

Automobile Training Board  
汽車業訓練委員會



Automobile Industry  
Manpower Survey Report  
汽車業 • 人力調查報告書

2019



OPPORTUNITIES • ACTION • SUCCESS  
良機 • 貴幹 • 成功

2019 MANPOWER SURVEY REPORT  
AUTOMOBILE INDUSTRY

2019 年汽車業  
人力調查報告

AUTOMOBILE TRAINING BOARD  
VOCATIONAL TRAINING COUNCIL

職業訓練局  
汽車業訓練委員會

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## TABLE OF CONTENTS

	<u>Page</u>
ACKNOWLEDGEMENT	i
DEFINITION OF TERMS	ii
<u>Section</u>	
I EXECUTIVE SUMMARY	
A. Background	1
B. Scope of Survey	1
C. Samples and Responses	1
D. Summary of Survey Findings	
• Number of Employees	2
• Number of Trainees	3
• Number of Vacancies	4
• Monthly Income of Employees	5
E. Manpower Projections and Annual Training Requirements	6
F. Business Outlook	
• Vehicle Servicing Sector	7
• Auto/Parts Retail Sector	8
G. Major Recommendations	8
II INTRODUCTION	
A. Background	10
B. Objective	10
C. Coverage	11
D. Sample Design	11
E. Questionnaire Design	12
F. Data Collection Method	12
G. Quality Control Measures	13
H. Fieldwork Period and Enumeration Results	15

### III SURVEY FINDINGS

A. Overview of the Automobile Industry	16
B. Vehicle Servicing Sector	
• Number of Employees	17
• Number of Trainees	19
• Number of Vacancies	20
• Employers' Forecasted Manpower Demand	22
• Monthly Income of Employees	23
• Turnover, Recruit and Retirement of Employees	24
• Preferred Level of Education, Mode of Training and Period of Training of Employees	26
• Training Demand for EV and Hybrid Vehicle Maintenance Workers	28
C. Auto/Parts Retail Sector	
• Number of Employees	29
• Number of Vacancies	31
• Employers' Forecasted Manpower Demand	32
• Monthly Income of Employees	33
• Turnover, Recruit and Retirement of Employees	34
• Preferred Level of Education and Experience of Employees	36
• Training Needs of Front-line Sales Persons	37
D. Statistical Tables	37

### IV OBSERVATIONS AND CONCLUSIONS

A. Vehicle Servicing Sector	
• Manpower Changes	38
• Business Outlook	41
• Projected Manpower and Training Requirements	42
• Manpower Supply of Technologists	45
• Manpower Supply of Technicians	46
• Manpower Supply of Craftsmen	47

IV	OBSERVATIONS AND CONCLUSIONS (continued)	
	B. Auto/Parts Retail Sector	
	• Manpower Changes	49
	• Business Outlook	50
	• Projected Manpower and Training Requirements	51
V	RECOMMENDATIONS	
	A. Manpower Investments	54
	B. Measures to Promote the Industry	
	• Business-School Partnership Programme (BSPP)	55
	• Skill Competition	55
	C. Training Subsidy Schemes	
	• Engineering Graduate Training Scheme (EGTS)	56
	• Reindustrialisation and Technology Training Programme (RTTP)	56
	• Vplus Engineering Subsidy Scheme	57
	• VTC Earn & Learn Scheme	57
	• Pilot Incentive Scheme to Employers (PISE)	58
	D. Lift-long Learning	58
	E. Uplifting the Professionalism of the Trade	
	• Registration Schemes for Vehicle Mechanics and Vehicle Maintenance Workshops	59
	• Trade Testing	60
	F. Summary of Major Recommendations	61

## 目錄

	頁數
鳴謝	iv
詞彙釋義	v
<u>章節</u>	
I 報告摘要	
A. 背景	62
B. 調查範圍	62
C. 抽樣方法和回覆率	62
D. 調查結果摘要	
• 僱員人數	63
• 受訓者人數	64
• 職位空缺數目	65
• 僱員每月收入	66
E. 人力預測及每年培訓需求	67
F. 行業前景	
• 汽車維修界別	68
• 汽車／零件零售界別	68
G. 主要建議	69
II 緒論	
A. 背景	70
B. 調查目的	70
C. 調查範圍	71
D. 抽樣方式	71
E. 問卷設計	72
F. 數據收集方法	72
G. 質素控制措施	73
H. 調查期及訪問結果	75

III	調查結果	
A.	汽車業概覽	76
B.	汽車維修界別	
•	僱員人數	77
•	受訓者人數	79
•	職位空缺數目	80
•	僱主預期人力需求	82
•	僱員每月收入	83
•	僱員流失、招聘及退休	84
•	宜有教育程度、訓練方式及訓練期	86
•	電動車和混能車維修人員的培訓需求	88
C.	汽車／零件零售界別	
•	僱員人數	89
•	職位空缺數目	91
•	僱主預期人力需求	92
•	僱員每月收入	93
•	僱員流失、招聘及退休	94
•	宜有教育程度及年資	96
•	前線銷售人員培訓需求	97
D.	統計表	97
IV	觀察及結論	
A.	汽車維修界別	
•	人力變化	98
•	行業前景	101
•	未來人力和培訓需求	102
•	技師級人力供應	105
•	技術員級人力供應	106
•	技工級人力供應	107



IV	觀察及結論 (續)	
	B. 汽車／零件零售界別	
	• 人力變化	109
	• 行業前景	110
	• 未來人力和培訓需求	111
V	建議	
	A. 投放資源培育人才	114
	B. 提升行業形象	
	• 商校合作計劃 (BSPP)	114
	• 技能比賽	115
	C. 訓練資助計劃	
	• 工科畢業生訓練計劃 (EGTS)	115
	• 再工業化及科技培訓計劃 (RTTP)	116
	• Vplus 工程專才進修資助	116
	• VTC Earn & Learn 職學計劃	116
	• 職場學習及評核先導計劃 (PISE)	117
	D. 終生學習	117
	E. 提升汽車業專業水平	
	• 車輛維修技工和工場註冊計劃	118
	• 技能測驗	118
	F. 主要建議摘要	119

## LIST OF APPENDICES

<u>Appendix</u>	<u>Title</u>	<u>Page</u>
1	Membership of the Automobile Training Board	121
2	Membership of the Working Party on Manpower Survey	123
3	Terms of Reference	125
4	Survey Document	
	A. Questionnaires	127
	B. Explanatory Note to the Questionnaires	134
	C. Job Descriptions for Principal Jobs	137
5	Manpower Statistics in the Industry -	
	Table 1: Automobile Industry Manpower Statistics (Sector A: Vehicle Servicing)	145
	Table 2: Automobile Industry Manpower Statistics (Sector B: Auto / Parts Retail)	147
	Table 3: Distribution of Employees by Monthly Income Range (Sector A: Vehicle Servicing)	149
	Table 4: Distribution of Employees by Monthly Income Range (Sector B: Auto / Parts Retail)	152
6	Registered and Licensed Vehicle Population and Manpower in the Servicing Sector of the Automobile Industry	154
7	Distribution of Employees by Skill Level in the Last 10 Consecutive Surveys (Vehicle Servicing Sector)	156
8	Manpower Forecasting Method	159

## 附錄表

<u>附錄</u>	<u>標題</u>	<u>頁數</u>
1	汽車業訓練委員會委員名單	122
2	汽車業訓練委員會人力調查工作小組委員名單	124
3	汽車業訓練委員會職權範圍	126
4	調查文件	
	A. 調查表	127
	B. 調查表附註	134
	C. 主要職務的工作說明	137
5	行業人力統計數字 -	
	表一：汽車業人力統計數字（汽車維修界別）	145
	表二：汽車業人力統計數字（汽車／零件零售界別）	147
	表三：每月總收入幅度的僱員分布情況（汽車維修界別）	149
	表四：每月總收入幅度的僱員分布情況（汽車／零件零售類別）	152
6	登記及領牌車輛總數及汽車業維修界別人力數字	154
7	各級技能等級僱員分布情況 - 汽車維修界別	156
8	採用調節過濾法推算人力情況	160

## **ACKNOWLEDGEMENT**

The Automobile Training Board (the Training Board) wishes to thank all the respondents of the sampled establishments for providing information required for the survey.

## DEFINITION OF TERMS

Average monthly income	“Average monthly income” refers to the monthly income, including basic wages, regular overtime pay, cost-of-living allowance, meal allowance, commission and bonus, etc. It is an average figure among employees engaged in the same principal job.
Diploma/certificate	“Diploma/certificate” refers to technical and vocational education programmes, including Diploma/Certificate courses, Diploma of Foundation Studies, Diploma of Vocational Education and programmes at the craft level or equivalent.
First degree	“First degree” refers to first degrees offered by local or non-local education institutions, or equivalent.
Postgraduate degree	“Postgraduate degree” refers to higher degrees (e.g. master degrees) offered by local or non-local education institutions, or equivalent.
Secondary 3 or below	“Secondary 3 or below” refers to Secondary 3 or below, or equivalent.
Secondary 4 to 7	“Secondary 4 to 7” refers to Secondary 4 to 7, covering the education programmes in relation to the Hong Kong Certificate of Education Examination (HKCEE), the Hong Kong Diploma of Secondary Education (HKDSE) Examination, Diploma Yi Jin, or equivalent.
Sub-degree	“Sub-degree” refers to Associate Degrees, Higher Diplomas, Professional Diplomas, Higher Certificates, Endorsement Certificates, Associateship or equivalent programmes offered by local or non-local institutions.

Total number of persons engaged (PE)	“Total number of persons engaged (PE)” refer to the number of employees (including full-time and part-time employees) who are under the payroll of the sampled establishment/company regardless of whether they are working outside Hong Kong.
Trainees	“Trainees” include all those receiving any form of training or apprentices under a contract of apprenticeship.
Vacancies	“Vacancies” refer to those unfilled, immediately available job openings for which the establishment was actively trying to recruit personnel at the time of survey.

## 鳴謝

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## 詞彙釋義

每月平均收入	「每月平均收入」是指從事相同主要職務僱員的平均月薪，包括底薪、恆常發放的超時工作補薪、生活津貼、膳食津貼、佣金及花紅等。
文憑／證書	「文憑／證書」是指技術及職業教育課程之文憑／證書、基礎課程文憑、職專文憑及技工程度的課程，或同等教育程度。
學士學位	「學士學位」是指本地或非本地教育機構提供的學士學位，或同等教育程度。
研究生學位	「研究生學位」是指本地或非本地教育機構提供的高等學位（如碩士學位），或同等教育程度。
中三或以下	「中三或以下」是指中三或以下，或同等教育程度。
中四至中七	「中四至中七」是指中四至中七（包括與香港中學會考、香港中學文憑考試、毅進文憑等相關的教育課程）或同等教育程度。
副學位	「副學位」是指本地或非本地教育機構提供的副學士、高級文憑、專業文憑、高級證書、增修證書、院士銜或同等課程。
僱員總人數	「僱員總人數」是指在抽取調查機構 / 公司的受薪僱員（包括全職和兼職僱員）人數，不論他們是否在香港以外的地方工作。
受訓者	「受訓者」包括正在接受各種訓練的人士，以及已簽訂學徒合約的登記學徒。
空缺	「空缺」指在統計日期當天，機構內已懸空、且正積極招聘人手但未曾填補的職位。



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## I. EXECUTIVE SUMMARY

### A. Background

1.1 This report presents the findings, observations and conclusions of the Manpower Survey (MPS) of the Automobile Industry conducted from March to May 2019, and subsequent recommendations.

1.2 The key objective of the MPS is to collect up-to-date manpower information with a view to assessing the manpower requirements and training needs of the automobile industry.

### B. Scope of Survey

1.3 The Survey covered the following sectors and branches of the automobile industry:

Vehicle servicing sector

Branch 1: Body assembly of motor vehicles

Branch 2: Servicing and repairing of motor vehicles and motorcycles

Branch 3: Supplementary samples

Auto/parts retail sector

Branch 4: Retail sale of motor vehicles

Branch 5: Retail sale of motorcycles

Branch 6: Retail sale of motor vehicle and motorcycle parts and accessories

Branch 7: Supplementary samples

Other prominent or relevant organisations with employees of the automobile industry

Branch 8: Supplementary samples

### C. Samples and Responses

1.4 Among the 3 796 establishments under the scope of survey, 569 were chosen for the survey. Of which, 501 establishments were selected by the stratified random sampling method and 68 establishments were included as supplementary samples, according to the recommendations by the Training Board.

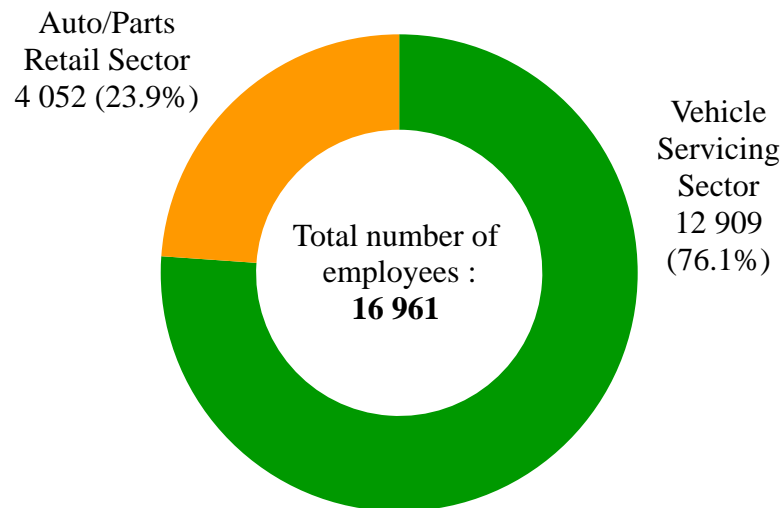
1.5 Among the sampled establishments, 425 were successfully enumerated, giving an effective response rate of 94%. The remaining cases were regarded as invalid, including establishments which suspended operations or were not engaged in the industry, and so on.

## D. Summary of Survey Findings

### *Number of Employees*

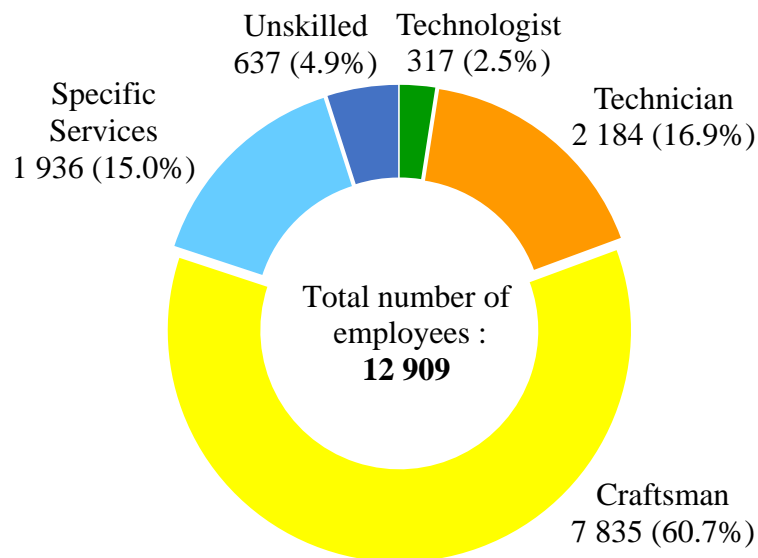
1.6 At the time of survey, 16 961 persons were employed in the automobile industry. Among them, about three quarters worked in the vehicle servicing sector (Figure 1.1).

Figure 1.1 Number of Employees in the Automobile Industry



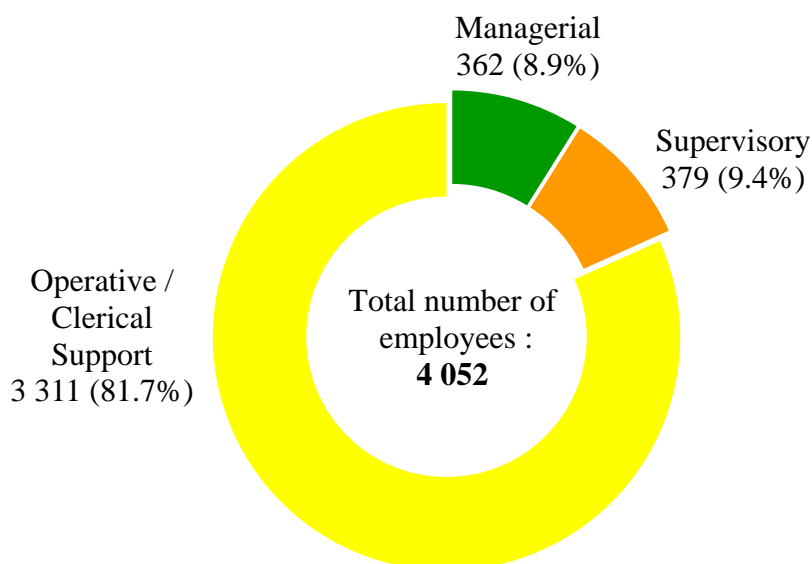
1.7 The majority (60.7%) of employees in the vehicle servicing sector were at the craftsman level (Figure 1.2).

Figure 1.2 Distribution of Employees by Job Level of the Vehicle Servicing Sector



1.8 For the auto/parts retail sector, the majority (81.7%) of employees belonged to operative/clerical support staff.

Figure 1.3 Distribution of Employees by Job Level of the Auto/Parts Retail Sector



1.9 Compared with those of last round of survey in 2016, the number of employees in the vehicle servicing sector recorded a minimal growth of 0.7% (from 12 822 to 12 909) whereas the auto/parts retail sector had a decrease of 2.8% (from 4 168 to 4 052).

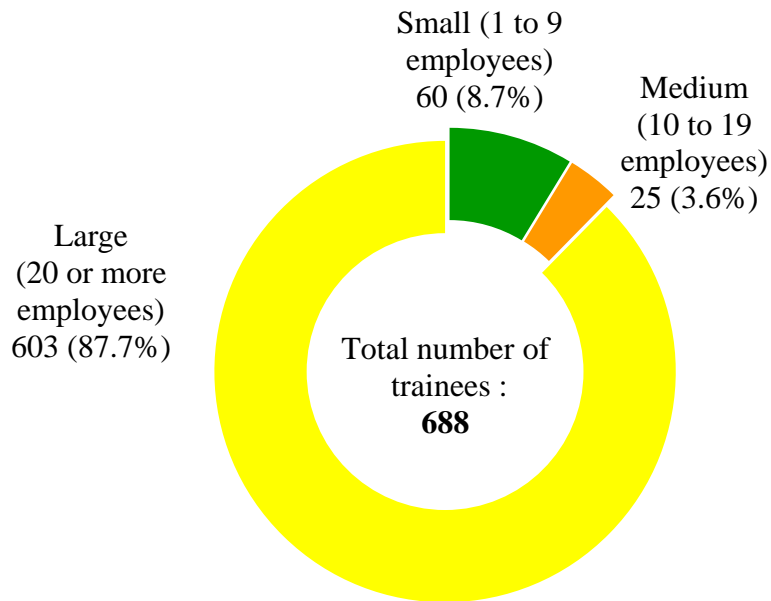
1.10 The survey found that large companies (i.e. with 20 or more employees) employed nearly half of the manpower in the vehicle servicing sector (45.8%) and the auto/parts retail sector (48.1%). Small and medium enterprises (SME) employed the remaining half of the manpower.

### ***Number of Trainees***

1.11 At the time of survey, the vehicle servicing sector had 688 trainees, amounting to 5.1% of the total workforce (i.e. employees + trainees = 13 597 practitioners). Compared with that of 2016, the number of trainees decreased by 2.3% (from 704 to 688).

1.12 Of the 688 trainees, the majority (641 or 93.2%) of them were at craftsman level. Most of them (603 or 87.7%) were employed by large companies (Figure 1.4).

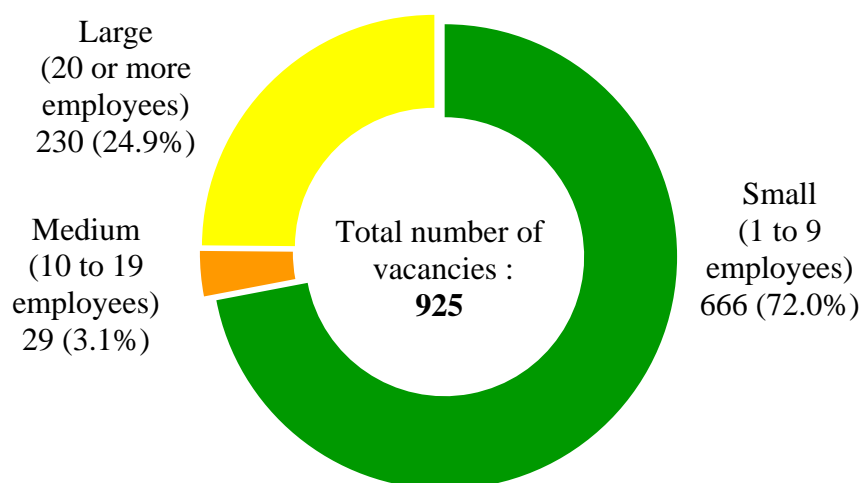
Figure 1.4 Distribution of Trainees by Company Size of the Vehicle Servicing Sector



***Number of Vacancies***

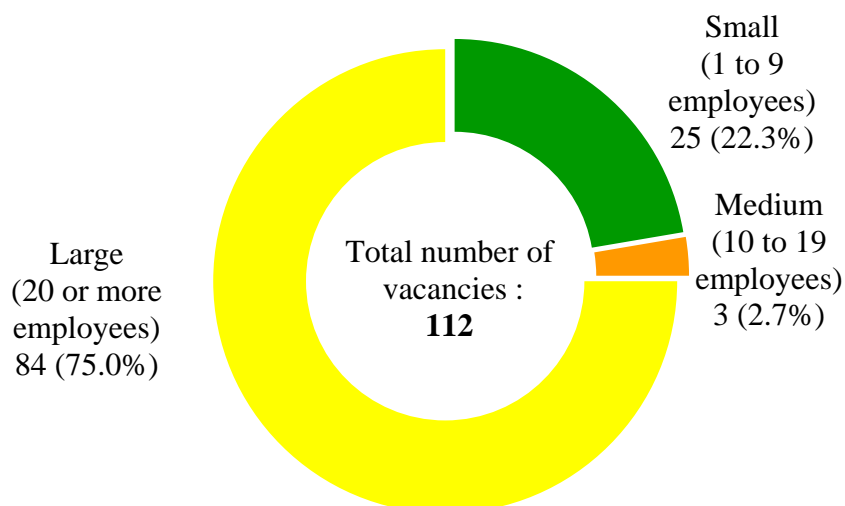
1.13 The vehicle servicing sector reported 925 vacancies at the time of survey, down 1.7% from that of 2016 (941 vacancies). Most of the vacancies (660 or 71.4%) were at craftsman level. Small garages accounted for the majority (666 or 72.0%) of the vacancies (Figure 1.5).

Figure 1.5 Distribution of Vacancies by Company Size of the Vehicle Servicing Sector



1.14 The auto/parts retail sector reported 112 vacancies at the time of survey, down 11.1% from that of 2016 (126 vacancies). Most of the vacancies (105 or 93.8%) were at operative/clerical support level. Large companies accounted for the majority (84 or 75%) of the vacancies (Figure 1.6).

Figure 1.6 Distribution of Vacancies by Company Size of the Auto/Parts Retail Sector



### ***Monthly Income of Employees***

1.15 Employees' typical monthly incomes at the time of survey are listed in Table 1.1 and Table 1.2. Overall speaking, employees' average monthly income shifted to a higher end, compared with that of three years ago. The proportion of employees who had an average monthly income higher than \$20,000 increased from 18% to 35% in the vehicle servicing sector and 26% to 47% in the auto/parts retail sector.

Table 1.1 Typical Monthly Incomes of the Vehicle Servicing Sector

Job Level	Average Monthly Income (% of employees)
Technologist	>\$35,000 (75%)
Technician	\$20,001 to \$35,000 (74%)
Craftsman	\$15,001 to \$25,000 (84%)
Specific Services	\$10,001 to \$20,000 (86%)
Unskilled	\$10,001 to \$15,000 (81%)

Table 1.2 Typical Monthly Incomes of the Auto/Parts Retail Sector

Job Level	Average Monthly Income (% of employees)
Managerial	>\$25,000 (90%)
Supervisory	\$20,001 to \$35,000 (86%)
Operative/Clerical Support	\$10,001 to \$25,000 (93%)

## E. Manpower Projections and Annual Training Requirements

1.16 Based on the survey findings of 2019 and those of previous rounds, the Training Board used the Adaptive Filtering Method (AFM) to project the number of employees at different job levels for 2020 to 2023. It was found that the manpower of the vehicle servicing sector would be very steady while a manpower decline in the auto/parts retail sector would occur (Table 1.3).

Table 1.3 Projected Manpower of the Automobile Industry for 2020 to 2023

Job Level	Year 2020	Year 2021	Year 2022	Year 2023
<b>A. Vehicle Servicing Sector</b>				
Technologist	318	319	320	321
Technician	2 185	2 186	2 187	2 187
Craftsman	7 843	7 853	7 861	7 867
Specific Services	1 944	1 940	1 937	1 935
<b>Subtotal</b>	<b>12 290</b>	<b>12 298</b>	<b>12 305</b>	<b>12 310</b>
<b>B. Auto/Parts Retail Sector</b>				
Managerial	356	351	346	342
Supervisory	390	401	411	422
Operative/Clerical Support	3 276	3 245	3 218	3 195
<b>Subtotal</b>	<b>4 022</b>	<b>3 997</b>	<b>3 975</b>	<b>3 959</b>

1.17 By adding the manpower growth projected with AFM and the required replacement for wastage (i.e. employees leaving the industry by whatever reasons), the Training Board estimated the average annual training requirements from 2020 to 2023 as shown in Table 1.4.

Table 1.4 Annual Training Requirements of the Automobile Industry from 2020 to 2023

Job Level	No. of Employees at the Time of Survey	Annual Training Requirements (persons)
<b>A. Vehicle Servicing Sector</b>		
Technologist	317	11
Technician	2 184	88
Craftsman	7 835	401
<b>B. Auto/Parts Retail Sector</b>		
Managerial	362	6
Supervisory	379	23
Operative/Clerical Support	3 311	69

## **F. Business Outlook**

### ***Vehicle Servicing Sector***

1.18 In general, the Training Board is optimistic about the future of the vehicle servicing sector as the vehicle population in Hong Kong keeps on growing, though its momentum might have been slowing down. The large number of vehicles on road will continue to demand a skilled workforce for maintenance and repairing. In particular, employees equipped with new skill sets, such as trouble-shooting the electrical systems in EVs and hybrid vehicles, will be of high demand.

1.19 High rental cost, substantial investment to meet the regulatory and technological requirements, and inadequate supply of new bloods, are unfavourable factors affecting the growth of the industry.

1.20 With the opening of the Hong Kong-Zhuhai-Macao Bridge in October 2018 and the Chinese and HKSAR governments' plan to promote tighter integration and economic cooperation in the Guangdong-Hong Kong-Macau Greater Bay Area, it is anticipated that more vehicle travelling between Hong Kong and Mainland will occur. This will lead to both challenges and opportunities for the local vehicle servicing sector.

1.21 The Training Board shares the view of other industry stakeholders that the introduction of mandatory registration schemes for vehicle mechanics and vehicle maintenance workshops will foster a higher level of professionalism for the automobile industry. The schemes will help attract more young people to join the industry. They will also uplift the



service standard of vehicle maintenance workshops and reduce unhealthy competitions, which in turn ensures a more stable income for the practitioners.

### ***Auto/Parts Retail Sector***

1.22 It is anticipated that the local economy will face increasingly downward pressure in the second half of 2019 and beyond due to the impacts of Sino-US trade frictions and political unrest in Hong Kong. In addition, the expansion of the Mass Transit Railway network and inadequate supply of car park spaces will certainly affect the business of the auto/parts retail sector. There is no doubt that the sector will have a hard time in the coming few years. Nevertheless, the gloomy situation will get some relief if the Hong Kong Government would introduce new incentive schemes or strengthens its existing ones to encourage consumers to replace their vehicles with more environmentally friendly models.

