as well as job requirements. Covid-19 ensures an even stronger push towards digitization. Employees will work together in their workplaces with networked systems that act, learn, and make their own decisions. Digital technologies open up new creative opportunities. Industry boundaries are dissolving, new industries are emerging and established business models are changing. The
amalgamation of production and service to form a hybrid value chain places new demands on traditional industrial companies and employees. Parts of the population could feel “forgotten” or disconnected from the fast pace of digital development also in rural areas.

1.1 What changes can be expected in terms of work content and job profiles?

Digitization is changing the equipment we work with. It ensures the disappearance of analog information preparation and processing\(^1\). Wherever information and knowledge are processed and generated, there is a natural potential of digitization. Coupled with networking and the further development and miniaturization of devices, this is also accompanied by a mobilization of workplaces and locations. As work equipment changes, the activities of employees in interaction with these increasingly intelligent devices\(^2\) changes. Applications allow more and more complex testing and search or process-controlling activities. The extent to which human work content is eliminated and ultimately also leads to substitutions, can only be answered on a case-by-case basis. The cooperation between humans and robots is already visible in many companies, and the implementation of further developments and improvements (Industry 4.0) are already visible.

Ultimately, however, it is always about the questions: which types of human work activities are transferred to the computer or robot, in which division of labour does it take place, what possibilities of relief are there, or even about the substitution of work.

1.2 How are work locations and working hours changing?

One consequence of digitization at work is the flexibilization of the place of work, the working hours and the quantitative increase and differentiation of new forms of employment. Place of work is more flexible and/or less regular. Covid-19 has driven work-from-home or on the go collaboration in a virtual team or virtual work groups across multiple locations up to virtualized cooperation of entire companies which represent a common corporate identity and service portfolio to the customer.

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\(^1\) Paper documents have been replaced, automated tasks by ERP, etc.

\(^2\) IoT Internet of Things
Making Digital Transformation Inclusive

The most important tools are the networked computer and knowledge and experience of the educated workers themselves. One form of flexibilization are modern office management concepts, in which the employees forego fixed assigned workplaces and occupy them if necessary. The latest trend are “coworking spaces”. Another form is the flexibility of the scope and the time allocation of work of an employee\(^3\). The guiding principle is to adapt the volume of work to the current need or to orient the personal volume of work per time unit of the person performing the work to his needs and possibilities. The third form of flexibilization is the shift of the entrepreneurial risk of the permanent commitment from the workers to the workers themselves that reduces the fixed costs if a workload-related payment is realized.

1.3 How are organizations changing?

Digital transformation and its competitive challenges will lead to an increasing realization of agile organizational structures, at least in parts of companies and organizations. Agility is a principle and at its core it describes an extremely customer-oriented approach, an iterative approach and the associated attitude of the people involved. In these descriptive dimensions, agility is an important answer to the digital environment in which economy and society are today: quickly changing, complex, internationally networked, extremely dependent on technological, business model-related and social innovations reliant. Working in agile principles requires a great deal of openness to accept changed requirements quickly, to try things out, to say goodbye to the assumption that you can "plan everything through" and to always have to go through previous lengthy, often hierarchical coordination paths. At the same time, agile principles rely on the broad activation of the energy and ideas of as many participants, employees and customers as possible.

1.4 What does that mean for leadership?

Orientation and inspiration, opportunity-oriented support for employees in terms of resource development, as well as involvement and loyalty assurance can be defined as core management tasks in flexible, networked and rapidly changing working environments. The equation is: The more flexible and agile the work, the more disciplined and interrelated the work has to be organized between those involved. For managers, this means learning to let go and actively involving employees.

\(^3\) e.g. part-time models, marginal employment, fixed-term forms of work, flexitime regulations, long-term accounts and shift work, etc.
1.5 What does digital transformation mean to education, qualification and training?

The demands on the education system are changing fundamentally. Today's education systems are based on the factor "knowledge". In today's digital world of work, knowledge is less important than the ability to adapt and learn permanently. This applies in particular to soft skills such as creative thinking, process-thinking, teamwork and problem solving, which so far have rarely been taught and promoted in schools and universities. Education and the development of employees' skills is of immense relevance, especially in this digital and dynamic time. Professional training is therefore becoming more and more important as it has to enable employees to keep pace with rapidly growing technological developments.

The current discussion reflects the significant changes that are essentially triggered by IT. It is therefore obvious to demand and promote digital competencies. Keywords such as data management, cognitive computing, the programming of networked production and control systems, the promotion of basic STEM subjects, and much more come up here. Having many statistics the last four years in mind IT competencies regularly land in the top places in corresponding queries on further training needs but at the top are mentions like readiness for lifelong learning per se, stronger interdisciplinary thinking and acting, the ability to support and recognize innovations, enduring uncertainty and give people orientation.

In a more volatile world, all those skills will be required that on the one hand support us to initiate and promote change, but at the same time endure uncertainty and still provide orientation. And to a large extent these are (self-) leadership skills.

2. International experiences in Digital transformation/digitization, education and labour market

2.1 Current Developments in Germany and Europe

In Germany and many European countries, the advancing digitization and its consequences have already arrived in the everyday working life of most employees, even if there are clear differences between different qualification
levels and occupational segments. If you look at the experiences that employees have had with the introduction of new technologies in the workplace over the past eight years, then there is increasing inequality on the labour market: employees whose jobs are becoming more and more demanding due to new digital technologies, oppose those whose work demands less and less skills. The positive trend clearly outweighs the negative trend at moment. With a not insignificant proportion of employees, however, the job profiles are becoming ever simpler. Less qualified employees and those with physically demanding activities are more often affected. At the same time, these two groups in particular benefit disproportionately from the fact that new technologies relieve them physically. In contrast, a large majority of employees report that technological change is leading to increased workload and information overload. So, while the physical workload decreases, the burden increases due to increasing demands on the cognitive and non-cognitive abilities of the majority of employees. It is still unclear what consequences this will have for the mental and physical health of employees in the future.

However, it is to be expected that the strain on health will increase in general. The challenge for the future will be not to let the gap between the winners and losers of digital change become too great, be it through further training offers or support for a professional reorientation that is carried out by the state or private companies or online-platforms. Last but not least, excessive stresses caused by the general work and information compression should be counteracted by means of operational and inter-company measures\(^4\).

