

# INFLUENCE OF SUPPLY CHAIN MANAGEMENT DUE TO **TRADE WAR**

Dr. Collin Wong

Director of Policy Research Institute of Global Supply Chain

The Hang Seng University of Hong Kong

Intertek Seminar, 17 January 2019

# **ABOUT US**

Established in 2016, the **Policy Research Institute of Global Supply Chain** undertakes relevant, high-quality academic and policy research in supply chain and logistics management.

A major role of the Institute is to facilitate communication between regional stakeholders, sharing their mutual interests in advancing the development of supply chain and logistics in the region.



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香港恒生大學
THE HANG SENG UNIVERSITY
OF HONG KONG



# PAST REPORTS – MAINLAND CABOTAGE STUDY



年已認居第五位。恒生管理學院一項最新研究 蔣德來沉重打擊。估計最豐經游攝失珠三角地區以外所有的轉 

### 倘放寬沿海運輸權 港或失14%貨運量

但中央政府近年推出自由貿 易區試驗計劃,於區內逐步放寬 恒生管理學院日前發表研究 報告·若中國全面開放沿海運 **給權,將對本港貨槽運輸業帶** 來沉重打擊。恒管決策科學學 院院長梁志堅(憲)指・不少國家 實施沿海運輸権・意指除本國 出隻外,其餘船隻不得在國家 港口間運輸貨物。由於本港2 約束,故外調賞翰多承運貨物來港,再轉 地區的中轉量(240萬標準箱),相等於總貨

本海曾是全球資標底經過最多港口、但抵

再學生。楊宏正母宗經光期分別表題論撰,對孫表音模攝驗書

口賀理量;以去年的吞吐量計算,損失可高速二百四十萬箱。

即減少一成四,足令本港港口排名被提出十大之列;並很失權

招港站位。聚者建議本港物流常加班關亞·增加處理幾口貨物

1加下。不過:本市在一個辨別下一 1加下:不過:本市在一個辨別下一 [不受(政府法)小有關而再運輸殖規

沿海運輸權限制。讓中資非五星 旗貨輸從事沿海捎帶業務,對本 港的港口地位構成威脅。報告警告,若貨櫃吞吐量推一步下跌。 將影響本港連接其他港口的能 :按理有的降幅計算,「最悲

Relaxed mainland port rules could slice 14pc off Hong Kong's container throughput, says report

City could lose all transshipment rights in the non-Pearl River Delta region, meaning a loss of 2.4 million containers per year



Hong Kong's container freight industry, according to the highly influential Hang Seng

# 内地推沿海捎帶 港轉口料年減240萬貨櫃



■左起:香港恒生管理學院黃彥璋博士、梁志堅教授、供應鏈及資訊管 理學系系主任及副教授黃惠虰博士、助理教授巫耀榮博士。

生管理學院供應鏈及資訊管理學上周四發 「放電沿海運輸權及珠三角地區對 告指國家若全面開放沿海運輸權,對香港

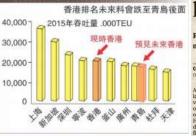
轉揮業務。這些措施已對本港的 就業、對香港經濟持續發展帶來

### 内地倘開放沿海運輸 港或失一成貨櫃吞吐

【明報專訊】面對鄰近地區競爭、本港貨櫃吞吐量近年持 續下跌,香港恒生管理學院發表研究報告,推算內地若全面 開放沿海運輸権・對番維貨標運輸業將仍來汽重打撃・以 2015年本港貨糧吞吐量推算,損失或高達240萬箱或佔全部 货量的12%,香港作爲全球十大港口之一的地位藉時不保

內地港口間運輸貝限中國船

### 2015年香港與內地港口吞吐量排名 40.000 2015年吞吐量 .000TEU





### HK likely to lose transshipment hub advantage

Relaxation of cabotage rules on the mainland may see city lose edge in container throughput

A full relaxation in the mainland's A hui relaxation in the maintain as laws prohibiting foreign-flagged vessels from moving cargo from one mainland coastal port to an-other, could deal a serious blow to Hong Kong's container freight in-dustry, according to the highly in-fluential Hang Seng Management

College (HSMC). It claims in a new report that in the worst-case scenario, Hong Kong could lose all transshipmen rights in the non-Pearl River Delta region, which could translate into a loss of 2.4 million container twenty-foot equivalent unit (TEU) - a measurement of stan dard container sizes - which would translate into 14 per cent loss of the city's total co

throughput, China's rules were waived for Hong Kong as it was considered a foreign port for these purposes. The relaxation of the transpor-

tation rules, commonly called cabotage in the industry, started in 2013. Up until then Hong Kong

as Oingdao, Ningbo and Guang zhou have been lobbying hard for a relaxation of their own cabotage

rules on foreign vessels.

At the same time, the Nansha
Free Trade Zone in Guangdong province, is progressively intro

"Mainland China's cabotage relaxation is weakening Hong Kong's status of being a key trans-shipment hub in the region, and creating uncertainty for the local jobs market and economy," said



"Any further relaxation will

### 香港急須保持區內樞紐港角色

### 梁志堅

香港是人才滙聚、資本可自由流轉和貨物出 入頻繁的城市·被譽為經濟充滿能量和生命力。 過去數十年,香港經濟可以保持穩定發展,社會繁 榮,其中一重要原因是香港擔當區內貨運樞紐的 角色。今天,我們賴以為生的其中一項支柱一 貨運物流業,正受到嚴重威脅。自2014年7月 起·本港港口吞吐量已連續下跌28個月。

