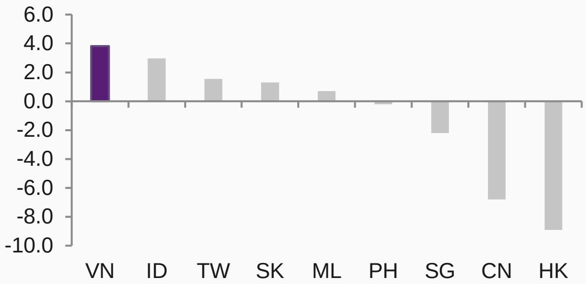
ASIA HOT TOPICS

14 May 2020

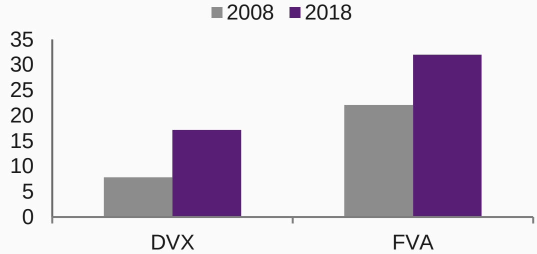
AFTER CRUSHING COVID-19, VIETNAM TO FOCUS ON MOVING UP THE GLOBAL VALUE CHAIN, FACILITATED BY THE PRIZED EU-VIETNAM FTA

2020 Q1 GDP growth (%)



Source: Natixis, Bloomberg

Breakdown of Vietnam's exports using GVC approach (% to GDP)



Source: UNCTAD-Eora database, Natixis
N.B. Results for 2018 are forecasted by UNCTAD-Eora
Foreign value added (FVA) represents the amount of foreign inputs within gross exports. Domestic value added in third countries' exports (DVX) represents the amount of exported inputs used in other countries' exports.

Trinh Nguyen
Tel. +852 3900 8726
trinh.nguyen@natixis.com

With contribution from :
Junyu Tan
Tel. +852 3900 8586
junyu.tan-ext@natixis.com

www.research.natixis.com

Zero is certainly the new hero, and Vietnam is a frontier market that can lay claim to the impressive feat of having zero reported death from Covid-19, a feat that wealthier nations have failed. From restricting, screening, tracing, quarantining, manufacturing masks and testing, Vietnam has impressed the world with not just its response but also limited supply chain disruption from its manufacturing capability, which undoubtedly will help the Made-in-Vietnam brand. So much so that recently France ordered hundreds of millions of masks, and there is anecdotal evidence that FDI will surge from a high level.

In the short-term, its success will not immunize it from a domestic and global slowdown but will help avoid a recession in 2020. In Q1, it had the best GDP growth in Asia and Q2 will likely worsen on mobility restriction. In H2 2020, weakness will come from abroad in the form of declining demand for manufactured goods and services such as tourism. While fiscal policy support has been modest, Vietnam structural reforms will pave ways for faster growth in 2021 and beyond.

Thus, we believe Vietnam's manufacturing luster will not be diminished and will continue to outshine the region in its higher growth trends for two key reasons. The push to diversify out of China will find a home in Vietnam due to its competitiveness for labor-intensive manufacturing, coupled with cultural and geographical proximity. That said, Vietnam's absorptive capacity is limited by its labor force size and supply chain linkages. Vietnam's EU-FTA will open up access to the largest market in the world and provision such as rules of origin for textile will further boost investment. And of course Vietnam's management of Covid-19 and ensure factories remain open with preferential access to key investors give it a further boost.

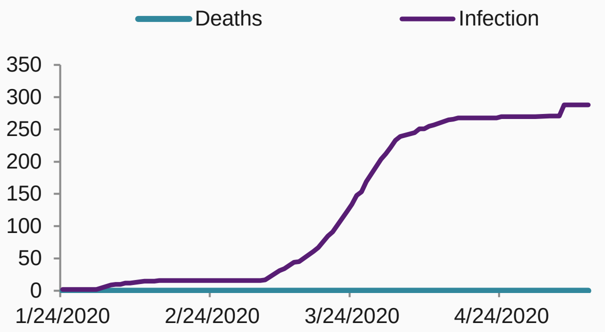
That said, Vietnam faces two challenges: too much dependency on foreign inputs for production and limited domestic linkages with global value chain, and worsening demographic transition in three decades. Both of these challenges require the same solution – for Vietnam to further invest in hard and soft infrastructure to boost the productivity of domestic firms to ensure that its economy does not get hollowed out when wage costs rise. And of course, campaigns to boost fertility do not hurt.

In short, we believe Vietnam's future is bright, helped by proactive policy, geopolitical trends of diversification, and further liberalization of its market, such as the EU-FTA expected to come to force in summer 2020. That said, Vietnam needs to work harder rather to rest on its laurel to integrate into the global value chain and raise productivity before it becomes old while still poor.

