

# **Indirect and Induced Economic Contribution of Hong Kong's Maritime and Port Industry in 2020**

- A study by the Hong Kong Shipowners Association

## **EXECUTIVE SUMMARY**

Hong Kong is an international finance, shipping and trade centre. Hong Kong's economic success has its origins in shipping and trade, whose combination initiated Hong Kong's growth as a global financial centre and a gateway where East meets West.

As the Hong Kong economy is externally oriented and highly dependent on trade with the rest of the world, the maritime and port industry is a vital element to making much of the external trade a reality, thus contributing significantly to Hong Kong. (In 2021, Hong Kong was the world's 6<sup>th</sup> largest trading entity in the world, with total merchandise trade value of HK\$10.3 trillion, nearly four times the gross domestic product (GDP) that year.)

Earlier, the HKSAR Government studied the Direct contribution of the maritime and port industry to the local economy for the year 2020. To give a fuller picture of the economic impact of the industry, the Hong Kong Shipowners Association (HKSOA), with the support of its research partner – the PolyU Maritime Library and R&D Centre (PMLC) of The Hong Kong Polytechnic University conducted a study on the Indirect and Induced contributions of the industry to the local economy. (The Indirect economic contribution is defined as the value added (VA) and number of persons engaged (PE) supported by the expenditure on goods and services in other business and industry sectors in the local community that serve the maritime and port industry. Induced economic contribution is defined as the VA and PE generated by the local spending of people directly employed and indirectly supported by the industry.)

The economic impact of the maritime and port industry on the Hong Kong economy in 2020, in terms of VA and PE, is summed up below and set out in Table 1:

- The maritime and port industry directly contributed HK\$35.4 billion to Hong Kong's gross domestic product (GDP). This represented 1.4% of the overall output of the economy. The industry also made an Indirect contribution of HK\$40.6 billion and an Induced contribution of HK\$17.8 billion to the local economy.

- The maritime and port industry directly employed 76 980 persons, accounting for 2.1% of total employment in Hong Kong. The industry also made an Indirect contribution of 56 910 jobs and an Induced contribution of 32 930 jobs, to Hong Kong.
- Taking into account its Direct, Indirect and Induced impact, the maritime and port industry contributed, in total, HK\$93.7 billion to the economy, representing 3.7% of the overall output of the economy and supported, in total, 166 820 jobs in Hong Kong, accounting for 4.5% of total employment.

Table 1: Economic impact of the maritime and port industry in 2020

Economic Contribution	Direct	Indirect	Induced	Total
<b>VA (HK\$ billion)</b>	35.4	40.6	17.8	<b>93.7</b>
<b>PE (number)</b>	76 980	56 910	32 930	<b>166 820</b>

Source: PMLC, The Hong Kong Polytechnic University

Note: The figures may not add up to the totals due to rounding.

- With regard to the multiplier effect, on average, for every dollar of Direct VA and every Direct job, the maritime and port industry contributed, in total, HK\$2.65 to the local economy and 2.17 local jobs respectively.

The HKSOA project was likely to be the first study on this subject ever done in Hong Kong. And it should be noted that in 2020, both the economy and the local employment in Hong Kong overall were hard hit by the pandemic, which commenced in early 2020.

## INTRODUCTION

1. Hong Kong is an **international finance, shipping and trade centre**, as set out in the national strategic plans. Hong Kong's economic success has its origins in shipping and trade, whose combination initiated Hong Kong's growth as a global financial centre and a gateway where East meets West.
2. From time to time, through the Hong Kong Maritime and Port Board (HKMPB), the HKSAR Government has studied the economic contribution of the maritime and port industry to the local economy. These studies, however, were confined to the Direct contribution.
3. In economic impact studies, the Indirect and Induced contributions are equally important as, if not more important than, the Direct contribution. These contributions deserve our attention particularly in the case of Hong Kong's maritime and port industry. The Hong Kong economy is externally oriented and highly dependent on trade with the rest of the world. In 2021, the value of Hong Kong's total merchandise trade reached HK\$10.3 trillion (US\$1.3 trillion), or nearly four times of the Gross Domestic Product (GDP) that year. The value of imports amounted to HK\$5,307.8 billion (US\$682.8 billion), and the value of exports was HK\$4,960.7 billion (US\$638.1 billion). Hong Kong was the world's 6th largest trading entity in goods – the 7th largest importer and the 6th largest exporter.
4. Obviously, the maritime and port industry is a vital element to making much of the external trade a reality, thus making a significant contribution to Hong Kong. In 2021, Hong Kong was ranked the 4th largest international maritime centre by the Xinhua-Baltic International Shipping Centre Development Index, and the 9th largest container port by the Global Maritime Hub.
5. Early this year, the Hong Kong Shipowners Association (HKSOA), with the support of its research partner – the PolyU Maritime Library and R&D Centre (PMLC) of The Hong Kong Polytechnic University, was sponsored by the HKMPB to study the Indirect and Induced contributions of Hong Kong's maritime and port industry to the local economy, based on the foundation of the HKMPB study on the Direct contribution of the industry for the year 2020, whose findings were published in August 2022.