2.2 Political framework in Europe and Germany

**Shaping digital change:** The BMWi\(^5\) is contributing to Digital transformation through economic policy frameworks and targeted support for companies. “We want to see this change as an opportunity to create more prosperity and a better quality of life for the citizens, while at the same time making it socially acceptable and in harmony with our basic values”.

**Creating a European and global framework for digitization since 2015\(^6\):** Industry 4.0 and the digital economy cannot be national issues. Mutual exchange and comparable framework conditions are important prerequisites for companies

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\(^4\) Ministry of Labour and trade union reports for the period up to 2020
\(^5\) Bundesministerium für Wirtschaft, www.bmwi.de
\(^6\) https://www.bmwi.de/Redaktion/DE/Dossier/digitalisierung.html; (2015); platform always actualized
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to remain competitive worldwide and to be able to cooperate on a European and global basis.”.

In the program "Innovations for the production, services and work of tomorrow" with the program line "Future of Work" since 2018, the BMBF7 supports the establishment of a nationwide structure of regional competence centers for work research, especially at universities of applied sciences, as regional partners for companies. In addition, fields of work design that are closely related to new (digital) product developments and business models based on digital tools are funded.

„Shaping Europe's digital future: The digital transformation should work for all, putting people first and opening new opportunities for business. Digital solutions are key to Education, Health-care and also fighting climate change and achieving the green transition”8.

2.3 Education system and training offers, and International online-platforms

a) Dual Vocational Training in Germany

In Germany there is a special way of learning your profession. The dual training at the “vocational” educational level consists of a lot of practical and theoretical work and takes between two and three and a half years. This combination prepares trainees particularly well for what companies expect from them: not only theoretical knowledge, but also practical experience in applying this knowledge. 350 recognized training courses are offered always updated, especially many trainings in the digital sector9.

b) Dual Universities in Germany10

The basic component of a dual study course is the combination of practical work in a company and theoretical lectures at the university. This dual study concept has been the basis for the unique success story of this type of university for around 40 years11. The connection between theory and practice is very close and

7 Bundesministerium für Bildung und Forschung, www.bmbf.de
9 See also Bosch Vietnam, Siemens Vietnam, AHK Vietnam, etc.
10 1,402 courses, 241 universities, 2,634 companies; www.dhbw.de; www.wegweiser-duales-studium.de
11 This education concept developed to one of the largest and most attractive Universities in Germany, also adapted in Singapore and Malaysia in the 1990s.
is achieved through the constant alternation of theoretical and practical phases that students complete at the university and in their companies. This concept is made possible by full-time lecturers and part-time teachers who bring most actual know-how and specific knowledge authentic and directly from the world of work into teaching. During the dual studies, the students work and also receive a regular salary from the training company. At the end of the dual course of study, the students acquire an internationally recognized bachelor's degree in three years or a master's degree in four years. These graduates have plenty of hands-on-work experiences that is particularly valued by employers.

c) Universities and technical colleges

The majority of almost 400 universities are financed by the state and are state sponsored. The state has granted the right to award doctorates to all universities and their equivalent universities in Germany. Universities are usually strongly research-oriented and are characterized by a wide range of subjects. Universities of applied sciences have a stronger practical focus on the fields of technical engineering, economics and social science. Whether advanced training, bachelor's or master's degree, many universities in Germany also offer online or distance learning courses.

d) International university cooperations

International university cooperation is a fundamental component of teaching and research at German universities. It also strengthens the intercultural skills of students and lecturers and at the same time helps to raise the profile of German universities in the world. More than 37,000 agreements have been made with partner institutions in over 150 foreign countries. Around 300 German universities have partnerships with universities and other institutions abroad.

e) Online Education platforms and professional development and e-learning

Since 2007, the German Education Server has been offering comprehensive information on the topics of schools, vocational trainings, higher education, science and educational research, and continuing education, education worldwide, etc. and is connected with many databases on other platforms, such as Industry 4.0, Digital development, labour market, etc.

Further information on www.bildungserver.de

www.bildungserver.de/innovationsportal/bildungplusartikel.html?artid=1200; read 15.9.2020

InfoWeb further education iwwb; Education + innovation; schulmediothek.de; Portal of German education server for teacher training; etc.
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provided by federal/state governments, European Union, Universities, schools, state institutes, scientific societies, media providers and libraries. The always updated content is available to all interested citizens free of charge.

f) Online International training programs

such as SkillsFuture\textsuperscript{15} in Singapore or Mon compte formation\textsuperscript{16} from France offer access to study or further training content and are an important instrument for promoting lifelong learning. They are designed to ensure that everyone have access to these platforms and workers acquire further qualifications in times of changes in the labour market. In Germany, within the framework of the “Work of Tomorrow” law, the opportunities for further professional training for employees are being further improved\textsuperscript{17}. MOOCs\textsuperscript{18} are available with high-quality-video courses mostly from English-speaking countries with online interaction and digital exams on a wide variety of topics. In particular, the giants Coursera\textsuperscript{19}, edX\textsuperscript{20} and FutureLearn\textsuperscript{21} are open for each individual and used by millions from around the world regardless of time and place. Contents are mostly provided by universities and certifications are also available.

2.4 Digital transformation inclusive in -Industry and Health Care-

a) Bosch > Education and work

Bosch TGA Vietnam was established in 2013 with the aim of training highly qualified technicians to work at the high-tech production lines and in engineering by providing a high quality dual-vocational training. The programme is designed to not only equip apprentices with technical skills, but also prepare them for long-term career development by building up their social skills. All apprentices at Bosch TGA are entitled to English and intercultural training throughout their apprenticeship. The exchange programmes with Germany and China offer apprentices opportunities to experience different cultures, learn to work in other countries, foster their ability to act independently, take responsibility for their actions, and develop strong teamwork skills. In 2016, Bosch TGA received almost 930 applications, which

\textsuperscript{15} \url{www.skillsfuture.sg} \\
\textsuperscript{16} \url{www.moncompteformation.gouv.fr} \\
\textsuperscript{17} Perspective qualification \\
\textsuperscript{18} massive open online course \\
\textsuperscript{19} \url{www.coursera.com} \\
\textsuperscript{20} United States \\
\textsuperscript{21} United Kingdom
was a positive increase as compared to 150 when the programme first started recruitment. The year-on-year increment of applications is an indicator of quality for Bosch TGA.