Covid-19 highlights Vietnam's management and manufacturing capability in times of stress

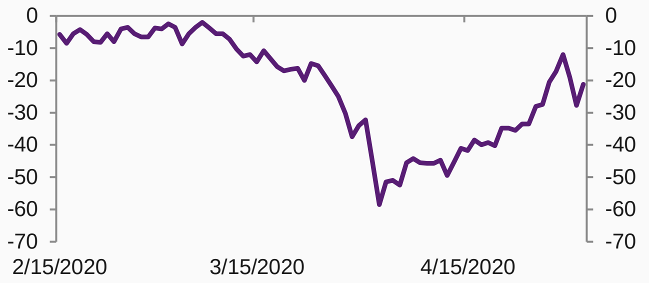
A small frontier market next door to China did something incredible – it has reported zero death from Covid-19 and succeeded to tame the virus where many wealthier nations have struggled (**Chart 1**). Vietnam's vigilance to suspend flights from Wuhan on 23 January, closed borders with China a week later, raise public hygiene awareness, develop vigorous contact tracing, quarantining and raise testing capability as well as make wearing masks in public places mandatory all contribute to its preventing an outbreak and achieving the impossible[1]. As such, mobility has been normalizing from the trough in early April when a nationwide isolation was imposed (**Chart 2**).

Chart 1
Covid-19 contained in Vietnam



Source: Natixis, Bloomberg

Chart 2
Change in mobility from baseline (%)



Source: Natixis, Google

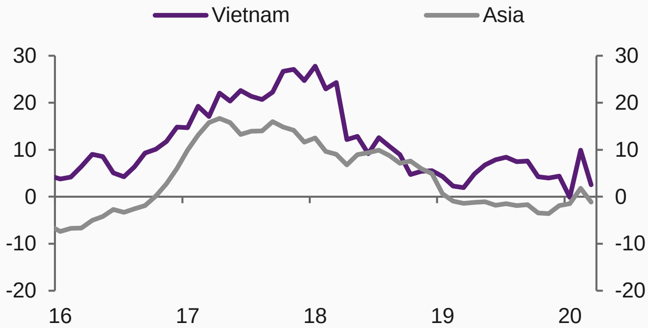
From developing domestic testing capability to manufacturing face masks, Vietnam's success with Covid-19 certainly raises its brand to international investors in terms of not just institutional capacity to manage unprecedented risks but also increasingly role in the global supply chain. While the social distancing measures, testing, tracing, quarantining and restriction of international flights do not make Vietnam immune to the fall-out of the coronavirus, such as exposure to weakening global demand of trade and tourism, the achievement assures Vietnam's brand in attracting investment.

This note addresses three key issues: a) The impact of Covid-19 on Vietnam's growth in the short-term; b) The medium term outlook for the economy; and c) the challenge to Vietnam's China arbitrage story as the chorus to reshuffle supply chain from China gets louder.

Down on reduced mobility, tourists missing and exports weakening but still best in Asia

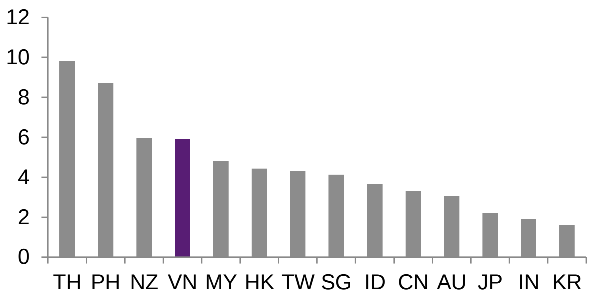
Vietnam status as an export rockstar of Asia remains even if there isn't much of global trade in time coronavirus. **Chart 3** shows Vietnam shipment to the world slowing although still higher than the region. But this doesn't mean that the global demand slump from measures to curb mobility globally isn't going to make a major dent to its growth. But more worrying than manufactured shipment, which can be stored and resumed, income losses from tourism, which made up 6% of GDP in 2018 for Vietnam, and other services due to mobility restriction for two weeks is irrecoverable.

Chart 3
Exports (% YoY 3-month moving average)



Source: Natixis, Bloomberg

Chart 4
Travel and tourism direct contribution to GDP (%)

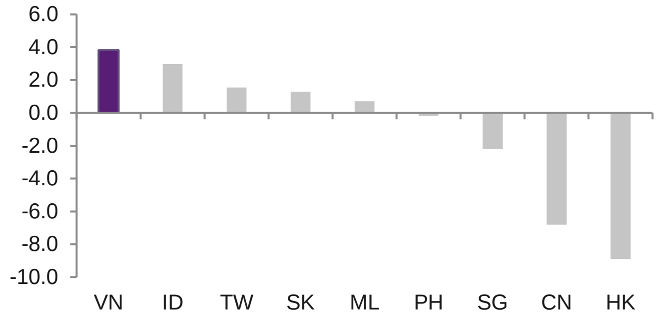


Source: Natixis, World Bank, Taiwan Tourism Bureau, Taiwan Executive Yuan, CEIC

[1] https://www.reuters.com/article/us-health-coronavirus-vietnam-fight-insi/after-aggressive-mass-testing-vietnam-says-it-contains-coronavirus-outbreak-idUSKBN22B34H