## PROJECT SCOPE

6. The project was likely the first study on this or a related subject ever done in Hong Kong.

7. This Indirect and Induced impact study was built on the foundation of the HKMPB's Direct study, which covered mainly the following industry activities:

- (i) Port and related
  - Terminal operators, port facilities operators, and midstream operations
  - Transport by tractors
  - Warehousing and storage
  
- (ii) Shipping
  - Ship owning and operating
  - Ship management and agencies
  - Inland water transport
  - Cargo forwarding services
  
- (iii) Maritime business services
  - Shipbroking
  - Ship finance
  - Marine insurance
  - Maritime legal and arbitration services
  - Marine surveying and classification societies
  - Shipbuilding and ship repair
  - Equipment servicing and supply
  - Maritime education

8. In the HKMPB study, the Direct economic contribution of the maritime and port industry was expressed in terms of the value added (VA) and the number of persons engaged (PE). The PE was measured on a headcount basis.

9. For the HKSOA project, the figures and statistics were collected through various sources, including industry questionnaires, employee surveys, and data as provided by the Asian Development Bank, Hong Kong Census and Statistics Department, Hong Kong Marine Department, and Transport and Logistics Bureau.

## FINDINGS

### Direct Economic Contribution

10. Briefly, in 2020, with respect to VA, the industry contributed **HK\$35.4 billion** to Hong Kong's GDP, representing **1.4%** of the total overall output of all economic activity in the territory; and with respect to PE, the industry employed **76 980** people, accounting for **2.1%** of total employment.

11. The above HKMPB findings for the Direct economic contribution of the maritime and port industry in 2020 are summed up in Table 2 and Chart A.

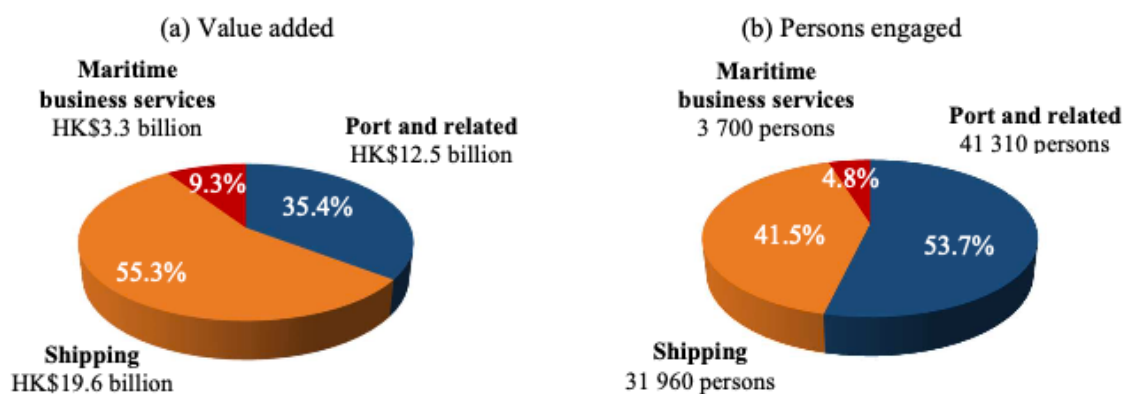
Table 2: Direct impact analysis in 2020

Business Activities	VA to GDP HK\$ billion	Employment (Number)
<b>Port and related</b>	12.5	41 310
<b>Shipping</b>	19.6	31 960
<b>Maritime business services</b>	3.3	3 700
<b>Total</b>	<b>35.4</b>	<b>76 980</b>

Source: Transport and Logistics Bureau, HKSAR Government

Note: The figures may not add up to the totals due to rounding.