恒生管理學院決策科學學院最近發表《放寬 沿海運輸權及珠三角地區對香港海運物流業之影 響》研究報告·探討內地近年在海運政策上放寬沿

頻繁的船班至世界各地。現時香港貨櫃碼頭每周 有340艘船班次,連接全球共470個港口。這船 運網絡吸納區內的航運·轉運·相關貿易和物流業 務,對穩定本港整體經濟有莫大幫助;可是這船運 網絡正受到多方面挑戰,包括以上談及的沿海運 輪權放實及珠三角地區競爭。

深圳港目前有131條國際班輪航線·半數以 上的航線都同時停靠或覆蓋香港和深圳的港口。 如香港貨量下降、這些航線將不再停靠香港、香港 樞紐港的地位將岌岌可危

過去10年·香港港口的角色已由主要是服務 內地腹地出口港,慢慢轉成中轉港口。2015年,中

# PAST REPORTS – GREATER BAY AREA STUDY

### 'Government inaction has cost Hong Kong advantages over other bay area cities'

But all is not lost, says report from academics, adding that quick action could revive city's innovation prospects

PUBLISHED : Friday, 01 December, 2017, 9:48am UPDATED : Friday, 01 December, 2017, 11:04am





2 SHARES



Government failure to maintain Hong Kong's economic advantages in innovation and technology has caused it to fall behind local rivals, a group of academics said on



But the city can still rekindle its niche in logistics and high-value-added services

### 恒管發表大灣區報告 探討物流業未來機遇

港珠澳大橋通車在即,香港、澳門以至珠海的物流業者終於可以選擇運輸更為靈活可靠的陸路運輸,這對香港的物流業不啻是新概

專欄: 灼見商業 作者: 本社编輯部 日期: 2017-12-06

何順文 恒生管理學院 梁志堅 物流 國港澳大鴻區 貿易 陣帥夫 香港中文大學 黃惠虹













### GRATION CHALLENGES

logistics and trade facilitation issues in the Guangdong-Hong Kong-

One concern among stakeholders is the lack of clarity on the approach to integration of the cities in the context of "One Country
Two Systems." Dynamics between market economy and policy driven economy, and given such dynamics, whether there is a division of services in the region, were two more issues that were identified.

Concerns were also raised on whether customs practices in the region will be reformed. The fifth concern was about creating a single window to facilitate trade and logistics.

These issues formed part of the findings in a report, "Logistics and Trade Facilitation in Guangdong-Hong Kong-Macau Bay Area: Stakeholders Concerns, Comments from Central Government, and Policy Recommendations," by a team that included

members of the Policy Research Institute of Global Supply Chain of Hang Seng Management College and the sian Institute of Supply Chains & Logistics of the Chinese University

development at Hong Kong International Airport, notes that the airline business is a key industry for collaboration. Guangzhou has plans for a second airport, while Shenzhen International Airport is building the 4th terminal, to move 60 million more passengers. These airports altogether offer more than 300 air routes to the mainland, while Hong Kong only has less than 50 accessing the mainland.

These airports could help Hong Kong attract more transit passengers, he says. The airports have also entered into partners with air ticket sellers such as Ctrip. Last month, Hong Kong airport teamed up with DHL Express to

expand capacity at the logistics center. However, since aviation is highly regulated

Bringing disparate cities and involves the government, an authority of the Big Bay Area together or commission for regional coordination is is a daunting undertaking. necessary, Cheung says. Hong Kong airport, so far, has set up an office in Guangzhou Jovce Chen reports

\*Before nine cities and two special administrative regions integrate, we have to

settle this as soon as possible to avoid unhealthy competition internally," he says.

### 大灣區融合助物流便利化

⊙ 2017-12-01 港間



大灌區融合助物流便利化

T



(星島日報報道)恒生管理學院及中大發表有關粤港澳大灣區物流及貿易便利化的研究報告, 指出港澳兩個特區與內地九個城市協調發展,尤其香港、廣州及深圳等可以發揮優勢互補,本港 透過完善法制及專業服務協助內地城市與國際接軌。兩校將在下月七日舉行大灣區專題論壇,邀 請政商界代表及業界分享。



## 中美貿戰衝擊香港海運業 速謀對策渡過難關

美貿易爭端仍然膠 着。國際貿易全球 避鏈穿梭各地,當

佔有全球國民生産總值合共 40%之 -美國和中國---和地方都會受牽連

以「中國製造」的電視機爲例, 組件可能包含「日本製造」的玻璃 面板、「新加坡製造」的背光面板、 「韓國製造」的電路板、「德國製 造」的芯片等。美國倘若針對中國 加其成本價格,減低貨品在美國銷 售的競爭力。損害中國生產者之餘, 同時打擊供應鏈中所有提供組件及 服務的國家、繼而減低製造組件的 國家的國內生產總值,形成雪球效

### 中港碼頭吞吐量或現斷崖式下跌

同時,貿易衝突肯定對全球貨運 物流業帶來一定程度打擊。對香港 來說,首當其衡是海運物流業。作



八成是與內地有關,所以今次中美

要通道、香港港口正面臨前所未有 之挑戰,第四季中港貨櫃碼頭吞吐 量更有可能出現「斷崖式」下跌。

海運佔香港海陸空貨運總量九 成,而當中超過七成的海運是轉口 雷經由轉口港,如香港葵青貨櫃碼 頭,換駁下一程船運,再運送至日 的港。香港轉口業務有八成是與內 地有關,所以今次中美貿易戰將爲 香港港口帶來迎頭重擊

2016年,香港貿易物流業提供了 超過70萬個工作戰位,佔香港接 近四分之一生產總值。所以,當務 之急是怎樣提升香港港口業的競爭 力, 將中美貿易紛爭對我們的影響