The company is also working with cooperation partners towards developing a highly skilled technical workforce in Vietnam, especially in adopting and leveraging on digital technologies for increased productivity and sustainability. Bosch is taking the driver’s seat in developing Industry 4.0 curriculum for technical and vocational education and training (TVET) sector to jointly work on integrating the requirements of the growing technological changes resulting from Industry 4.0 and digitalization into the human resources development in Vietnam.

The partnership’s objective is to create a cooperation with the business sector and stakeholders in the Technical and Vocational Education and Training (TVET) sector.

The joint project is one of the bilateral activities of the Vietnamese-German development cooperation in the vocational education and training sector.

b) Astra Zeneca > Digital Transformation inclusive in Healthcare

Astra Zeneca has long been concerned with the topic of digitisation and digital transformation in healthcare. The current development results to Practice of digital technologies across patient journey to support early diagnosis, improve diagnosis and treatment, improve post-treatment care & recovery and machine learning is applied in the process of recovery. The data can help train AI for proposing treatment protocols.

AstraZeneca is constructing a network of physical locations and virtual partnerships that will work to solve, scale and showcase innovative and holistic health solutions to deliver truly patient-centric disease management. The Health Innovation Hub iDREAM focus on bringing together digital, R&D and commercial industries within Emerging Market countries to reimagine how we can improve patient. The implementation takes place in Public Private Partnership and in collaboration with international Institutes, Academia, Governments, and hospitals in areas of R&D. outcomes. The vision is “to create and strengthen partnerships to accelerate innovation, increase access to healthcare and improve outcomes for society”22.

3. Covid-19 and Digital Transformation

Covid-19 has changed education forever. It has resulted in schools shut all across the world. Globally, over 1.2 billion children are out of the classroom. As a result, education has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms. Research suggests that online learning has been shown to increase retention of information, and take less time, meaning the changes coronavirus have caused might be here to stay.23

Pre-lockdown in Vietnam, despite the educational opportunities offered by 4G networks, and an abundance of e-learning platforms and resources, online teaching and training was not widespread, even in the major Vietnamese cities.

However, lockdown has proven to many sceptics that online teaching and training is not only a viable, but potentially a far more effective inclusive alternative complement to traditional, classroom-based teaching and training approaches, particularly when it comes to educating a geographically dispersed, low-income population, in the absence of an adequate supply of appropriately qualified teachers,24 and in encouraging the sort of active, independent, autonomous, agile, life-long approach to learning, that is widely considered, by both educationalists and employers, to be one of the key 21st century skills.

Distance learning online is vital to ensure continuing learning in this period of time for all educational institutions from K-12 until Universities. Vietnam also accelerates this digital transition.25

Even so, the majority of online teaching has simply replicated traditional methods of classroom-based teaching, with synchronous, face-to-face classes, and the exchange of documents via email, and has not realised the full potential offered by the ability of current LMS/VLE26 platforms to deliver interactive and adaptive synchronous content27. E-learning in schools in steps in this direction with fully online and free code.org courses28, available in Vietnamese and for colleges and universities with shared/3rd party online content.

23 www.weforum.org
24 particularly teachers of technological and digital subjects
25 Minister of Education and Training Phung Xuan Nha requests UNICEF’s support in distance learning, UNICEF is committed to supporting Vietnam’s education in response to COVID-19, Thùy Linh – www.giaoduc.net.vn, 21.4.2020
26 LMS=Learning Management Systems; VLE=Virtual Learning Environment
27 Dr.Mark Spittel, Head of Center for Excellence in Teaching and Learning, Vietnamese-German University
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4. Conclusion: Digital Transformation and Labour

In summary, it can be said, for the time being, that significant employment effects will be expected, which, however, are assessed very differently depending on the specific design of digitization and the success of necessary qualification efforts. It is also expected that completely new job profiles will emerge and that work will never “run out”.

The winners of digitization are generally the more highly qualified. There will be an increase in jobs, especially in the ICT sector, but also in healthcare, service sector and creative activities that cannot be automated like many processes in a factory hall or in administration. The losers are not, like many assume, primarily the low-skilled. The biggest changes will take place in the skilled intermediate labour market segment. Many routine processes are being replaced by ERP systems or robotic, and in the further development of digital transformation by artificial intelligence. In regions with many manufacturing, more jobs can theoretically be substituted. However, it is not mandatory whether it this leads to regional job losses. A strong industry can also be a competitive advantage if it moves digitally. Regions with a good educational infrastructure will earn a higher digitization dividend in the future. And we're not talking about the upcoming skilled workers at schools and universities, but also about the active employees. The innovation cycles are shortening, upheavals are happening faster and faster, and that means for employees that they have to learn and develop throughout their entire professional life especially digital topics. It is no longer enough to do an internal training course every year, but to train independently in the application of new digital technical development.

The rapid technical advancements with an exponential speed induced the digital transformation and consequently the change in work also indicate social upheavals in the present, which are still difficult to classify. University graduates and other skilled individuals who have both the digital expertise and the skills to live the changed working conditions in companies are indispensable for the change to a digital society and working world and thus for securing the further development to Smart Vietnam.

Three structural development processes are shaping this transformation: Globalization, Flexibilization and Digitization. Globalization encompasses a
worldwide integration of economic, political and social structures, which on the one hand leads to increased mutual dependencies, but on the other hand also to intensified competition for political and economic leadership positions. In addition, flexibilization is a comprehensive requirement for coping with the entire lifestyle and gainful employment. Our life is becoming more mobile, the boundaries between working hours, place of work, private time, family and work are becoming more fluid and can shift constantly. To be flexible means to be fully prepared for the demands of a more complex lifestyle and gainful employment, which make lifelong learning indispensable and which result in living and working in permanent reorganization. At the same time, we are faced with the question of where we can still find security, stability and a justification for our actions on the basis of reliable values. Flexible living and working offers many options, but also creates permanent tension and conflict. Digitization and digital transformation are closely interwoven with globalization and flexibility. Digitization enables global networking and thus real-time interaction around the globe. It connects people, but also value creation processes or economic transactions such as trade on goods, financial and capital markets.