And so, Vietnam's above 7% growth rates almost halved to 3.8% in Q1 2020. Still, its avoidance of an outbreak and lengthy lock-down means that it is still the best in Asia, especially in juxtaposition to China's -6.8%YoY (**Chart 5**). That said, Q2 will likely be worse for Vietnam when its two-week lock-down occurred. That said, the lock-down was short-lived and domestic activities have normalized with flights, schools and most activities resumed. This means that the shock to Vietnam's growth beyond Q2 will likely come from external sources in H2 2020 in the form of reduced exports and tourist inflows.

Chart 5
2020 Q1 GDP growth (%)



Source: Natixis, Bloomberg

Table 1. Fiscal support as share of GDP (%)

Total	3.5
Consumption	0.5
Investment	0
Discretionary (Tax cuts etc)	3

Source: Natixis, IMF, Bloomberg

In response to the economic shock, the Vietnamese government has announced measures to support the economy, including deferral of tax payments and land rental fee obligations for affected firms and households. And beyond that, Vietnam also included a cash transfer package worth 0.5 percent of GDP from the state budget. Note that most of the measures are discretionary rather than on-budget spending (**Table 1**). On the monetary side, Vietnam focused primary on credit packages amounting to 3.8 percent of GDP vs rate cuts, although it did cut the refinancing rate by 150bps.

Despite limited fiscal support, the Covid-19 shock will likely less severe for Vietnam in term of both deaths and livelihood due to avoidance of longer term lock-down and fast normalization of activities. Moreover, beyond external exposure that reduces income flows, Vietnam also avoids the financial stability shock due to its accumulation of savings over the years thank to its current account surplus, higher foreign reserves and limited dependence on portfolio flows.

While Vietnam's fiscal support is meager, its trade-focused policy will help FDI will rise further in 2020 and 2021

Thus, we believe Vietnam's manufacturing luster will not be diminished and will continue to outshine the region in its higher growth trends. First, the push to diversify out of China will find a home in Vietnam due to competitiveness for labor intensive manufacturing, coupled with cultural and geographical proximity.

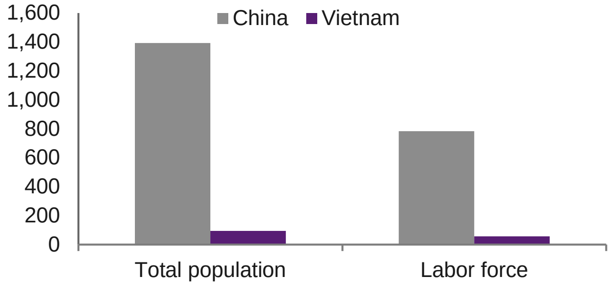
Our study of labor intensive manufacturing attractiveness, using input costs, hard and soft infrastructure and trade policy, puts Vietnam at the top of the relocation ranking, even without considering its latest prize of the EU-Vietnam FTA and the goodwill generated from taming the coronavirus and limiting supply-side disruption to manufacturing.

Table 2. A summary of our relocation metrics and ranking

Country	Demographics (% 2020-2025)	Input		Institution/Infrastructure		Investment		Overall Rankings 2019	Overall Rankings 2018
		Wage ($ per month)	Electricity ($ per liter)	Doing Business Ranking	Infrastructure Ranking	Mfg/Total FDI (%)	Import tariff on Mfg goods (%)		
CN	-1	493	1	31	26	30	9	4	4
ID	6	296	1	73	46	35	9	5	5
IN	7	265	1	63	44	61	10	6	2
ML	7	413	1	12	41	30	6	3	6
PH	9	220	1	95	60	14	6	7	7
TH	-2	413	1	21	32	37	9	2	3
VN	1	227	1	70	39	36	9	1	1

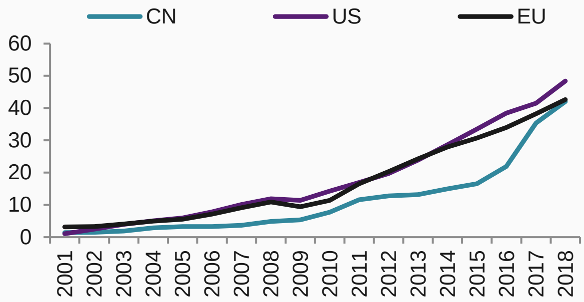
Source: Natixis, UNCTAD, Jetro, UN Population Statistics, World Bank, Global Petrol

Chart 6
Size of population and labor force compared with China (mn)



Source: Natixis, World Bank, ILO

Chart 7
Exports to key trading parters (USD bn)



Source: Natixis, UNCTAD

That said, Vietnam's ability to absorb diversification push out of China is limited by its relatively smaller labor force, which is only 7% of China's (**Chart 6**). That means that Vietnam is only absorbing sectors that it targets such as textile, footwear and electronics. And even within electronics, production that require massive mobilization of labor force, Vietnam cannot achieve the scale that China has as well as the existing supply linkages. Meaning, those that look to diversify out of China will find a home in Vietnam but that destination is niche rather than a solution for all.