### 強化創新 保持貿易物流業活力

今年8月,香港恒生大學(前身 爲恒生管理學院)全球供應鏈政第 研究所發表報告,建議香港貨櫃碼 頭各碼頭營運商考慮一套提升競爭 力的方法,便是開放其設施,讓大 家共享泊位、吊機和堆場等。外國 碼頭也有相關合作模式成功例子 這個「設施協作模式」方案將有助 降低船公司和碼頭營運商的營運成 本・減少污染、提升香港港口競爭

在應對貿易戰所帶來的威脅,香 港需強化創新,發揮我們靈活運作 的「設施協作模式」之同時·政府 貨櫃碼頭競爭力,將有助保持本港 貿易和物流業的活力,渡過今次難

> 作者梁志堅是香港恒生大學 決策科學學院院長, 決策科學學院副院長

# PAST REPORTS – HK PORT FACILITY SHARING

As the trade war intensifies, the maritime industry in Hong Kong must adapt to stay afloat

- · Lawrence Leung and Collin Wong say Hong Kong hard hit by the trade war as the majority of its ca
- The Hong Kong port should consider implementi terminal operators to share berths, cranes and va

PUBLISHED : Tuesday, 06 November, 2018, 7:34pm UPDATED: Wednesday, 07 November, 2018, 2:05pm



issue of ITTs is increasingly relevant for all ports with competing termina connections. Credit: Huskyherz/Pixabay/CC0

COMMENT: A study on better co-operation between terminals in Hong Kong by Hong Kong's Hang Seng Management College has rightfully received industry attention of late, writes Peter de Langen.

The study focuses on inter-terminal transfers (ITTs) between the five terminal operating companies in Hong Kong. The terminals charge for these ITTs, thus adding costs to already-high terminal rates in comparison with competing ports.

Inter-terminal moves arise when a container arrives at, for example, terminal A, but needs to be moved to terminal B for the onward (feeder) transport. Given the rise of consortia and the increase in ship sizes, the issue of ITTs is increasingly relevant for all ports with competing terminal operators and onward feeder or intermodal connections. The study mentions that around 15% of total volume is transferred between terminals.

With the use of simulation, the study found that the number of ITTs can be significantly reduced (around 50%) if the different terminals are managed as one facility, so facilities such as guays and cranes are shared. Competing ports such as Singapore and Shanghai are already managed as one facility as they are operated by one operator.

## 恒管倡碼頭公司共享裝卸設施

至9號碼頭劃為三大區域服務,如此的話可以 令船公司每年節省高達8800萬港元、將可吸 堅相信,中短期內都不可行,因為搬遷需要 引它們增多使用香港的設施

- 至兩位,香港港口更是區內唯一負增長的



享資源安排下,碼頭公司會根據各自的成本

政府政策推動,而且成本高昂,並不划算 構,強化商業模式,是可行的做法

黄惠虹指出,報告將會旱交政府,以及 向五大碼頭公司匯報。在研究中,恒生管理 學院使用了葵青貨櫃碼頭2017年其中一個月 六種貨櫃箱轉運量的情景,然後推算碼頭營 運商在有共享和沒有共享設施情況下所需的

頭操作效率會有所提升,估計每年節省29.1萬 次來回不同碼頭的不必要ITT次數。運送每 個貨櫃箱收費為300元計,船公司每年可節省 8800萬港元;二氧化碳排放量每年亦可減少 達4655噸;每艘貨輪的平均等候時間可減少



How city can keep maritime industry afloat

Lawrence Leung and Collin Wong say Hong Kong's logistics sector will be hard hit by the raging US-China trade war because most of our cargo is the

ent forms. If the US-China trade was con-



If trade between the US and China falls, this will have a negative economic impact on countries in the supply chain

# **GLOBAL SUPPLY CHAIN**

- A dynamic worldwide network when a company purchases or uses goods or services from overseas.
- involves people, information, money, processes and resources involved in the production, handling and distribution of materials and finished products or providing a service to the customer.



Source: Cips.com, BideDao





50-70% of company's profits can be eaten up by supply chain and logistics costs



Manufacturing is the highest multiplier effect of any economic sector

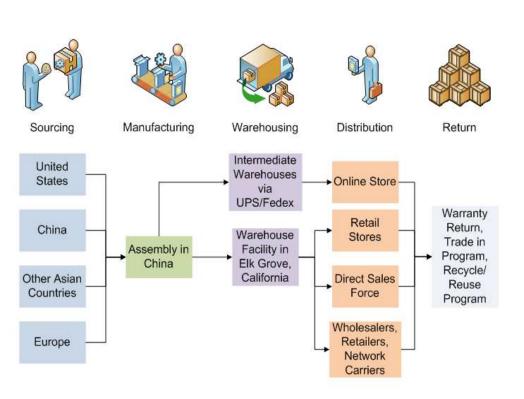


In US, every \$1 spent in manufacturing, adds \$1.89 to the economy

\$

Logistics cost can be more than 10% of the retail price

# **APPLE'S SUPPLY CHAIN**



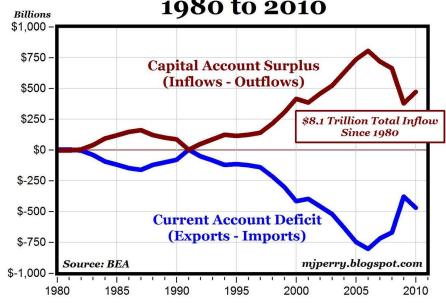


Sourced from supplychain247.com

Source: Econlife.