## **G. Major Recommendations**

1.23 The Training Board's major recommendations for different stakeholders of the industry are:

- (a) Training Providers
  - (i) broaden course promotion to ethnic minorities
  - (ii) strengthen the publicity of skill competitions to the general public, in particular secondary school students and their parents
  - (iii) cooperate with vehicle manufacturers to offer more in-service training courses on new vehicle technologies
  - (iv) strengthen the use of e-learning and AR/VR technologies for in-service training
  
- (b) Employers
  - (i) make use of the Business-School Partnership Programme (BSPP) to promote the trade to secondary school students
  - (ii) make use of government's subsidy schemes, such as the Reindustrialisation and Technology Training Programme (RTTP), for staff training
  - (iii) participate in the VTC Earn & Learn Scheme to recruit and retain more apprentices
  - (iv) support Workplace Learning and Assessment (WLA) by participating in the Pilot Incentive Scheme to Employers (PISE)
  
- (c) Employees
  - (i) make use of the Vplus Engineering Subsidy Scheme to pursue higher qualifications in part-time mode
  - (ii) embark a life-long learning journey throughout the career, by attending skill upgrading courses, workshops, and seminars organised by the VTC, government departments and professional bodies

- (iii) sit for the relevant VTC trade tests, if required, to gain recognition of their trade competencies and fulfil the registration requirements of the Voluntary Registration Scheme for Vehicle Mechanics
  
- (d) Government
  - (i) launches the mandatory registration schemes for vehicle mechanics and vehicle maintenance workshops

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## II. INTRODUCTION

### A. Background

2.1 The Automobile Training Board of the Vocational Training Council is required by its terms of reference to determine the manpower demand of the automobile industry and to make recommendations to the Council for the development of training facilities to meet the demand. The Training Board comprises members nominated by major trade associations, trade unions, professional bodies, educational/training institutions and government departments. The membership of the Training Board and its Working Party on Manpower Survey, and its terms of reference are listed in Appendices 1 to 3.

2.2 In pursuance of its terms of reference, the Training Board conducted the 2019 Manpower Survey of the Automobile Industry from March to May 2019. This report presents the findings, observations and conclusions of the survey, and subsequent recommendations.

### B. Objective

2.3 The objective of the survey is to collect the latest manpower information of the automobile industry. Specifically, the survey aims at

- (a) collecting up-to-date manpower information by principal jobs in related disciplines of the automobile industry;
- (b) assessing the technical manpower structure;
- (c) forecasting training requirements in the near future; and
- (d) recommending to the Council the development of training strategies to meet such needs.

## C. Coverage

2.4 The survey covered eight branches of 3 796<sup>1</sup> establishments in the automobile industry with details as follows:

Sector/Branch	Size 1 – 9 employees	Size 10 – 19 employees	Size ≥20 employees	Total
<b>Vehicle Servicing Sector</b>				
Body assembly of motor vehicles	33	6	2	41
Servicing and repairing of motor vehicles and motorcycles	2 749	66	21	2 836
Supplementary samples	3	1	14	18
<b>Auto/Parts Retail Sector</b>				
Retail sale of motor vehicles	416	8	12	436
Retail sale of motorcycles	14	2	1	17
Retail sale of motor vehicle and motorcycle parts and accessories	397	10	2	409
Supplementary samples	4	1	1	6
<b>Other Prominent or Relevant Organizations Employing Workers of Automobile Industry</b>				
Supplementary samples	3	4	26	33
Overall	3 619	98	79	3 796

## D. Sample Design

2.5 The sample design and selection were done by the VTC Manpower Survey Team for Training Boards. To ensure the selection of a representative sample and facilitate subgroup analysis, a total of 569 establishments were invited for the survey. Of these, 501 were selected from the Central Register of Establishments (CRE)<sup>2</sup> using a statistically scientific method of stratified random sampling (comprising strata of establishments by three levels which were sector, branch and employment size). The remaining 68 companies (supplementary sample) were recommended for inclusion in the survey by the Training Board. These companies were prominent companies of other business natures which also employed employees of the automobile industry.

<sup>1</sup> The figure refers to establishments with technical manpower for the automobile industry.

<sup>2</sup> The Census and Statistics Department maintains a computerised Central Register of Establishments which contains information relating to some 400 000 active establishments in Hong Kong. Information kept in the Register is updated on a quarterly basis through feedback from various surveys of the department and administrative returns from relevant government departments.

## E. Questionnaire Design

2.6 Survey data were collected with a structured questionnaire. The questionnaire was divided into Part I and II. Part I was the major part of the questionnaire collecting manpower information including number of employees, vacancies and trainees by level by principal job while Part II collected supplementary information related to manpower.

2.7 The questionnaire, explanatory notes and job descriptions for principal jobs are given in Appendix 4.

## F. Data Collection Method

2.8 A survey pack, containing a notification letter and a survey questionnaire, together with an explanatory note and a list of principal jobs with job descriptions, was prepared for each of the invited establishments. The survey packs were dispatched by mail/email or in person. Responsible persons of the establishments were asked to provide information regarding the manpower situation in their establishments at the time of survey.

2.9 In respect of manpower information, two sectors and totally eight levels of job were classified for the automobile industry, namely:

A. Vehicle Servicing Sector	B. Auto/Parts Retail Sector
(i) Technologist	(i) Managerial
(ii) Technician	(ii) Supervisory
(iii) Craftsman	(iii) Operative/Clerical Support
(iv) Specific Services	
(v) Unskilled	

2.10 The list of principal jobs was defined by the Training Board with detailed job descriptions. It was understood that the job titles adopted in the establishments might not be exactly the same as those of the principal jobs. Respondents were required to report manpower information corresponding to the principal jobs based on the job descriptions.

2.11 During the fieldwork period, fieldworkers made telephone contacts with or visited individual establishments to assist respondents in completing questionnaires or to collect completed ones.

## G. Quality Control Measures

2.12 Various measures were taken to assure the quality of the survey data collected. These included prior fieldwork preparation, thorough training of fieldwork staff, monitoring of the fieldwork execution, measures to increase the response rate, checking of the completed questionnaires, double data entry and validation of the collected data.

(a) Prior fieldwork preparation

Before the fieldwork, efforts were made to collect contact telephone numbers of the sampled establishments as far as possible. Sampled establishments under the same business entities were grouped together to facilitate fieldwork execution.

(b) Thorough training of fieldwork staff

VTC organised an industry-briefing workshop to familiarise the fieldwork staff with industry-related knowledge.

Intensive briefing and training sessions were given to all fieldwork staff involved to ensure that they had a good understanding of the survey objectives, the contents of the questionnaire and the operational procedures. Representatives of VTC participated as guest speakers in the briefing and training sessions to answer and clarify queries.

(c) Monitoring of the fieldwork execution

Experienced and well-trained fieldworkers were deployed to conduct the fieldwork. The fieldwork progress and the work of fieldworkers were closely monitored by their supervisors. Debriefing sessions were held twice a week to discuss and solve the problems encountered and to review the quality of the completed questionnaires.

Joint field visits to a number of establishments were made by VTC staff to ensure that fieldwork was properly conducted.

(d) Measures to increase the response rate

Several measures were employed to increase the response rate. In particular, the Training Board and trade associations were enlisted to persuade and solicit cooperation from their members to participate in the survey.

(e) Checking of the completed questionnaires

Completed questionnaires returned by each fieldworker were subject to sample checks by an independent team of experienced checkers to verify if field visits had really been made.

ALL the completed questionnaires underwent vetting process by VTC staff. Dubious cases identified were followed up by telephone and field verification with the parties concerned.

(f) Double data entry and validation of the collected data

A double data entry system was adopted to minimise the risk of incorrect data entry. All input data were subject to computer validation and dubious cases identified were followed up by field verification.

(g) Data analysis by VTC

Comparison of survey findings with those of last round and benchmarking with relevant manpower information, if deemed appropriate, were conducted.



## H. Fieldwork Period and Enumeration Results

2.13 The data collection was carried out between March and May 2019. Among the sampled establishments, 425 were successfully enumerated, giving an effective response rate of 94%. Taking into account (i) the satisfactory response rate of individual branches, (ii) the fact that majority of prominent and sizeable establishments had responded to the survey, and (iii) the grossing-up of sample results based on statistically-grounded method, it could be concluded that the survey findings presented in this report contributed to a significant level of representativeness of the sector/branch. The response rate achieved for individual sector/branch was also adequate to produce meaningful breakdown by sector/branch (Table 2.1).

Table 2.1 Enumerated Results by Sector/Branch

Sector/Branch	(a) No. of Valid Cases*	(b) No. of Establishments Successfully Enumerated	(b)/(a) Effective Response Rate
Vehicle Servicing Sector	297	286	96%
Auto/Parts Retail Sector	123	113	92%
Other Organisations (e.g. Government departments, public utilities, companies maintaining fleet of vehicles, and educational institutions)	30	26	87%
Overall	450	425	94%

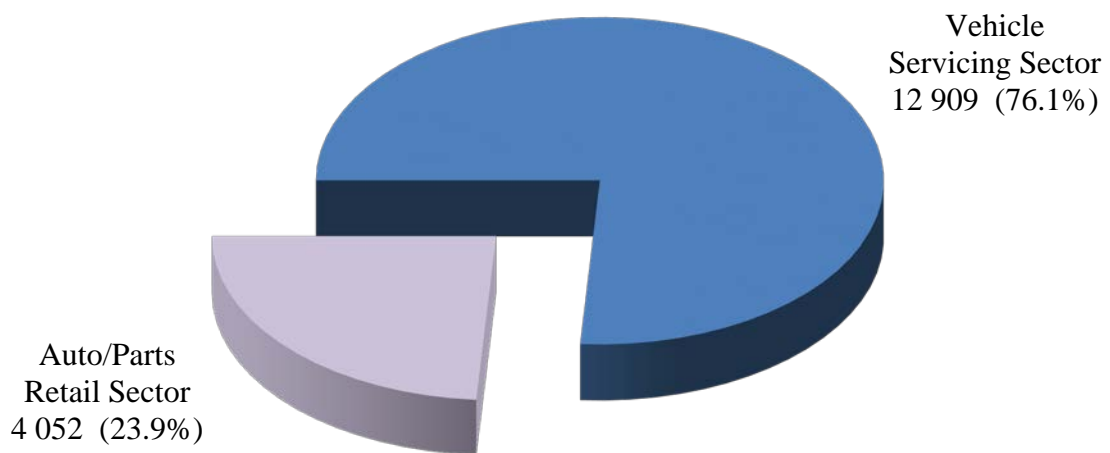
Note: \* Invalid cases refer to those establishments that had ceased operations, closed, and so on.

### III. SURVEY FINDINGS

#### A. Overview of the Automobile Industry

3.1 The survey found that at the time of survey which was March 2019, a total of 16 961 employees (excluding trainees) were employed in the principal jobs of the automobile industry in Hong Kong, indicating a minimal decline of 0.17% over the past three years. Of the 16 961 employees, three quarters of them worked in the vehicle servicing sector while the rest were employed in the auto/parts retail sector. The detailed distribution is shown in Figure 3.1.

Figure 3.1 Distribution of Employees of the Automobile Industry



## B. Vehicle Servicing Sector

### Number of Employees

3.2 The distributions of employees (excluding trainees) by job level and by company size of the vehicle servicing sector are given in Figure 3.2 and Figure 3.3 respectively.

Figure 3.2 Distribution of Employees by Job Level of the Vehicle Servicing Sector

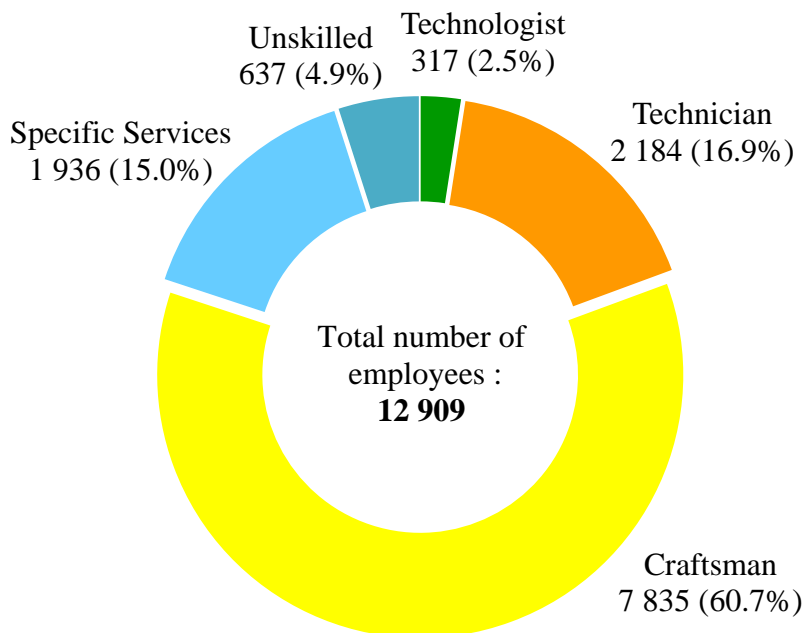
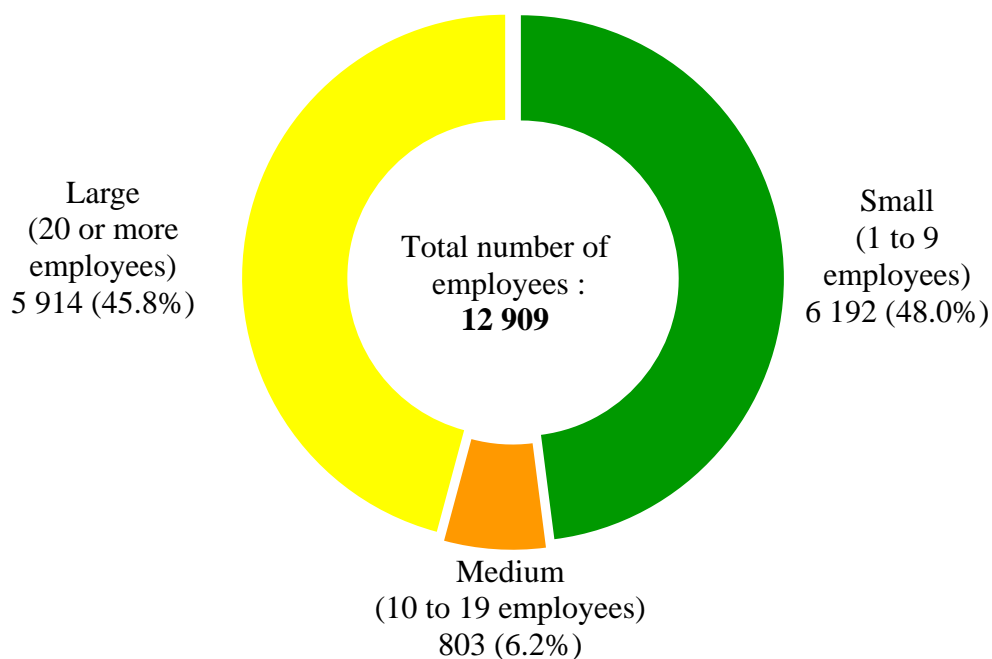
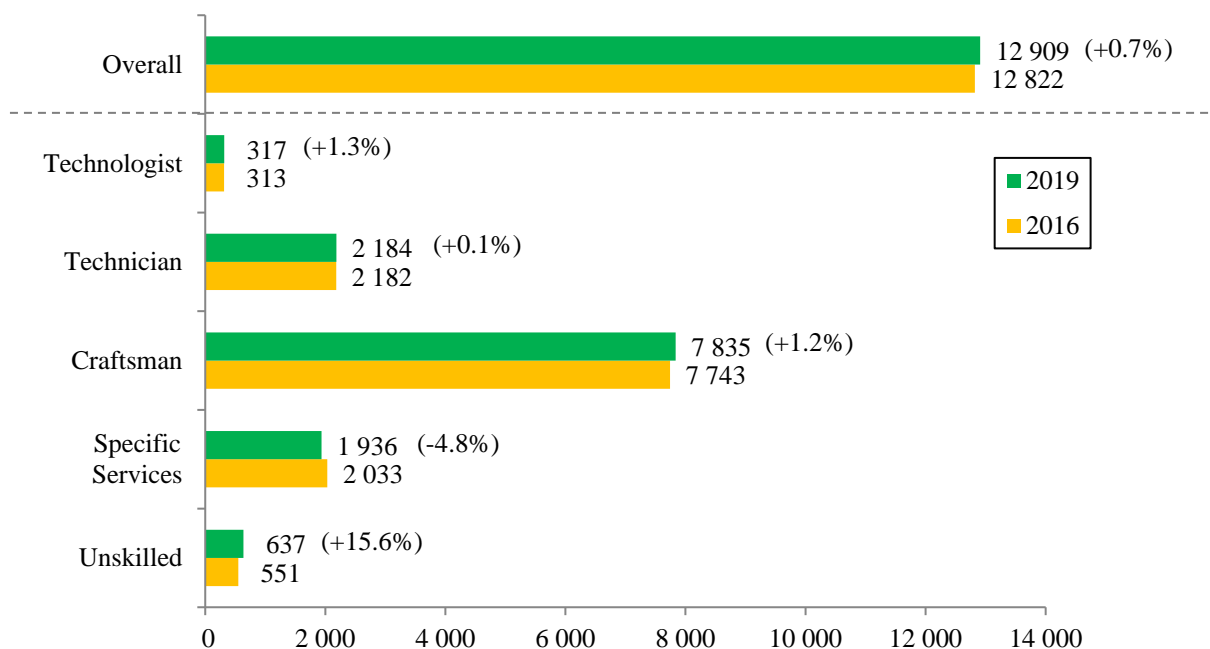


Figure 3.3 Distribution of Employees by Company Size of the Vehicle Servicing Sector



3.3 Compared with that of 2016, the total number of employees of the vehicle servicing sector recorded a minimal growth of 0.7%. The changes at different job levels are shown in Figure 3.4.

Figure 3.4 Number of Employees in 2016 and 2019 – Vehicle Servicing Sector



3.4 Table 3.1 lists out a few principal jobs which accounted for a significant percentage of employees at each job level, as recorded in the 2019 survey.

Table 3.1 Prominent Principal Jobs by Level of the Vehicle Servicing Sector

Job Level	Prominent Principal Jobs	% of Employees Accounted at Respective Job Level
Technologist	Service Manager	64.0%
Technician	Service Supervisor	48.0%
Craftsman	Vehicle Mechanic	72.3%
Specific Services	Car Detailing Worker	40.4%
	Tyre Worker / Battery Worker	18.5%

### Number of Trainees

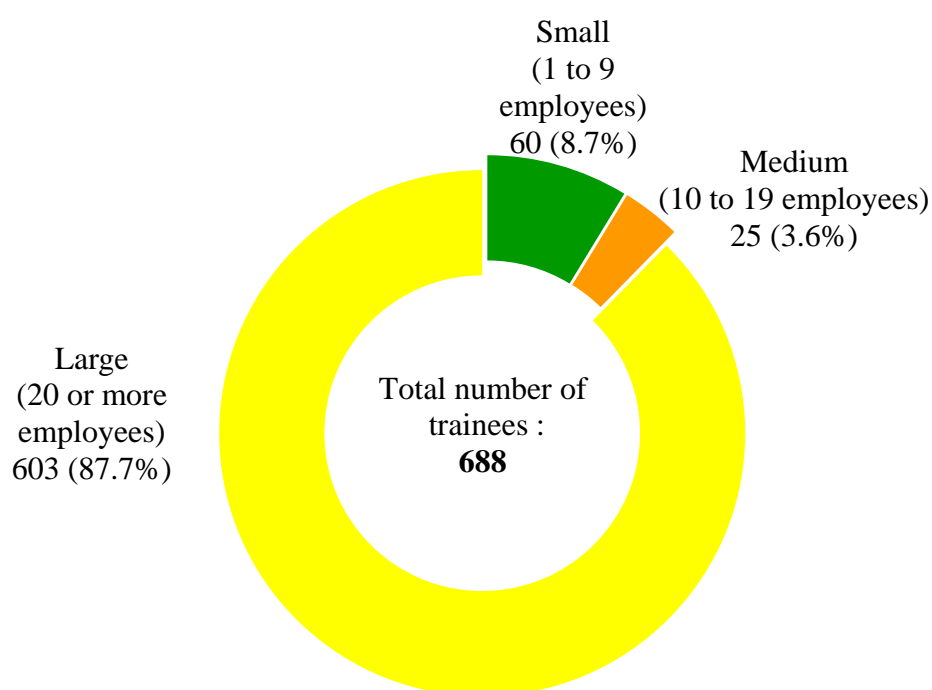
3.5 At the time of the survey, there were 688 trainees in the vehicle servicing sector, amounting to 5.1% of the total workforce (i.e., employees + trainees = 13 597 persons). The majority (641 or 93.2%) of them were at craftsman level. The distribution of trainees by job level is given in Table 3.2.

Table 3.2 Distribution of Trainees by Job Level of the Vehicle Servicing Sector

Job Level	Number of Employees	Number of Trainees	No. of Trainees
			No. of Employees + No. of Trainees
Technologist	317	1	0.3%
Technician	2 184	36	1.6%
Craftsman	7 835	641	7.6%
Specific Services	1 936	9	0.5%
Unskilled	637	1	0.2%
Total	12 909	688	5.1%

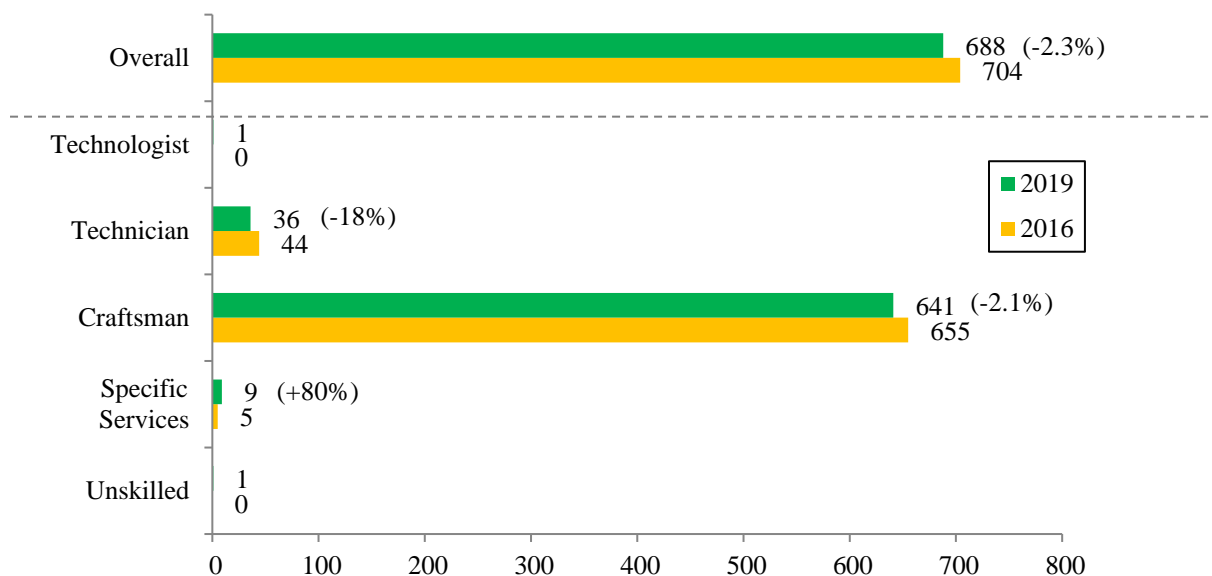
3.6 The distribution of trainees by company size is given in Figure 3.5. It was found that the majority (603 or 87.6%) were engaged in large organisations (20 or more employees).

Figure 3.5 Distribution of Trainees by Company Size of the Vehicle Servicing Sector



3.7 Compared with that of 2016, the total number of trainees of the vehicle servicing sector decreased by 2.3% (Figure 3.6).

Figure 3.6 Number of Trainees in 2016 and 2019 – Vehicle Servicing Sector



### ***Number of Vacancies***

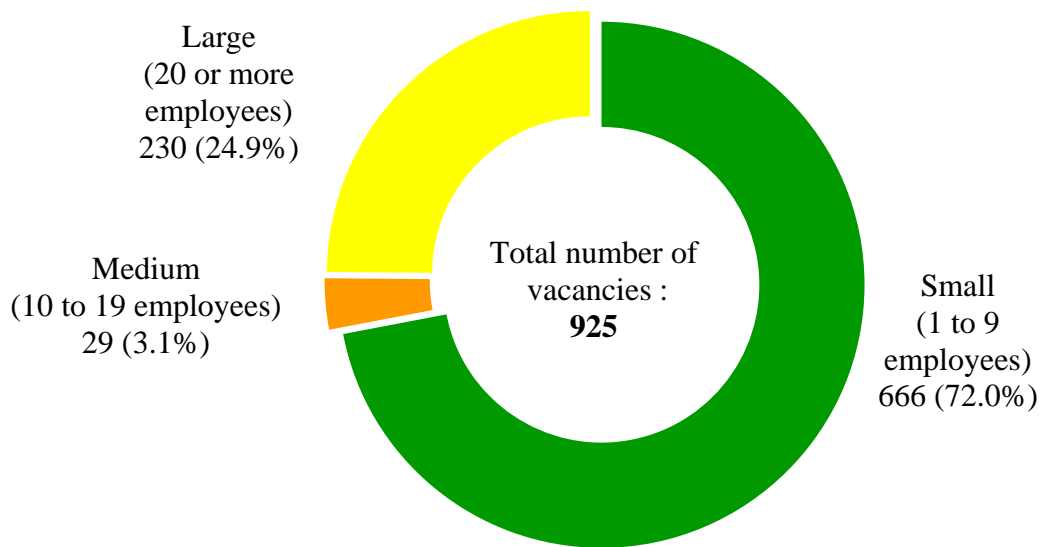
3.8 Employers reported 925 vacancies, representing about 6.7% of the total required manpower of the vehicle servicing sector at the time of the survey. The distribution of the vacancies by job level is shown in Table 3.3.

Table 3.3 Distribution of Vacancies by Job Level of the Vehicle Servicing Sector

Job Level	Number of Employees	Number of Vacancies	Vacancy Rate = $\frac{\text{No. of Vacancies}}{\text{No. of Employees} + \text{No. of Vacancies}}$
Technologist	317	9	2.8%
Technician	2 184	97	4.3%
Craftsman	7 835	660	7.8%
Specific Services	1 936	140	6.7%
Unskilled	637	19	2.9%
Total	12 909	925	6.7%

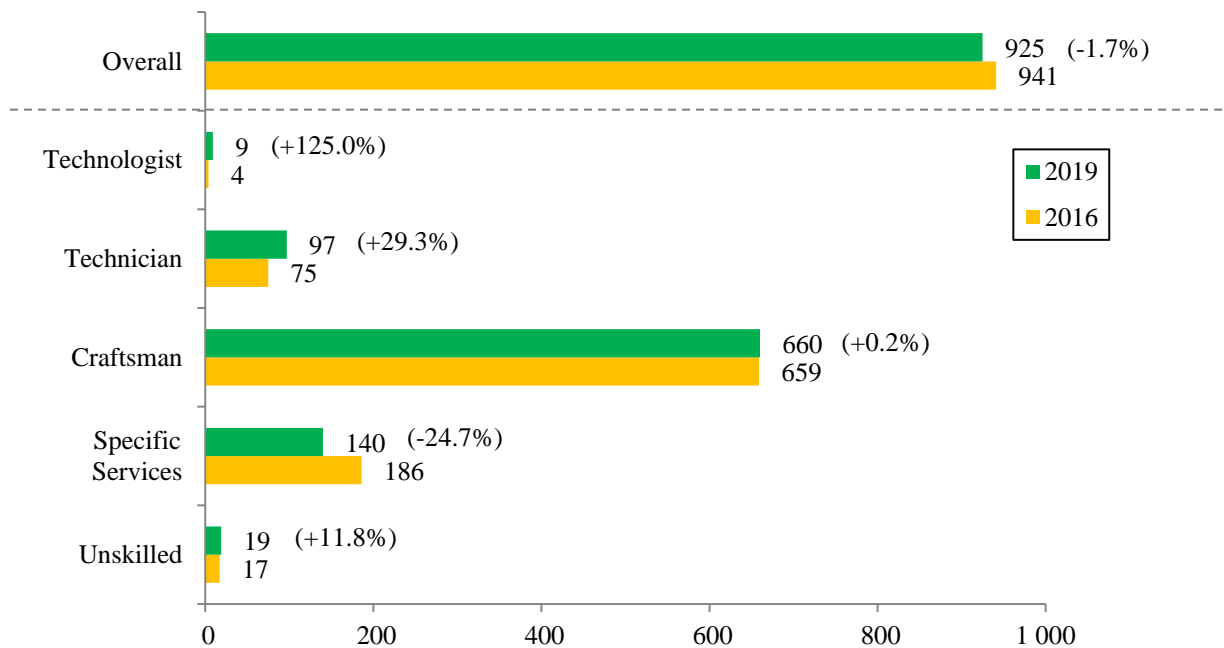
3.9 The distribution of vacancies by company size is given in Figure 3.7. It was found that three quarters of the vacancies belonged to SME.