Chart A: Direct impact by sector in 2020



12. Compared to the HKMPB findings for its previous study in 2019, the VA increased by 15%, while there was a reduction of about 4 500 jobs. In terms of the contribution of the various subsectors, the VA of the ports and related sectors decreased by about 10%, the VA of the shipping sector increased by about 43.4%, and the VA of the maritime business services sector increased by 3.2%. In terms of the number of PE, the port and related sector and the shipping sector supported slightly fewer jobs, while the maritime business sector saw a marginal increase.

13. It should be noted that both the economy and the local employment in Hong Kong overall were hard hit by the pandemic, which commenced in early 2020.

### **Indirect Economic Contribution**

14. For this project, the Indirect economic contribution is defined as the VA and PE supported by the expenditure on goods and services in other business and industry sectors in the local community that serve the maritime and port industry. Indeed, the industry requires input from many other industries, from materials and intermediate goods to services and labour, to produce output. These inter-industry relations signify the industry's Indirect contribution to the Hong Kong economy.

15. Briefly, in terms of VA, it is estimated that the maritime and port industry made an Indirect contribution of **HK\$40.6 billion** to the Hong Kong economy in 2020. The relevant estimations and breakdown are set out in Table 3 and Chart B.

Table 3: Estimated Indirect impact on VA (HK\$ billion) in 2020

Business Activities	Direct VA	Indirect VA
<b>Port and related</b>	12.5	14.5
<b>Shipping</b>	19.6	22.7
<b>Maritime business services</b>	3.3	3.31
<b>Total</b>	<b>35.4</b>	<b>40.6</b>

Source: PMLC, The Hong Kong Polytechnic University

Note: The figures may not add up to the totals due to rounding.

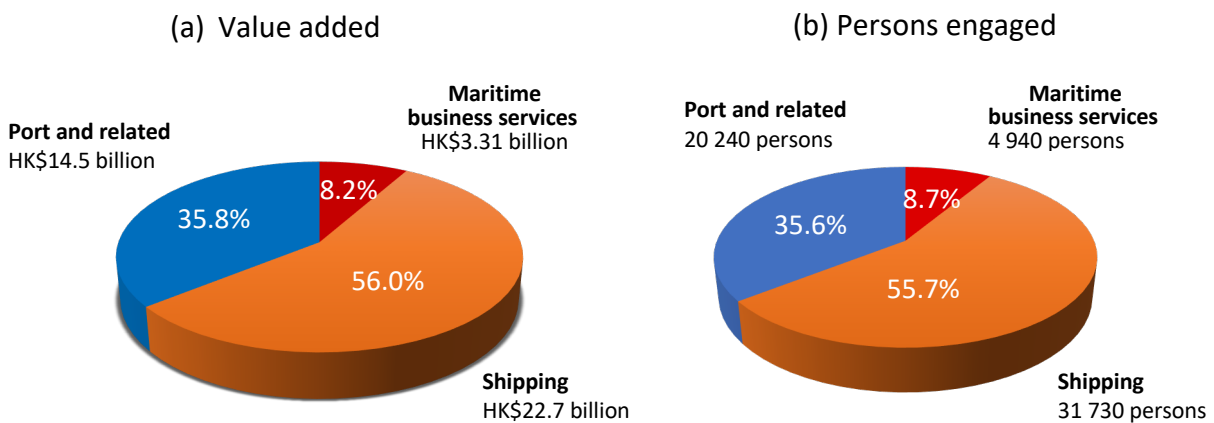
16. In terms of PE, the maritime and port industry made an Indirect contribution of approximately **56 910** jobs in 2020. The relevant estimations and breakdown are set out in Table 4 and Chart B.

Table 4: The estimated Indirect impact on PE in 2020

Business Activities	Direct Employment (Number)	Indirect Employment (Number)
<b>Port and related</b>	41 310	20 240
<b>Shipping</b>	31 960	31 730
<b>Maritime business services</b>	3 700	4 940
<b>Total</b>	<b>76 980</b>	<b>56 910</b>

Source: PMLC, The Hong Kong Polytechnic University  
 Note: The figures may not add up to the totals due to rounding.

Chart B: Indirect economic impact by sector in 2020



### **Induced Economic Contribution**

17. For this project, the Induced economic contribution is defined as the VA and PE generated by the local spending of people directly employed and indirectly supported by the maritime and port industry.