# TRADE GLOBALIZATION

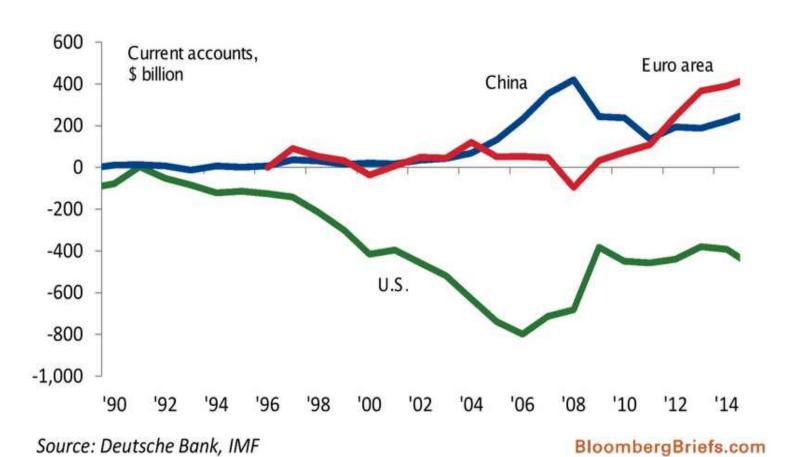
### U.S. Balance of Payments 1980 to 2010



### International balance of payments

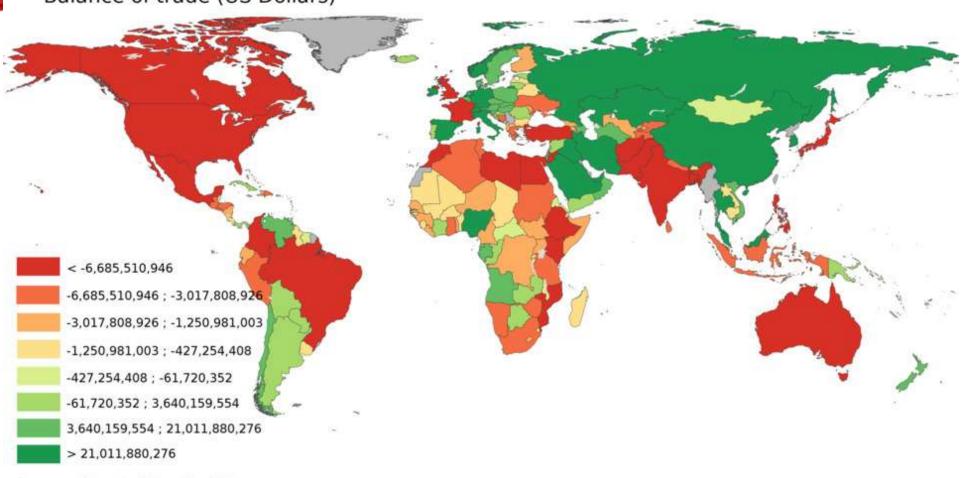
- used by countries to summarize, for a specific time period, the economic transactions of an economy with the rest of the world.
- recording all of a country's economic transactions, (exports & imports), by two main categories: current accounts and capital accounts.
- If a country is experiencing persistent BOP deficits -the country's industries lack productivity and efficiency.

# TRADE GLOBALIZATION



# TRADE GLOBALIZATION

Balance of trade (US Dollars)



Source: The World Bank - 2014

# FREE TRADE



reduces the price of every item sold in the market;



increases the supply of products in other markets and results in lower prices for those products;



encourages other nations to trade more freely with their trading partners which helps the global economy;



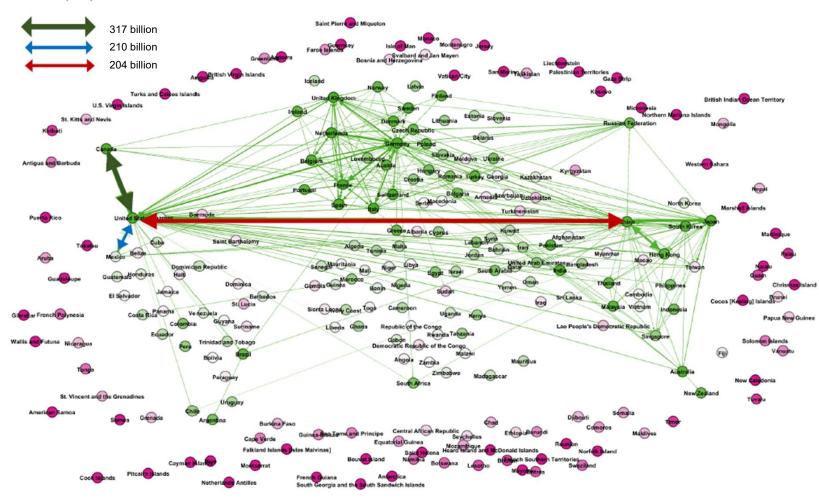
increases the number and variety of products for consumers to choose;



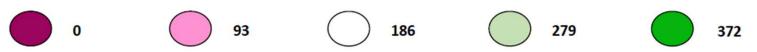
is a driving force behind a high standard of living.

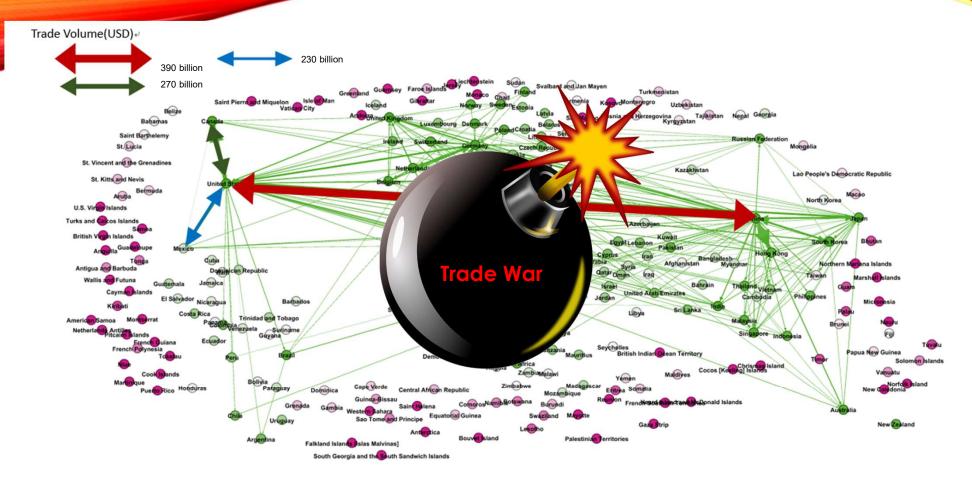
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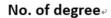