Within a very short time, the spread of Covid-19 has also had an impact on the way we educate and work. The digitization of the world of work has been advancing unstoppably for a long time. However, the spread of the virus around the world and the security measures prescribed in response to it are now accelerating this development rapidly, also, the way in which new technologies are used in the workplace and how we work. Employees and companies have learned a lot and very fast through the work-from-home measures and it can be assumed that after Covid-19 the organizations will show a different face.
5. Recommendations to make digital transformation inclusive

The program for national digital transformation by 2025 with orientations toward 2030, 749/QD-TTG from 03/2020 signed by the Prime Minister Nguyen Xuan Phuc, contain the cornerstones for Digital Transformation in Vietnam. The following recommendations intends to support the implementation phase.

1. An inclusive digital transformation addresses these uncertainties through the targeted support of individual people, regions or industries who are in danger of falling behind.

**Skills-Maps** can help identify and promote those skills and competencies that can be used for education and training programs. But it also get a good overview of the job market in the regions and municipalities and provide targeted support to the local companies, organisations and people in their effort for Digitalisation. Especially in a decentralized economic structure made up of SMEs and “hidden champions”, the development of a regional digital strategy that takes into account the requirements of the local economy and the employees is essential.

2. A **digital education and personnel development offensive** backed by appropriate resources is required to drive economic development forward. Ideally, the education system along the entire qualification chain should give young people a starting advantage for operating successfully in the digital age. But this only works if the teachers and lecturers also have the appropriate digital skills that they can pass on to their pupils or students.

3. A National **Education Platform** could encompass the entire education sector and can be used free of charge by all those parties involved in education. It has open standard interfaces to network existing national and international platforms via gateways. Everything that already exists can be used via uniform access, regardless of the place and time. High-quality digital learning content should be made available on it under strict data protection conditions.

4. Regional and local governments can play a leading role in cooperation with or as part of **local digital competence centers** to support institutions, housing, co-working spaces and IT infrastructure. These centers have digital, scientific and practical methodological-didactic competences available and are advisors for educational institutions, organizations, enterprises as well as for SMEs and
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Startup’s. In addition, these centers can efficiently network scientists, didactics experts, school internships and training companies and can support with digital training for teachers and advise schools on IT infrastructure, media planning, teaching and personnel development as required.

5. Due to the phase of digital transformation there are and will continue to be shifts in the qualification architecture in companies. A Future of Work program could promote the development of specific solutions to maintain added value and jobs. The competence centers could also play a major role in investigating the design possibilities of new technologies for the world-of-work locally and matching them with the qualification architecture of enterprises.

6. In order to meet these challenges, politics, business and educational institutions need to join forces in order to initiate concrete measures in the further training of employees and a sustainable further development of the education system with stronger focus on digital skills.

7. Digital Technology should be embraced as a means to advance equal opportunities by expanding flexible job opportunities to greater numbers of traditionally marginalised groups, such as stay-at-home parents, people with disabilities and ethnic minorities.

8. The digital skills should be taught and promoted much more strongly in schools as well as in universities. These investments in digital learning are inevitable. An affirmation that a shift towards online teaching and learning is indeed necessary, post-Covid-19, not only to ensure the continuity of education in the event of a subsequent pandemic, but also to ensure sustained economic growth, through increasing access to education, particularly by those in rural communities, thereby helping to build the capacity of the Vietnamese workforce.

9. Improvement of technical capabilities of schools and teachers to set up and fully utilise -according to best pedagogical practices- their LMS/VLE platforms. All pupils (K-12) and teachers should be able to use a digital device at anytime and anywhere, free of charge to access to educational platform.

29 https://en.vietnamplus.vn/education-ministry-collects-opinions-on-elearning/180246.vnp
30 Availability of ‘smart’ devices – Android tablets now sub < $30 retail!
31 Already steps in this direction > https://elearning.moet.edu.vn/gioi-thieu/ Fully-online and free code.org courses available in Vietnamese
10. Assessment of the current and projected capacity of the Vietnamese IT infrastructure and content required to deliver effective online education, including to those in geographically/ economically marginalised communities. In seeking to increase access, however, pedagogical approaches and course designs need to be assessed carefully to ensure that their quality is not compromised by greater quantity.

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This document can only make a small contribution from the overall spectrum of digitization, digital transformation inclusive, international experiences, labour market and education. The recommendations and explanations provide some fields of actions from the practical point of view and their implementation requires detailed processing. It is for sure that the technical development will increase with an exponential speed and the process of digital transformation implementation should orientate itself accordingly.

Winfried Messmer, Ho Chi Minh, 20.09.2020
Making Digital Transformation Inclusive

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Ho Chi Minh
Making Digital Transformation Inclusive

- Challenges to Digital Transformation/Digitalization and implications on the labour market and digital divide
- International experiences in Digital Transformation
- Recommendations to make Digital Transformation Inclusive

Winfrid W. Messmer

Digital Transformation - Human Resources – Education

International experiences in Digital Transformation

Recommendations

1) Documentation: 1, 3-4; 2) Documentation: 2; 3) Recommendations: 5

Winfrid W. Messmer - messmer@german-asia.com - 09/2020
Emerging Technology Trends

1. **Social Media**
   - Enable new ways and drive expectations of interaction, personalization, and building relationships within organizations and with customers.

2. **Cloud**
   - Virtualize and consume infrastructure, platforms, and applications as a service (XaaS) enables better scalability and flexibility.

3. **Internet of Things**
   - Connected devices of all kinds and cheap integrations everywhere create large amounts of data in need of effective management.

4. **Big Data**
   - The uninterrupted trend of using mobile devices impacts how people interact, use information, and how businesses reach them.

5. **Mobility**
   - Analytics and access to the right data enable new insights and decision-rich information and allows us to make use of such data.

6. **Cyber Security**
   - Protection of information systems from theft or damage to the hardware, the software, and the information of our users.

Digital Transformation - Human Resources - Education

**Infrastructure**
- Powers and support digital networks and the flow of data throughout the economy. A strong integrated infrastructure is crucial for a digital economy.

**People**
- Fundamental to the digital economy - Human capital. We must especially be mindful of those who are traditionally kept out of the digital sphere and proactively bring them into the digital economy. Skills and capabilities needed in digital economies and evolving labor markets, and social protection systems.

**Financing**
- Resources need to be prioritized and sourced to ensure successful funding and support for the transition into a digitally integrated and inclusive economy. Includes the range of instruments needed for households, businesses, and governments to access and use new digital technologies.