Second, another reason for Vietnam's outperformance is its aggressive opening up policy such as Vietnam's EU-FTA. Other than bilateral free trade agreements (FTAs) with neighboring economies such as ASEAN, Australia, New Zealand, Chile, China, India, Japan, and South Korea, Vietnam has gained its prized access – the European Union.

The EU-Vietnam FTA was ratified and is expected to come into force in summer 2020, which marks the EU's most ambitious free trade agreement ever concluded with a developing country. Within ASEAN, Vietnam and Singapore are the only economies with such a status. Moreover, it is one that has eluded China and likely to prove another advantage for firms seeking to diversify their supply chain.

Beyond tariff and non-tariff barriers, the EU-Vietnam FTA also will achieve the following for Vietnam:

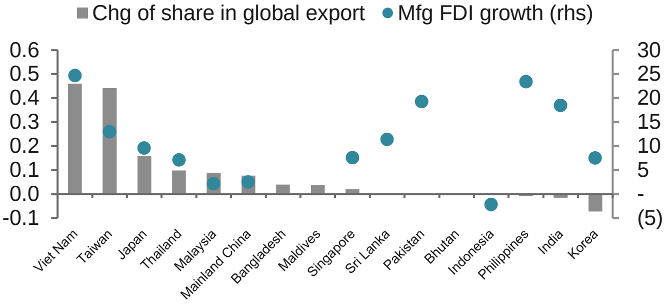
Box 1.

- *Align more closely with international standards on motor vehicles and pharmaceuticals. As a result, EU products will not require additional Vietnamese testing and certification procedures. Vietnam will also simplify and standardize customs procedures;*
- *EU access to Vietnamese public procurement: EU companies will be able to compete for Vietnamese government contracts (and vice-versa);*
- *Make it easier for EU companies to operate in the Vietnamese postal, banking, insurance, environmental and other service sectors;*
- *Vietnamese manufacturing sectors such as food, tyres and construction materials will open up to EU investment.*

The EU FTA is important as it not only allows Vietnamese firms to access the largest economic bloc in the world but also a selling point for those that want to use Vietnam as an access to Europe. And that in itself will attract European firms as well as Asian ones such as China that want to use Vietnam as an access point to Europe. For example, FDI inflows from China into Vietnam rose massively in 2019. Moreover, it will help Vietnam to liberalize and improve standards of trade and investment as well las facilitate upgrading of value chain linkages. Thus, we believe that the EU FTA will be a big game changer for Vietnam and further cement its status in Southeast Asia as a trade and investment friendly hub to the world.

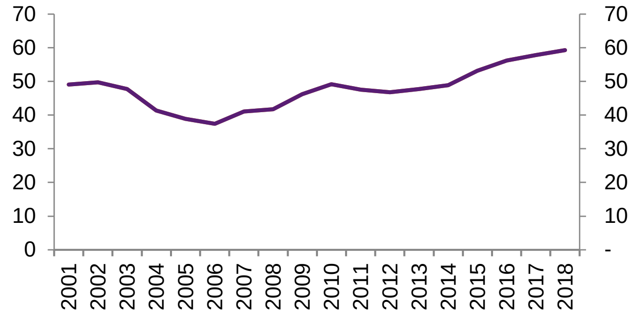
Beyond trade liberalization policy, Vietnam also adopts incentives for foreign firms setting up shop in the country through industrial parks, infrastructure building and tax breaks. These measures have proved successful as big brands such as Samsung Electronics have relied on Vietnam as its offshore center to arbitrage from rising costs from China. During the height of the foreign visitors ban due to Covid-19, the Vietnamese government made exemptions for South Korean engineers that needed to enter the country to visit their plants. That ability to contain the virus to ensure that factories can run smoothly and key foreign personnel can enter the country means that the level of investment in the country will likely rise after Covid-19 as the Vietnam brand gets a lift as a place to do business.