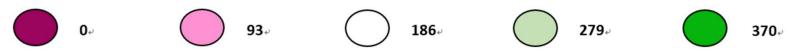


### No. of degree









# SINO-US TRADE CONFLICT DISRUPTS GLOBAL SUPPLY CHAIN

- When the world's two top economies
- a combined Gross Domestic Product constituting nearly 40% of the global figure in 2017
- a trade war nothing good can be expected for the two countries.



Source MSCI.com, World Bank

# TRADE WAR DETAILS

- Tariffs on \$200 billion worth of Chinese goods.
- industrial equipment and machinery
- consumer products
  - consumer electronics including smartwatches and bluetooth devices
  - industrial chemicals used for manufacturing textiles
  - health and safety products including bicycle helmets
  - child safety furniture including high chairs and car seats

March 1, 2018. Imposed tariffs of 25% on steel and 10% on aluminium.

March 22, 2018. > 1,300 categories of Chinese imports were listed for tariffs, including aircraft parts, batteries, flat-panel televisions, medical devices, satellites, etc

**July 6, 2018.** imposed a 25% tariff on \$34 billion of Chinese exports.

**August 22, 2018.** imposed a 25% tariff on \$16 billion of Chinese exports.

**September 24**, **2018**, imposed 10% tariff on \$200 billion worth of Chinese goods, increasing to 25% by the end of 2018 (pending)

Source: businessinsider.com

# GLOBAL SUPPLY CHAIN FOR FLAT PANEL TV

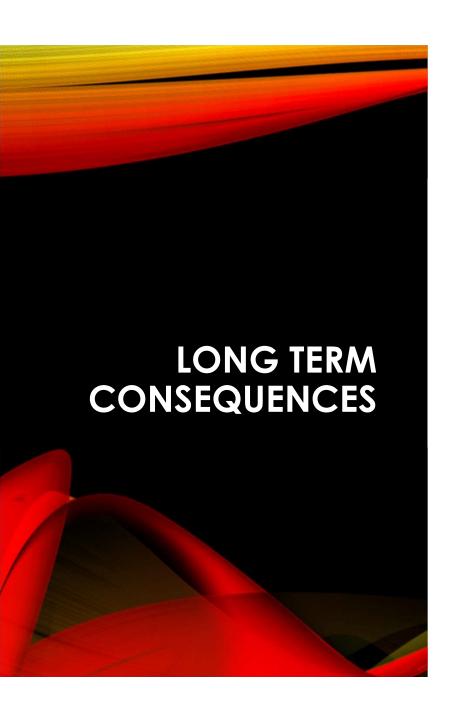
### Flat Panel TV **Parts** Intermediate commodities Parts Main production country Liquid crystal modules Liquid Japan, Korea, Taiwan, China Image processing units crystal panels Tuner units China, Taiwan, India, Indonesia, Japan, DDD Power supplies Korea, Malaysia, Singapore, Thailand, Assembled in I/O terminal units Vietnam. China, Taiwan, Inverter units Thailand, Malaysia, Philippines, Indonesia, India, Indonesia, Singapore, Vietnam, Taiwan, China, Korea, IC chips Japan, Korea, USA, Japan, EU China, Taiwan, India, Malaysia. Thailand, Malaysia, Philippines, Indonesia, Indonesia, Japan, Thailand, Mexico Capacitors Singapore Korea, Malaysia, Brazil, Vietnam Singapore, Thailand China, Taiwan, Thailand, Malaysia, Philippines, Indonesia, Resistors Singapore India, Indonesia, Japan, Korea, Connectors Thailand, Malaysia, Philippines, Vietnam Malaysia, Malaysia, Philippines, Vietnam Inductors Thailand, Relays Philippines Mexico, Brazil

Source: vimeo.com

# **EFFECT ON GLOBAL SUPPLY CHAIN**

- A negative economic impact on the countries in the supply chain
  - → a loss of GDP across the whole chain of countries that made up the network.
- As Americans buy less from China,
  - trade volume decreases
  - o negative multiplier effect will ripple through all economies involved, including HK

Trade Rank	2007	2017
1	US and Canada (US\$565.9 billion)	US and China (US\$635.3 billion)
2	US and Mexico (US\$345.6 billion)	US and Canada (US\$581.6 billion)
3	US and China (US\$341.4 billion)	US and Mexico (US\$557.6 billion)



China may find new customers to replace the Americans, but it takes long time.

China's economy will suffer due to downsize in manufacturing plants



Africa, Cambodia, India, Indonesia, Vietnam, etc

Are their supply chain infrastructures ready?

The product price is getting higher or lower?

Are labour skills ready?

Manufacturer of the various components could provide their goods and services to new buyers, instead of American companies

In practice, it would take some good years to make the transitions and the changes.

# IMPACT ON GOODS, CUSTOMERS, ECONOMY, PRODUCT OWNERS

### Goods

- Retailers transfer the tariffs onto retail prices
- Retailer sell the same goods but don't source the product from China grow profits by increasing prices.