**Policy**
- Competition policy, taxation, intellectual property, data standards and interoperability, as well as cybersecurity and data protection all need to be thought through carefully. To ensure citizens and companies are protected it is vitally important to strengthen and solidify regulations that will protect against the misuse of data.
“IT’S NOT JUST ABOUT TECHNOLOGY
IT’S ABOUT THE FUTURE OF HOW PEOPLE ARE GOING TO LIVE AND WORK”

Carla Echevarría, Design Lead, Google

International experiences in Digital Transformation

Current Development in Europe and Germany

Digital Strategy > Framework

Education and Training

Best Practice Digitalization and Human Resources
## International experiences in Digital Transformation

### Education Server DE
- **Website**: [www.bildungsserver.de](http://www.bildungsserver.de)
- **Description**: Govt, Univ, Institutions, ...

### Industry 4.0 DE/EU
- **Website**: [www.plattform-i40.de](http://www.plattform-i40.de)
- **Description**: Govt, Univ, Institutions, ...

### FutureLearn
- **Website**: [https://www.futurelearn.com](https://www.futurelearn.com)
- **Description**: Universities, Enterprises

### Life-long learning
- **Website**: [www.skillsfuture.sg](http://www.skillsfuture.sg)
- **Location**: Singapore

### Mon compte formation
- **Website**: [www.moncompteformation.gouv.fr](http://www.moncompteformation.gouv.fr)
- **Location**: France

### Classes and courses
- **Website**: [www.coursera.org](http://www.coursera.org)
- **Description**: classes universities and companies

### Courses and lessons
- **Website**: [www.edx.org/learn/education](http://www.edx.org/learn/education)
- **Location**: Universities US

### Classroom
- **Website**: [elearning.moet.vgu.vn/elearning/bai-giang-elearning/](http://elearning.moet.vgu.vn/elearning/bai-giang-elearning/)
- **Location**: MOET Vietnam

### Bosch in Vietnam

**TGA Training Center**

- **Specialty/Occupation**:
  - Industrial Mechanics (Chế tạo thiết bị cơ khí)
  - Mechatronics (Cơ điện tử)

#### One of the first and prominent vocational training partnership under the dual training framework of AHK in Vietnam

- **Certificate**
- **Diploma**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>04/2013</td>
<td>Signing a corporation contract of TGA</td>
</tr>
<tr>
<td>10/2013</td>
<td>Recruiting the first 24 apprentices</td>
</tr>
</tbody>
</table>

- **3.5 Years** Required training time

- **100%** German standard
- **75%** Practical hours
- **25%** Teaching hours

- **Total Investment**: Over 1 million euro

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Third generation of 26 Bosch apprentices graduated in Jun 2020. (97 apprentices have been entitled to permanent positions at HCP)
International experiences in Digital Transformation

Bosch in Vietnam
Integrating Industry 4.0 in Education

Aug 18
- Signing MoU between Bosch Vietnam, LILAMA 2, DVET, and GIZ

Sep 18
- Setting up Industry 4.0 demonstration room at LILAMA 2 – used for the practical training for teachers and students
- Conference on “How Industry 4.0 is shaping the future of the technical and vocational education and training (TVET) sector”

2019
- Developing Industry 4.0 elements/modules

2020
- Project evaluation

AstraZeneca’s iDREAM Hub:

iDREAM Hub becomes an open integrated platform and an eco-system for world innovation

*Disclaimer: TBC by AstraZeneca compliance
**Practice of digital technologies across patient journey**

- **Prevention to Early Diagnosis**
  - National helpline
  - Smart diagnostics
- **Diagnosis & Treatment**
  - Self-assessment
  - Access to specialists
- **Post-treatment**
  - Wearables
  - Early diagnosis
  - Improved standard of care
  - Enriched life

**Technologies**
- Virtual Assistant
- Chatbots
- IoT
- Artificial Intelligence
- Teledicine
- Big Data
- Blockchain
- Mobile Apps
- IoT
- Machine Learning

**Recommendations**

**Universal digital inclusion**
- Assess and expedite digital scope allocation
- Improve digital skills and train the trainers
- Address the price structure of mobile data tariffs
- Provide tablets to secondary learners
- Establish digital competence centers
- Establish principles for digital service.
- Include digital usage in K-12 curricula
- Establish open access participation
- Shift Govt-service delivery to online platform
- Build digital infrastructure in Schools
- Establish digital access as a socio-economic right
- Develop a digital service SME sector

**Summary of actions**

**Quick Wins (One year)**
- Establish digital access as a socio-economic right
- Develop a digital service SME sector

**Medium term**
- Establish online education free of charge
- Mainstream work readiness and on the job training
- Modernise accreditation system

**Long term**
- Assess and expedite digital scope allocation
- Improve digital skills and train the trainers
- Address the price structure of mobile data tariffs
- Provide tablets to secondary learners
- Establish digital competence centers
- Establish principles for digital service.
- Include digital usage in K-12 curricula
- Establish open access participation
- Shift Govt-service delivery to online platform
- Build digital infrastructure in Schools
- Establish digital access as a socio-economic right
- Develop a digital service SME sector

**Human Ressources - Education**
- Assess skills maps (digital) and update the relevance of critical skills list
- Establish C-centers in priority areas
- Review curricula K-12, vocational and Universities towards digital needs
- Provide Content
- Develop industry-wide and Edu-institution wide mechanisms for reskilling and/or upskilling digital
- Develop vocational education sector to international standard
- Establish online education free of charge
- Mainstream work readiness and on the job training
- Modernise accreditation system

*Disclaimer: TBC by AstraZeneca compliance*
“IT IS NOT THE STRONGEST OF THE SPECIES THAT SURVIVES, NOR THE MOST INTELLIGENT. IT IS THE ONE THAT IS THE MOST ADAPTABLE TO CHANGE”

Charles Darwin
THANK YOU
OPENING SESSION

08:05 – 08:10:
Opening remarks
H.E. Mr. Nguyễn Chí DŨNG, Minister of Planning and Investment

H.E Nguyen Chi Dung served the High Command of Engineers and was a student of the University of Road and Rail Transport, Ha Noi during 1977-1985. He received his BA in mechanical engineering from this University in 1983. He obtained his PhD in economics, management and national economic planning (macroeconomics) from the National Economics University, Ha Noi in 1997.