Figure 3.7 Distribution of Vacancies by Company Size of the Vehicle Servicing Sector



3.10 Compared with that of 2016, the total number of vacancies of the vehicle servicing sector decreased by 1.7% (Figure 3.8). Nevertheless, a noticeable increase was found in the high-skilled jobs, i.e., technologists and technicians.

Figure 3.8 Number of Vacancies in 2016 and 2019 – Vehicle Servicing Sector



### ***Employers' Forecasted Manpower Demand***

3.11 Employers forecasted 13 872 employees and 722 trainees in 2020 for the vehicle servicing sector. Their distributions by job level are shown in Table 3.4 and 3.5 respectively.

Table 3.4 Forecasted Number of Employees in 2020 of the Vehicle Servicing Sector

Job Level	Number of Required Employees in 2019 (including vacancies)	Employers' Forecast on Number of Employees in 2020	Growth
Technologist	326	326	-
Technician	2 281	2 279	-0.1%
Craftsman	8 495	8 531	0.4%
Specific Services	2 076	2 082	0.3%
Unskilled	656	654	-0.3%
Total	13 834	13 872	0.3%

Table 3.5 Forecasted Number of Trainees in 2020 of the Vehicle Servicing Sector

Job Level	Number of Trainees in 2019	Employers' Forecast on Number of Trainees in 2020	Growth
Technologist	1	1	-
Technician	36	31	-13.9%
Craftsman	641	681	6.2%
Specific Services	9	8	-11.1%
Unskilled	1	1	-
Total	688	722	4.9%



### Monthly Income of Employees

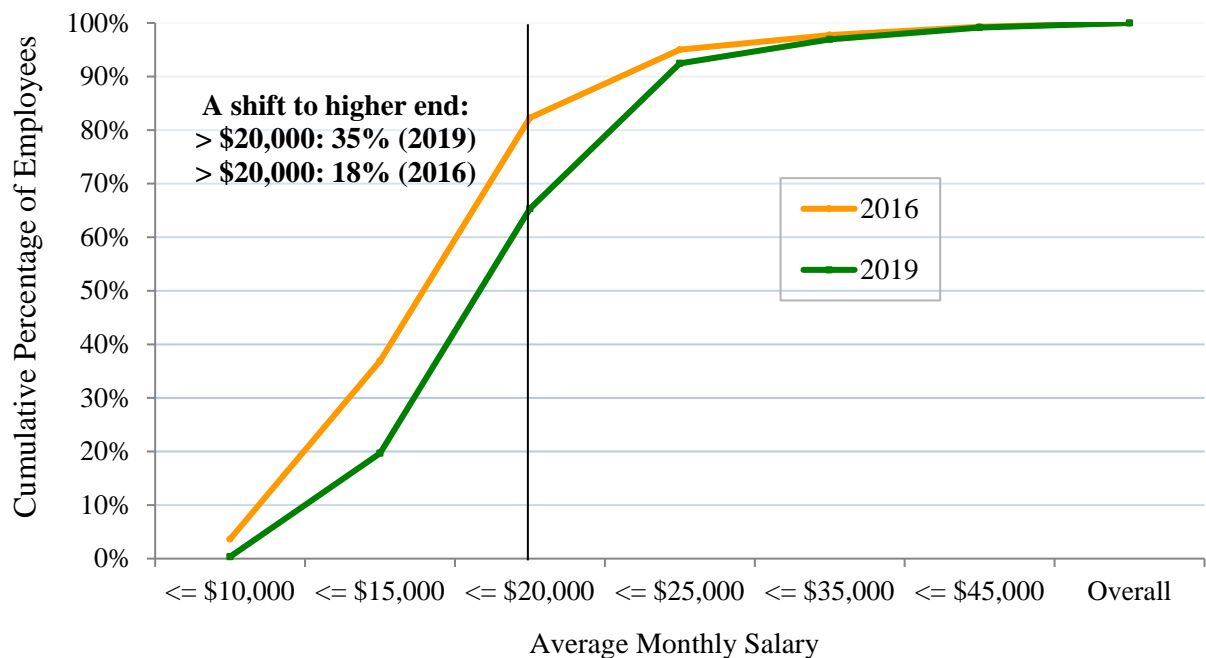
3.12 The distribution of employees by monthly income ranges by job level of the vehicle servicing sector is detailed in Table 3.6, and by principal job in Table 3 of Appendix 5.

Table 3.6 Distribution of Employees by Monthly Income Range by Job Level of the Vehicle Servicing Sector

Monthly Income Range	Technologist	Technician	Craftsman	Specific Services	Unskilled	Overall
\$10,000 or below	-	-	-	-	7.2%	0.4%
\$10,001 - \$15,000	-	5.3%	15.4%	31.5%	81.3%	19.3%
\$15,001 - \$20,000	-	12.7%	55.5%	54.4%	9.9%	45.7%
\$20,001 - \$25,000	7.4%	48.1%	28.5%	14.0%	1.7%	27.1%
\$25,001 - \$35,000	18.0%	26.0%	0.6%	0.1%	-	4.5%
\$35,001 - \$45,000	45.0%	7.3%	-	-	-	2.2%
Over \$45,000	29.6%	0.5%	-	-	-	0.8%

3.13 Overall speaking, the average monthly income of employees in the vehicle servicing sector shifted to a higher end, compared with that of three years ago. The proportion of employees who had an average monthly income of higher than \$20,000 increased from 18% in 2016 to 35% in 2019 (Figure 3.9).

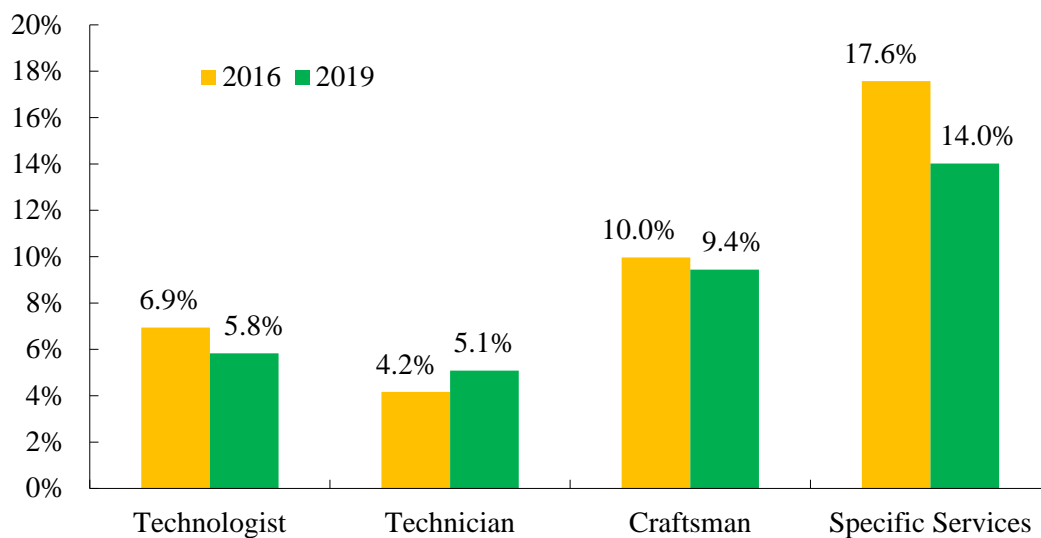
Figure 3.9 Average Monthly Income in the Vehicle Servicing Sector



### Turnover, Recruit and Retirement of Employees

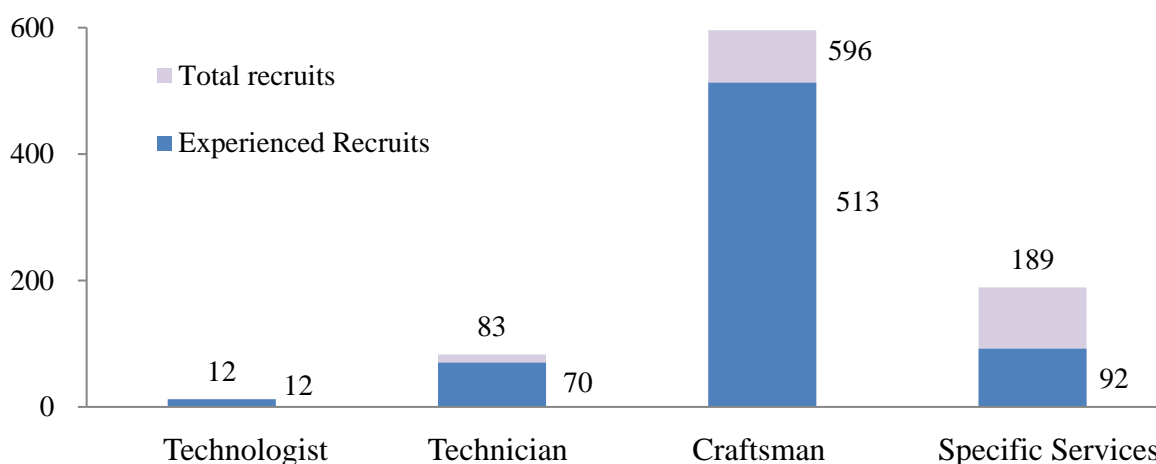
3.14 Employers reported that 1 228 technologists, technicians, craftsmen and specific services workers had left within the 12 months before the survey, with the craftsman and specific services levels registering the largest number of turnovers (802 and 291 employees respectively). The turnover rates<sup>1</sup> by job level, with comparison to those of 2016, are shown in Figure 3.10.

Figure 3.10 Turnover Rate of Employees of the Vehicle Servicing Sector



3.15 On the other hand, there were 880 new employees recruited within the previous 12 months. Among them, 687 were experienced practitioners. The distribution by job level is shown in Figure 3.11.

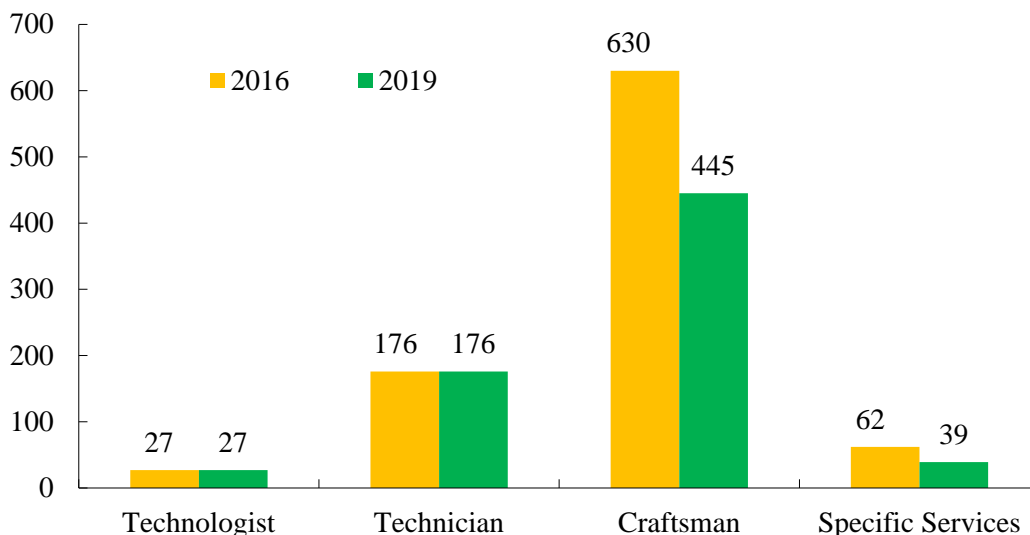
Figure 3.11 Numbers of Recruits within Previous 12 Months – Vehicle Servicing Sector



<sup>1</sup> Turnover Rate =  $\frac{\text{No. of staff left during the past 12 months}}{\text{No. of employees} + \text{No. of vacancies at the time of survey}}$

3.16 Employers of the vehicle servicing sector estimated that 687 employees would retire within the coming five years. The breakdown by job level, with comparison to that of 2016, is shown in Figure 3.12.

Figure 3.12 Estimated Number of Employees Going to Retire within Coming Five Years – Vehicle Servicing Sector



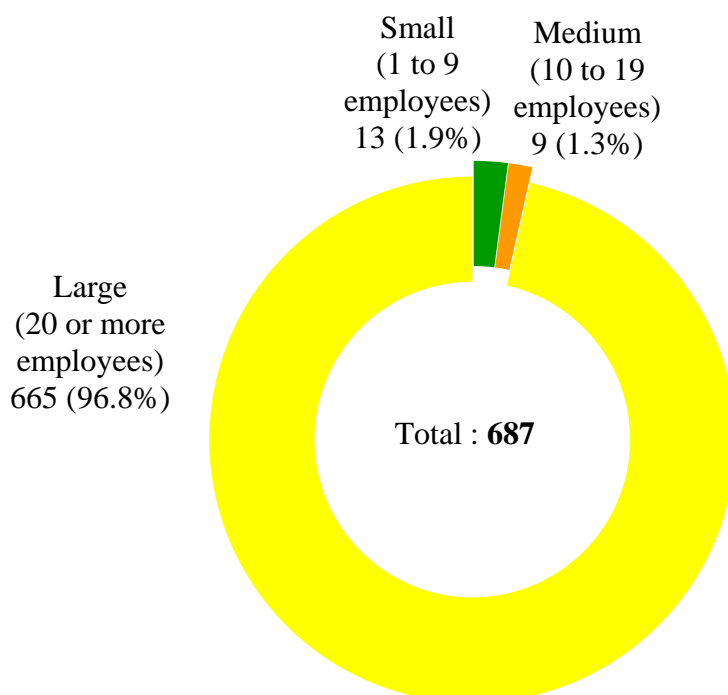
3.17 Based on employers' estimates, the average annual retirement rates of different job levels are calculated in Table 3.7.

Table 3.7 Estimated Average Annual Retirement Rates of the Vehicle Servicing Sector

Job Level	Number of Employees at Time of Survey (a)	Estimated Number of Employees Going to Retire in Coming 5 years (b)	Average Annual Retirement Rate $= \frac{(b)}{5 * (a)} * 100\%$
Technologist	317	27	1.7%
Technician	2 184	176	1.6%
Craftsman	7 835	445	1.1%
Specific Services	1 936	39	0.4%
Total	12 272	687	1.1%

3.18 It was found that while large-size companies employed 46% of the manpower in the vehicle servicing sector, they accounted for most of the employees (96.8%) who were going to retire within the coming five years (Figure 3.13). The low retirement rate in SME garages could be attributed to several factors, such as lack of successors, recruitment difficulties, and flexible retirement ages.

Figure 3.13 Distribution of Employees Going to Retire within Coming 5 Years by Company Size of the Vehicle Servicing Sector



### *Preferred Level of Education, Mode of Training and Period of Training of Employees*

3.19 Regarding the preferred education of employees at technologist level, 71% of the employees were preferred to have first degree or above qualification. About two thirds (62%) of the employees at technician level were preferred to have diploma/certificate qualification. As for craftsman and specific services levels, over 70% of the employees were preferred to have secondary or below qualification (Table 3.8).

Table 3.8 Employers' Views on Preferred Education of the Vehicle Servicing Sector

Job Level	Education					
	Postgraduate Degree	First Degree <sup>2</sup>	Sub-Degree <sup>3</sup>	Diploma/Certificate <sup>4</sup>	Secondary 4 to 7 <sup>5</sup>	Secondary 3 or below
Technologist	1%	70%	24%	5%	-	-
Technician	-	5%	16%	62%	17%	-
Craftsman	-	-	-	28%	27%	45%
Specific Services	-	-	-	16%	40%	44%

<sup>2</sup> Hong Kong Qualification Framework (HKQF) Level 5

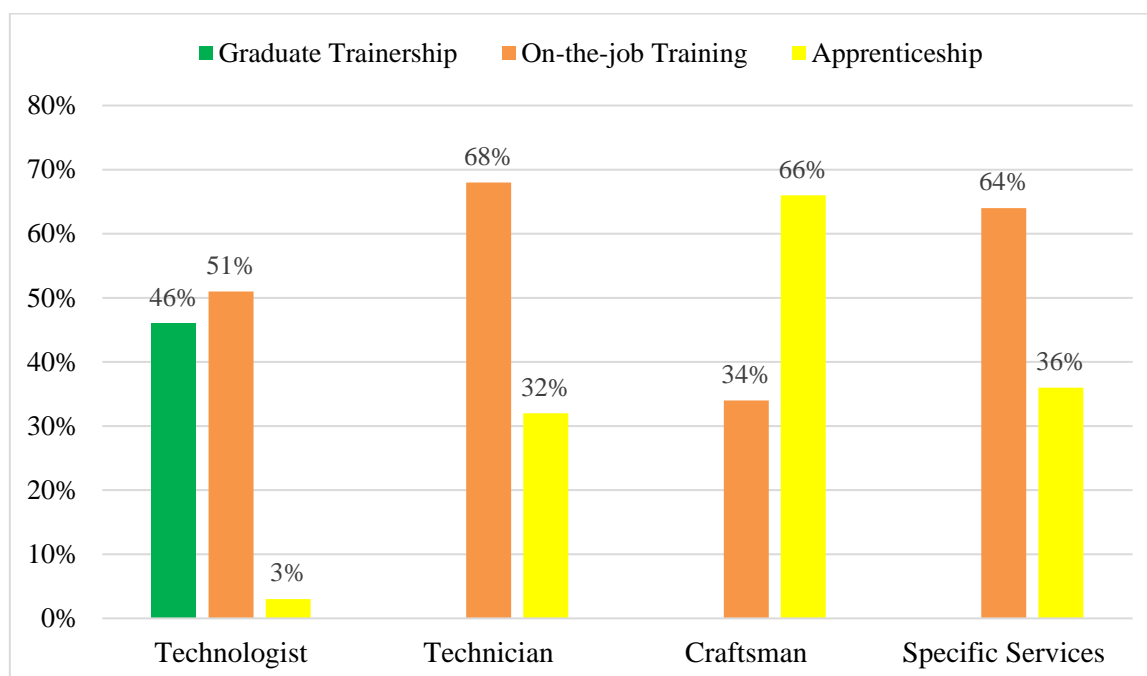
<sup>3</sup> HKQF Level 4 (e.g. Higher Diploma)

<sup>4</sup> HKQF Level 3 (e.g. Diploma of Vocational Education) or Level 2 (e.g. Certificate of Vocational Education)

<sup>5</sup> HKQF Level 2 to Level 3

3.20 Regarding the preferred mode of training for employees at technologist level, 51% of the employees were preferred to have on-the-job training and 46% to have graduate traineeship. About two thirds of the employees at technician (68%) and specific services (64%) levels were preferred to have on-the-job training. As for craftsman, 66% of the employees were preferred to have apprenticeship training (Figure 3.14).

Figure 3.14 Employers' Views on Preferred Training Mode of the Vehicle Servicing Sector



3.21 Regarding the preferred training period, 64% of the employees at technologist level and 62% of the employees at craftsman level were preferred to have a training period of three years or above. The proportion of employees at technician level who were preferred to have a training period of three years or above was relatively higher at 87%. As for specific services level, 67% of the employees were preferred to have a training period of less than two years (Table 3.9).

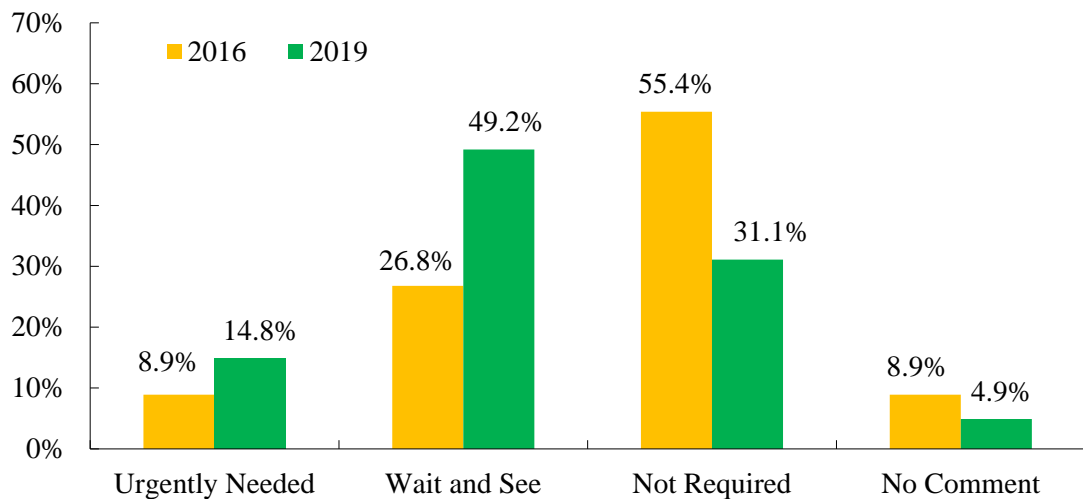
Table 3.9 Employers' Views on Preferred Training Period of the Vehicle Servicing Sector

Job Level	Training Period				
	4 years or above	3 years to less than 4 years	2 years to less than 3 years	1 year to less than 2 years	6 - 11 months
Technologist	56%	8%	28%	8%	-
Technician	47%	40%	8%	5%	-
Craftsman	16%	46%	14%	24%	-
Specific Services	2%	7%	24%	35%	32%

### ***Training Demand for EV and Hybrid Vehicle Maintenance Workers***

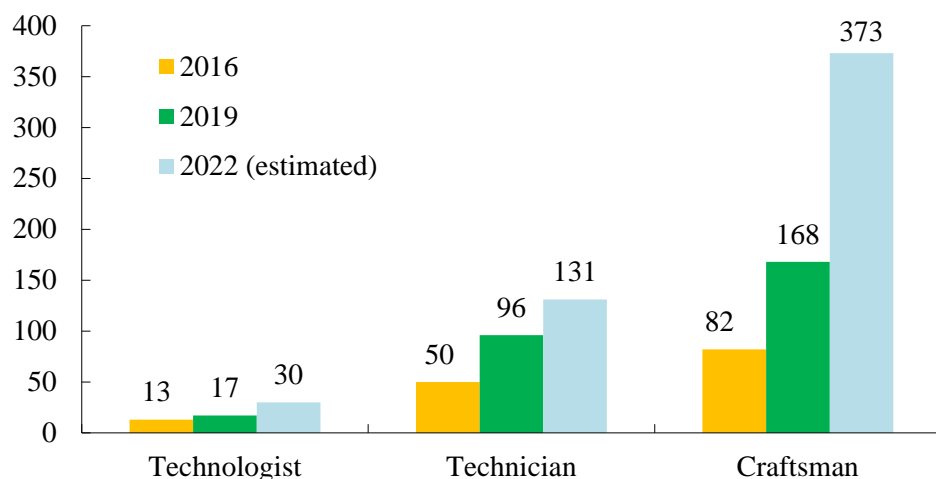
3.22 Regarding employers' views on the training demand for EV and Hybrid vehicle maintenance, most (74%) small garages answered "Not Required", 13.5% answered "Urgently Needed" and 12.6% said "Wait and See". The results were quite similar to those of last round. Whereas, the responses from large companies (with 20 or more employers) were quite different. There was a clear indication that their training demand for EV and Hybrid vehicle maintenance was rising (Figure 3.15).

Figure 3.15 Large Companies' Training Demand for EV and Hybrid Vehicle Maintenance



3.23 The number of qualified EV and Hybrid vehicle maintenance workers, in 2016, 2019 and 2022 (estimated by employers), are shown in Figure 3.16. Compared with the total number of technical staff in technologist, technical and craftsman levels, the percentage was still quite small (e.g., 2.7% in 2019) but an obvious growing trend was noted.

Figure 3.16 Number of Qualified EV and Hybrid Vehicle Maintenance Workers



## C. Auto/Parts Retail Sector

### Number of Employees

3.24 The distributions of employees by job level and by company size of the auto/parts retail sector are given in Figure 3.17 and 3.18 respectively.