Chart 8
Change of share in global exports (%, 2014-2018)



Source: Natixis, UNCTAD

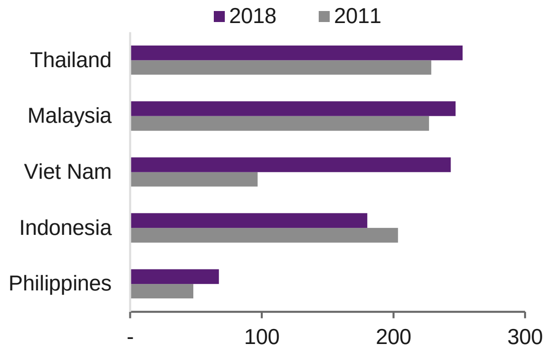
Chart 9
Stock of FDI as a share of GDP (%)



Source: Natixis, UNCTAD

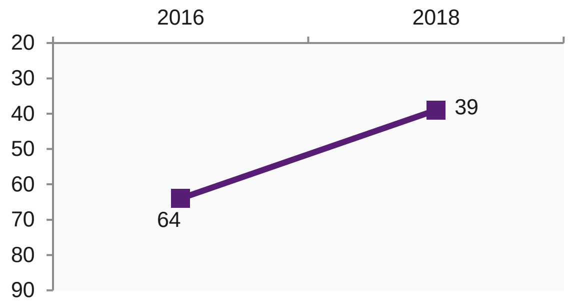
Already, its FDI inflows are high, raising the stock of FDI as a share of GDP steadily. As a result of this foreign inflow investment to manufacturing, Vietnam has had the highest increase of global market share in the past five years within the region (**Chart 8**). This has allowed it to raise its gross exports to the level comparable to Thailand and Malaysia and surpassed Indonesia, a country four times its economic size (**Chart 10**).

Chart 10
Gross export to the world (USD bn)



Source: Natixis, UNCTAD

Chart 11
Vietnam improved in infrastructure rankings



Sources: World Bank, Natixis

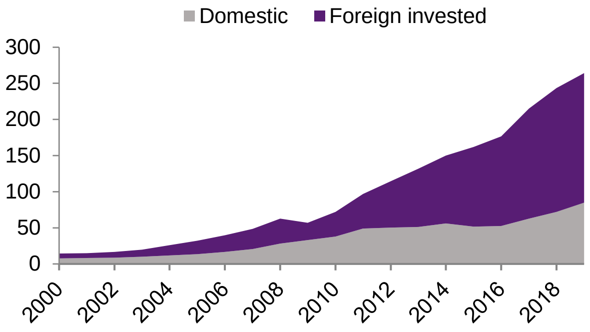
To match with an increase of production, Vietnam has also invested in infrastructure to improve its electricity production, national highway improvement, and sea and air transport. These investment has boosted the infrastructure rankings of Vietnam from 64 to 39 for 2018 (**Chart 11**). In particular, the World Bank logistics performance index assign a strong upgrade in Vietnam's logistics services and thus a better ability to track consignments. Given the expected increase of FDI inflows and industrial production growth, we expect demand for infrastructure investment will continue to rise.

But Vietnam faces two challenges: raising its domestic capacity and demographics

While Vietnam's short-term success is assured, its development faces the following limitation: low domestic sector capability to tap into the global value chain and worsening demographic transition. Vietnam's gross export growth is impressive but beneath the strong performance is domestic weakness. **Chart 12** shows that most of the growth of exports is derived by foreign invested firms and domestic firms have trailed behind. This is very bad news for Vietnam long-term future when its attractiveness gets eroded.

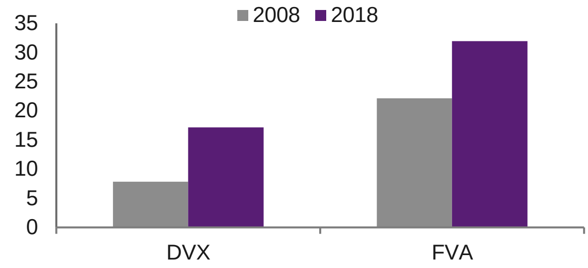
If we dig deeper into Vietnam's gross exports to look at the value add by the global value chain (GVC) approach, then we can see that foreign firms are deriving more value add from Vietnam's exports than domestic firms as Vietnam depends a high share of foreign imports of intermediates for exports (FVA). Meanwhile, Vietnam's exports of intermediates used by other countries as inputs for their exports is smaller, although growing (**Chart 13**).

Chart 12
Toal exports breakdown by ownership (USD bn)



Source: Natixis, CEIC

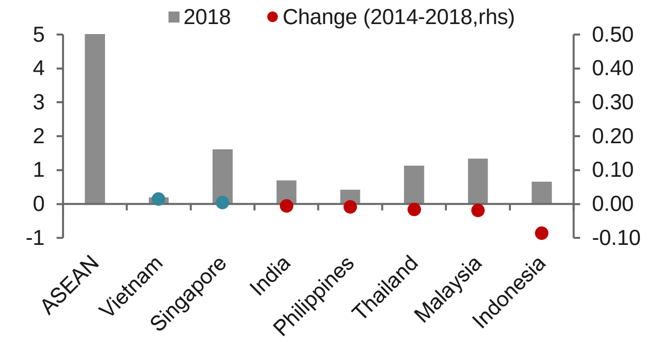
Chart 13
Breakdown of Vietnam's exports using GVC approach (% to GDP)



Source: UNCTAD-Eora database, Natixis
N.B. Results for 2018 are forecasted by UNCTAD-Eora
Foreign value added (FVA) represents the amount of foreign inputs within gross exports. Domestic value added in third countries' exports (DVX) represents the amount of exported inputs used in other countries' exports.