### Customers

Consumers have fewer choices and higher prices

### Economy

- boost to inflation
- could affect 11 million jobs in the U.S., with rural and low-population counties hit the hardest.

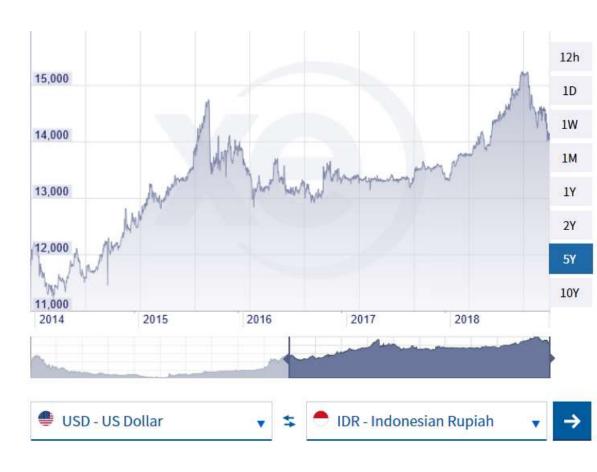
### Product Owners

- Shift sourcing and production- e.g. General Motors, Coca-Cola, Whirlpool, Harley-Davidson, Steve Madden, etc.
- Painful, costly and time-consuming processes for supplier selection & management, manufacturing site relocation, applying new licences and permits, training workers & management

## **IMPACT ON FINANCE & CREDIT**

### Finance & credit

- new banking relationships have to be reestablished in less developed countries (lower credit rating)
- due diligence and auditing to new trading partners is costly and time consuming
- less developed banking systems impose less available funding, higher funding cost and longer time to fund
- lower credit rating induces less trade financing sources and higher cost
- Volatile currency for developing countries
- High Risk & Cost, Time consuming



Source: xe.com

# SUPPLY CHAIN RISK

# Supply

Relationship Risk Supplier Deliver Risk Supplier Disruption Risk Technical Risk

## Manufacturing

Production Capability Risk
Forecasting Risk
Quality Risk
Security Risk
Product Design Risk
Technical Risk
Human Resources Risk

Financial Risk

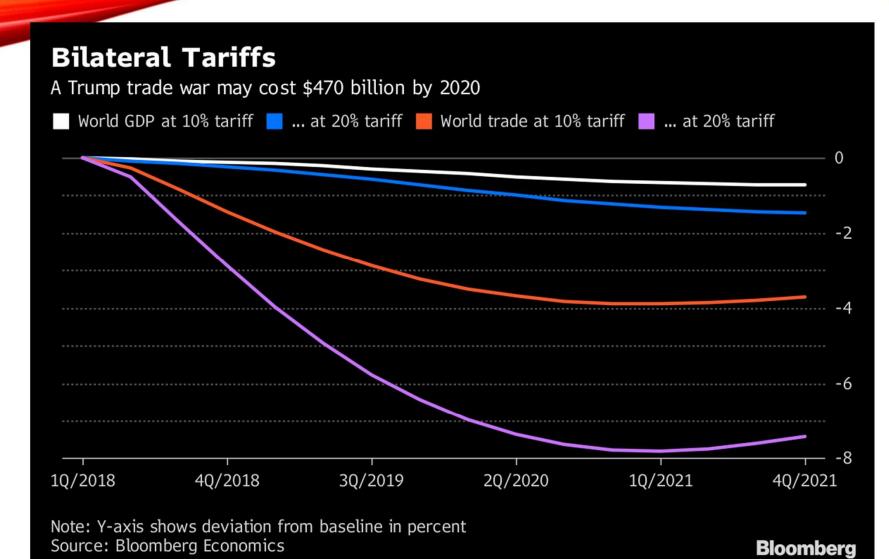
## **Distribution**

Relationship Risk
Delivery Risk
Security Risk
Inventory Risk
Financial Risk

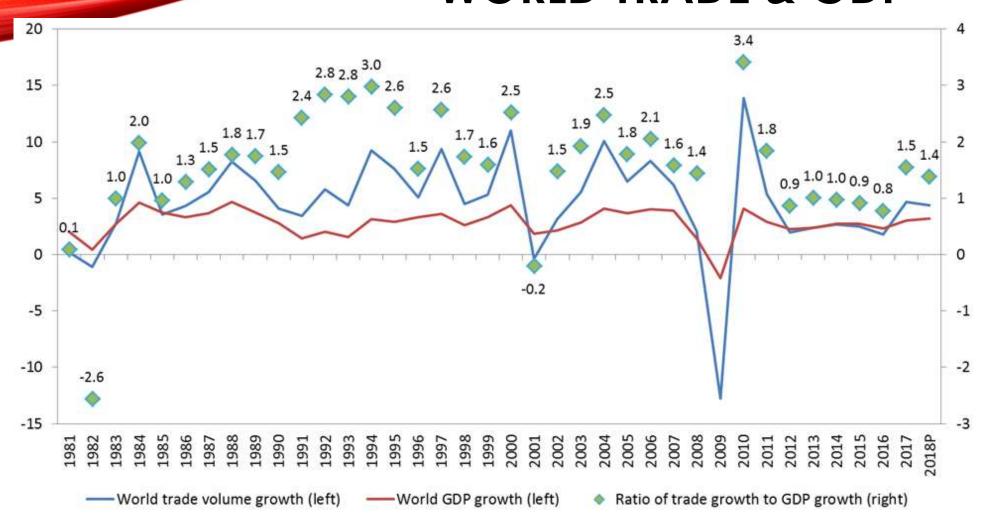
### External

Political Risk
Business
Environmental Risk
Natural Disaster Risk
Market Dynamic Risk