Figure 3.17 Distribution of Employees by Job Level of the Auto/Parts Retail Sector

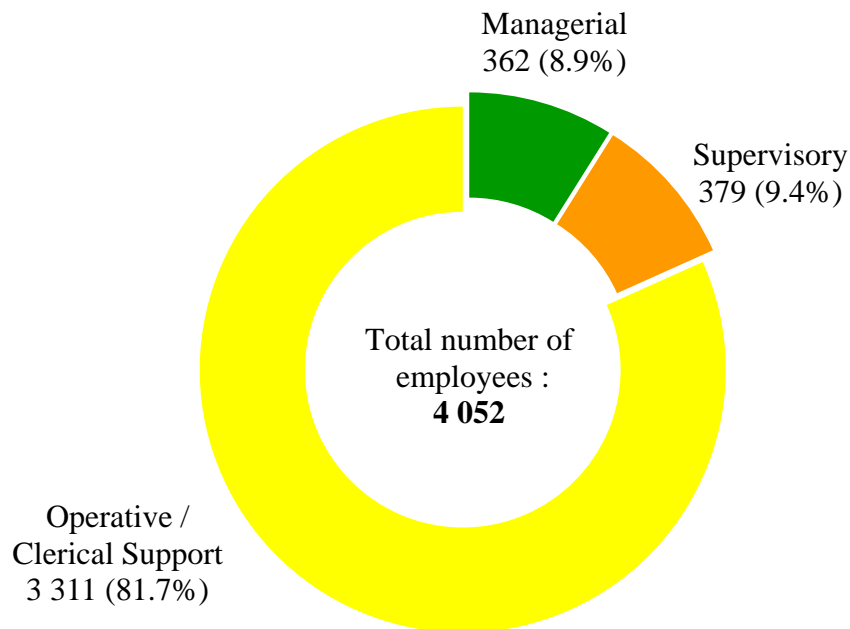
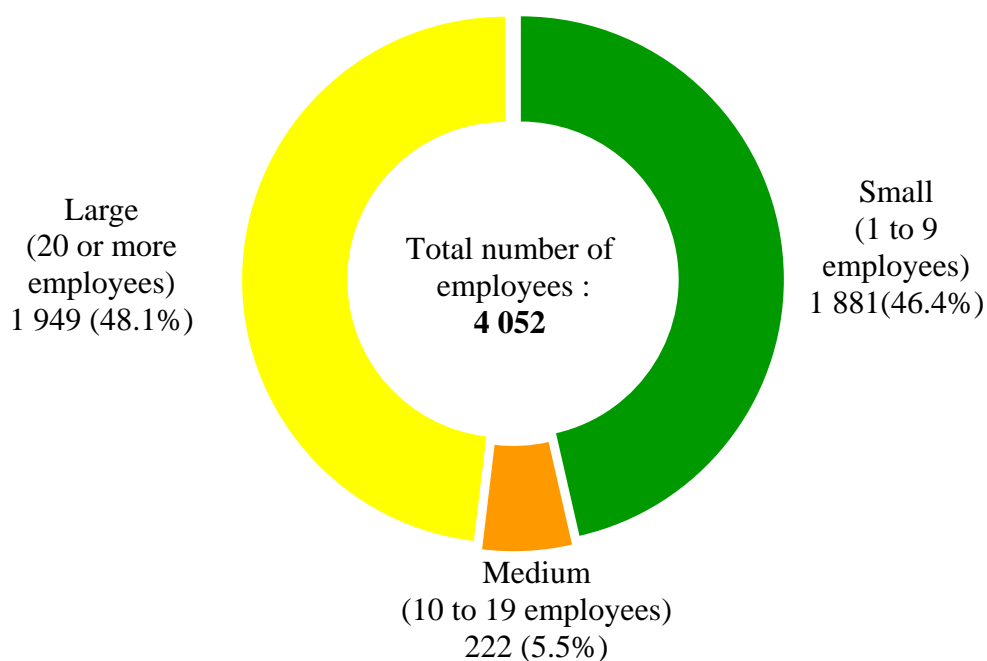
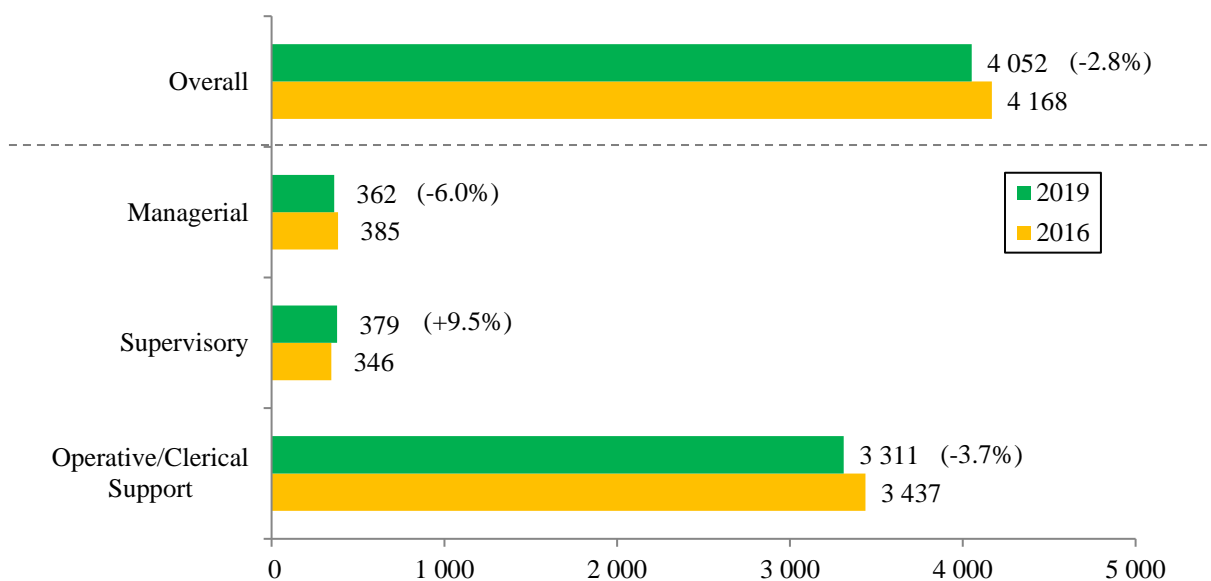


Figure 3.18 Distribution of Employees by Company Size of the Auto/Parts Retail Sector



3.25 Compared with that of 2016, the total number of employees of the auto/parts retail sector shank 2.8%. Figure 3.19 shows the breakdown by job levels.

Figure 3.19 Number of Employees in 2016 and 2019 – Auto/Parts Retail Sector



3.26 Table 3.10 lists out a few principal jobs which accounted for a significant percentage of employees at each job level, as recorded in the 2019 survey.

Table 3.10 Prominent Principal Jobs by Level of the Auto/Parts Retail Sector

Job Level	Prominent Principal Jobs	% of Employees Accounted at Respective Job Level
Managerial	Owner/Sole Proprietor/Working Partner	27.9%
	Sales Manager	26.2%
Supervisory	Store/Branch Supervisor	50.4%
	Parts/Logistics/Distribution/Warehouse Supervisor	23.2%
Operative / Clerical Support	Senior Sales Representative/Staff	52.2%



### Number of Vacancies

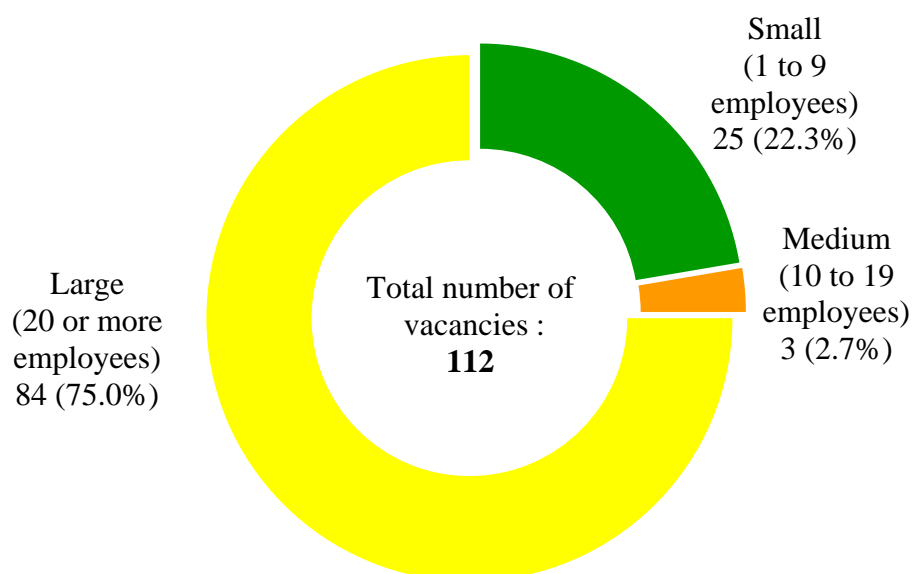
3.27 Employers reported 112 vacancies, representing 2.7% of the total manpower of the auto/parts retail sector at the time of the survey. The vast majority (105 or 93.8%) were at operative/clerical support level. The distribution of the vacancies by job level is shown in Table 3.11.

Table 3.11 Distribution of Vacancies by Job Level of the Auto/Parts Retail Sector

Job Level	Number of Employees	Number of Vacancies	Vacancy Rate
			$= \frac{\text{No. of Vacancies}}{\text{No. of Employees} + \text{No. of Vacancies}}$
Managerial	362	2	0.5%
Supervisory	379	5	1.3%
Operative / Clerical Support	3 311	105	3.1%
Total	4 052	112	2.7%

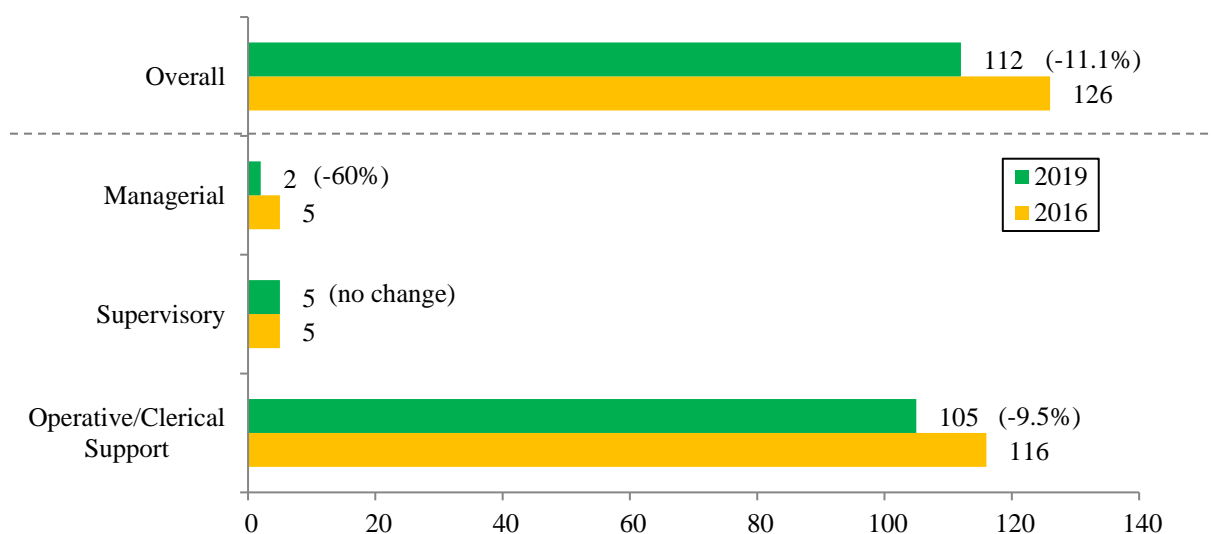
3.28 The distribution of vacancies by company size is given in Figure 3.20. It was found that three quarters of the vacancies belonged to large companies.

Figure 3.20 Distribution of Vacancies by Company Size of the Auto/Parts Retail Sector



3.29 Compared with that of 2016, the total number of vacancies of the auto/parts retail sector decreased by 11.1% (Figure 3.21). This could be attributed to the slowdown of vehicle sales during the past three years.

Figure 3.21 Number of Vacancies in 2016 and 2019 – Auto/Parts Retail Sector



### ***Employers' Forecasted Manpower Demand***

3.30 Employers forecasted 4 165 employees in 2020 for the auto/parts retail sector. Their distribution by job level is shown in Table 3.12.

Table 3.12 Forecasted Number of Employees in 2020 of the Auto/Parts Retail Sector

Job Level	Number of Required Employees in 2019 (including vacancies)	Employers' Forecast on Number of Employees in 2020	Growth
Managerial	364	365	0.3%
Supervisory	384	384	-
Operative/Clerical Support	3 416	3 416	-
Total	4 164	4 165	-

### Monthly Income of Employees

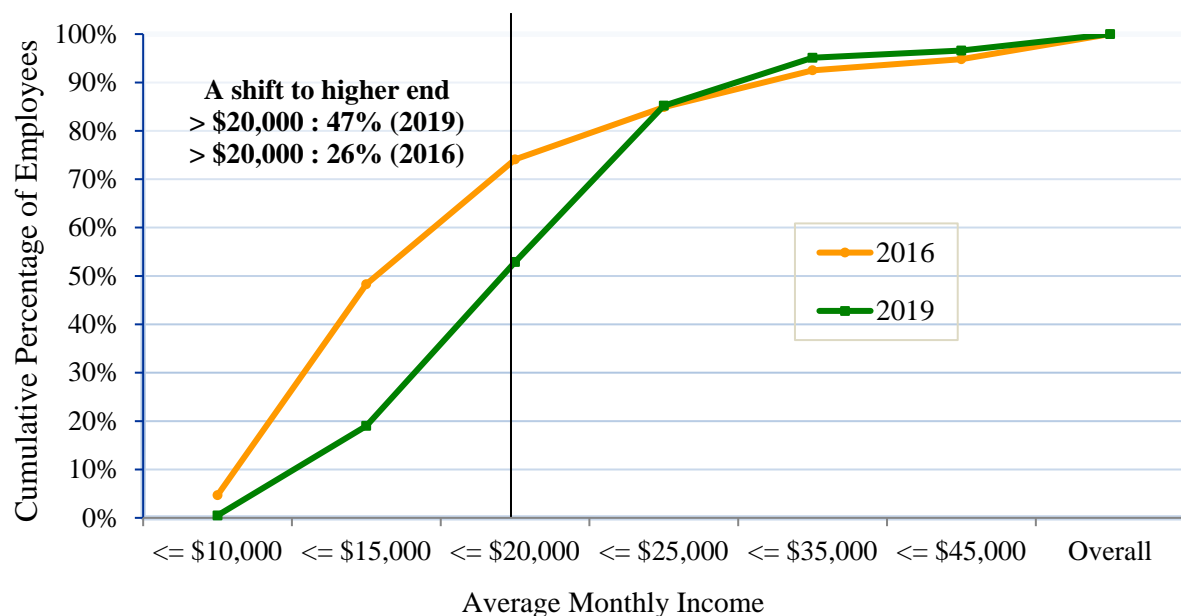
3.31 The distribution of employees by monthly income ranges by job level of the auto/parts retail sector is detailed in Table 3.13, and by principal job in Table 4 of Appendix 5.

Table 3.13 Distribution of Employees by Monthly Income Range by Job Level of the Auto/Parts Retail Sector

Monthly Income Range	Managerial	Supervisory	Operative/ Clerical Support	Overall
\$10,000 or below	-	-	0.6%	0.5%
\$10,001 - \$15,000	-	0.6%	22.4%	18.5%
\$15,001 - \$20,000	1.6%	11.9%	39.6%	33.8%
\$20,001 - \$25,000	8.2%	70.6%	30.8%	32.3%
\$25,001 - \$35,000	53.3%	15.6%	4.7%	9.9%
\$35,001 - \$45,000	18.0%	-	-	1.6%
Over \$45,000	18.9%	1.3%	2.0%	3.4%

3.32 Overall speaking, the average monthly income of employees in the auto/parts retail sector shifted to a higher end, compared with that of three years ago. The proportion of employees who had an average monthly income of higher than \$20,000 increased from 26% in 2016 to 47% in 2019 (Figure 3.22).

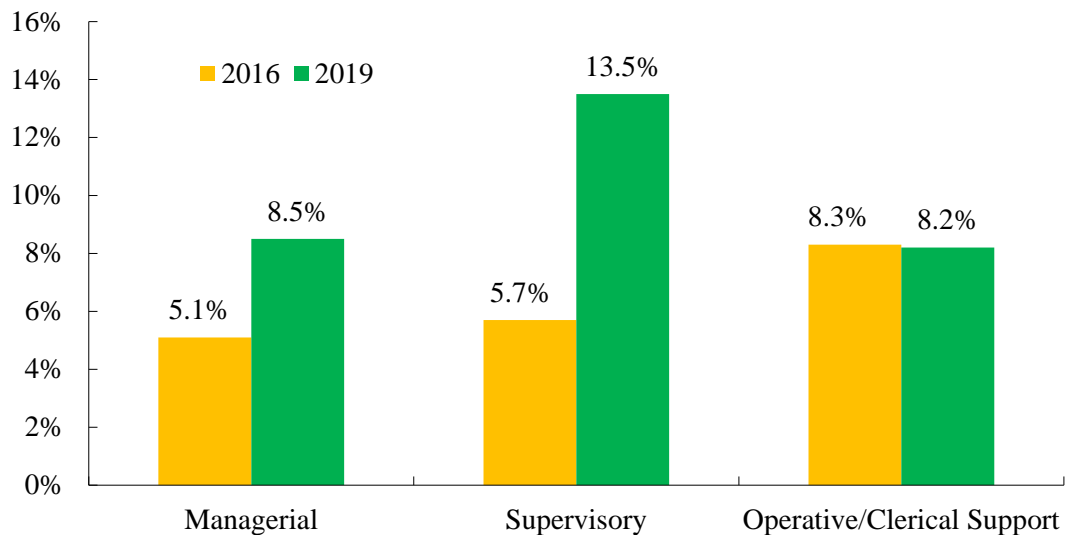
Figure 3.22 Average Monthly Income in the Auto/Parts Retail Sector



### Turnover, Recruit and Retirement of Employees

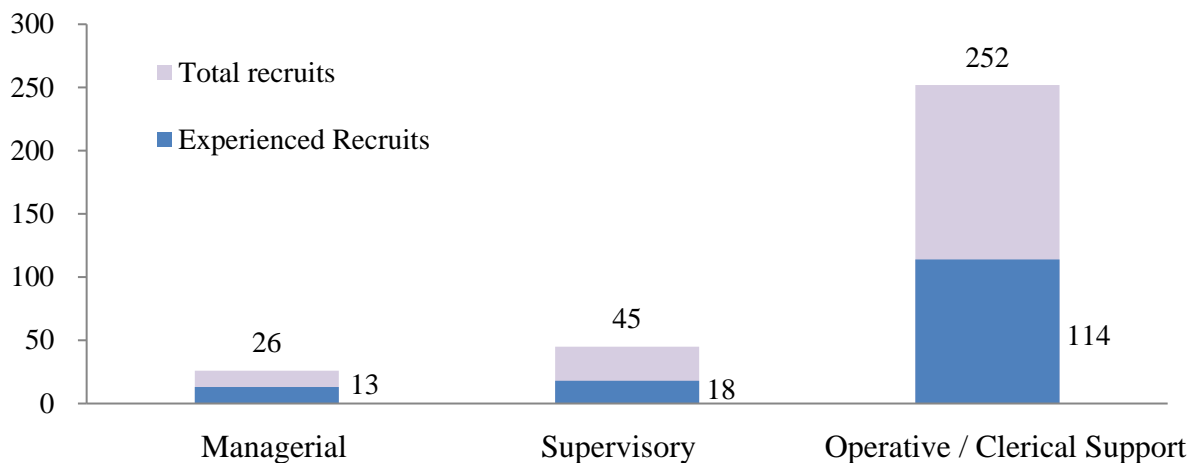
3.33 Employers reported that 362 employees had left within 12 months before the survey, with the operative/clerical support level registering the largest number of turnovers (279). The turnover rates by job level, with comparison to those of 2016, are shown in Figure 3.23.

Figure 3.23 Turnover Rate of Employees of the Auto/Parts Retail Sector



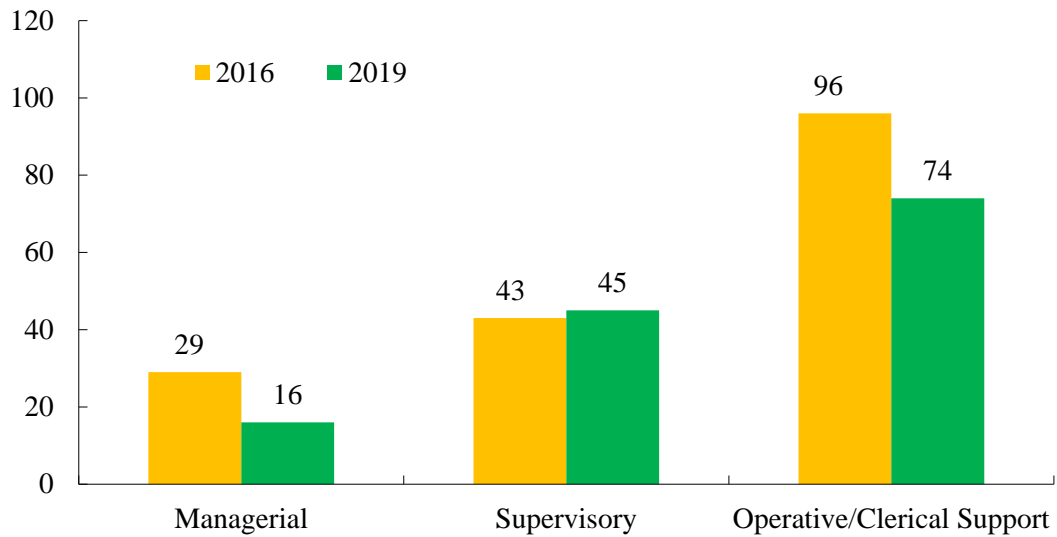
3.34 On the other hand, there were 323 new employees recruited within the previous 12 months. Among them, 145 were experienced practitioners. The distribution by job level is shown in Figure 3.24.

Figure 3.24 Number of Recruits within Previous 12 Months– Auto/Parts Retail Sector



3.35 Employers of the auto/parts retail sector estimated that 135 employees would retire within the coming five years. The breakdown by job level, with comparison to that of 2016, is shown in Figure 3.25.

Figure 3.25 Estimated Number of Employees Going to Retire within the Coming 5 Years – Auto/Parts Retail Sector



3.36 Based on employers' estimates, the average annual retirement rates of different job levels are calculated in Table 3.14.

Table 3.14 Estimated Average Annual Retirement Rates of the Auto/Parts Retail Sector

Job Level	Number of Employees at Time of Survey (a)	Estimated number of employees retire within the coming 5 years (b)	Average Annual Retirement Rate $= \frac{(b)}{5 * (a)} * 100\%$
Managerial	362	16	0.9%
Supervisory	379	45	2.4%
Operative/Clerical Support	3 311	74	0.4%
Total	4 052	135	0.7%

3.37 Similar to the situation in the vehicle servicing sector, the majority (99%) of employees going to retire in the auto/parts retail sector were employed by large companies (i.e., with 20 or more employees).

### ***Preferred Level of Education and Experience of Employees***

3.38 Regarding the preferred education of employees at managerial level, 55% to 60% of the employees were preferred to have first degree or above qualification and 40% to 45% to have sub-degree qualification. As for supervisory level, 31% to 64% of the employees were preferred to have diploma/certificate qualification. Over 80% of the employees at operative/clerical support level were preferred to have secondary or below qualification (Table 3.15).

Table 3.15 Employers' Views on Preferred Education of the Auto/Parts Retail Sector

Level of Education	Retail of Vehicles	Retail of Parts
<b>Managerial</b>		
First Degree or above	55%	60%
Sub-Degree	45%	40%
<b>Supervisory</b>		
First Degree or above	35%	14%
Sub-Degree	16%	2%
Diploma / Certificate	31%	64%
Secondary 4 to 7	18%	20%
<b>Operative / Clerical Support</b>		
Sub-Degree	12%	-
Diploma / Certificate	4%	7%
Secondary 4 to 7	84%	88%
Secondary 3 or below	-	5%

3.39 Regarding the preferred experience for employees at managerial level, 100% of the employees were preferred to have experience of six years or more. 76% to 90% of the employees at supervisory level were preferred to have experience of three to six years. As for operative/clerical support level, 45% to 63% of the employees were preferred to have experience of one to three years and 22% to 52% were preferred to have experience of three to six years (Table 3.16).

Table 3.16 Employers' Views on Preferred Experience of the Auto/Parts Retail Sector

Preferred Experience	Retail of Vehicles	Retail of Parts
<b>Managerial</b>		
6 years or more	100%	100%
<b>Supervisory</b>		
3 years to less than 6 years	90%	76%
<b>Operative / Clerical Support</b>		
1 year to less than 3 years	45%	63%
3 years to less than 6 years	52%	22%

### ***Training Needs of Front-line Sales Persons***

3.40 Employers were asked to rate the importance of six training areas for front-line sales persons of the auto/parts retail sector. "Customer Service" and "Selling Skills" were the two major areas cited (Table 3.17).

Table 3.17 Training Needs of Front-line Sales Persons of the Auto/Parts Retail Sector

Training Area	Opinion as "Very Important" or "Important"
(1) Customer Service	98%
(2) Selling Skills	97%
(3) Automotive Fundamentals	91%
(4) English, Putonghua	66%
(5) Finance and Insurance of Automotive Trade	63%
(6) Automotive Body Treatments	61%

## **D. Statistical Tables**

3.41 The detailed manpower statistics of the automobile industry by sector, by job level and by principal job including number of employees employed, trainees, vacancies and employers' forecast number of employees and trainees in 2020 are tabulated in Table 1 and Table 2 of Appendix 5.

## IV. OBSERVATIONS AND CONCLUSIONS

4.1 The Training Board has carefully examined the survey findings and considers that they generally reflect the employment situation of the automobile industry at the time of survey.

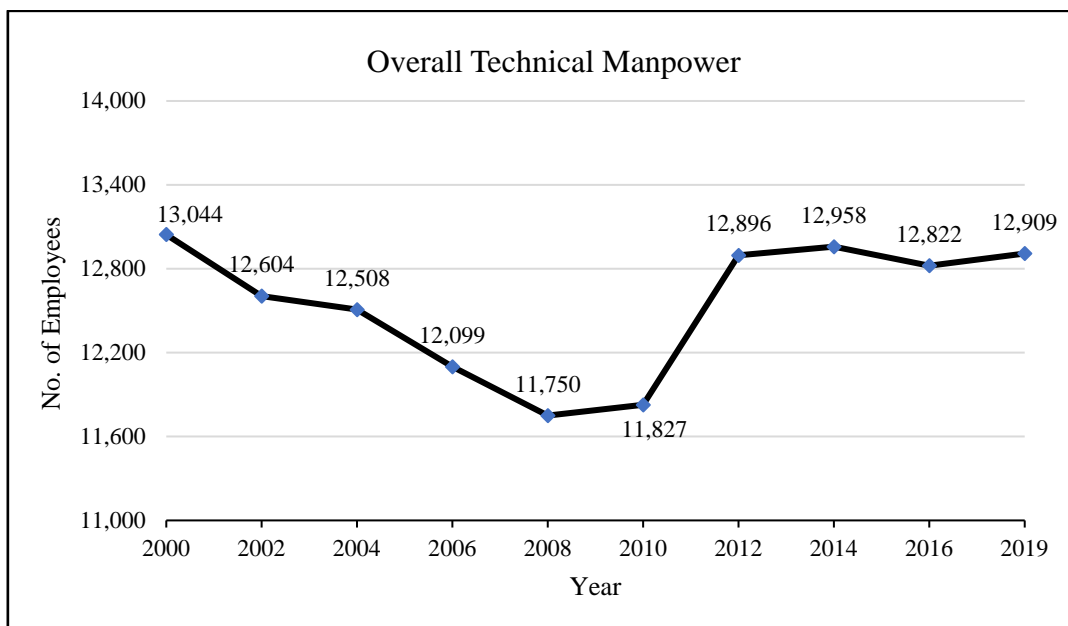
### A. Vehicle Servicing Sector

#### *Manpower Changes*

4.2 The vehicle population and the manpower of the vehicle servicing sector over the past 41 years (from 1978 to the time of survey, i.e. March 2019) are compared in Appendix 6. While the number of licensed vehicles has increased by 3.67 times (from 214 507 to 787 595 vehicles), the manpower grew by 29% only (from 9 984 to 12 909 employees). This can be attributed to the ever-improving reliability of modern vehicles and the contemporary practice in car repairing (i.e. switching from component level to sub-system/module level).

4.3 The overall technical manpower and distribution by job levels in this and last nine consecutive surveys are shown in Figure 4.1 and Appendix 7 respectively. In 2010, establishments engaged in auto/parts retail business were first covered by the survey and a significant number of cleaners and greasers were reported in the unskilled level. In 2012, five principal jobs (Tyre Worker, Battery Worker, Lubrication Worker, Car Accessories Worker, and Car Detailing Worker) were added in the Specific Services level, resulting in a sudden increase of manpower. In 2019, a new principal job (Customer Services Ambassador / Assistant) was added in the unskilled level and 113 employees were found. If the above factors were excluded, the overall manpower of the vehicle servicing sector was in fact situated in a mild downward trend.

Figure 4.1 Overall Technical Manpower of the Vehicle Servicing Sector



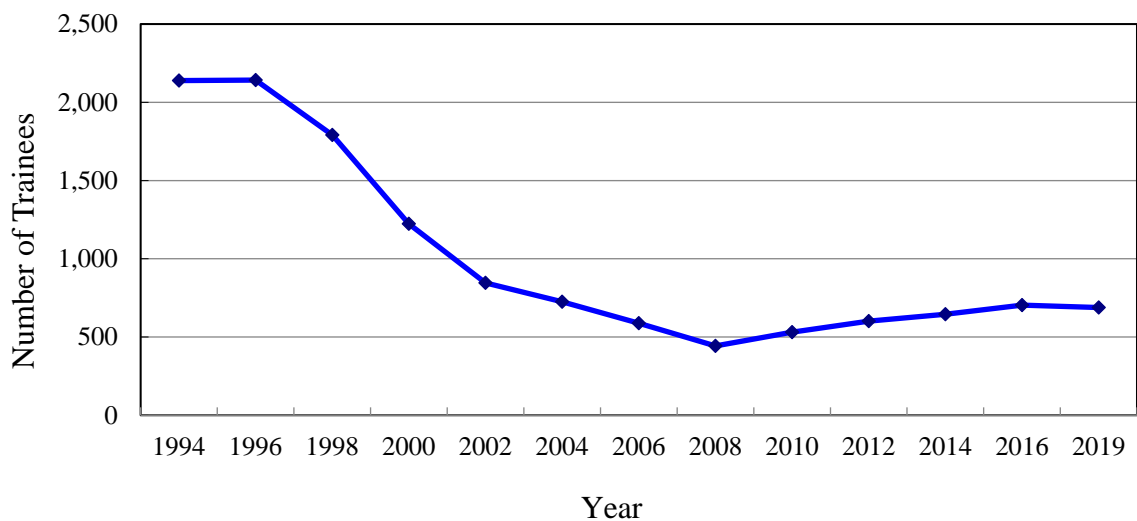


4.4 The number of employees and trainees in the vehicle servicing sector is closely related to the local economy. As reflected in Table 4.1 and Figure 4.2, the number of trainees started to fall in 1998 and rebounded since 2008.