From December 1985 to October 1989 he served as a seconded soldier and an official at the Department No. 1 of the Ministry of Transport. He started his civil service since October 1989 when he joined the State Committee for Cooperation and Investment (SCCCI) which, in November 1995, was merged with the State Planning Commission (SPC) into the Ministry of Planning and Investment (MPI) of today. He served as a Deputy Director General of the Department for Foreign Investment Projects during 2000-2003 and then that of the Small- and Medium-Sized Enterprise Development Agency (which is now the Agency for Enterprise Development) of MPI during 2003-2005. He was then promoted as the Director General of the Ministry’s Department for Trade and Services. He became a Deputy Minister of MPI in August 2008.

From May 2009 to September 2010 he served as the Deputy Secretary of the Ninh Thuan Provincial Party’s Committee and Chairman of Ninh Thuan Provincial People’s Committee (PPC). Later, from September 2010 to June 2014, H.E Dung served as the Secretary of the Ninh Thuan Provincial Party’s Committee and its PPC Chairman.

He became a Member of the Party’s Central Committee in July 2011. He then moved back to MPI as a Deputy Minister during January 2014 - April 2016. Since April 2016 to date, he has been serving as the Minister of MPI.

Minister Dung has been serving as a Standing Member of the Party’s the Party Central Committee’s Sub-Committee for Socio-Economic Affairs (PCCSCSEA) and Head of the Editorial Team of the Sub-Committee for Socio-Economic Affairs whose main responsibility is to draft Viet Nam’s 2021-2030 Socio-Economic Development Strategy (SEDS) since December 2018./.
Ms. Carolyn Turk, new World Bank Country Director for Vietnam

Ms. Carolyn (Carrie) Turk will assume the position of World Bank Country Director for Vietnam on July 1st, 2020. She will be based in Hanoi.

Ms. Turk, a United Kingdom national, joined the World Bank in 1998. She has since held various positions, including Senior Poverty Specialist based in Vietnam, Senior Social Development Specialist and Lead Social Development Specialist in the Eastern Europe and Central Asia Region, and Country Manager for Rwanda. Her most recent assignment was as the World Bank Country Director for Ethiopia, South Sudan, Sudan and Eritrea.

Prior to joining the World Bank, Ms. Turk worked with the UK Department for International Development. She holds undergraduate and postgraduate degrees in Economics from the University of Cambridge, and has authored numerous publications on poverty and inequality, including a book based on research into gender inequality in 20 countries.

Ms. Turk will provide the leadership needed to further strengthen World Bank’s financing and knowledge engagements with Vietnam, including at the sub-national level, so that Vietnam can achieve the ambitious yet achievable goal of being a high-income country by 2045.

As of June 30, 2020, the World Bank provided US$24.86 billion in grants, credits and loans to Vietnam to support the country’s development agenda, with an active portfolio of 38 projects valued at US$7.4 billion.

Over the past six months, the World Bank has committed US$516.67 million for Vietnam’s development through projects covering transport, urban development, higher education, and climate change and green growth. The World Bank’s strong analytic and advisory program in Vietnam has provided strategic, cutting edge and timely knowledge and advice to support the country’s development agenda, ranging from the most recent series of COVID-19 response policy notes, to inputs into the country’s upcoming 10-year development strategy and 5-year development plan.
08:15 – 08:20:
Welcoming remarks
H.E. Mme. Robyn Mudie, Australian Ambassador to Viet Nam

Ms Mudie is a senior career officer with the Department of Foreign Affairs and Trade and was most recently the founding Executive Director of the Diplomatic Academy.

She has previously served overseas as Australian High Commissioner to Sri Lanka and Maldives; Deputy Permanent Representative to the United Nations (Geneva); First Secretary, UN Permanent Mission, New York; and Second Secretary, Hanoi. In Canberra Ms Mudie has served as Assistant Secretary, Public Diplomacy Branch; Assistant Secretary, Information Resources Branch; and Director, Strategic Policy Section.

Ms Mudie holds a Master of Southeast Asian Studies from the University of Hull; Bachelor of Arts (Honours), from the University of Adelaide; and a Graduate Diploma (Foreign Affairs and Trade) from the Australian National University. Ms Mudie is a Vietnamese speaker who has studied Vietnamese at the RAAF School of Languages (1992), the Foreign Languages School, Hanoi (1993) and the Diplomatic Academy (2019).

Ms Mudie is married with two sons.
SESSION 1: Covid-19 and Viet Nam’s Actions to Seize Opportunities and Move up the Global Value Chain

8:30 – 8:35:

Moderator Session 1

Vu Thanh Tu Anh, Senior Lecturer, Fulbright School of Public Policy and Management in Ho Chi Minh City

Dr. Vu-Thanh Tu-Anh is a professor at the Fulbright School of Public Policy and Management (Fulbright University Vietnam), and a senior fellow at the Harvard Kennedy School. Dr. Tu-Anh’s primary research interests include economic development, institutional economics, public finance, and industrial policy. His recent publications include “Does WTO Accession Help Domestic Reform? The Political Economy of SOE Reform Backsliding in Vietnam” with World Trade Review, and “Industrial Policy and the Evolution of Industrial Hubs in Vietnam,” in The Oxford Handbook of Industrial Hubs and Economic Development published in 2020. Dr. Tu-Anh is currently a member of the Vietnamese Prime Minister’s Economic Advisory Group. He also serves as a member of the Consultative Group of the National Assembly’s Committee of Economic Affairs and the National Financial Supervision Council. Dr. Tu Anh received his PhD degree in economics from Boston College in 2004.
08:35 – 08:55:

Session 1 – Keynote speech - “Covid-19 and Impact on Global Trade and Production Networks”

Dr. Victoria Kwakwa, Vice President of the World Bank for East Asia and Pacific Region; former World Bank’s Country Director for Vietnam

Victoria Kwakwa assumed the role of Vice President for East Asia and Pacific on April 15, 2016. She oversees a portfolio of more than $32 billion in loans, grants, credits, and trust funds across 23 countries.

Ms. Kwakwa leads the World Bank’s strategy in East Asia Pacific which focuses on five priority areas: inclusion and empowerment; jobs and private sector-led growth, governance and institutions, infrastructure and urbanization, climate change and disaster risk management. The Region also focuses on the cross-cutting themes of gender, fragility and conflict and poverty analytics.