Source: SUPPLY CHAIN RETURN AND RISK MANAGEMENT by WH Wong, 2014



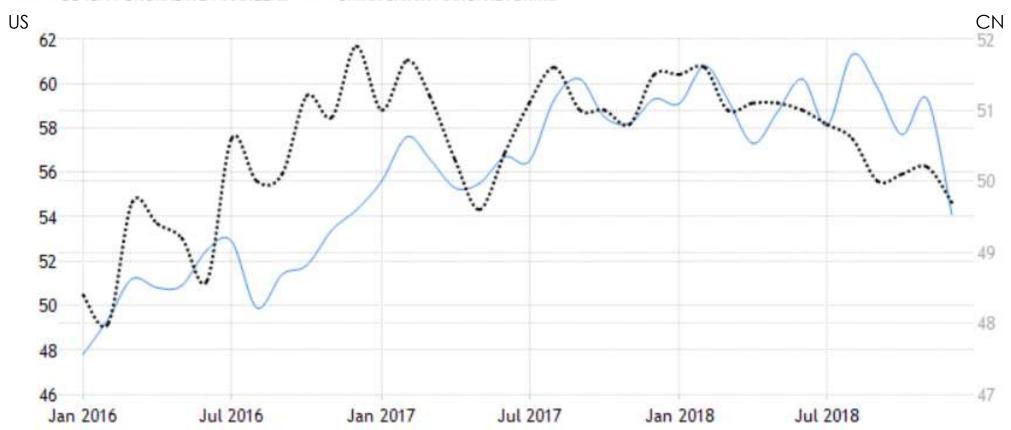
# **WORLD TRADE & GDP**



Source: World Trade Organization

# US MANUFACTURING PMI VS CHINA MANUFACTURING PMI

— US ISM PURCHASING MANAGER... ····· CHINA CAIXIN MANUFACTURIN...



Source: tradingeconomics.com



# INTERNATIONAL ECONOMICS AND TRADE The world's leading merchandise traders

Exporters			Importers		
7	US\$ billions	Per cent share		US\$ billions	Per cent share
China	2343	12.4	US	2409	12.7
US	1623	8.6	China	1960	10.3
Germany	1511	8	Germany	1217	6.4
Japan	684	3.6	Japan	822	4.3
Netherlands	672	3.6	UK	683	3.6
France	583	3.1	France	679	3.6
Korea	573	3	Hong Kong**	601	3.2
Italy	529	2.8	Netherlands	587	0.8
Hong Kong*	524	2.8	Korea	526	3.1
UK	507	2.7	Canada	475	2.8
Memo:	V-10-20-1		Memo:	12-0104	
Australia (#21)	240	1.3	Australia (#22)	238	1.2

<sup>\*</sup>Of which US\$508b are re-exports

<sup>\*\*</sup> Of which only US\$151b are retained imports.

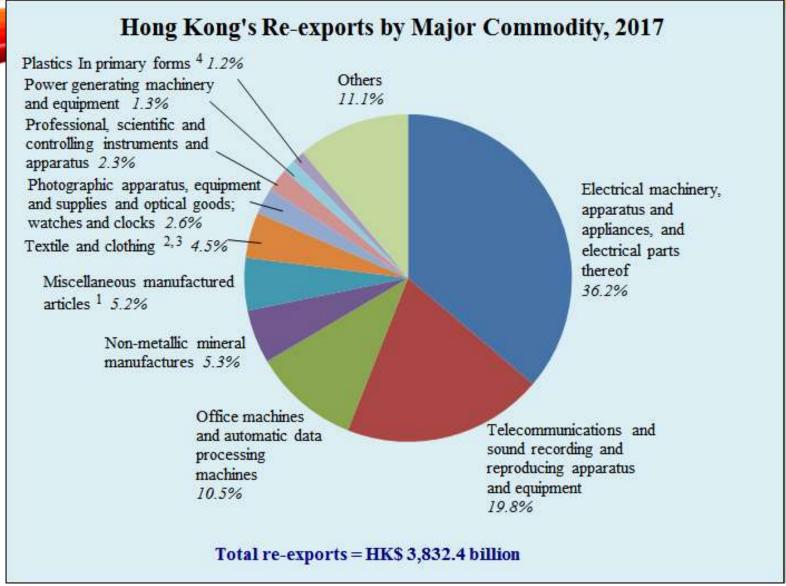
# HONG KONG HARD HIT-AS A TRADING HUB

- Hong Kong's maritime logistics sector, where over 70% are transshipment business.
- China-related transshipment takes up 80% of Hong Kong's transshipment business
- In terms of volume, maritime cargo makes up over 90% of Hong Kong's overall cargo volume.
- Hong Kong's trade and logistics sector contributes about 21.6% (in 2016) to GDP