Table 4.1 Number of Trainees in the Vehicle Servicing Sector

Year of Survey	Number of Employees (a)	Number of Trainees (b)	Percentage of Workforce $= \frac{(b)}{(a) + (b)} * 100\%$
1994	11 225	2 139	16.0%
1996	13 888	2 142	13.4%
1998	13 366	1 791	11.8%
2000	13 044	1 223	8.6%
2002	12 604	846	6.3%
2004	12 508	725	5.5%
2006	12 099	588	4.6%
2008	11 750	443	3.6%
2010	11 827	531	4.3%
2012	12 896	602	4.5%
2014	12 958	645	4.7%
2016	12 822	704	5.2%
2019	12 909	688	5.1%

Figure 4.2 Number of Trainees in the Vehicle Servicing Sector

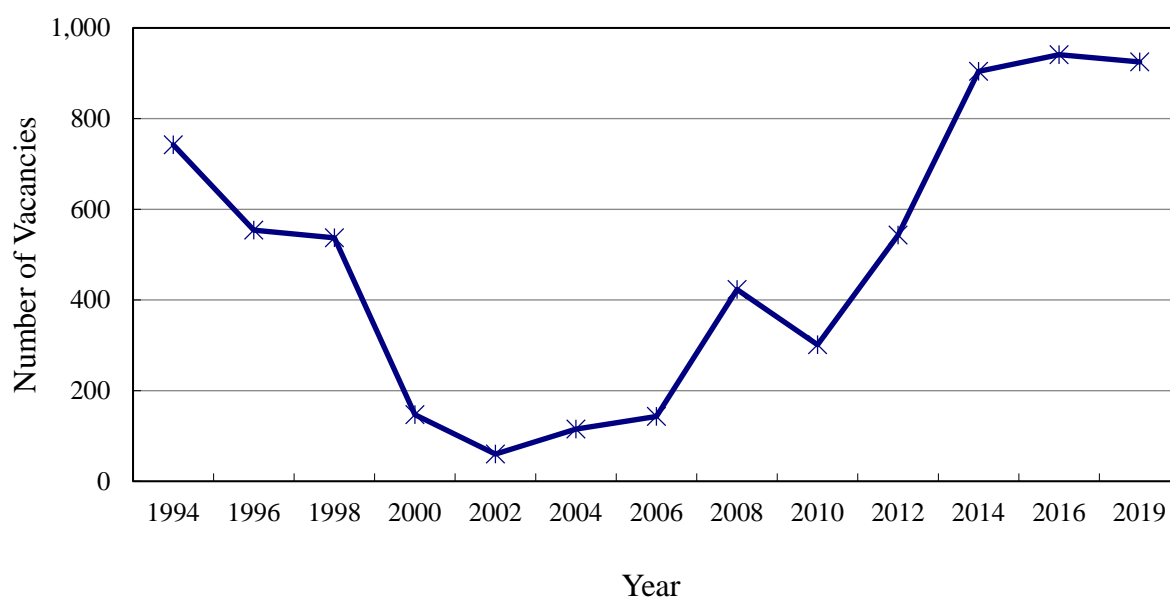


4.5 With the recovery of the local economy in mid-2000s, the number of vacancies in the vehicle servicing sector piled up rapidly since 2006, as shown in Table 4.2 and Figure 4.3. At the time of the 2019 survey, the vacancies rate amounted to 6.7%.

Table 4.2 Number of Vacancies in the Vehicle Servicing Sector

Year of Survey	Professional/ Technologist	Technician	Tradesman/ Craftsman	Total No. of Vacancies <sup>1</sup>
1994	5	44	672	742
1996	3	39	489	554
1998	6	34	405	537
2000	5	14	94	147
2002	0	7	53	60
2004	0	1	109	115
2006	2	15	119	143
2008	3	7	351	423
2010	1	20	248	301
2012	5	21	355	543
2014	3	77	530	904
2016	4	75	659	941
2019	9	97	660	925

Figure 4.3 Number of Vacancies in the Vehicle Servicing Sector



<sup>1</sup> including Specific Services and Unskilled workers

## ***Business Outlook***

4.6 In general, the Training Board is optimistic about the future of the vehicle servicing sector as the vehicle population in Hong Kong keeps on rising, though the growth may have been slowing down due to various uncertainties of the local economy. The large number of vehicles on road will continue to demand a skilled workforce for maintenance and repairing.

4.7 At the same time, the Training Board considers the following as major factors affecting the growth of the industry:

- (a) To meet the low emission requirements stipulated by the Government and to provide state-of-the-art driver assistant function to customers, modern vehicles are built with advanced electronics and IT technologies. The trend will be further speeded up with the transition from traditional diesel/petrol fuelled vehicles to electric vehicles (EV). The demand of traditional mechanical workers will decrease while those equipped with the new skill sets, e.g. trouble-shooting and repairing the electrical system in EVs and hybrid vehicles, will be of high demand.
- (b) Because of high rental cost, substantial investment to meet the regulatory and technological requirements, and inadequate supply of new bloods, it is anticipated that some small-to-medium sized garages will consolidate or quit the business. As the result, the overall manpower of the vehicle servicing sector will gradually shrink.
- (c) With the opening of the Hong Kong-Zhuhai-Macao Bridge in October 2018 and the Mainland and HKSAR Governments' plan to promote tighter integration and economic cooperation in the Guangdong-Hong Kong-Macau Greater Bay Area, it is anticipated that more vehicle travelling between Hong Kong and Mainland will occur. This will lead to both challenges (i.e., competition from vehicle servicing providers in mainland) and opportunities (e.g., stimulate vehicle sales and create more vehicle examination works) for the local vehicle servicing sector.
- (d) Many stakeholders of the automobile industry wish the current voluntary registered schemes for vehicle mechanics and vehicle maintenance workshops to become mandatory in future. It is believed that the mandatory registration schemes will foster a higher level of professionalism in the industry and hence attract young people to join. In addition, the mandatory schemes will uplift the service standard of vehicle maintenance workshops and reduce unhealthy competitions, which in turn ensures a stable income for the practitioners.

### ***Projected Manpower and Training Requirements***

4.8 Following the practice of previous rounds of manpower surveys, the Training Board decided to adopt the Adaptive Filtering Method (AFM, please refer to Appendix 8 for more details) for projecting the manpower of the vehicle servicing sector for Year 2020 to 2023.

4.9 Based on the findings of the manpower surveys from 1994 to 2019, the Training Board selected the best fitted curves of AFM (Figure 4.4 to Figure 4.7) to project the manpower of technologists, technicians, craftsmen, and specific services workers for 2020 to 2023. The projected figures are listed in Table 4.3.

Figure 4.4 Manpower Projection of Technologists (Vehicle Servicing Sector)

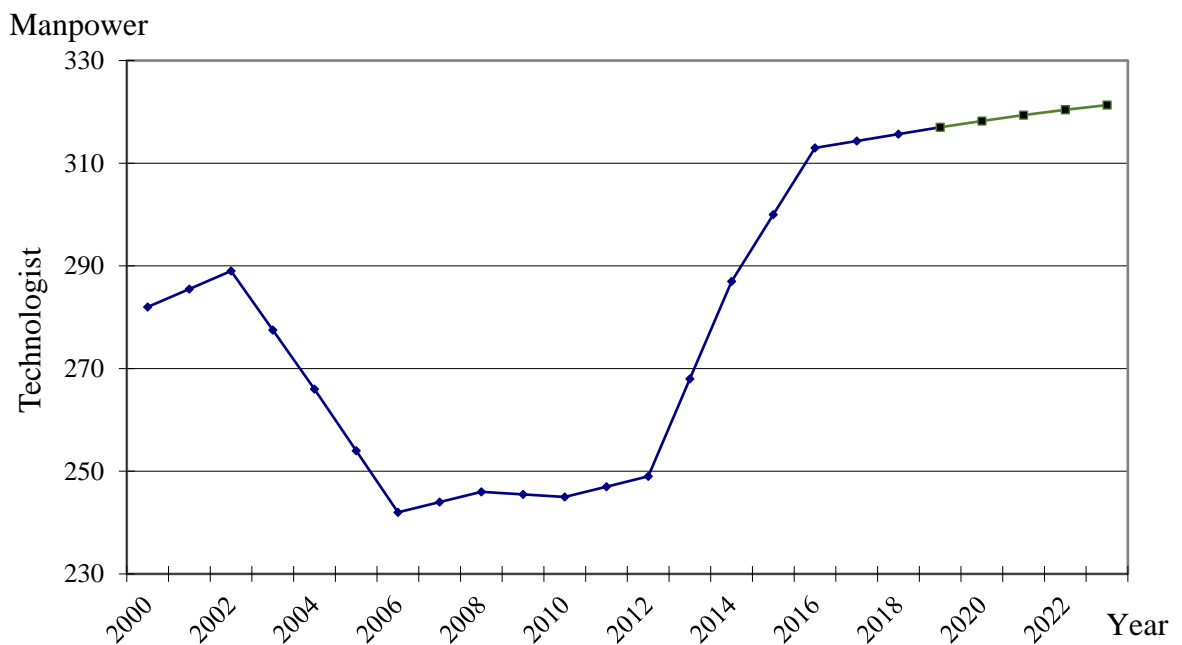


Figure 4.5 Manpower Projection of Technicians (Vehicle Servicing Sector)

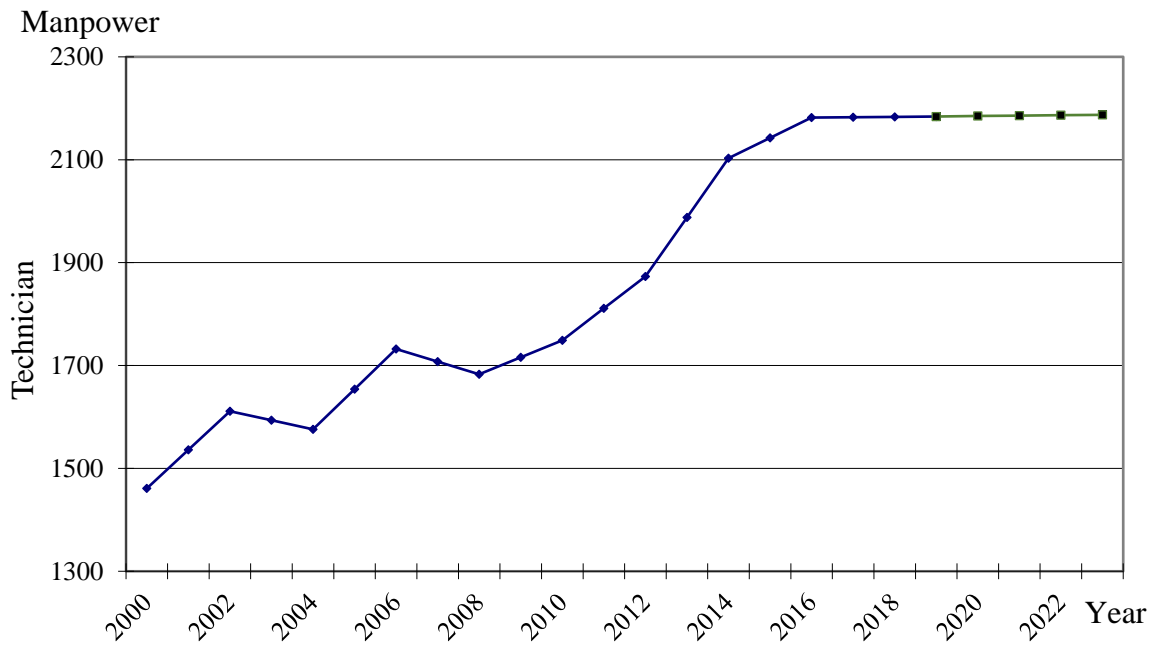


Figure 4.6 Manpower Projection of Craftsmen (Vehicle Servicing Sector)

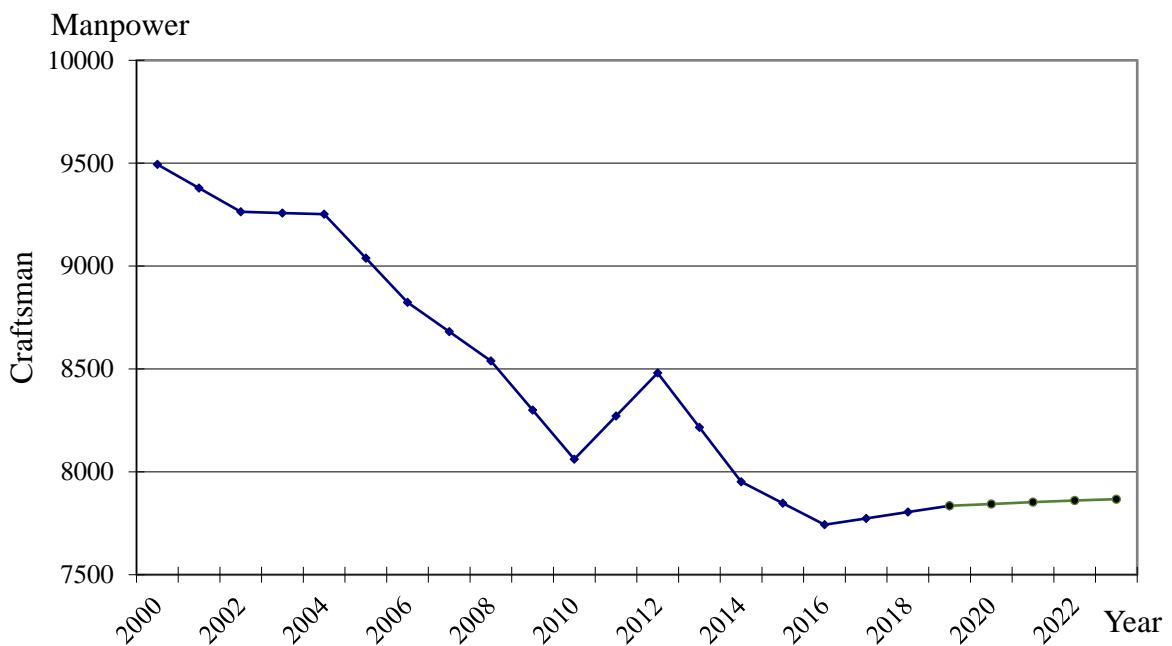


Figure 4.7 Manpower Projection of Specific Services Workers (Vehicle Servicing Sector)

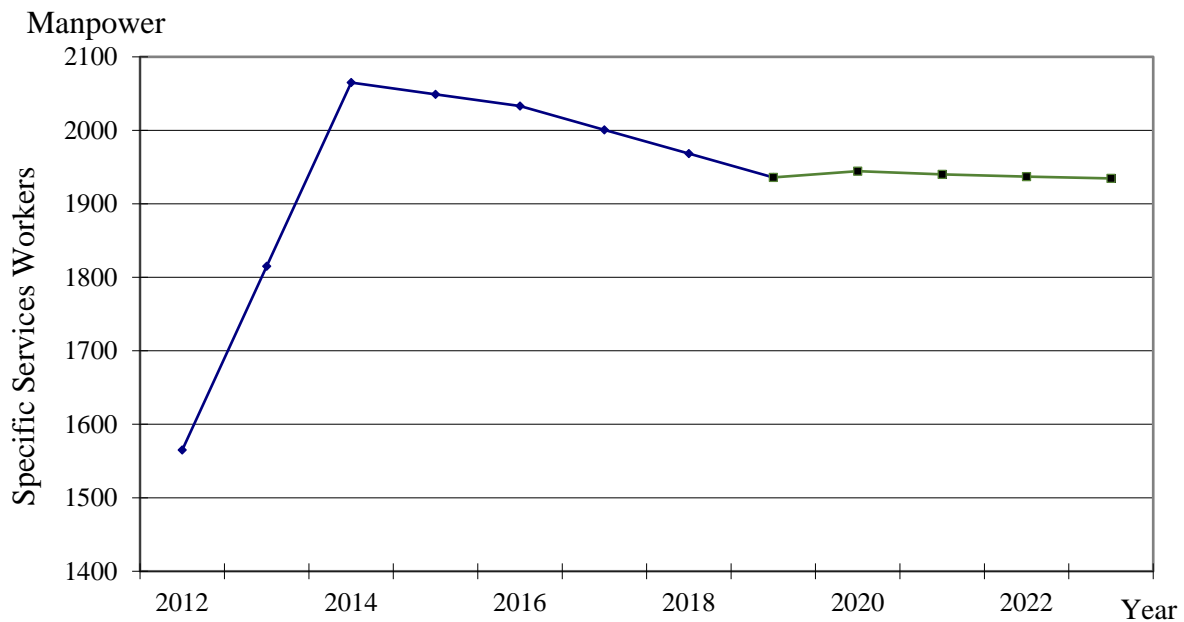


Table 4.3 Manpower Projection of the Vehicle Servicing Sector for 2020 to 2023

Year	Technologist	Technician	Craftsman	Specific Services	Total
2019	317	2 184	7 835	1 936	12 272
2020	318	2 185	7 843	1 944	12 290
2021	319	2 186	7 853	1 940	12 298
2022	320	2 187	7 861	1 937	12 305
2023	321	2 187	7 867	1 935	12 310

4.10 Regarding the loss of manpower in the vehicle servicing sector due to natural wastage, i.e. employees leaving the industry for whatever reasons, the Training Board had considered factors such as the aging workforce and retention rate of new bloods, and decided to continue to adopt 3%, 4% and 5% respectively for the annual wastage rates of technologists, technicians and craftsmen.

4.11 By adding the manpower growth projected with AFM and the required replacement for wastage, the vehicle servicing sector's average annual training requirement at each level for the coming four years were calculated and listed in Table 4.4.

Table 4.4 Annual Training Requirements of the Vehicle Servicing Sector for 2020 to 2023

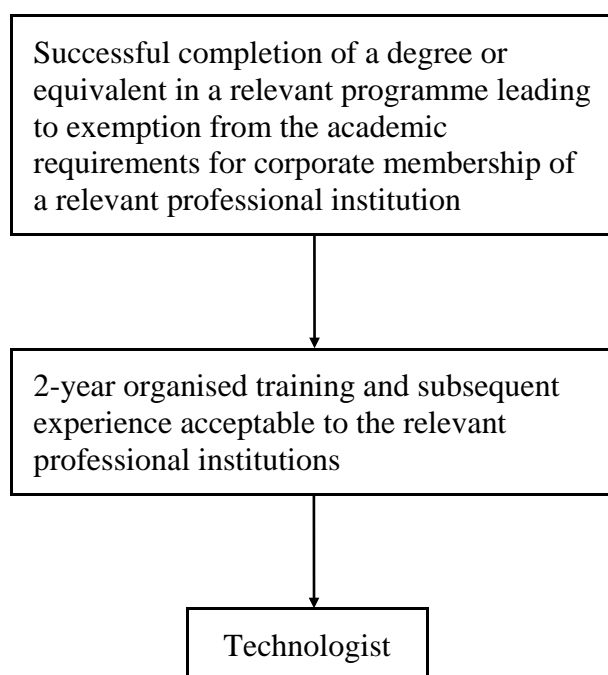
Job level	No. of Employees at the Time of Survey	Annual Training Requirements (persons)
Technologist	317	11
Technician	2 184	88
Craftsman	7 835	401

***Manpower Supply of Technologists***

4.12 Technologists in the automobile industry are mostly engineers and service managers who have reached a level of professional competence in the discipline of mechanical or road transport engineering recognised by professional institutions.

4.13 Technologists should be competent in analysing and solving a wide range of technical problems. They should also be able to assume personal responsibility for the development and application of engineering principles, exercise original thinking and judgement, apply the latest techniques, and manage all commercial and technical activities. The recommended route for training technologists is shown in Figure 4.8.

Figure 4.8 Training of Technologists

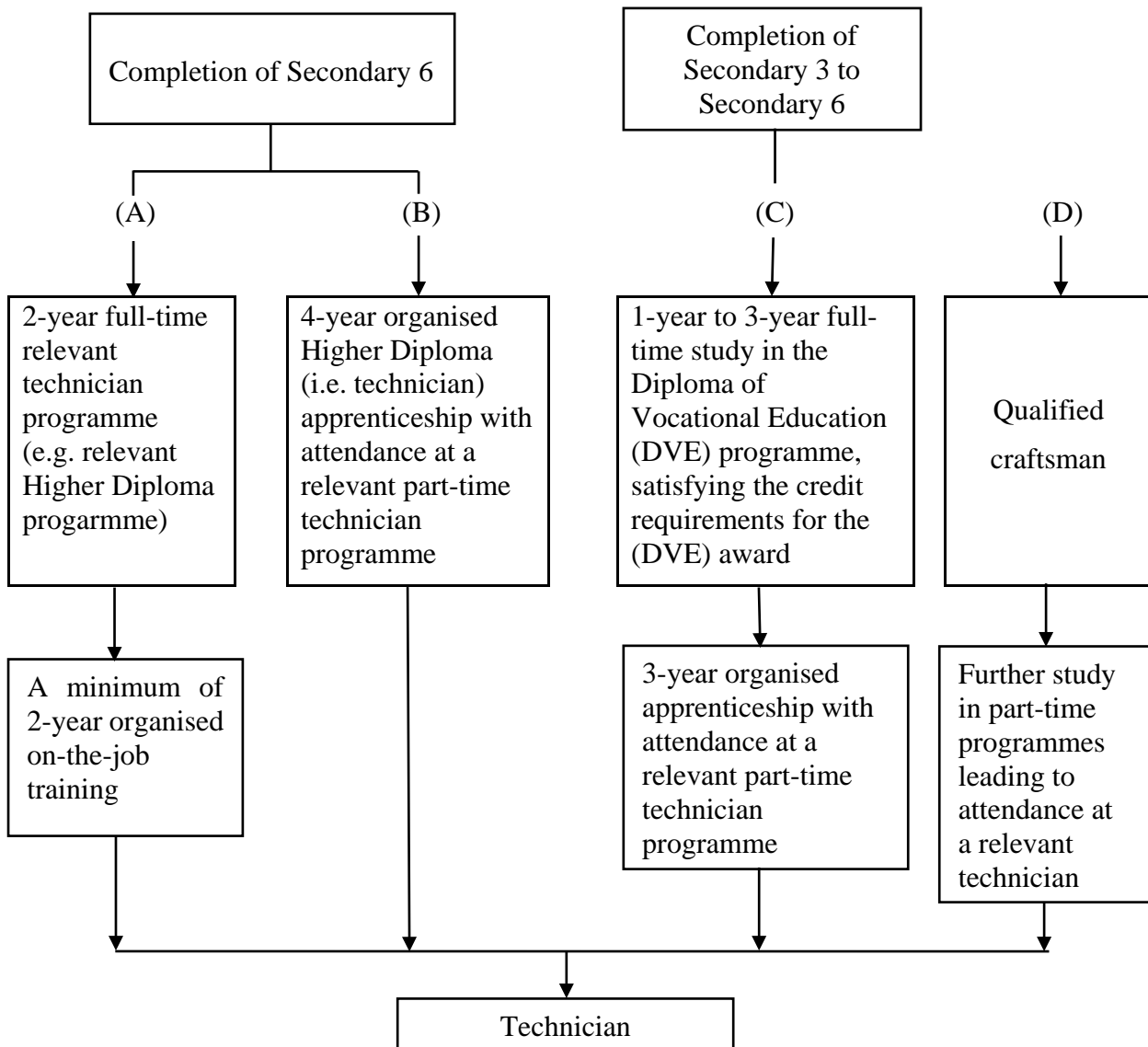


4.14 Local universities do not offer specific degree programmes on Automotive Engineering but graduates from Bachelor of Engineering (Mechanical Engineering) or related programmes satisfy the academic requirements for working as technologist trainees in the automobile industry. In addition, some employers prefer to fill up the vacancies by internal promotion. Given the small number of annual training requirements mentioned in paragraph 4.11 (11 persons), the manpower supply of technologists is considered as adequate for the coming few years.

### ***Manpower Supply of Technicians***

4.15 Technicians are persons whose education, practical training and experience enable them to apply proven techniques and procedures and to carry a measure of technical responsibility, normally under the supervision of a technologist. The recommended routes for training technicians are shown in Figure 4.9.

Figure 4.9 Training of Technicians





4.16 The Hong Kong Institute of Vocational Education (IVE) offers Higher Diploma (HD) in Automotive Engineering with both full-time (i.e. Route A) and part-time-evening (i.e. Route C and Route D) modes.

4.17 After considering the employment figures in recent two years, it is estimated that about 30 full-time graduates per year will join the automobile industry from 2020 to 2023. Compared with the annual training requirements mentioned in paragraph 4.11 (88 persons), it is obvious that the manpower supply through Route A alone cannot meet the demand. The shortage can be filled up by Route C (i.e. technician apprentice) and Route D (i.e. internal promotion from craftsman to technician), as well as graduates from other relevant programmes, e.g. HD in Mechanical Engineering.

4.18 With a view to attracting more secondary school students to the HD in Automotive Engineering programme, IVE introduced the Business Stream in the programme since AY 2017/18. The new stream aims at better preparing students to work in positions related to automotive business, e.g., Service Advisers and Vehicle Sales.

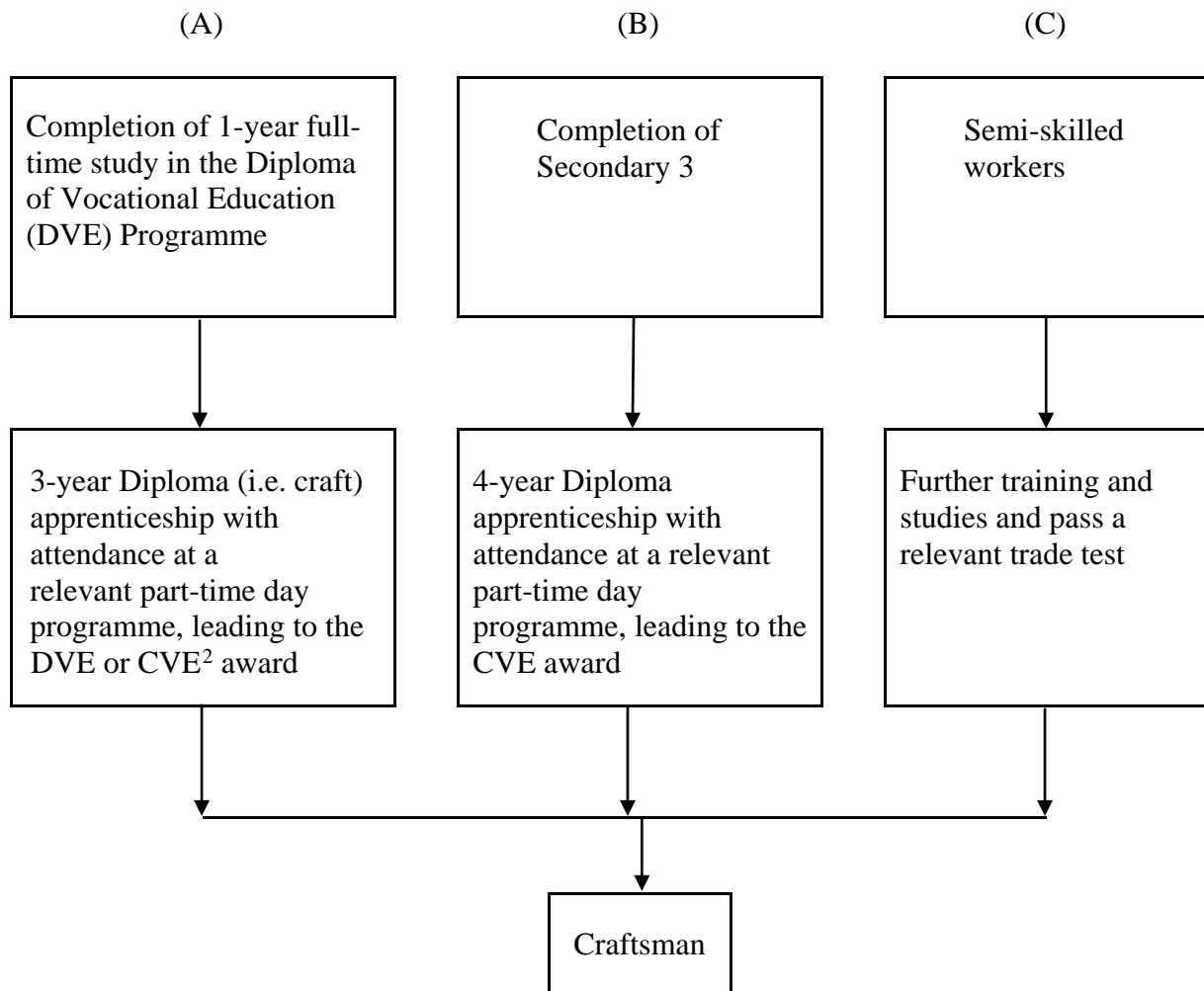
### ***Manpower Supply of Craftsmen***

4.19 Craftsmen require both a high degree of practical skills and sound technical knowledge if they are to venture into new skills resulting from technological advancement. They need to have a general education of at least completion of Secondary 3. The recommended routes for training craftsmen are shown in Figure 4.10.