18. Briefly, in terms of VA, the Induced contribution of the maritime and port industry to the economy in 2020 was **HK\$17.8 billion**. The relevant estimations and breakdown are set out in Table 5 and Chart C.

Table 5: Estimated Induced impact on VA (HK\$ billion) in 2020

Business Activities	Direct VA	Induced VA
<b>Port and related</b>	12.5	8.1
<b>Shipping</b>	19.6	8.6
<b>Maritime business services</b>	3.3	1.2
<b>Total</b>	<b>35.4</b>	<b>17.8</b>

Source: PMLC, The Hong Kong Polytechnic University

Note: The figures may not add up to the totals due to rounding.

19. In terms of PE, the Induced contribution of the maritime and port industry to the economy in 2020 was that a further **32 930** jobs were supported in Hong Kong. The relevant estimations and breakdown are set out in Table 6 and Chart C.

Table 6: Estimated induced impact on PE in 2020

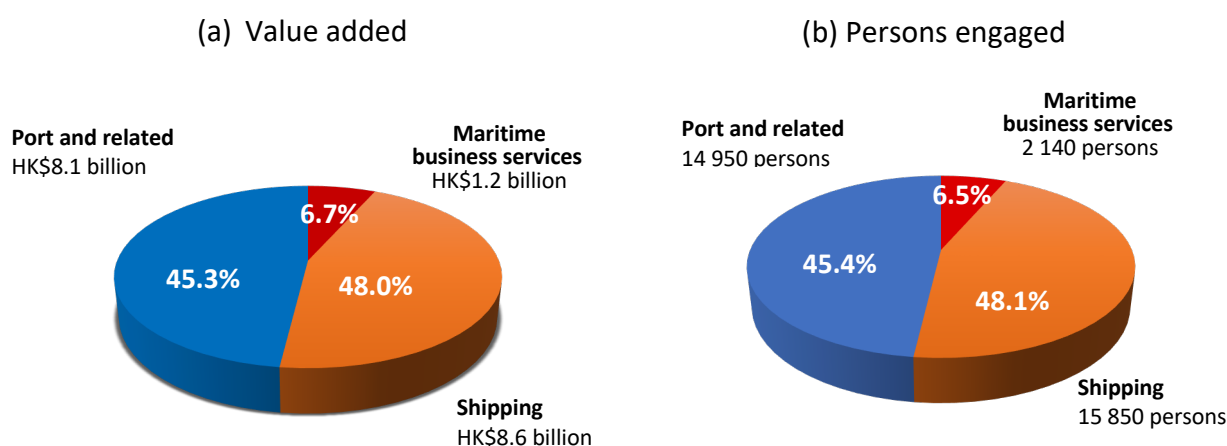
Business Activities	Direct Employment (Number)	Induced Employment (Number)
<b>Port and related</b>	41 310	14 950
<b>Shipping</b>	31 960	15 850
<b>Maritime business services</b>	3 700	2 140
<b>Total</b>	<b>76 980</b>	<b>32 930</b>

Source: PMLC, The Hong Kong Polytechnic University

Note: The figures may not add up to the totals due to rounding.



Chart C: Induced economic impact by sector in 2020



## ECONOMIC IMPACT

20. The overall economic impact of the maritime and port industry for the year 2020 is set out in Table 7. Briefly, taking into account its Direct, Indirect and Induced contributions, the maritime and port industry contributed, in total, **HK\$93.7 billion** to the economy, representing **3.7%** of the overall output of the economy and supported, in total, **166 820** jobs in Hong Kong, accounting for **4.5%** of total employment.

Table 7: Summary of the economic impact of the maritime and port industry in 2020

Economic Contribution	Direct	Indirect	Induced	Total
<b>VA (HK\$ billion)</b>	35.4	40.6	17.8	<b>93.7</b>
<b>PE (Number)</b>	76 980	56 910	32 930	<b>166 820</b>

Source: PMLC, The Hong Kong Polytechnic University  
 Note: The figures may not add up to the totals due to rounding.

21. For reference purposes, we also calculated the multipliers for the VA and PE of the Hong Kong maritime and port industry for the year 2020. The multipliers are defined as the ratio between the total contribution (Direct + Indirect + Induced) and the Direct contribution.