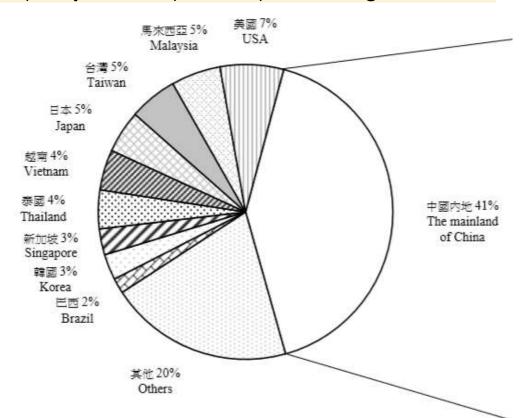


# Hong Kong's Re-exports by Main Destination, 2017

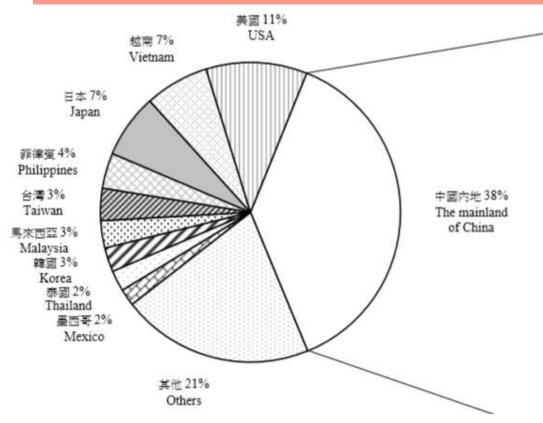
			Percentage Change
	Value	Percentage	over the
Main Destination	HK\$ Million	Share	Preceding Year
The Mainland of China	2,088,561	54.5%	+8.5%
USA	326,733	8.5%	+2.0%
India	157,173	4.1%	+35.2%
Japan	127,479	3.3%	+10.3%
Taiwan	87,292	2.3%	+20.1%
Viet Nam	77,203	2.0%	+9.9%
Germany	73,713	1.9%	+10.9%
Netherlands	63,771	1.7%	+11.7%



# Share of laden containers discharged (TEU) by major country/territory of loading, Q3 2018



# Share of laden containers loaded (TEU) by major country/territory of discharge, Q3 2018



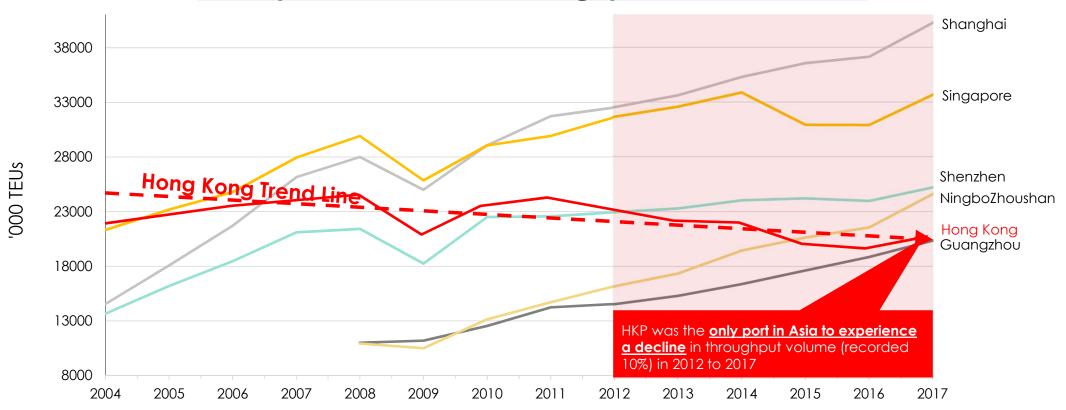
# AIRFREIGHT INTERNATIONAL SCHEDULED REVENUE TONNE-KILOMETRES (RTK)

Rank	State of AOC	RTK 2017 (million)	RTK share (%)	Cumulative (%)
1	China (1)	84,412	12.8318%	12.8318%
2	United States	66,425	10.0975%	22.9292%
3	United Arab Emirates	55,863	8.4919%	31.4212%
4	United Kingdom	35,192	5.3497%	36.7708%
5	Germany	31,789	4.8323%	41.6032%
6	Qatar	24,077	3.6600%	45.2632%
7	Republic of Korea	23,650	3.5952%	48.8584%
8	Turkey	19,669	2.9900%	51.8484%
9	Singapore	19,601	2.9796%	54.8281%
10	France	19,001	2.8885%	57.7165%
11	Japan	18,992	2.8870%	60.6035%
12	Ireland	18,667	2.8376%	63.4411%
13	Netherlands	18,056	2.7448%	66.1859%
14	Canada	16,820	2.5569%	68.7428%
15	Russian Federation	14,824	2.2534%	70.9962%
16	Thailand	11,746	1.7856%	72.7817%
17	Spain	10,772	1.6375%	74.4193%
18	Australia	10,272	1.5614%	75.9807%
19	Malaysia	9,376	1.4253%	77.4060%
20	India	8,940	1.3590%	78.7650%

Rank	State of AOC	RTK 2016 (million)	RTK share (%)	Cumulative (%)
1	China (1)	76,578	12.7123%	12.7123%
2	United States	63,072	10.4703%	23.1826%
3	United Arab Emirates	53,797	8.9306%	32.1132%
4	United Kingdom	33,427	5.5491%	37.6623%
5	Germany	31,027	5.1506%	42.8128%
6	Republic of Korea	22,297	3.7015%	46.5143%
7	Qatar	21,672	3.5977%	50.1120%
8	Singapore	18,671	3.0995%	53.2115%
9	France	18,128	3.0094%	56.2209%
10	Turkey	17,167	2.8498%	59.0707%
11	Japan	16,995	2.8212%	61.8919%
12	Netherlands	16,326	2.7101%	64.6021%
13	Ireland	15,921	2.6429%	67.2450%
14	Canada	14,757	2.4497%	69.6947%
15	Russian Federation	12,202	2.0255%	71.7202%
16	Thailand	10,154	1.6856%	73.4058%
17	Spain	9,865	1.6376%	75.0434%
18	Australia	9,684	1.6076%	76.6510%
19	Malaysia	8,245	1.3687%	78.0197%
20	India	7,566	1.2561%	79.2758%

# **OVERVIEW**

# Steady decline of HKP throughput from 2004-2017



# Get well Prepared Hope for the Best

# THANK YOU!





Dr. Collin Wong

Website: prisc.hsu.edu.hk

Email: prisc@hsu.edu.hk