4.20 Of the three routes, the Training Board recommends Route (A) because the apprentices already had some basic training prior to commencing apprenticeship and hence are productive workers right from the start of their apprenticeship.

4.21 The Youth College and Pro-Act Training and Development Centre (Automobile) of the VTC offer the full-time Diploma of Vocational Education (DVE) programme (Automotive Technology) for both S3 and S6 school leavers. Based on the placement figures of recent two years, it is estimated that from 2020 to 2023, about 160 graduates will join the automobile industry via Route A each year. Among them, the majority (over 80%) will be S3 intakes who have completed Year 1 in the DVE programme. In addition to DVE students, employers also recruit youngsters who have never received any formal training in vehicle repairing as 4-year Diploma apprentices (i.e. Route B).

Figure 4.10 Training of Craftsmen



4.22 Taking the figures of AY 2017/18 and AY 2018/19 as reference, the average number of newly registered Diploma apprentices (i.e. Route A + Route B) per annum was 255, amounting to 64% of the training requirement (401 persons, as mentioned in paragraph 4.11). The shortfall of craftsman supply has lasted for more than 10 years, which is a major factor leading to the shrinkage of manpower in the vehicle servicing sector. Small to medium scale garages, in particular those serving commercial vehicles, suffer most from the current manpower shortage situation as their business locations, working environment and training opportunities are less appealing to youngsters.

<sup>2</sup> CVE stands for Certificate of Vocational Education which was called Craft Certificate prior to 2016.

## B. Auto/Parts Retail Sector

### *Manpower Changes*

4.23 The auto/parts retail sector was covered in the automobile industry manpower survey since 2010. Table 4.5 and Figure 4.11 show that its manpower has been relatively stable in the past and a gradual decline was found in the recent two rounds of survey. Similar pattern was also observed in the number of vacancies. Table 4.6 and Figure 4.12 reflected that the vacancy rate fell to 2.7% in 2019.

Table 4.5 Manpower of the Auto/Parts Retail Sector

Year of Survey	Managerial	Supervisory	Operative/Clerical Support	Total
2010	276	546	3 026	3 848
2012	236	521	3 136	3 893
2014	296	443	3 471	4 210
2016	385	346	3 437	4 168
2019	362	379	3 311	4 052

Figure 4.11 Overall Manpower of the Auto/Parts Retail Sector

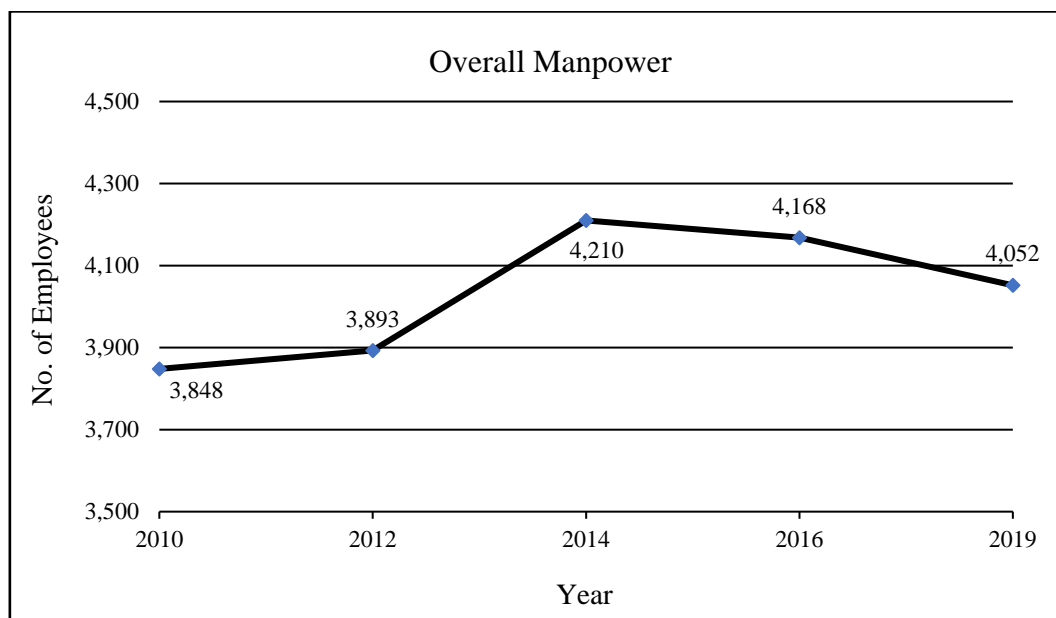
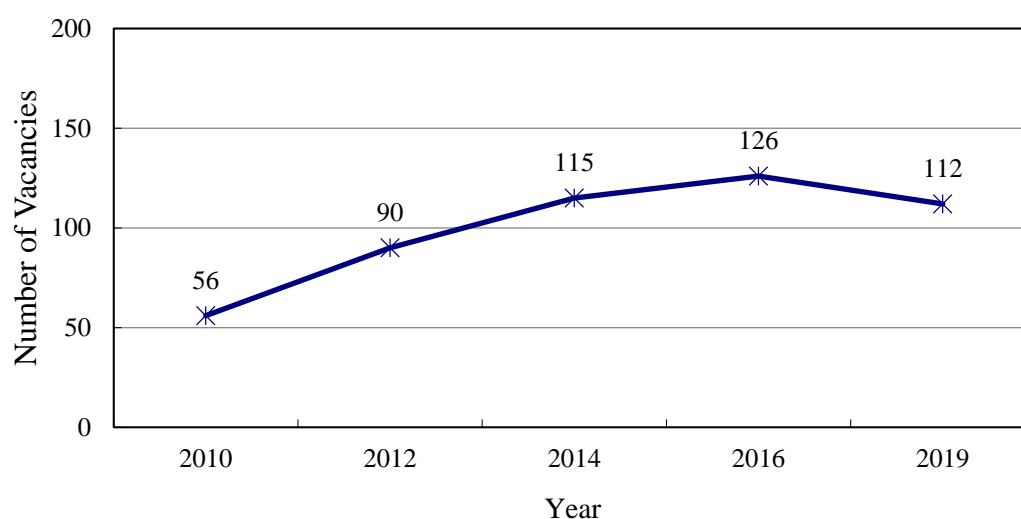


Table 4.6 Number of Vacancies in the Auto/Parts Retail Sector

Year of Survey	Managerial	Supervisory	Operative/Clerical Support	Total
2010	0	0	56	56
2012	1	2	87	90
2014	0	3	112	115
2016	5	5	116	126
2019	2	5	105	112

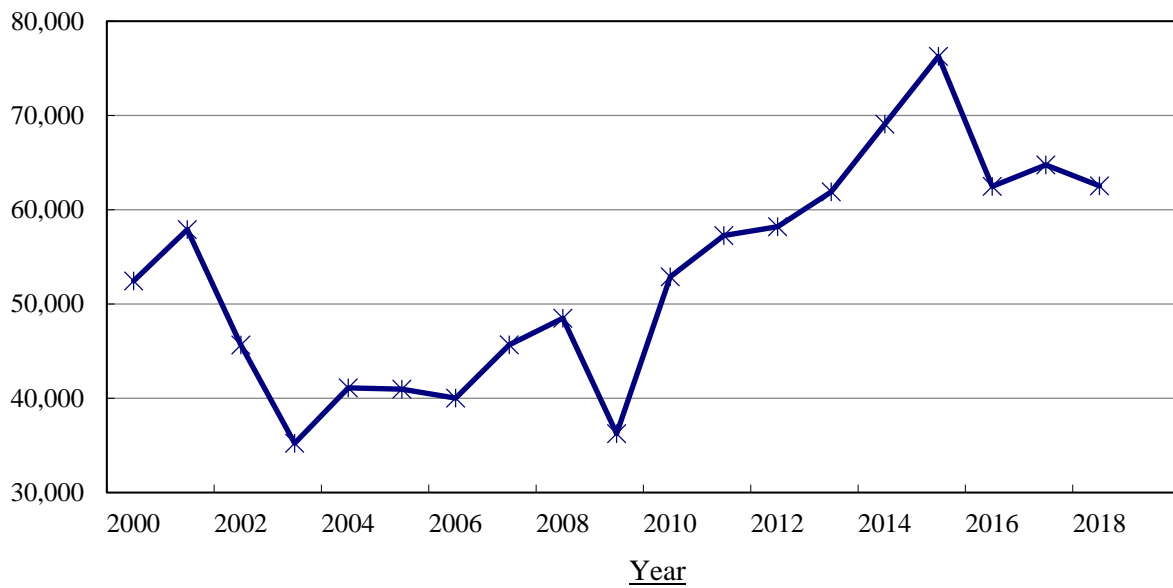
Figure 4.12 Number of Vacancies in the Auto/Parts Retail Sector



### ***Business Outlook***

4.24 Figure 4.13 shows the number of newly registered vehicles registered per annum, from 2000 to 2018. The numbers, more or less, reflect the business of the auto/parts retail sector over the years. Between 2009 and 2015, there was a rapid growth in vehicle sales, largely due to the low unemployment rate and low interest rate. The momentum slowed down during the past few years. For example, compared with that of the same period in 2018, the number of newly registered vehicles dropped by 7.1% in the first six months of 2019. This can be attributed to the expansion of the Mass Transit Railway network, inadequate supply of car park spaces, and uncertainties in the economy.

Figure 4.13 Number of Newly Registered Vehicles Per Annum



4.25 It is anticipated that the local economy will face increasingly downward pressure in the second half of 2019 and beyond due to the impacts of Sino-US trade frictions and political unrest in Hong Kong. There is no doubt that the auto/parts retails business will have a hard time in the coming few years. The gloomy situation will get some relief if the Government introduces new incentive schemes or strengthens its existing ones to encourage consumers to replace their vehicles with more environmentally friendly models.

#### ***Projected Manpower and Training Requirements***

4.26 In previous rounds of manpower surveys, due to the inadequacy of historical data, the Training Board adopted employers' one-year forecast for manpower projection of the auto/parts retail sector. Considering that there are five consecutive rounds of data available in this round (i.e. 2010, 2012, 2014, 2016 and 2019), the Training Board decided to adopt AFM to project the manpower of the auto/parts retail sector from 2020 to 2023. The projections at different job levels are shown in Figure 4.14 to Figure 4.16 and the numbers are listed in Table 4.7.

Figure 4.14 Manpower Projection of Managerial Staff (Auto/Parts Retail Sector)

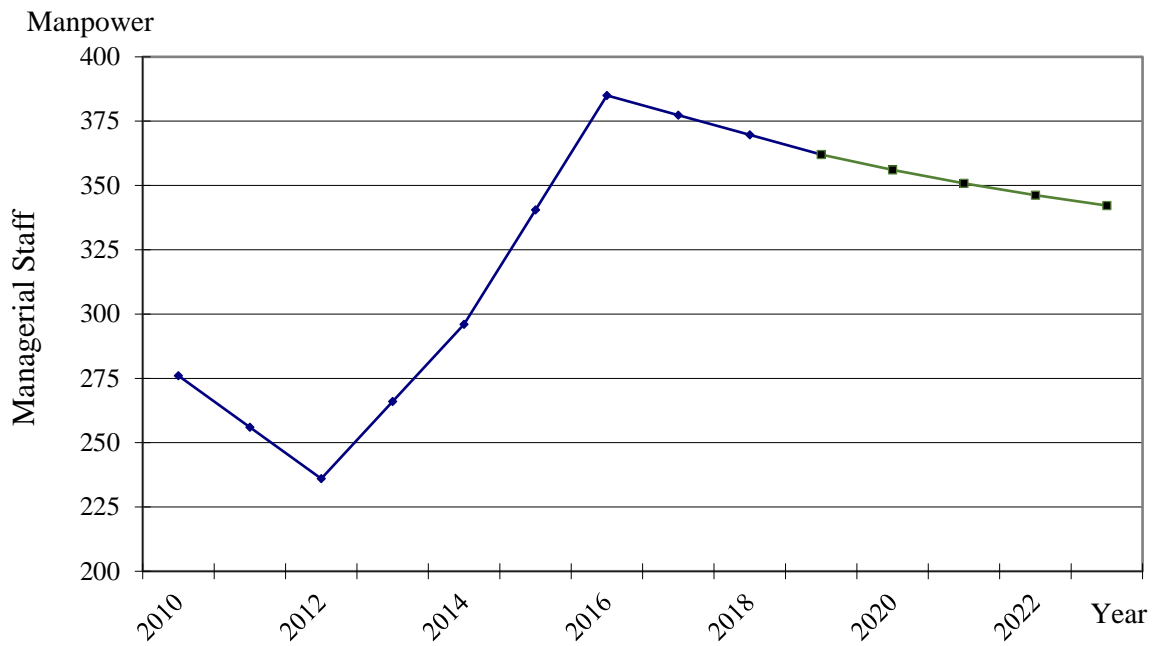


Figure 4.15 Manpower Projection of Supervisory Staff (Auto/Parts Retail Sector)

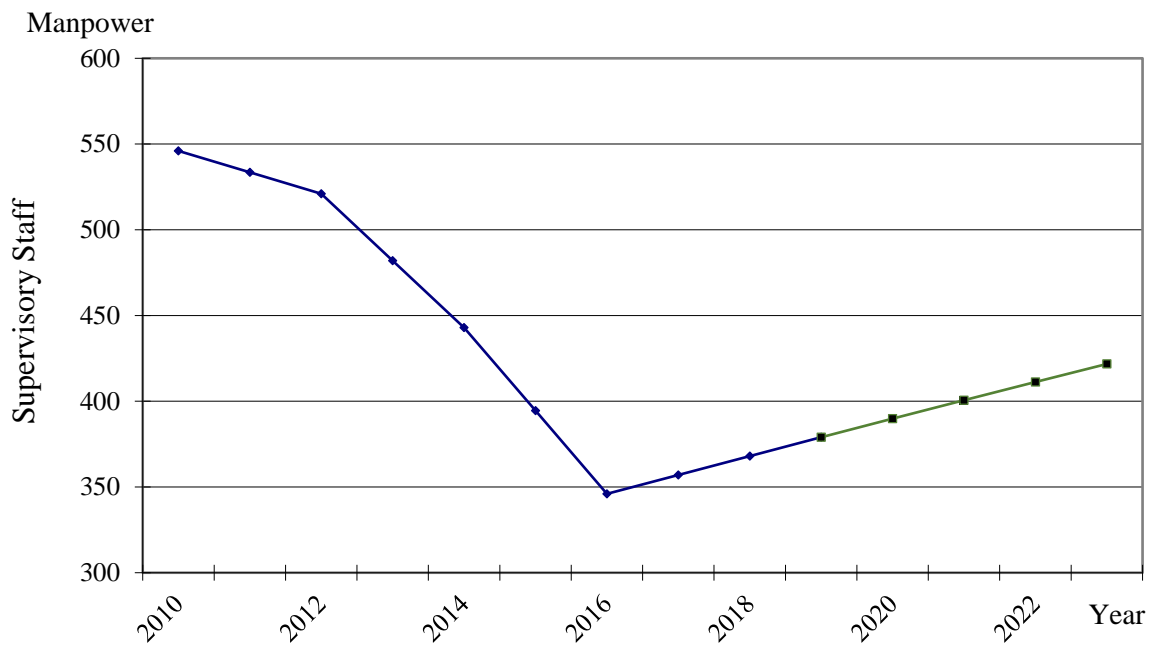


Figure 4.16 Manpower Projection of Operative/Clerical Support Staff  
(Auto/Parts Retail Sector)

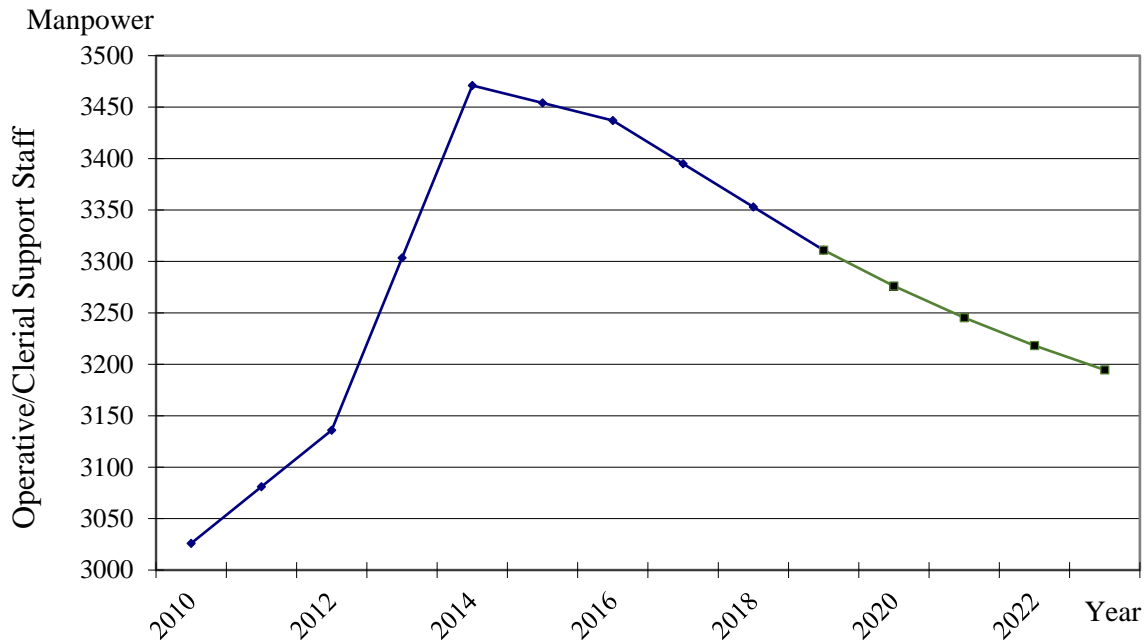


Table 4.7 Manpower Projection of the Auto/Parts Retail Sector for 2020 to 2023

Year	Managerial	Supervisory	Operative/Clerical Support
2019	362	379	3 311
2020	356	390	3 276
2021	351	401	3 245
2022	346	411	3 218
2023	342	422	3 195

4.27 Based on the manpower projection and a natural wastage rate of 3%, the average annual training requirements for 2020 to 2023 were calculated and listed in Table 4.8.

Table 4.8 Annual Training Requirements  
of the Auto/Parts Retail Sector for 2020 to 2023

Job level	No. of Employees at the Time of Survey	Annual Training Requirements (persons)
Managerial	362	6
Supervisory	379	23
Operative/Clerical Support	3 311	69

## V. RECOMMENDATIONS

### A. Manpower Investments

5.1 In view of the large and growing vehicle population in Hong Kong, the Training Board anticipates a persistent demand for manpower in the automobile industry. To meet the forecast manpower requirements, the industry should embark on a manpower training programme of a scale set out in paragraphs 4.11 and 4.27.

5.2 For manpower planning of the vehicle servicing sector, employers should note that the scale when expressed in terms of the existing manpower, represents an average annual intake of trainees of about 3.4%, 4.0% and 5.1% of the respective employees at the technologist, technician and craftsman levels. Whereas, the auto/parts retail sector is expected to have an average annual intake of trainees of about 1.7%, 6.1% and 2.1% of the respective employees at the managerial, supervisory and operative/clerical support levels.

5.3 The Training Board is aware of the operational difficulties experienced by employers in recent years, in particular the high rental cost and manpower shortage. However, unless employers are willing to train up and able to retain a sufficient number of technical people to meet the manpower needs, the development of the automobile industry will be hindered.

5.4 The Training Board was glad to see the noticeable increase of salaries among employees of the industry during the past three years. In addition to competitive remuneration packages, employers are advised to provide a clear career ladder and demonstrate some success stories to their young staff, strengthening their confidence for a long-term career development in the automobile industry.

5.5 To attract more new bloods, training providers are advised to broaden their course promotion to ethnic minorities. In addition, employers should consider other alternatives, such as retraining of the middle-aged group.



## **B. Measures to Promote the Industry**

5.6 Nowadays, nearly all industry sectors are competing for manpower. In addition to competitive remuneration packages, employers need to promote their trades proactively to students, parents and teachers, in order to attract new bloods. Promotion is particularly important to the automobile industry, as social culture and stereotyping (e.g., dirty, low-paid, limited career prospects) have deterred young people from joining the industry. The Training Board recommends the following measures for promoting and uplifting the image of the industry.

### ***Business-School Partnership Programme (BSPP)***

5.7 The Business-School Partnership Programme (BSPP) was first launched by the Education Bureau in 2005. It aims to lead students out of the classroom to learn about different careers, understand the operation of different industries and requirements of employers, explore their own career orientation, and develop correct work attitude so that they can get prepared for transition to work and challenges in the future.

5.8 Under BSPP, business sectors offer career exploration activities for students, teachers and parents, including workplace visits, talks and career expos. Hands-on workshops can be supported by IVE or Pro-Act Training and Development Centre (Automobile). Through these activities, employers and education institutions can promote the related professions and study programmes to students, teachers and parents.

5.9 The Training Board recommends the BSPP to employers as it is a convenient platform to promote the trade to secondary schools.

### ***Skill Competition***

5.10 Since 1986, the Training Board has been organising the Best Apprentice Competition (BAC) annually to promote apprenticeship training and enhance the skills in vehicle maintenance and repairing. For instance, in 2019, 43 final year apprentices of the vehicle mechanic, vehicle electrician, vehicle body repairer and vehicle painter trades were nominated by employers to enter the competition. After a series of practical assignments in the Stage 1 test and the final competition, six winners will be selected. In addition to cash prizes and trophies, the six winners will be awarded with one-week study trip to Germany, visiting motor plants, vehicle museums and training schools.

5.11 The BAC not only arouses the interest of employers and apprentices in quality training, but also helps to promote the vehicle servicing trades to the public through different channels, such as press release, media interview and highlight video on YouTube. The photos and videos of the competition and the study trip are excellent publicity materials for programme promotion activities.

5.12 Young talents of the automobile industry are also selected biennially to represent Hong Kong in the WorldSkills Competition. The WorldSkills Hong Kong team included representatives of the Car Painting trade in the 2017 Abu Dhabi and 2019 Kazan competitions.

5.13 The Training Board considers skill competition as an effective tool to arouse public's interest in Vocational and Professional Education and Training (VPET) and appeals to employers to nominate their talent staff to join the competitions. The VTC is advised to strengthen the publicity of the competitions to the general public, in particular secondary school students and their parents.

## **C. Training Subsidy Schemes**

### ***Engineering Graduate Training Scheme (EGTS)***

5.14 To bring about more well-structured practical training opportunities for engineering graduates, the Vocational Training Council (VTC), with the assistance of the Innovation and Technology Training Board (ITTB), is operating a subsidy scheme which provides engineering graduates with 18 months of practical training of a standard acceptable to the Hong Kong Institution of Engineers (HKIE) for corporate membership. Each graduate receiving training under the scheme is granted a subsidy through his employer as part of his salary. If required, basic workshop training of up to eight weeks can be arranged in VTC's Pro-Act Training and Development Centres for those graduates who did not receive approved practical training during their study in the Degree programme. The Training Board highly recommends the scheme to employers for training their engineering graduates.

### ***Reindustrialisation and Technology Training Programme (RTTP)***

5.15 In August 2018, the Innovation and Technology Commission of the HKSAR Government launched the RTTP under the Technology Talent Scheme. The VTC and the ITTB are entrusted to carry out the administration work and course vetting for the RTTP. RTTP subsidises local companies on a 2:1 matching basis to train their staff in advanced technologies. Both public courses (i.e., open to the public for enrolment) and tailor-made courses (i.e., designed for a particular company) are supported. Within each financial year, a company can receive up to \$500,000 subsidies for its staff training in approved courses, with no restriction on the number of applications submitted. The Training Board strongly recommends the RTTP to employers for staff training in advanced technologies.

### ***Vplus Engineering Subsidy Scheme***

5.16 To further encourage continuing education, the HKSAR Government approved the implementation of a pilot scheme called Engineering Training Subsidy Scheme (ETSS) in 2016 which provided tuition fee subsidy for designated professional (accredited at Qualifications Framework (QF) Level 3 to 5), self-financing part-time programmes offered by the VTC. The scheme covered programmes in the disciplines of construction and engineering and benefited three cohorts of students admitted from AY 2016/17 to AY 2018/19. At 2018 Policy Address, the Chief Executive announced that the scheme would be further piloted for another three cohorts, from AY 2019/20 to AY 2021/22, and expanded to cover disciplines related to the creative industries including IT and Design. To reflect the expanded scope, the subsidy scheme was renamed as VPlus.

5.17 The Training Board recommends the VPlus Engineering Subsidy Scheme to working adults of the automobile industry who are planning to pursue higher qualifications to enhance their upward mobility. Students of IVE's Higher Diploma in Automotive Engineering (part-time evening mode) and Professional Diploma in Automotive Technology and Management are eligible to apply. Successful applicants will be refunded 60% of the tuition fees, subject to a maximum of \$45,000 per person.

### ***VTC Earn & Learn Scheme***

5.18 With a view to attracting more young people to join the Apprenticeship Scheme for trades with strong manpower demand, the Chief Executive announced the Pilot Training and Support Scheme (also known as Earn & Learn Scheme) at the 2014 Policy Address. Through tripartite collaborations among employers, the Government and the VTC, the Scheme provides clear academic and career pathways for youngsters such that they could earn an attractive salary while concurrently receiving on-the-job training.

5.19 Because of the proven effectiveness of the Scheme and positive feedback from employers and apprentices, the Chief Executive announced at 2018 Policy Address to regularise the Scheme with effect from AY 2019/20, providing 1 200 training places per year for industries (including automobile) with a keen demand for manpower.

5.20 Under the Scheme, a Diploma apprentice will receive the following salary and incentive allowances during his/her 3-year apprenticeship period:

- (i) a guaranteed monthly salary not less than \$8,000;
- (ii) an average monthly allowance of \$2,500 from the Government; and
- (iii) additional subsidy from the employer, amounting to a total of \$30,800.

5.21 In the beginning of AY 2018/19, over 70 Diploma apprentices joined the Scheme after completing one year of full-time study in Diploma of Vocational Education (Automotive Technology). The Training Board highly recommends the Scheme to employers who want to recruit and retain more apprentices.