Ms. Kwakwa was previously the World Bank’s Country Director for Vietnam, overseeing a multibillion-dollar lending portfolio and an innovative knowledge program, including the recently published Vietnam 2035 report. This report, prepared jointly with the Government of Vietnam, presents options for Vietnam to achieve its ambitious goal of becoming an upper-middle-income country in a generation.

Before moving to Hanoi, Ms. Kwakwa was the Country Manager for Rwanda for two years, where she worked with the government to design and pilot programs in social protection, health financing, and agriculture productivity.

From 2000 to 2006, she was a senior economist and lead economist in Abuja, Nigeria, where she set up a program of state-level analytical work and provided policy advice on how to efficiently and transparently manage oil revenues.

Ms. Kwakwa joined the Bank as a Young Professional in 1989 and worked on the 2000-2001 World Development Report on poverty. She earned her Doctorate and Master’s degrees in Economics from Queen’s University in Canada.
8:55 – 9:05:  
Session 1 – Panelist 1: “Global value chains: Don’t be wrong – COVID-19 offers an opportunity for Vietnam”

Dr. Jacques Morisset, Lead Economist and Program Leader, The World Bank in Viet Nam

Jacques Morisset is the World Bank’s Lead Economist and Program Leader for Vietnam where he coordinates Bank’s work on macroeconomics, trade, finance, agriculture, poverty and public-sector reforms.

After receiving his PhD in economics from the University of Geneva, he has held various positions at the World Bank and IFC, while collaborating with the World Economic Forum. He has led or co-led lending operations worth over US$2 billion and advised governments on a wide spectrum of economic areas from financial markets, investment promotion, fiscal and tax policies to labor markets. Jacques has published in academic journals, including the World Bank Economic Review, Journal of Development Economics, and World Development. He was a member of the Board of the World Bank Economic Review.

9:05 – 9:15

Session 1 – Panelist 2: “Seizing the GVC shift opportunities: Viet Nam’s Actions for Inclusive Growth, Attraction of Quality FDI to Viet Nam and Development of Vietnamese Private Economic Sector and Enterprises”

Dr. Jonathan Pincus, UNDP Senior International Economist - Advisor

Jonathan Pincus is Senior International Economic Advisor at UNDP Viet Nam and also leads the Rajawali Foundation, an Indonesian philanthropy focusing on policy research and education. His previous roles include dean of the Fulbright Economics Teaching Program in Ho Chi Minh City, Senior Country Economist for the United Nations Development Program (UNDP) in Vietnam and Senior Lecturer in economics at the School of Oriental and African Studies (SOAS), University of London. He has held technical and managerial positions at various international organizations addressing issues including development policy, agriculture and rural development, poverty reduction and higher education. His most recent publication is the forthcoming book Indonesia Kaya: How Can Indonesia Achieve High Income Status by 2045? He attended Oberlin College in the United States and holds master and doctoral degrees in economics from Cambridge University in the United Kingdom.
9:15 – 9:25:

Session – Panelist 3: “Resilient leaders - persistent businesses sustainable recovery and thrive”

Mme. Ha Thị Thu Thanh, Chairperson, Deloitte Vietnam

Mrs. Ha Thị Thu Thanh is the Chairperson and one of the founders of Deloitte Vietnam – one of the four largest Consulting Firms in the world – with over 37 years of experience in the field of Audit and Advisory, including 30 years working for the company since its establishment.

In addition to her leadership role at Deloitte, Mrs. Thanh is highly appreciated for her great contribution and pioneering in the development of the profession of accounting, auditing and corporate governance in Vietnam, through her key roles in some organizations with consulting and training activities to improve leadership capacity as well as support businesses.

Mrs. Thanh is the speaker in many prestigious seminars as well as the senior consultant / senior coach for many large corporations’ Executive Boards in Vietnam. Besides, Mrs. Thanh also participates in high quality training programs related to Corporate Governance, Business Leadership, Sustainable Development for private enterprises community. Also, as the Vice President of The Vietnam Business Council for Sustainable Development (VBCSD), Mrs. Thanh plays an important role in the association’s action plan, by supporting and developing the business community as well as contributing to the socio-economic development of the country, promoting economic, trade, science and technology cooperation with countries in the region.

She was ranked one of the “50 most influential women in Vietnam” by Forbes and awarded the “Asia Pacific Entrepreneur Award” by Enterprise Asia in 2017 and 2019.
SESSION 2: Leveraging Innovation to Overcome the Middle-Income Trap

10:31 – 10:35

Moderator Session 2:

Dr. Dương Nguyên Vũ, Professor of Aerospace Engineering, School of Mechanical & Aerospace Engineering; Director, Air Traffic Management Research Institute, Nanyang Technological University (Singapore)

Vu Dương is currently Professor of Aerospace Engineering at Nanyang Technological University – Singapore (NTU), School of Mechanical & Aerospace Engineering, and Director of NTU Air Traffic Management Research Institute. Prior to joining NTU, he had been Founding-Director of John von Neumann Institute of Vietnam National University Ho Chi Minh City until 2017. Before returning to Asia in 2012,Vu had been Head of Innovative Research and Senior Scientific Advisor at the European Organisation for the Safety of Air Navigation (EUROCONTROL). Vu had also been a member of the Scientific Committee of Vu Dương is Professor at School of Mechanical & Aerospace Engineering cum Director of Air Traffic Management Research Institute of Nanyang Technological University (NTU), Singapore. Concurrently he serves as member of the University Council and Honorary Dean of College of Engineering & Computer Science of VinUniversity. He is also a member of VinGroup’s Scientific Advisory Board and Advisor to Vietnam Minister of Planning and Investment on Innovation Strategy. Prior to the assignment at NTU, he had been Founding-Director of John von Neumann Institute, Viet Nam National University Ho Chi Minh City (VNU-HCM).

Vu is a world-recognized leader in Air Traffic Management research. He had been Head of Innovative Research then Senior Scientific Advisor at the European Organization for Safety of Air Navigation - EUROCONTROL (1995-2012), and a member of European Commission’s SESAR JU Scientific Committee (2010 – 2012).