22. In Hong Kong, for every dollar of Direct VA, on average, the maritime and port industry made an overall contribution to the local economy of **HK\$2.65**. For every Direct job, the industry contributed **2.17** local jobs. The overall picture is set out in Table 8.

Table 8: Maritime and port industry multipliers in 2020

Economic Contribution	Direct	Total	Multiplier
<b>VA (HK\$ billion)</b>	35.4	93.7	2.65 (times)
<b>PE (Number)</b>	76 980	166 820	2.17 (times)

Source: PMLC, The Hong Kong Polytechnic University

23. Last but not least, it should be noted that both the economy and local employment in Hong Kong during the assessment year (2020) were hard hit by the pandemic.

# 2020 年香港海運和港口業對本地經濟的間接及連帶貢獻

## 香港船東會研究項目

### 報告摘要

香港是國際金融、航運和貿易中心。香港經濟的成功源於航運和貿易的發展；兩者的結合推動香港成為國際金融中心和東西方交匯的門戶。

鑒於香港的外向型經濟模式以及高度依賴與世界其他地區貿易往返，海運和港口業是大部分對外貿易得以落實的重要因素，也因此為香港帶來顯著的貢獻。（2021 年，香港是全球第六大貨物貿易實體，商品貿易總額達 10.3 萬億港元，幾乎是該年本地生產總值（GDP）的四倍）。

較早時候，香港特別行政區政府研究 2020 年海運和港口業對本地經濟的直接貢獻。為了更全面地瞭解行業的經濟影響，香港船東會及研究合作夥伴——香港理工大學理大海事圖書館暨研發中心，共同研究行業對本地經濟的間接及連帶貢獻。（間接經濟貢獻是指海運及港口業在生產過程中，使用其他行業提供的商品和服務時，間接為供應商帶來的增加值和就業職位。連帶經濟貢獻是指香港海運和港口業直接僱用和間接支援的人員在當地消費所產生的增加值和從業人數。）

以下是 2020 年，海運及港口業對香港經濟的貢獻（以增加值和從業人數計）總結如下，並詳列於表 1：

- 海運及港口業直接為香港經濟貢獻了 354 億港元，佔本地生產總值的 1.4%。該行業對當地經濟的間接貢獻和連帶貢獻分別為 406 億港元和 178 億港元。
- 海運及港口業直接僱用 76 980 人，佔香港總就業人數的 2.1%。該行業為香港創造了 56 910 個間接和 32 930 個連帶就業機會。
- 考慮其直接、間接及連帶影響，海運及港口業對香港經濟的貢獻共計港幣 937 億港元，佔本地生產總值的 3.7%，為香港提供 166 820 個就業機會，佔總就業人數的 4.5%。

表 1：2020 年海運和港口業的經濟貢獻

經濟貢獻	直接	間接	連帶	總計
增加值 (億港元)	354	406	178	<b>937</b>
就業人數	76 980	56 910	32 930	<b>166 820</b>

資料來源：香港理工大學理大海事圖書館暨研發中心

註：因四捨五入，數字加起來或不等於總數。

- 在乘數效應方面，海運和港口業平均每產生 1 港元的直接增加值和直接提供 1 個工作崗位，可給本地經濟帶來 2.65 港元的增加值和 2.17 個本地就業機會。

是次研究項目可能是香港有史以來，首個研究相關課題的項目。也值得注意的是，從 2020 年初開始，香港整體經濟和本地就業情況，受到新冠疫情的嚴重影響。

## 引言

1. 正如國家戰略規劃中的定位，香港是國際金融、航運和貿易中心。香港的經濟成功源於航運和貿易，兩者的結合，推動香港成為國際金融中心和東西方交匯的門戶。
2. 香港特別行政區政府定期通過香港海運港口局，研究海運及港口業對本地經濟的影響。然而，這些研究僅限於直接貢獻。
3. 在經濟影響研究中，間接貢獻和連帶貢獻，即使可能稍遜於直接貢獻，但有著與之等同的重要地位。這些貢獻，尤其是來自香港海運和港口業界的，值得我們關注。香港作為一個外向型經濟體，高度依賴與世界其他地區貿易。2021年，香港商品貿易總額達10.3萬億港元（1.3萬億美元），幾乎是當年本地生產總值（GDP）的四倍。進口總值53,078億港元（6,828億美元），出口總值49,607億港元（6,381億美元）。香港是世界第六大貨物貿易實體——第七大進口和第六大出口經濟體。
4. 顯然，海運和港口業是大部分對外貿易得以落實的重要因素，也因此對香港有顯著的貢獻。2021年，香港獲新華-波羅的海國際航運中心發展指數評為第四大國際航運中心，獲全球海事樞紐評為第九大貨櫃港口。
5. 今年年初，香港船東會在其研究夥伴——香港理工大學理大海事圖書館暨研發中心的支持下，獲得香港海運港口局的資助，以香港海運港口局於2022年8月發表，就2020年海運及港口業直接貢獻的研究結果為基礎，研究香港海運及港口業對本地經濟的間接和連帶貢獻。