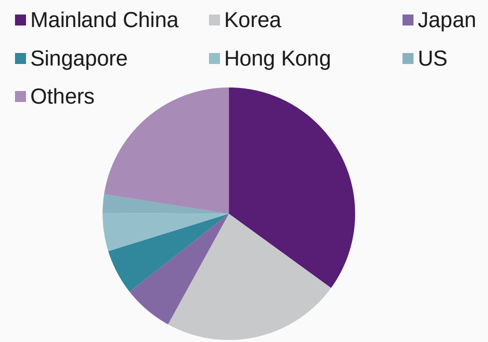
We have also studied Vietnam's bilateral relationship with China and it shows that that Vietnam's dependency on China's inputs for its exports has risen over the years. And within ASEAN, Vietnam's linkages with China has increased the most while others declined (**Chart 14**). That said, on a whole, Vietnam's rise in global market share is not all shallow – its participation in global value chain has increased significantly not just via foreign inputs for exports (FVA) but also its rising exports of intermediates in others' exports over the past 10 years (DVX).

Chart 14
China's participation in ASEAN's value chain(%)



Source: UNCTAD-Eora database, Natixis
N.B. Results for 2018 are forecasted by UNCTAD-Eora
Blue dot stands for a rise in change

Chart 15
Vietnam's key import origins (%)



Source: Natixis, OEC

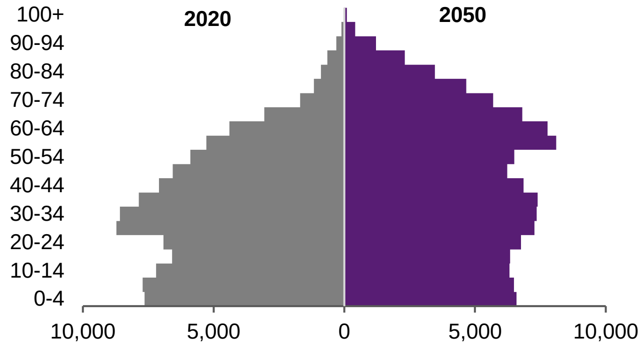
The good news is that the EU-Vietnam FTA, in addition to almost all import duties eliminated over seven years in the EU and ten years in Vietnam (**Box 1**), has the provisions on rules of origin within the agreement that could also benefit Vietnamese production in moving up the value chain as it requires the entire supply chain to be in Vietnam to benefit from zero duty or have to be imported from EU member countries. While in the short-term this creates complications for Vietnam as it currently relies on China for inputs for manufacturing but also presents opportunities for more FDI inflows to tap into zero duty to the EU.

While the US and EU are Vietnam's largest export markets, Vietnam depends most on China for imports, especially inputs for production (**Chart 15**). So the rise of Vietnamese gross exports actually have a lot of China-value added intermediate inputs. As such, the rules of origin of the EU-Vietnam FTA for textile can help Vietnamese firms start the process of capturing more of the value chain. Still, despite progress and Vietnam being a competitive cheaper alternative to China, it needs to derive more from the global value chain and improve the linkages of local firms to the global value chain. And the reason for this is simple – if Vietnam isn't successfully in upgrading its linkages, then when its population ages, it will not have the productivity necessary to counter the slump from demographic weakness.

At the moment, Vietnam is a bright star, but in time, its luster will disappear as the easy ingredient to growth dissipates. According to United Population projection, Vietnam will age in 2050 as you can see the beautiful population pyramid tilts to top heavy by 2050 (**Chart 16**). And that means that the friction to growth will rise and one of the key reasons the government is trying to raise the campaign to promote fertility to avoid that fate[2].

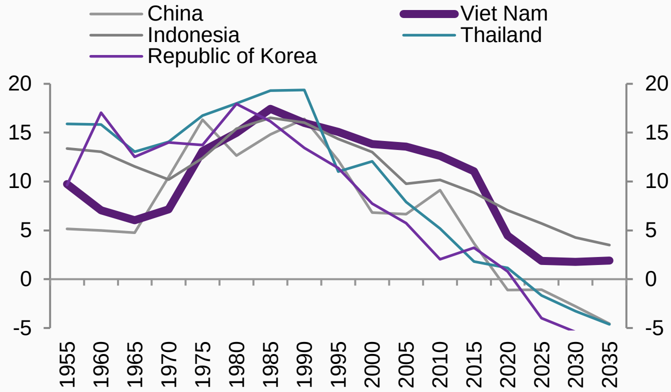
Given Vietnam's population size and worsening demographic transition in thirty years, the government has no time to rest on its laurel even if it is a short-term Asian economic star. And to do so, it needs to address structural weaknesses such as soft and hard infrastructure to help domestic firms link more to the global value chain.