### ***Pilot Incentive Scheme to Employers (PISE)***

5.22 Starting from AY 2019/20, employers under the VTC Earn & Learn Scheme can opt to participate in Workplace Learning and Assessment (WLA). Traditionally, apprentices were engaged in both school-based-learning (SBL) in technical institutions and workplace-learning (WL) with their employers. The SBL and WL components were conducted and assessed separately by the institutions and employers. Under WLA, the SBL and WL components undergo a matching process. Wherever practical, the common elements will be delivered in workplace only, to avoid duplication and reduce the school hours.

5.23 Since credits will be awarded in the study programme, the quality assurance standard of WLA should be in line with that adopted in SBL. Employers are required to deploy qualified trainers, verifiers and assessors for the implementation of WLA.

5.24 With a view to encouraging more employers to take part in WLA, the VTC launched the Pilot Incentive Scheme to Employers (PISE) with the support of the Government. Employers who opt to participate in WLA will receive a maximum of \$36,000 per trainee.

5.25 The Training Board recommends PISE to employers as the scheme can help to relieve the study loads of the apprentices and thus improve their retention rate.

## **D. Lifelong Learning**

5.26 To keep pace with the technology development, it is vital for practitioners of the automobile industry to embark on a life-long learning journey throughout their career, by attending upgrading courses, workshops and seminars organised by the VTC, government departments and professional bodies. It is also of equal importance that employers recognise such needs and support their employees for the acquisition of knowledge and skills on advanced technologies.

5.27 IVE and the Pro-Act Training and Development Centre (Automobile) offer a wide range of part-time short courses, workshops and seminars for in-service practitioners of the industry. Some of these training are offered in collaboration with vehicle manufacturers who are willing to share their proprietary technologies (e.g., EV and low emission vehicles) with SME garages. The Training Board encourages this type of co-operations as practitioners of SME garages are eager to learn the advanced technologies.

5.28 To facilitate more flexible learning schedules for industry practitioners, training providers are advised to strengthen the use of e-learning and Augmented Reality/Virtual Reality (AR/VR) technologies in their training courses.

## **E. Uplifting the Professionalism of the Trade**

### ***Registration Schemes for Vehicle Mechanics and Vehicle Maintenance Workshops***

5.29 The Voluntary Registration Scheme for Vehicle Mechanics (VRSVM) was launched by the Electrical and Mechanical Services Department (EMSD) of the HKSAR Government in January 2007 for in-service practitioners of the automobile industry. Workers including vehicle mechanics, vehicle electricians, vehicle body repairers, vehicle painters and seven categories of specific service workers in possession of the necessary qualification and/or experience could register with the Scheme on voluntary basis. The Scheme aims to facilitate the public to identify registered vehicle mechanics easily and uplift the professional image of the vehicle maintenance trade. As at June 2019, there were 9 351 registered workers in the Scheme, amounting to 90% of the manpower in the related principal jobs.

5.30 In 2013, one year after the publishing of the Practice Guidelines for Vehicle Maintenance Workshops, the EMSD invited local vehicle maintenance workshops which undertook to comply with the Practice Guidelines to subscribe to the Vehicle Maintenance Workshops Charter. To further enhance service standards and the professional image and competitiveness of the vehicle maintenance trade, the EMSD launched the Voluntary Registration Scheme for Vehicle Maintenance Workshops (VRSVMW) in July 2015. To register with the VRSVMW, vehicle maintenance workshops should pledge to operate at a quality level not lower than that specified in the Practice Guidelines for Vehicle Maintenance Workshops in terms of the technical, environmental, safety, staff training, service, and documentation requirements. Registered workshops must also employ Registered Vehicle Mechanics and have a working bay with a fixed cover, and accept the VRSVMW's complaint handling mechanism and its decisions. As at June 2019, 2 060 (i.e., about 73% of the total) workshops have registered.

5.31 The Training Board shared the view with most stakeholders of the industry that it is time to change the current voluntary registered schemes for vehicle mechanics and vehicle maintenance workshops to mandatory. The mandatory registration schemes will foster a higher level of professionalism and hence attract more young people to join the automobile industry. In addition, the uplifted service standard will benefit both customers and industry practitioners.

## ***Trade Testing***

5.32 With the assistance of its Training Boards, the VTC offers a set of trade tests for in-service practitioners of different trades. The purpose of trade testing are to

- (i) set standards for skilled workers;
- (ii) help industry in the selection of workers for skilled jobs;
- (iii) facilitate the acquisition of recognised qualification, in particular for those who have not gone through any formal training, and enhanced the status of skilled workers, and
- (iv) facilitate the establishment of skills hierarchy for career advancement of skilled workers.

5.33 At present, there are four trade tests offered for vehicle servicing. Holders of the trade test certificates are eligible to register in the VRSVM (Table 5.1).

Table 5.1 Automobile Trade Tests Recognised by the VRSVM

Trade Test	Registration Classification
(i) Vehicle Mechanics	Mechanical (M)
(ii) Vehicle Electricians	Electrical (E)
(iii) Vehicle Body Repairers	Body Repair (B1)
(iv) Vehicle Painters	Body Painting (B2)

5.34 The Training Board encourages practitioners who do not possess relevant academic qualifications to sit for the trade test(s). In addition to the EMSD, the trade test certificates are widely recognised by employers as the proof of trade competencies.

## **F. Summary of Major Recommendations**

5.35 The Training Board's major recommendations for different stakeholders of the industry are summarised below:

- (a) Training Providers
  - (i) broaden course promotion to ethnic minorities (para. 5.5)
  - (ii) strengthen the publicity of skill competitions to the general public, in particular secondary school students and their parents (para. 5.10 to 5.13)
  - (iii) cooperate with vehicle manufacturers to offer more in-service training courses on new vehicle technologies (para. 5.27)
  - (iv) strengthen the use of e-learning and AR/VR technologies in teaching and learning (para. 5.28)
  
- (b) Employers
  - (i) make use of the Business-School Partnership Programme (BSPP) to promote the trade to secondary school students (para. 5.7 to 5.9)
  - (ii) make use of government's subsidy schemes, such as the Reindustrialisation and Technology Training Programme (RTTP), for staff training (para. 5.15)
  - (iii) participate in the VTC Earn & Learn Scheme to recruit and retain more apprentices (para. 5.18 to 5.21)
  - (iv) support Workplace Learning and Assessment (WLA) by participating in the Pilot Incentive Scheme to Employers (PISE) (para. 5.22 to 5.25)
  
- (c) Employees
  - (i) make use of the Vplus Engineering Subsidy Scheme to pursue higher qualifications in part-time mode (para. 5.16 to 5.17)
  - (ii) embark a life-long learning journey throughout their career, by attending skill upgrading courses, workshops, and seminars organised by the VTC, government departments and professional bodies (para. 5.26)
  - (iii) sit for the relevant VTC trade test(s), if required, to gain recognition of their trade competencies and fulfil the registration requirements of the Voluntary Registration Scheme for Vehicle Mechanics (para. 5.32 to 5.34)
  
- (d) Government
  - (i) launches the mandatory registration schemes for vehicle mechanics and vehicle maintenance workshops (para. 5.29 to 5.31)

## I. 報告摘要

### A. 背景

1.1 本會於 2019 年 3 月至 5 月期間進行汽車業人力調查，此報告旨在反映調查中收集的數據、觀察所得、結論，以及因應調查結果而所作出的建議。

1.2 汽車業人力調查旨在收集業界最新的人力資料，以評估汽車行業未來的人力需求和培訓需求。

### B. 調查範圍

1.3 是次調查涵蓋汽車業以下界別及門類：

#### 汽車維修界別

門類一：汽車的裝嵌

門類二：汽車及電單車維修

門類三：附加調查機構

#### 汽車／零件零售界別

門類四：汽車零售店

門類五：電單車零售店

門類六：汽車及電單車配件及零件零售店

門類七：附加調查機構

#### 其他僱用汽車業人力的重要或相關機構

門類八：附加調查機構

### C. 抽樣方法和回覆率

1.4 在調查範圍內的 3 796 間業內機構中，本會抽取 569 間進行調查；當中 501 間以分層隨機方法抽樣，另外 68 間則按訓練委員會建議作附加抽樣。

1.5 在全部 569 間抽樣機構之中，共有 425 間順利集得統計資料，有效回應率為 94%。其餘樣本視為無效，包括已停止運作或並無聘用汽車業人力的機構等。

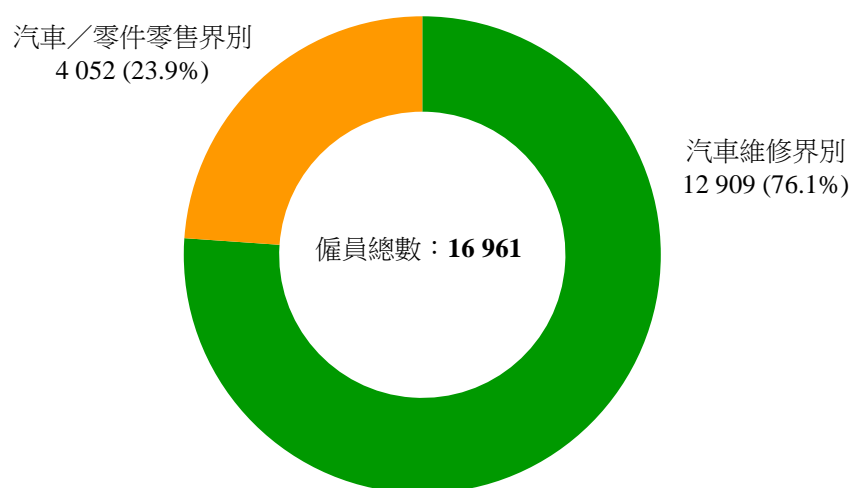


## D. 調查結果摘要

### 僱員人數

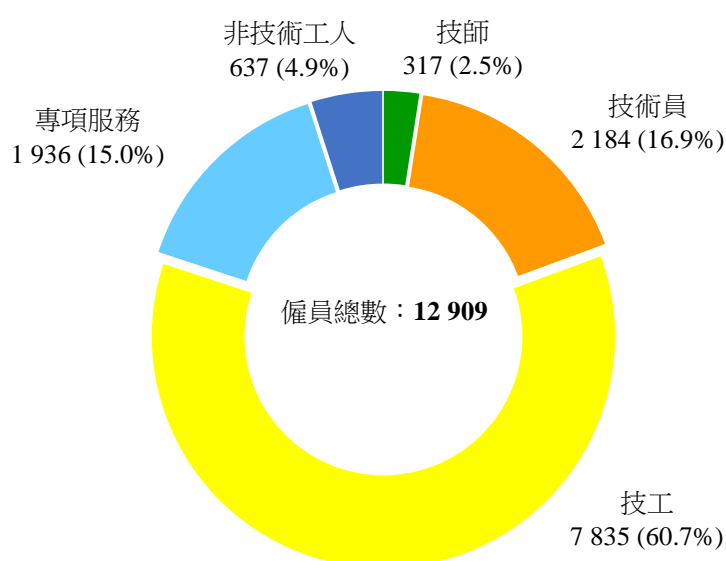
1.6 調查期間，汽車業共有 16 961 名僱員，其中約四分之三在汽車維修界別工作（圖 1.1）。

圖 1.1 汽車業僱員人數



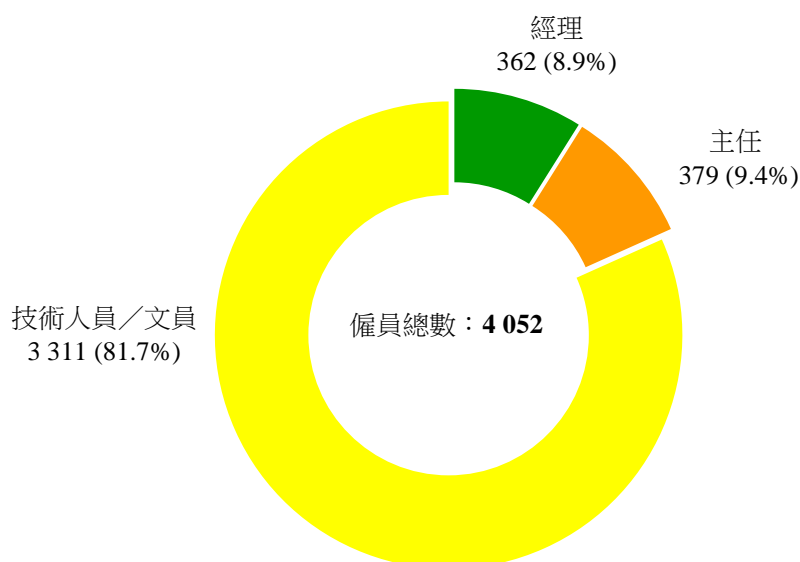
1.7 汽車維修界別大多數僱員（60.7%）屬於技工類別（圖 1.2）。

圖 1.2 汽車維修界別按技能等級劃分的僱員人數分布



1.8 至於汽車／零件零售界別，大多數僱員 (81.7%) 為技術人員／文員類別 (圖 1.3)。

圖 1.3 汽車／零件零售界別按職級劃分的僱員人數分布



1.9 與上次 2016 年的調查數字相比，汽車維修界別的總人力微增 0.7% (由 12 822 增至 12 909)，而汽車／零件零售界別的總人力則減少 2.8% (由 4 168 減至 4 052)。

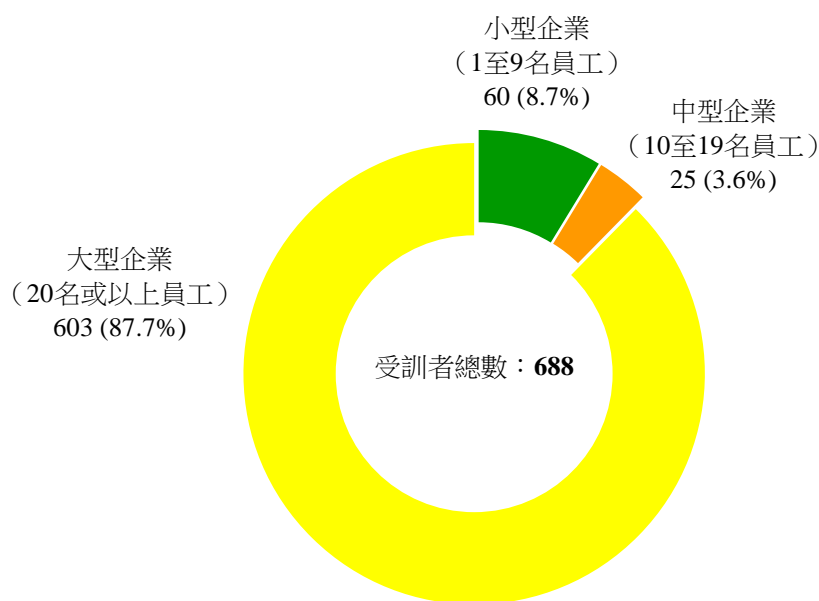
1.10 調查發現，在汽車維修界別，大型企業 (20 名或以上員工) 僱用 45.8% 的人力；在汽車／零件零售界別，大型企業亦僱用 48.1% 的人力；即接近一半汽車業僱員在大型企業服務，其餘一半由中小企聘用。

### 受訓者人數

1.11 調查期間，汽車維修界別共有 688 名受訓者，佔總人力 (即僱員 + 受訓者 = 13 597 名從業員) 的 5.1%。與 2016 年相比，受訓者人數減少 2.3% (從 704 減至 688 人)。

1.12 在 688 名受訓者中，大多數 (641 名，即 93.2%) 屬技工級別；當中的大多數 (603 人或 87.7%) 受僱於大型企業 (圖 1.4)。

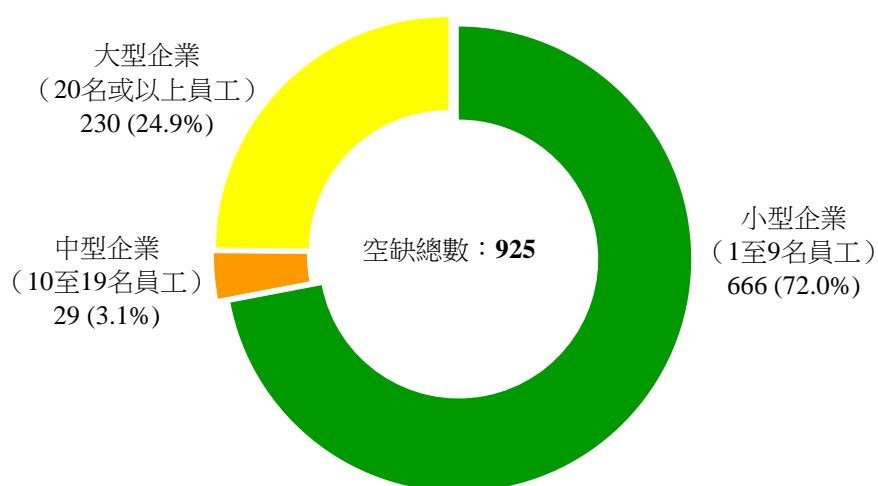
圖 1.4 汽車維修界別按公司規模劃分的受訓者人數分布



### 職位空缺數目

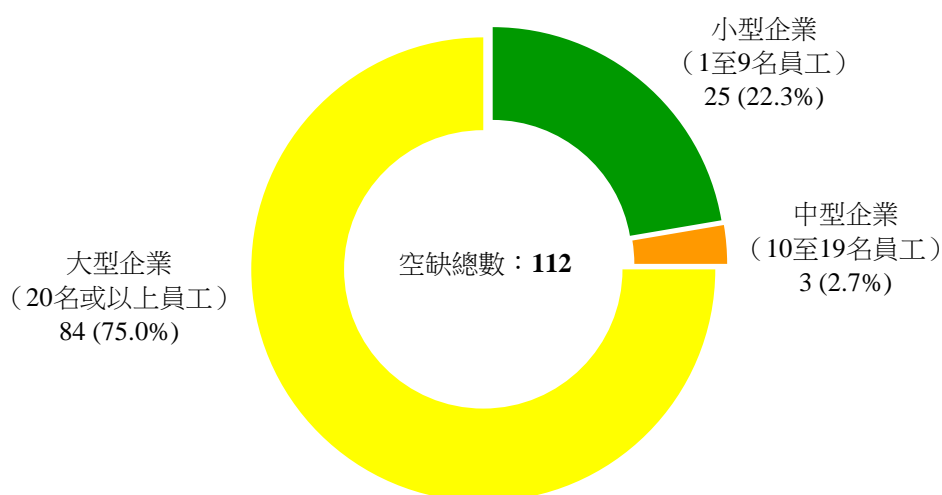
1.13 調查期間，汽車維修界別反映共有 925 個職位空缺，比 2016 年（941 個）減少 1.7%；大部分職位空缺（660 個，即 71.4%）屬技工級別，而且大多數由小型車房招聘（666 個，即 72.0%）（圖 1.5）。

圖 1.5 汽車維修界別按公司規模劃分的空缺數目分布



1.14 調查期間，汽車／零件零售界別反映共有 112 個職位空缺，比 2016 年（126 個）減少 11.1%；大部分職位空缺（105，即 93.8%）屬技術人員／文員級別，而且大多數由大型企業招聘（84 個，即 75%）（圖 1.6）。

圖 1.6 汽車／零件零售界別按公司規模劃分的空缺數目分布



### 僱員每月收入

1.15 在調查期間，僱員每月標準薪酬於表 1.1 和表 1.2 列出。總括來說，與 2016 年數字相比，僱員平均收入普遍向上調整。在汽車維修界別，平均月入超過 20,000 元的僱員佔比，從 2016 年的 18%增加至 2019 年的 35%；在汽車／零件零售界別，則從 26%上升至 47%。

表 1.1 汽車維修界別每月標準收入

技能等級	平均月入 (佔僱員百分比)
技師	>\$35,000 (75%)
技術員	\$20,001 to \$35,000 (74%)
技工	\$15,001 to \$25,000 (84%)
專項服務	\$10,001 to \$20,000 (86%)
非技術工人	\$10,001 to \$15,000 (81%)

表 1.2 汽車／零件零售界別每月標準收入

職級	平均月入 (佔僱員百分比)
經理	>\$25,000 (90%)
主任	\$20,001 to \$35,000 (86%)
技術人員 / 文員	\$10,001 to \$25,000 (93%)

## E. 人力預測及每年培訓需求

1.16 根據 2019 年及以往幾次的調查結果，訓練委員會利用「調節過濾法」來預測 2020 年至 2023 年不同職級的僱員人數。結果顯示，汽車維修界別的人力將非常穩定，但汽車／零件零售界別則可能出現人力下降（表 1.3）。

表 1.3 汽車業 2020 年至 2023 年的人力預測

技能等級／職級	2020 年	2021 年	2022 年	2023 年
<b>A. 汽車維修界別</b>				
技師	318	319	320	321
技術員	2 185	2 186	2 187	2 187
技工	7 843	7 853	7 861	7 867
專項服務	1 944	1 940	1 937	1 935
小計	<b>12 290</b>	<b>12 298</b>	<b>12 305</b>	<b>12 310</b>
<b>B. 汽車／零件零售界別</b>				
經理	356	351	346	342
主任	390	401	411	422
技術人員 / 文員	3 276	3 245	3 218	3 195
小計	<b>4 022</b>	<b>3 997</b>	<b>3 975</b>	<b>3 959</b>

1.17 基於以「調節過濾法」預測的人力增長，加上因流失而出現的空缺（即由於各種原因而離開該行業的僱員），訓練委員會估算由 2020 年至 2023 年的平均每年培訓需求，如表 1.4 所示。

表 1.4 汽車業 2020 年至 2023 年的每年培訓需求

技能等級／職級	調查期間僱員數目	每年培訓需求（人數）
<b>A. 汽車維修界別</b>		
技師	317	11
技術員	2 184	88
技工	7 835	401
<b>B. 汽車／零件零售界別</b>		
經理	362	6
主任	379	23
技術人員 / 文員	3 311	69

## F. 行業前景

### 汽車維修界別

1.18 總體而言，由於香港的車輛數目持續上升，即使增長速度可能放緩，但訓練委員會對汽車維修界別的前景仍感樂觀。畢竟道路上仍有大量汽車行走，將繼續需要熟練人才提供保養和維修服務。對於掌握先進汽車技術的員工，需求將尤其殷切，例如為電動車及混能車檢修電能系統的工種。

1.19 至於有礙行業發展的不利因素包括：租金成本高昂、需大量投資方可滿足法規和技術的要求，以及缺乏新血加入。

1.20 隨著 2018 年 10 月港珠澳大橋通車，以及中央政府和香港特區政府攜手展開計劃，以推動粵港澳大灣區的緊密融合和經濟合作，預計將有更多車輛行駛於香港和內地之間，並為本地汽車維修界別帶來挑戰和機遇。

1.21 訓練委員會與其他業界人士均同意，為車輛維修技工和車輛維修工場引入強制性註冊計劃，將有效提升汽車業的專業水平，有助吸引更多年輕人入行，並能提高車輛維修工場的服務水平，減少不良競爭，繼而有助穩定僱員收入。

### 汽車／零件零售界別

1.22 由於中美貿易摩擦和香港政治局勢動蕩的影響，預計 2019 年下半年及往後季度，本地經濟將面臨日益沉重的下行壓力。此外，港鐵網絡的擴張和車位供應不足等問題，將影響汽車／零件零售界別的業務。無疑該界別於未來幾年將面臨嚴峻考驗，但若政府能推出新的資助或稅務寬減計劃，或為現有計劃加重力度，鼓勵車主更換較環保的車輛，汽車／零件零售界別面對的下行壓力或將得到紓緩。

## G. 主要建議

1.23 訓練委員會對業界不同持份者的主要建議是：

- (a) 培訓機構
  - (i) 將課程推廣至少數族裔
  - (ii) 加強對公眾宣傳技能比賽，尤其針對中學生及他們的父母
  - (iii) 與汽車製造商合作，提供更多有關先進汽車技術的在職培訓課程
  - (iv) 於在職培訓中，加強使用電子學習、擴增實境、虛擬實境等技術
  
- (b) 僱主
  - (i) 利用「商校合作計劃」(BSPP) 向中學生宣傳汽車業前景
  - (ii) 申請政府的資助計劃，例如「再工業化及科技培訓計劃」(RTTP)，培訓員工
  - (iii) 參與職業訓練局的「Earn & Learn 職學計劃」，以招募及挽留更多學徒
  - (iv) 參加「職場學習及評核先導計劃」(PISE)，支持職場學習及評核(WLA)
  
- (c) 僱員
  - (i) 參與「Vplus 工程專才資助」計劃，以兼讀形式取得更高學歷
  - (ii) 展開終身學習，修讀職業訓練局、政府部門及專業團體所舉辦的技能提升課程、出席工作坊及研討會
  - (iii) 如有需要，可報考與行業相關的 VTC 技能測驗，為職業技能取得認可，更可符合《車輛維修技工自願註冊計劃》的註冊要求
  
- (d) 政府
  - (i) 為車輛維修技工和車輛維修工場引入強制性註冊計劃

## II. 緒論

### A. 背景

2.1 汽車業訓練委員會（下稱本會）隸屬職業訓練局，須按職權範圍確定汽車業的人力需求，並向局方提出發展訓練設施的建議，以配合行業需求。本會委員由各大行業商會、工會、專業團體、教育培訓機構及政府部門提名出任。委員名單、屬下人力調查工作小組委員名單，以及本會職權範圍，分別載於附錄 1 至附錄 3。

2.2 本會根據職權範圍，於 2019 年 3 月至 5 月期間進行 2019 年汽車業人力調查。此報告旨在反映調查中收集的數據、觀察所得、結論，以及因應調查結果而所作出的建議。

### B. 調查目的

2.3 調查旨在收集汽車業的最新人力資料；尤其重於以下幾方面：

- (a) 按汽車業相關界別的主要職位，收集最新的人力資料；
- (b) 評估技術人力結構；
- (c) 預測未來的培訓需求；以及
- (d) 就制定培訓策略方面，向局方建議，以配合行業需求。



## C. 調查範圍

2.4 是次調查涵蓋汽車業 3 796<sup>1</sup>間機構，分為八個門類，詳情如下：

界別門類	1至9名 員工	10至19名 員工	20名或 以上員工	總數
汽車維修界別				
汽車的裝嵌	33	6	2	41
汽車及電單車維修服務	2 749	66	21	2 836
附加調查機構	3	1	14	18
汽車／零件零售界別				
汽車零售店	416	8	12	436
電單車零售店	14	2	1	17
汽車及電單車配件及零件零售店	397	10	2	409
附加調查機構	4	1	1	6
其他僱用汽車業人力的重要或相關機構				
附加調查機構	3	4	26	33
總數	3 619	98	79	3 796

## D. 抽樣方式

2.5 抽樣方式及篩選程序由局方人力調查組為本會設計。為確保抽樣具代表性，以便按機構組別進行分析，是次調查總共邀請 569 間企業參與。當中 501 間從「機構單位記錄庫」<sup>2</sup>中選出，採用分層抽樣的統計科學方法（包括三個層級，即界別、門類及公司規模）。其餘 68 間公司（附加調查機構）屬其他業務性質，但有聘請汽車業僱員的知名公司或相關機構，由本會建議納入調查範圍。

<sup>1</sup> 此數字是指僱用汽車業技術人員的機構。

<sup>2</sup> 「機構單位記錄庫」是由政府統計處管理的電子資料庫，載有約四十萬間活躍於本港的機構單位資料。記錄庫中保存的資料透過統計處各項統計調查的結果和有關政府部門的行政紀錄，按季更新。

## E. 問卷設計

2.6 本會採用有系統的問卷形式收集調查數據。問卷分為兩部分：第一部分為調查主要部分，收集人力資料，包括按主要職級和職務劃分的僱員人數、職位空缺和受訓者數目；第二部分收集與人力相關的補充資料。

2.7 問卷樣本、附註，以及主要職務的工作說明載於附錄 4。

## F. 數據收集方法

2.8 本會為每間獲邀參與調查的機構準備一套調查文件，包括邀請信、問卷、附註和主要職務工作說明表，並以郵遞／電郵／派員上門形式遞送，請機構負責人提供機構在調查期間的人力資料。