## 研究範圍

6. 相信是次研究項目，是香港有史以來首個有關此主題或相關主題的研究。
7. 是次間接及連帶貢獻的研究建立在香港海運港口局的直接影響的研究基礎上。直接影響的研究主要涵蓋以下行業活動：
  - (i) 港口及相關行業
    - 貨運碼頭、港口設施和中流作業營運商
    - 拖頭拖運服務
    - 貨倉和倉庫服務
  - (ii) 船務業
    - 船舶擁有及營運
    - 船務管理及代理
    - 港內水上運輸
    - 貨運代理
  - (iii) 海運服務業
    - 船隻經紀
    - 船舶融資
    - 海事保險
    - 海事法律及仲裁
    - 驗船服務及船級社
    - 船舶製造及維修
    - 海事設備檢修及供應
    - 海事教育
8. 在香港海運港口局的研究中，海運和港口業的直接經濟貢獻以增加值和從業人數表示。
9. 本研究的數據和統計資料取自不同來源，包括行業問卷調查、僱員問卷調查、以及由亞洲開發銀行、香港政府統計處、香港海事處和運輸及物流局提供的數據。

## 研究結果

### 直接經濟貢獻

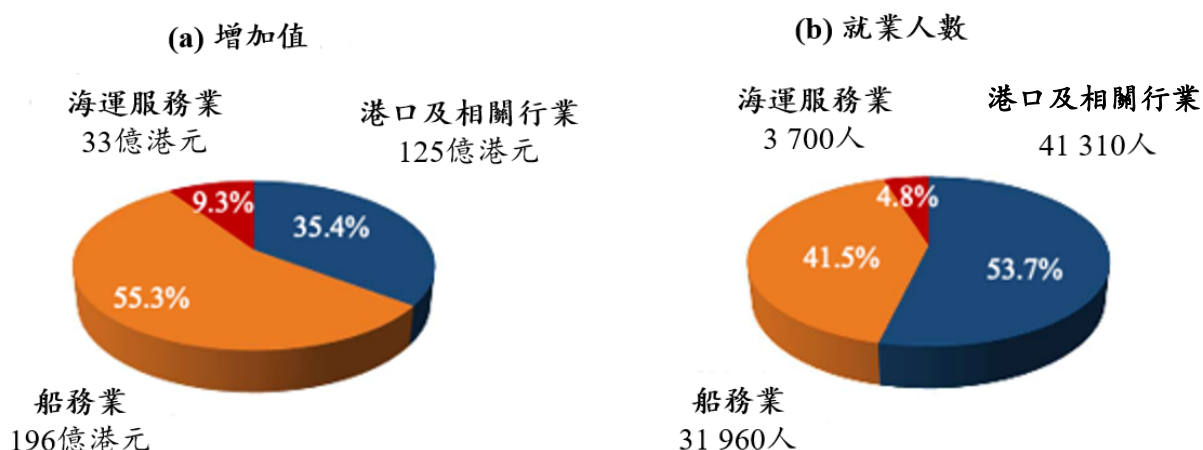
10. 簡而言之，業界在 2020 年為香港本地生產總值貢獻的增加值為 **354 億港元**，佔全港本地生產總值的 **1.4%**；在就業人數方面，該行業從業人員 **76 980** 人，佔總就業人數的 **2.1%**。
11. 表 2 和圖 A 總結了上述香港海運港口局對於 2020 年海運和港口業直接經濟貢獻的研究結果。

表 2：2020 年的直接經濟貢獻

商業活動	直接增加值	直接就業
	億港元	人數
港口及相關行業	125	41 310
船務業	196	31 960
海運服務業	33	3 700
<b>總計</b>	<b>354</b>	<b>76 980</b>