Chart 16
Vietnam population projection (thousand)



Source: Natixis, UN Projections

Chart 17
Working age (higher is better, % change)



Source: Natixis; UNCTAD

Vietnam also will need to invest in more sustainable infrastructure for its development as rapid industrialization also brings negative impact on environmental and natural assets. As such, we expect further increase in investment in Vietnam in the next decade for it to ensure that its future remains bright as its leaves its primarily youthful period behind (as **Chart 16** shows, most of Vietnam's population is below 35).

Related Research	
Update of Asia Outlook: Asia in recession again due to large demand shocks and limited stimulus	23/04/20
North Asia reshuffling supply chain to Southeast Asia in response to China s vertical integration	13/11/19
Supply chain transformation: The world is more linked to China while China becomes more vertically integrated	09/10/19

[2] https://www.scmp.com/week-asia/economics/article/3083869/marry-30-two-children-35-vietnams-plan-young-people-boost-its

Head of Global Markets Research

Jean-François Robin
+33 1 58 55 13 09
jean-francois.robin@natixis.com

Asia Pacific Research (Non independent Research)

Chief Economist, Asia Pacific

Alicia Garcia Herrero
+852 3900 8680
alicia.garciaherrero@natixis.com

Emerging Asia

Economist

Trinh Nguyen
+852 3900 8726
trinh.nguyen@natixis.com

Greater China

Economist

Jianwei Xu
+852 3900 8034
jianwei.xu@natixis.com

Japan, Pacific

Economist

Kohei Iwahara
+813 4519 2144
kohei.iwahara@natixis.com

Sectoral Research Asia

Economist

Gary Ng
+852 3915 1242
gary.ng@natixis.com

Disclaimer

The information contained in this publication and any attachment thereto is exclusively intended for a client base consisting of professionals and qualified investors. This document and any attachment thereto are strictly confidential and cannot be divulgated to a third party without the prior written consent of Natixis. If you are not the intended recipient of this document and/or the attachments, please delete them and immediately notify the sender. Distribution, possession or delivery of this document in, to or from certain jurisdictions may be restricted or prohibited by law. Recipients of this document are required to inform themselves of and comply with all such restrictions or prohibitions. Neither Natixis, nor any of its affiliates, directors, employees, agents or advisers or any other person accepts any liability to any person in relation to the distribution, possession or delivery of this document in, to or from any jurisdiction.

This document has been developed by our economists. It does not constitute a financial analysis and has not been developed in accordance with legal requirements designed to promote the independence of investment research. Accordingly, there are no prohibitions on dealing ahead of its dissemination.

This document and all attachments are communicated to each recipient for information purposes only and do not constitute a personalized investment recommendation. They are intended for general distribution and the products or services described herein do not take into account any specific investment objective, financial situation or particular need of any recipient. This document and any attachment thereto shall not be construed as an offer nor a solicitation for any purchase, sale or subscription. Under no circumstances should this document be considered as an official confirmation of a transaction to any person or entity and no undertaking is given that the transaction will be entered into under the terms and conditions set out herein or under any other terms and conditions. This document and any attachment thereto are based on public information and shall not be used nor considered as an undertaking from Natixis. All undertakings require the formal approval of Natixis according to its prevailing internal procedures.

Natixis has neither verified nor carried out independent analysis of the information contained in this document. Accordingly, no representation, warranty or undertaking, either express or implied, is made to the recipients of this document as to or in relation to the relevance, accuracy or completeness of this document or as to the reasonableness of any assumption contained in this document. Information does not take into account specific tax rules or accounting methods applicable to counterparties, clients or potential clients of Natixis. Therefore, Natixis shall not be liable for differences, if any, between its own valuations and those valuations provided by third parties; as such differences may arise as a result of the application and implementation of alternative accounting methods, tax rules or valuation models. The statements, assumptions and opinions contained in this document may be changed or may be withdrawn by Natixis at any time without notice.

Prices and margins are indicative only and are subject to change at any time without notice depending on, *inter alia*, market conditions. Past performances and simulations of past performances are not a reliable indicator and therefore do not anticipate any future results. The information contained in this document may include results of analyses from a quantitative model, which represent potential future events that may or may not be realised, and is not a complete analysis of every material fact representing any product. Information may be changed or may be withdrawn by Natixis at any time without notice. More generally, no responsibility is accepted by Natixis, nor any of its holding companies, subsidiaries, associated undertakings or controlling persons, nor any of their respective directors, officers, partners, employees, agents, representatives or advisers as to or in relation to the characteristics of this information. The statements, assumptions and forecasts contained in this document reflect the judgment of its author(s), unless otherwise specified, and do not reflect the judgment of any other person or of Natixis.