Vu attended Ecole Nationale des Ponts et Chaussées of France where he obtained the degree of Master in Engineering in 1986, and Ph.D. in Artificial Intelligence in 1990. In his free time, Vu practices Marathon and Triathlon. He is currently President of Viet Nam Triathlon Club and is an IRONMAN Ambassador.
Session 2 – Keynote speech

“Digitizing a nation. A personal account of how it was done, why and what can be learned from the process.”

Mr. Toomas Hendrik Ilves, Former President, Estonia; Distinguished Fellow, Center for European Policy Analysis

Toomas Hendrik Ilves is former President of Estonia (2006-2016)

Before assuming the Office of the Presidency, Mr. Ilves served as Vice-President of the Foreign Affairs Committee of the European Parliament (2004-2006), Foreign Minister of Estonia (1996-2002), where he led Estonia’s EU and NATO accession process. From 1993-96, he served as Estonia’s first post-independence Ambassador to Washington. From 1988 to 1993, Mr. Ilves was Director of the Estonian Service at RFE-RL and prior to that a Research Analyst in the Research Department of RFE-RL.

He is best-known internationally for his work 1995-2016 pushing Estonia to digitize its government. He is currently writing a book on democracy in the digital era.

Mr. Ilves served as Chairman of the EU Task Force on eHealth from 2011 to 2012 and was Chairman of the European Cloud Partnership Steering Board at the invitation of the European Commission from 2012 to 2014. In 2013, he chaired the High-Level Panel on Global Internet Cooperation and Governance Mechanisms convened by ICANN. From 2014 to 2015, Mr. Ilves was the co-Chair of the Advisory Panel of the World Bank's World Development Report 2016 "Digital Dividends" and was also the Chair of World Economic Forum's Global Agenda Council on Cyber Security beginning in June 2014.

Starting from 2016, Mr. Ilves co-chairs The World Economic Forum Working Group The Global Futures Council on Blockchain Technology and is a member of Munich Security Conference Advisory Council.

In 2017, Mr. Ilves became an advisory council member of German Marshall Fund’s Alliance for Securing Democracy and joined World Bank Identification for Development (ID4D) High-Level Advisory Council. From 2017 to 2020, he was a Berggruen Fellow at the Center for Advanced Study in the Behavioral Sciences, Distinguished Visiting Fellow at the Hoover Institution and the Global Digital Policy Incubator, Stanford University. Starting from 2018, Mr. Ilves is a member of the Advisory Board of the Oxford University Centre for Technology and Global Affairs. Starting from 2019, Mr. Ilves is a member of the Board of Free Russia Foundation. In 2020, Mr. Ilves joined the Center for European Policy Analysis as a Distinguished Fellow and became Commissioner of the WHO Pan-European Commission on Health and Sustainable Development.
Mr. Nguyen Trong Duong is a Deputy Director General of the Authority of Information Technology Application (AITA), Ministry of Information and Communications (MIC). AITA is the agency responsible for exercising state management and legal enforcement in terms of national digital transformation, information technology (IT) application, e-government development, smart city development, digital data building and sharing, digital infrastructure and digital platform development.

Mr. Duong has been working for MIC for 19 years. Prior to joining MIC, he had 10 years of working in enterprises in the fields of IT, electronics and telecommunications.

Previous and current positions of Mr. Duong at MIC include:
- Deputy Director General, Department of Industrial Information Technology (2006-2009);
- Director General, Department of Information Technology (2009-2015);
- Chief of Office, National Steering Committee on Information Technology (2009-2015);
- Director, Viet Nam Computer Emergency Response Team (VNCERT) (2015-2019);
- Deputy Director General, Authority of Information Security (2019-7/2020);
- Deputy Director General, Authority of Information Technology Application (7/2020 - present).

Mr. Duong obtained a PhD Degree in Electronics and Telecommunications Technologies from Hanoi University of Science & Technology (HUST), a Master Degree in Telecommunications Science and a Postgraduate Diploma in Communications Technologies from Victoria University of Technology, Australia.
Dr. Bui Hai Hung, Director, Artificial Intelligence Research Institute (Vin AI Research), Vingroup

Dr. Hung H. Bui is the Director of VinAI Research, VinGroup, Vietnam. His technical expertise and interests include probabilistic graphical models, deep generative models, Bayesian inference and machine learning, especially models for sequential and relational data with applications in human activity/intent recognition, video understanding and natural language processing. These interests center around the challenging problem of how to make the machine better understand the humans - a problem that plays a central part in intelligent assistive technologies, personal assistance and dialogue management.

Before joining VinAI, he was at Google DeepMind, Adobe Research and Nuance Natural Language Understanding Lab, and also spent almost 10 years at the AI Center, SRI International (formerly Stanford Research Institute) where he led the multi-institution research team in developing probabilistic inference technologies for understanding the user activities during the CALO project (at the time, the largest AI project in history, also known as the project that spun off Siri). Going further back in time, he was an assistant professor at Curtin University, Australia (2000 - 2003), Ph.D. graduate in computer science (Curtin, 1998).
11:15 – 11:25
Session 2 – Panelist 3: “Making Digital Transformation Inclusive”

Mr. Winfrid Messmer, Expert IT, ERP, Finance & Projectmanagement, Interim Head of IT-Department, Vietnamese-German University; Director, Institute for Applied Informatics, Germany; Chairman of Digital Sector Committee EuroCham Vietnam (recommended by EU)

Key attribute: “From 1st Advise Until Implementation”

Winfrid is an experienced senior consultant, manager and executive with a demonstrated history in working in space-research for eight years, in consulting industry for around forty years and six years as a part-time Prof. for business computer science at a Dual University beside the full-time work. He is skilled in electrical engineering, informatics, international business management and economics. The expertise by education and experience are IT/ERP/SAP, business processes, international accounting and reporting, project Management, change management, global rollouts and of course digitalisation and digital transformation with a holistic view. The radius of action extends from IT strategy consulting until implementation of digital solutions in medium-sized to global enterprises and public services with pronounced international travel activity. He worked and/or collaborated with major enterprises such as R.Berger, IBM, KPMG, Accenture, PWC, McKinsey, Deloitte and served customers such as Siemens, Airbus Industry, Bayer, DHL, BASF, Ministries in CH, Pfizer, Lufthansa, Gieseke&Devrient and State Bank DE.

Beside all of this he is a passionate Saxophonist also on stage if working hours permit.