資料來源：香港特區政府運輸及物流局  
 註：因四捨五入，數字加起來或不等於總數。

圖 A：2020 年按行業劃分的直接經濟貢獻



12. 與香港海運港口局在 2019 年的研究結果相比，2020 年增加值增加了 15%，同時就業機會減少了約 4 500 個。從各子行業的增加值來看，2020 年港口及相關行業下降約 10%，船務業增加約 43.4%；海運服務業增加約 3.2%。從僱用人數來看，港口及相關行業和船務業提供的就業崗位略有減少，而海運服務業則略有增加。

13. 值得注意的是，2020 年初開始的疫情，重創香港整體經濟和本地就業。

### 間接經濟貢獻

14. 在此研究項目，間接經濟貢獻是指海運及港口業在生產過程中，使用其他行業提供的商品和服務時，間接為供應商帶來的增加值和就業職位。實際上，海運和港口業的生產需要許多其他行業的投放，從材料和中間產品到服務和勞動力。這些行業之間的相互關係體現了海運和港口業對香港經濟的間接貢獻。

15. 簡而言之，就增加值而言，2020 年海運和港口業對香港經濟的間接貢獻約為 **406 億港元**。相關的估計和分項數字見表 3 和圖 B。

表 3：2020 年間接貢獻增加估值（億港元）

商業活動	直接增加值	間接增加值
港口及相關行業	125	145
船務業	196	227
海運服務業	33	33.1
<b>總計</b>	<b>354</b>	<b>406</b>

資料來源：香港理工大學理大海事圖書館暨研發中心  
 註：因四捨五入，數字加起來或不等於總數。

16. 在就業人數方面，2020 年海運和港口業間接貢獻約 **56 910** 個就業機會。相關估算和細分列於表 4 和圖 B。

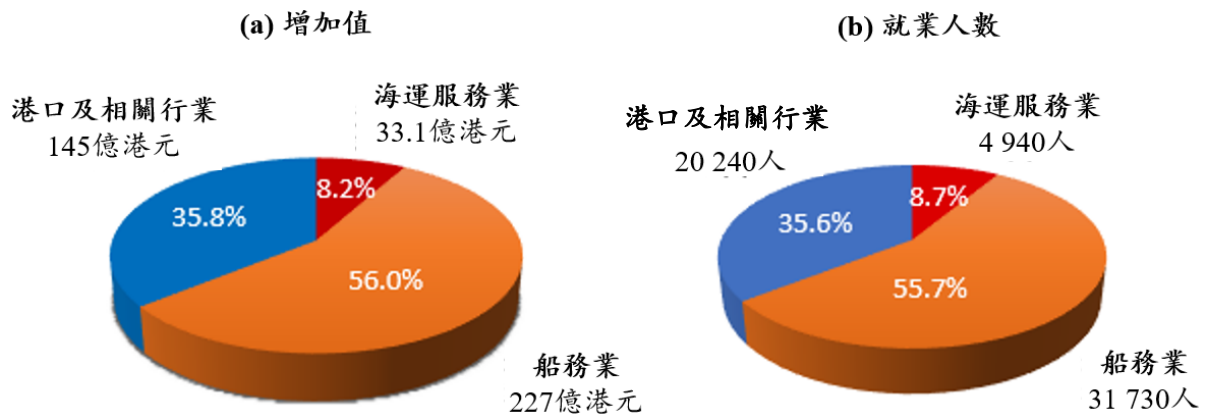
表 4：2020 年就業人數的間接貢獻估值

商業活動	直接就業人數	間接就業人數
港口及相關行業	41 310	20 240
船務業	31 960	31 730
海運服務業	3 700	4 940
<b>總計</b>	<b>76 980</b>	<b>56 910</b>

資料來源：香港理工大學理大海事圖書館暨研發中心  
 註：因四捨五入，數字加起來或不等於總數。



圖 B：2020 年按行業劃分的間接經濟影響



### 連帶經濟貢獻

17. 在此研究項目，連帶經濟貢獻定義為香港海運和港口業直接僱用和間接支援的人員在當地消費所產生的增加值和就業人數。
18. 簡而言之，按增加值，2020 年海運及港口業對經濟的連帶貢獻為港幣 **178 億元**。相關估計和細分載於表 5 和圖 C。