The information contained in this document should not be assumed to have been updated at any time subsequent to the date shown on the first page of this document and the delivery of this document does not constitute a representation by any person that such information will be updated at any time after the date of this document.

Natixis shall not be liable for any financial loss or any decision taken on the basis of the information disclosed in this presentation and Natixis does not provide any advice, including in case of investment services. In any event, you should request for any internal and/or external advice that you consider necessary or desirable to obtain, including from any financial, legal, tax or accounting adviser, or any other specialist, in order to verify in particular that the transaction described in this document complies with your objectives and constraints and to obtain an independent valuation of the transaction, its risk factors and rewards.

Natixis is supervised by the European Central bank (ECB).

Natixis is authorized in France by the *Autorité de Contrôle Prudentiel et de Régulation* (ACPR) as a Bank -Investment Services Provider and subject to its supervision.

Natixis is regulated by the *Autorité des Marchés Financiers* in respect of its investment services activities.

Natixis is authorized by the ACPR in France and regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority in the United Kingdom. Details on the extent of regulation by the FCA and the Prudential Regulation Authority are available from Natixis' branch in London upon request.

In Germany, NATIXIS is authorized by the ACPR as a bank – investment services provider and is subject to its supervision. NATIXIS Zweigniederlassung Deutschland is subject to a limited form of regulation by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) with regards to the conduct of its business in Germany under the right of establishment there. The transfer / distribution of this document in Germany is performed by / under the responsibility of NATIXIS Zweigniederlassung Deutschland.

Natixis is authorized by the ACPR and regulated by Bank of Spain and the CNMV (*Comisión Nacional del Mercado de Valores*) for the conduct of its business under the right of establishment in Spain.

Natixis is authorized by the ACPR and regulated by Bank of Italy and the CONSOB (*Commissione Nazionale per le Società e la Borsa*) for the conduct of its business under the right of establishment in Italy.

Natixis is authorized by the ACPR and regulated by the Dubai Financial Services Authority (DFSA) for the conduct of its business in and from the Dubai International Financial Centre (DIFC). The document is being made available to the recipient with the understanding that it meets the DFSA definition of a Professional Client; the recipient is otherwise required to inform Natixis if this is not the case and return the document. The recipient also acknowledges and understands that neither the document nor its contents have been approved, licensed by or registered with any regulatory body or governmental agency in the GCC or Lebanon.

All of the views expressed in this report accurately reflect the author's personal views regarding any and all of the subject securities or issuers. No part of author compensation was, is or will be, directly or indirectly related to the specific recommendations or views expressed in this report.

I(WE), AUTHOR(S), WHO WROTE THIS REPORT HEREBY CERTIFY THAT THE VIEWS EXPRESSED IN THIS REPORT ACCURATELY REFLECT OUR(MY) PERSONAL VIEWS ABOUT THE SUBJECT COMPANY OR COMPANIES AND ITS OR THEIR SECURITIES, AND THAT NO PART OF OUR COMPENSATION WAS, IS OR WILL BE, DIRECTLY OR INDIRECTLY, RELATED TO THE SPECIFIC RECOMMENDATIONS OR VIEWS EXPRESSED IN THIS REPORT.

The personal views of authors may differ from one another. Natixis, its subsidiaries and affiliates may have issued or may issue reports that are inconsistent with, and/or reach different conclusions from, the information presented herein.

Natixis, a foreign bank and broker-dealer, makes this report available solely for distribution in the United States to major U.S. institutional investors as defined in Rule 15a-6 under the U.S. securities Exchange Act of 1934. This document shall not be distributed to any other persons in the United States. All major U.S. institutional investors receiving this document shall not distribute the original nor a copy thereof to any other person in the United States. Natixis Securities Americas LLC, a U.S. registered broker-dealer and member of FINRA, is a subsidiary of Natixis. Natixis Securities Americas LLC did not participate in the preparation of this report and as such assumes no responsibility for its content. This report has been prepared and reviewed by authors employed by Natixis, who are not associated persons of Natixis Securities Americas LLC and are not registered or qualified as research analysts with FINRA, and are not subject to the rules of the FINRA. In order to receive any additional information about or to effect a transaction in any security or financial instrument mentioned herein, please contact your usual registered representative at Natixis Securities Americas LLC, by email or by mail at 1251 Avenue of the Americas, New York, NY 10020.

The stocks mentioned might be subject to specific disclaimers. Please click on the following link to consult them:

http://research.intranet/GlobalResearchWeb/main/globalresearch/DisclaimersSpecifiques