表 5：2020 年連帶貢獻增加值的估值（億港元）

商業活動	直接增加值	連帶增加值
港口及相關行業	125	81
船務業	196	86
海運服務業	33	12
<b>總計</b>	<b>354</b>	<b>178</b>

資料來源：香港理工大學理大海事圖書館暨研發中心  
註：因四捨五入，數字加起來或不等於總數。

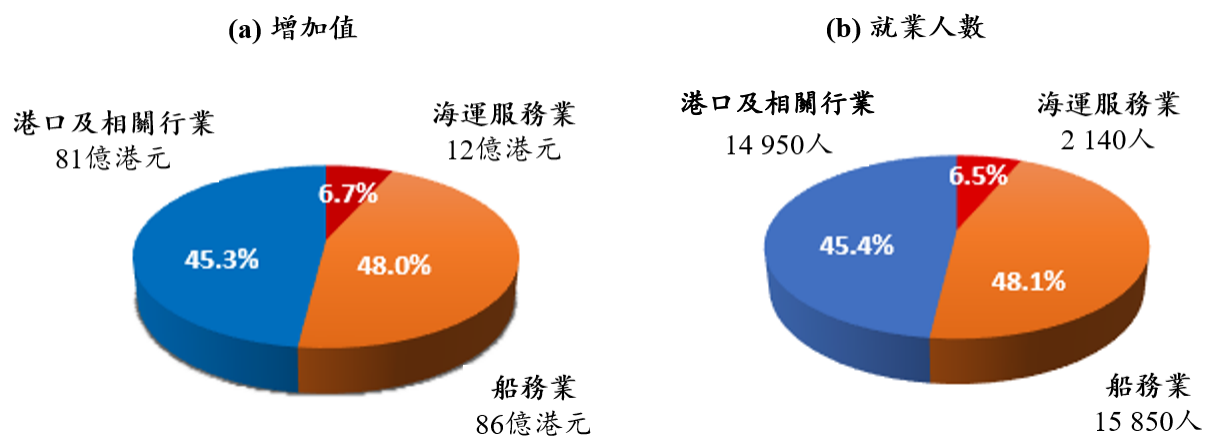
19. 在就業人數方面，2020 年海運和港口業對經濟的連帶貢獻創造約合共 32 930 個本地就業機會。相關估計和細分載於表 6 和圖 C。

表 6：2020 年連帶貢獻就業人數的估計

商業活動	直接就業人數	連帶就業人數
港口及相關行業	41 310	14 950
船務業	31 960	15 850
海運服務業	3 700	2 140
<b>總計</b>	<b>76 980</b>	<b>32 930</b>

資料來源：香港理工大學理大海事圖書館暨研發中心  
 註：因四捨五入，數字加起來或不等於總數。

圖 C：2020 年按行業劃分的連帶經濟貢獻



## 經濟貢獻

20. 2020 年海運和港口業的總體經濟貢獻見表 7。簡而言之，考慮到其直接、間接和連帶貢獻，海運和港口業對香港經濟合共貢獻 **937 億港元**，佔總體經濟的 **3.7%**，合共支持香港就業 **166 820** 個職位，佔總就業人數的 **4.5%**。

表 7: 2020 年海運和港口業的經濟貢獻摘要

經濟貢獻	直接	間接	連帶	總計
增加值 (億港元)	354	406	178	937
就業人數	76 980	56 910	32 930	166 820

資料來源：香港理工大學理大海事圖書館暨研發中心  
註：因四捨五入，數字加起來或不等於總數。

21. 我們亦計算了 2020 年香港海運和港口業的增加值和就業人數乘數效應，作為參考。乘數定義為總貢獻（直接 + 間接 + 連帶）與直接貢獻的比率。
22. 在香港，海運和港口業每產生 1 港元的直接增加值，就會帶來 **2.65 港元** 的整體經濟貢獻。而該行業每創造一個直接職位，就會帶來 **2.17** 個本地就業機會（見表 8）。

表 8: 2020 年海運和港口業乘數

經濟貢獻	直接	總計	乘數
增加值 (億港元)	354	937	2.65 (倍)
就業人數	76 980	166 820	2.17 (倍)

資料來源：香港理工大學理大海事圖書館暨研發中心。

23. 最後，必須指出，在評估年度（2020 年），香港的經濟和本地就業均受到疫情的嚴重打擊。