2.9 有關人力資料，汽車業的職位分為兩個界別共八個技能等級：

A. 汽車維修界別	B. 汽車／零件零售界別
(i) 技師	(i) 經理
(ii) 技術員	(ii) 主任
(iii) 技工	(iii) 技術人員／文員
(iv) 專項服務	
(v) 非技術工人	

2.10 本會訂明業內各項主要職務，並詳述每個職務的工作說明。本會了解各機構採用的職稱與表列的主要職務名稱未必完全相同，因此本會請受訪機構按照工作說明填報主要職務的人力資料。

2.11 調查期間，統計員透過電話聯絡或親往拜訪個別機構，協助受訪者填寫問卷或收集已填妥的問卷。

## G. 質素控制措施

2.12 本會採取多項措施，確保收集調查數據的質素，當中包括：調查前的準備工作、給予調查人員全面培訓、監察調查工作進度、採取措施提高回覆率、核對填妥的問卷、重複輸入數據以求準確，以及核實所得資料。

(a) 調查前之準備工作

調查工作開始前，盡量取得樣本機構的聯絡電話，並將隸屬同一集團的樣本機構歸為一組，方便進行調查。

(b) 培訓實地調查人員

VTC 為實地調查人員舉辦工作坊，簡介行業情況，讓他們熟習行業相關知識。

所有實地調查人員須參加密集的簡介和培訓，確保明白人力調查的目的、問卷內容和運作程序。VTC 的代表亦擔任講員，解答問題。

(c) 監察調查工作

實地調查工作由已完成訓練的調查員負責，他們具備為機構進行調查的經驗，並由調查主任監察調查的進度以及工作情況。每周舉行兩次檢討會議，討論和解決所遇難題，並審閱收回的問卷是否填妥和有效。

VTC 的職員亦一同訪查多間機構，確保調查工作進行得當。

(d) 提升回應比率

調查期間採用不同措施以提升人力調查的回應比率，包括邀請訓練委員會和行業商會協助，呼籲會員機構合作參與，填覆問卷。

(e) 核對填覆的問卷

每名調查員所交回的問卷，都會由一組獨立及有經驗的核對員抽樣查核，查證調查員已如實造訪有關機構。

所有填覆問卷都經由 VTC 的職員審閱，有疑問時會以電話聯絡有關人士跟進，並核實。

(f) 雙重數據輸入並核實數據

調查採用一套雙重數據輸入系統，以減少錯誤輸入情況。此外，所有輸入資料須經電腦核證，如有疑問個案，會安排實地驗證。

(g) VTC 進行數據分析

在適當的情況下，本會會把是次調查結果與上一輪調查結果及相關的人力資料作比較。

## H. 調查期及訪問結果

2.13 本會於 2019 年 3 月至 5 月期間收集數據。在抽樣機構中，共有 425 間順利集得統計資料，有效回覆率為 94%。基於以下因素：(i) 各機構門類的回覆率均令人滿意；(ii) 知名及具規模的機構大多回覆了問卷；以及(iii) 樣本結果可運用統計學方式倍大，本會總結本報告所載的調查結果大致可反映業內的整體人力情況。個別界別及門類錄得的回應率，亦足以為相關類別提供有意義的資料細分（表 2.1）。

表 2.1 各界別／門類成功受訪機構數目

界別／門類	(a) 有效抽樣機構 數目*	(b) 成功受訪機構 數目	(b)/(a) 有效回覆率
汽車維修界別	297	286	96%
汽車／零件零售界別	123	113	92%
附加調查機構 (包括政府部門、公共事業公司、擁 有車隊的公司及教育機構)	30	26	87%
總數	450	425	94%

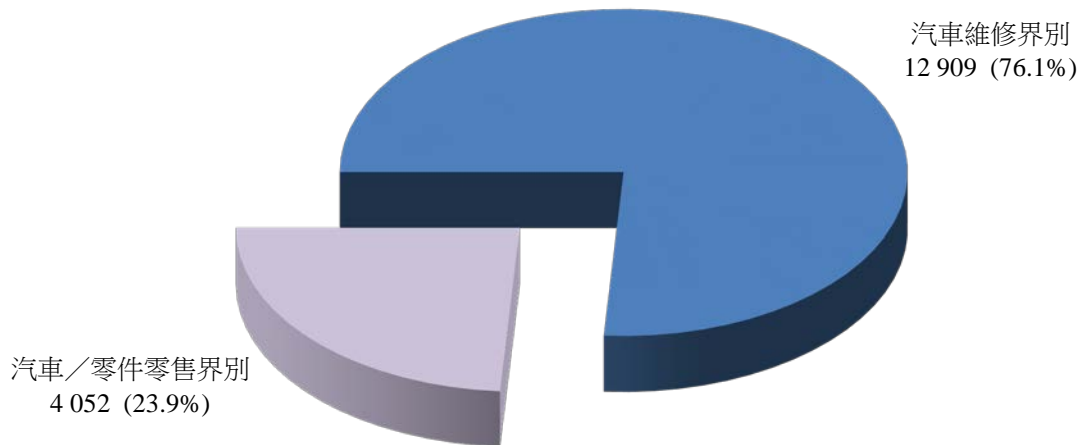
註：\*已停止營運或結業的機構視作無效。

### III. 調查結果

#### A. 汽車業概覽

3.1 在 2019 年 3 月進行調查期間，本港共有 16 961 人（受訓者除外）從事汽車業的主要職位，較三年前數字相比微跌 0.17%。在 16 961 名僱員之中，四分之三在汽車維修界別就業，其餘四分之一在汽車／零件零售界別服務。詳細分布如圖 3.1 所示。

圖 3.1 汽車業按界別僱員人數分布



## B. 汽車維修界別

### 僱員人數

3.2 汽車維修界別按技能等級及公司規模劃分的僱員人數分布（受訓者除外），分別如圖 3.2 和圖 3.3 所示。

圖 3.2 汽車維修界別按技能等級劃分的僱員人數分布

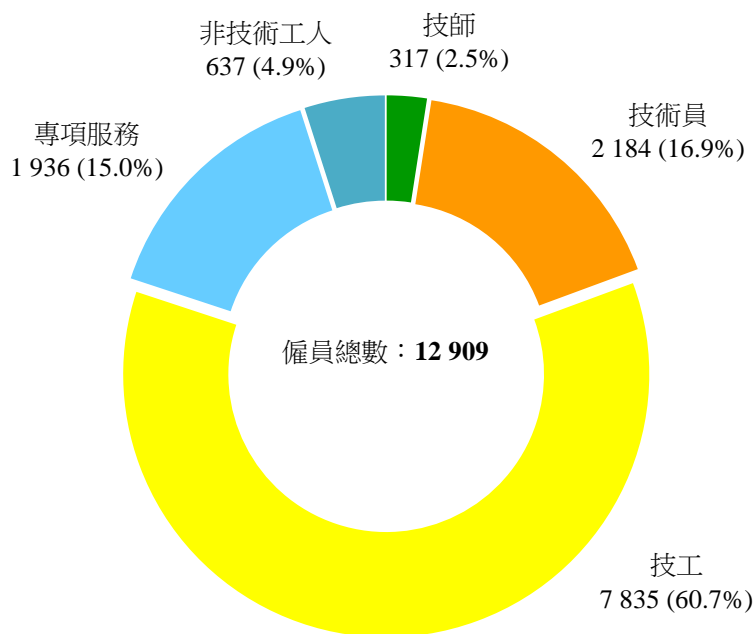
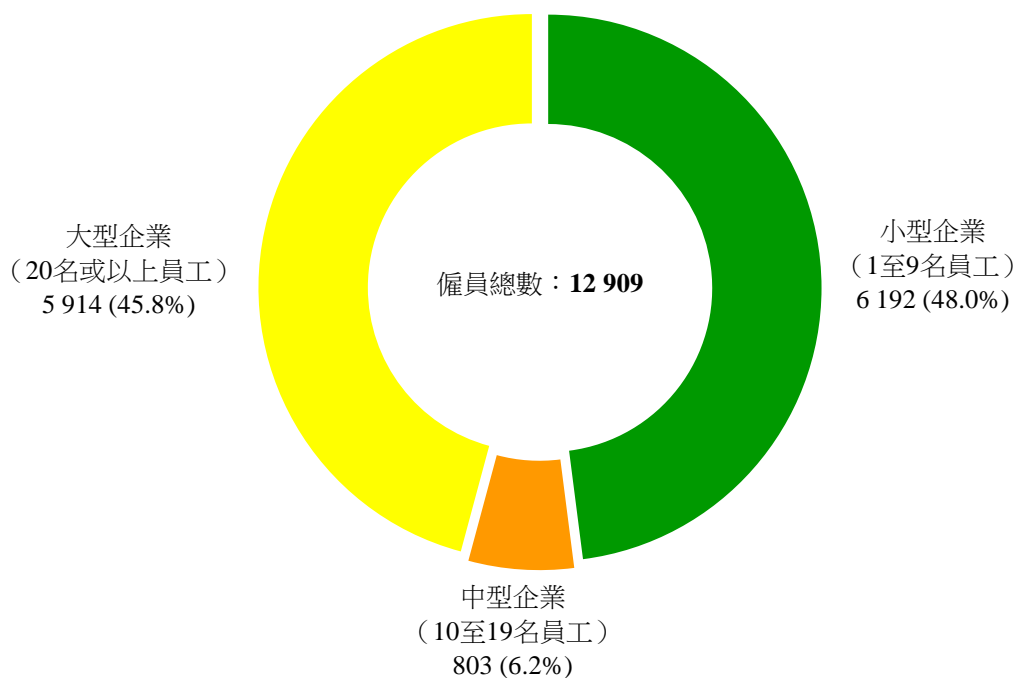
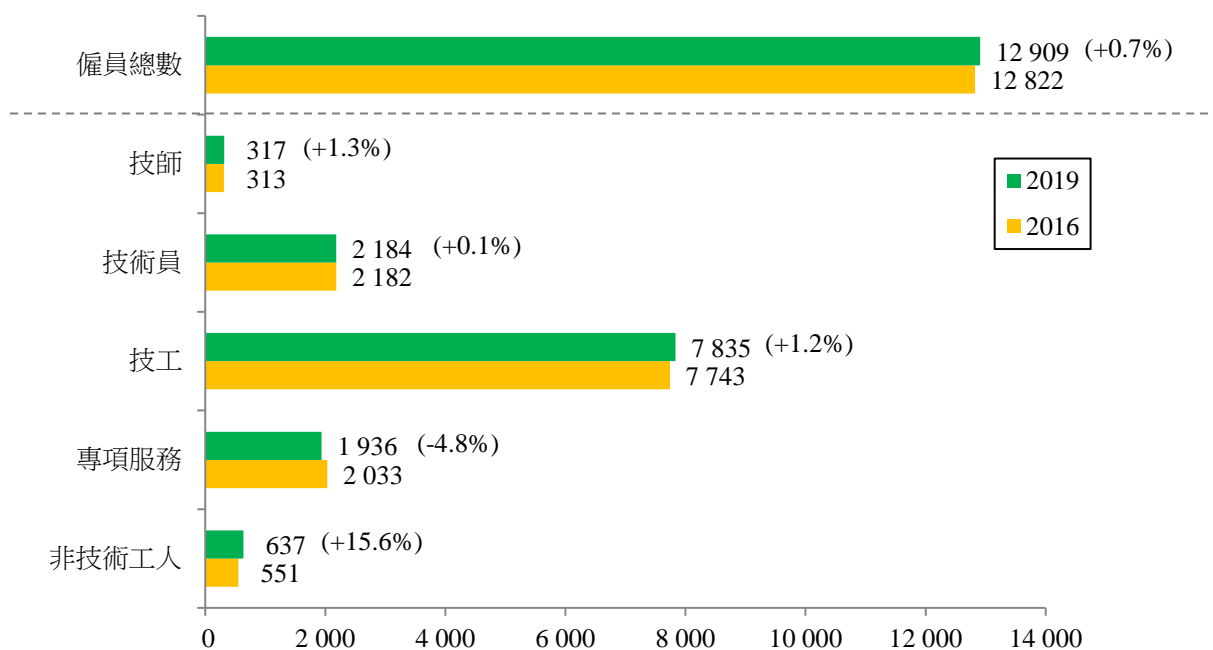


圖 3.3 汽車維修界別按公司規模劃分的僱員人數分布



3.3 與 2016 年的調查數字相比，汽車維修界別的總人力微增 0.7%，不同技能等級的人力變動如圖 3.4 所示。

圖 3.4 2016 年與 2019 年汽車維修界別 - 按技能等級劃分的僱員人數



3.4 表 3.1 列出在 2019 年調查中，每個技能等級之中僱員人數佔比最高的主要職位。

表 3.1 汽車維修界別各技能等級中僱員最多的主要職位

技能等級	僱員最多的主要職位	佔同級僱員總數百分比
技師	維修部經理	64.0%
技術員	維修監督	48.0%
技工	汽車機械工	72.3%
專項服務	汽車美容工	40.4%
	輪胎工／電池工	18.5%



## 受訓者人數

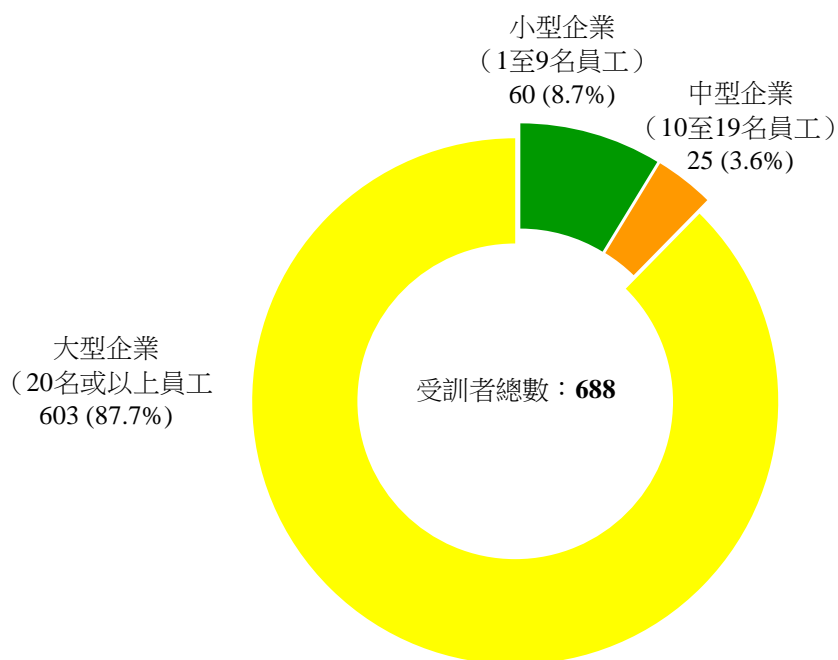
3.5 調查期間，汽車維修界別共有 688 名受訓者，佔總人力（即僱員+受訓者 = 13 597 名人員）的 5.1%。當中大多數受訓者（641 人，佔 93.2%）受訓擔任技工級工作。表 3.2 列出按技能等級劃分的受訓者人數分布。

表 3.2 按技能等級劃分的受訓者人數分布

技能等級	僱員人數	受訓者人數	受訓者佔總人力百分比 = $\frac{\text{受訓者人數}}{\text{僱員人數} + \text{受訓者人數}}$
技師	317	1	0.3%
技術員	2 184	36	1.6%
技工	7 835	641	7.6%
專項服務	1 936	9	0.5%
非技術工人	637	1	0.2%
總數	12 909	688	5.1%

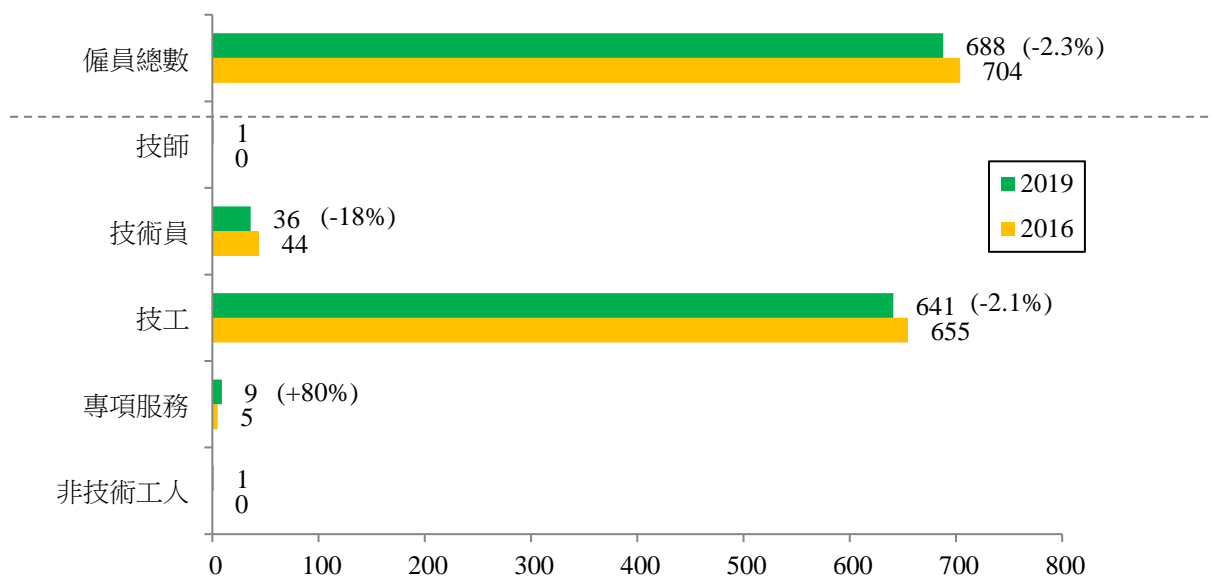
3.6 按公司規模劃分的受訓者人數分布見圖 3.5。結果顯示大多數受訓者（603 人或 87.6%）受聘於大型企業（聘用 20 名或以上員工）。

圖 3.5 按公司規模劃分受訓者人數分布 - 汽車維修界別



3.7 與 2016 年的調查數字相比，汽車維修界別的受訓者人數下跌 2.3%，如圖 3.6 所示。

圖 3.6 2016 年與 2019 年受訓者人數比較 - 汽車維修界別



### 職位空缺數目

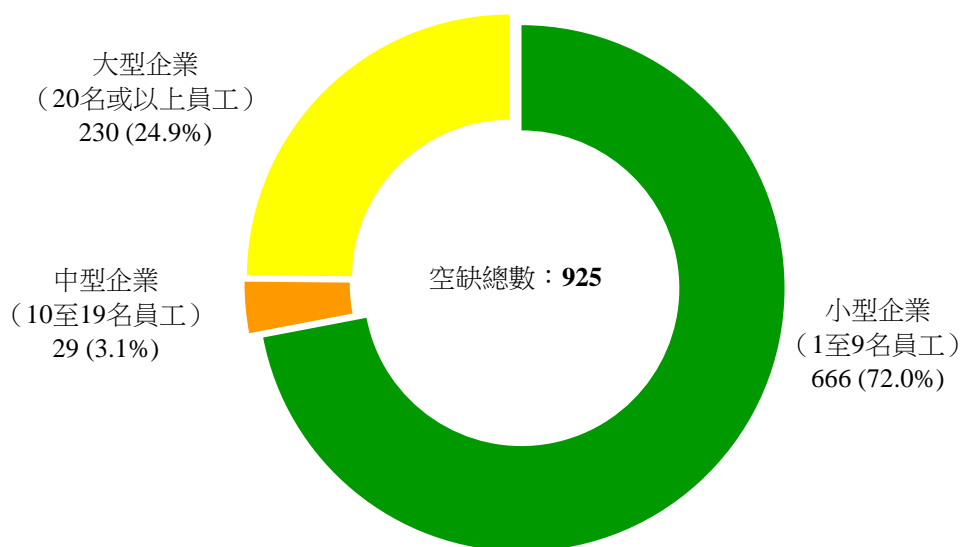
3.8 調查期間，汽車維修界別填報共有 925 個職位空缺，約佔界別總人力的 6.7%，職位空缺的分布情況如表 3.3 所示。

表 3.3 按技能等級劃分的職位空缺數目分布 - 汽車維修界別

技能等級	僱員人數	空缺數目	空缺率 = $\frac{\text{空缺數目}}{\text{僱員人數} + \text{空缺數目}}$
技師	317	9	2.8%
技術員	2 184	97	4.3%
技工	7 835	660	7.8%
專項服務	1 936	140	6.7%
非技術工人	637	19	2.9%
總數	12 909	925	6.7%

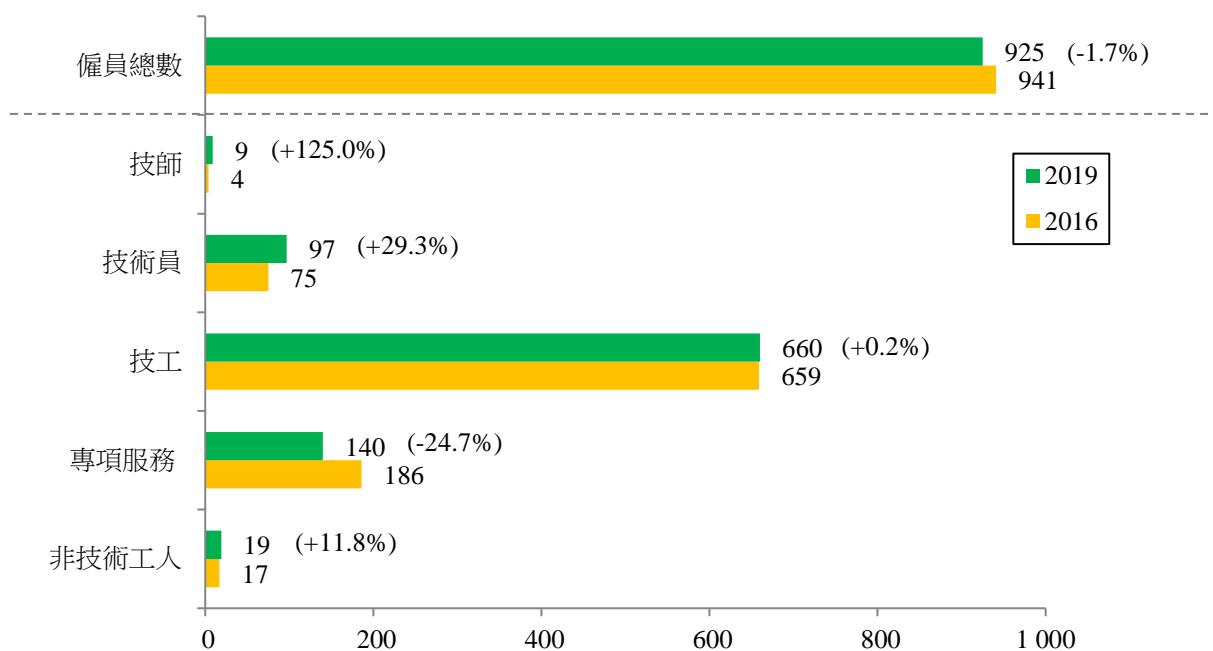
3.9 按公司規模劃分的職位空缺分布見圖 3.7，調查發現四分之三的空缺由中小企填報。

圖 3.7 按公司規模劃分的職位空缺數目分布 - 汽車維修界別



3.10 與 2016 年的調查數字相比，汽車維修界別的整体職位空缺數目下跌 1.7%，如圖 3.8 所示。然而，高技術職位的空缺數目（即技師和技術員）則顯著增加。

圖 3.8 2016 年與 2019 年職位空缺數目比較 - 汽車維修界別



## 僱主預期人力需求

3.11 僱主預測 2020 年汽車維修界別將有 13 872 名僱員和 722 名受訓者。按技能等級劃分的僱員及受訓者人數分布，分別如表 3.4 和表 3.5 所示。

表 3.4 預測 2020 年僱員人數 - 汽車維修界別

技能等級	2019 年所需 僱員人數（包括空缺）	僱主預測 2020 年僱員人數	上升／下降 百分比
技師	326	326	-
技術員	2 281	2 279	-0.1%
技工	8 495	8 531	0.4%
專項服務	2 076	2 082	0.3%
非技術工人	656	654	-0.3%
總數	13 834	13 872	0.3%

表 3.5 預測 2020 年受訓者人數 - 汽車維修界別

技能等級	2019 年 受訓者人數	僱主預測 2020 年 受訓者人數	上升／下降 百分比
技師	1	1	-
技術員	36	31	-13.9%
技工	641	681	6.2%
專項服務	9	8	-11.1%
非技術工人	1	1	-
總數	688	722	4.9%

## 僱員每月收入

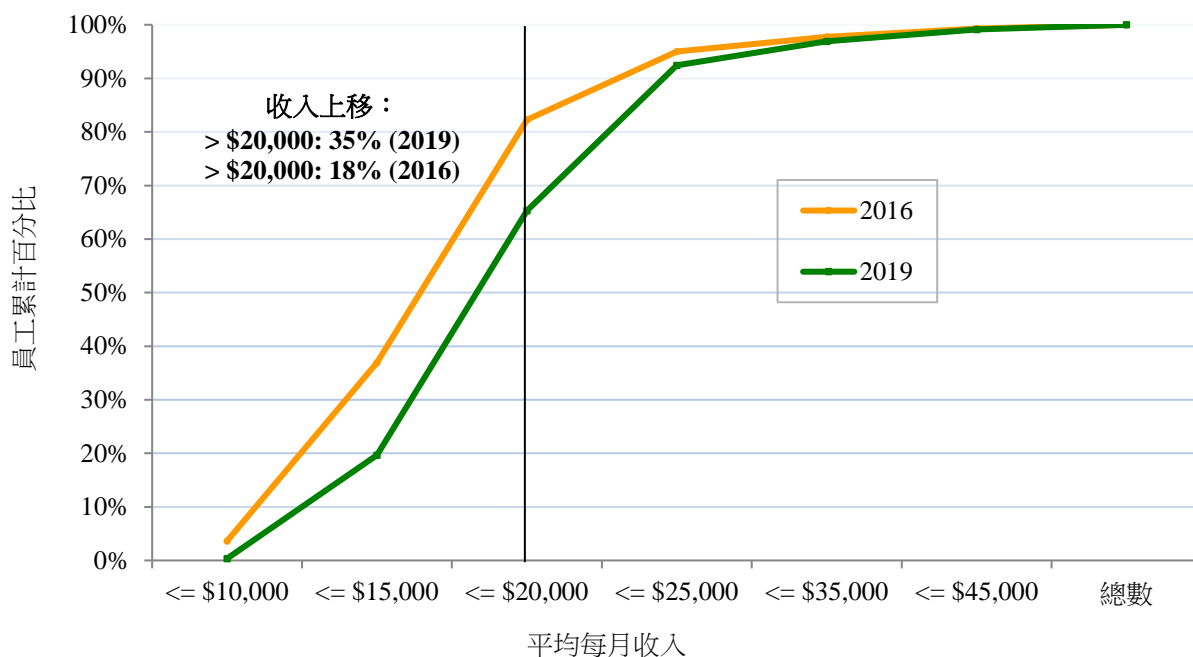
3.12 表 3.6 中詳細列出汽車維修界別按技能等級劃分的僱員每月收入分布，而按主要職位劃分的收入分布則載於附錄 5 中的表三。

表 3.6 各技能等級僱員每月收入分布情況 - 汽車維修界別

每月收入幅度	技師	技術員	技工	專項服務	非技術工人	佔比
\$10,000 或以下	-	-	-	-	7.2%	0.4%
\$10,001 - \$15,000	-	5.3%	15.4%	31.5%	81.3%	19.3%
\$15,001 - \$20,000	-	12.7%	55.5%	54.4%	9.9%	45.7%
\$20,001 - \$25,000	7.4%	48.1%	28.5%	14.0%	1.7%	27.1%
\$25,001 - \$35,000	18.0%	26.0%	0.6%	0.1%	-	4.5%
\$35,001 - \$45,000	45.0%	7.3%	-	-	-	2.2%
\$45,000 以上	29.6%	0.5%	-	-	-	0.8%

3.13 與 2016 年數字相比，僱員平均收入普遍向上調整。在汽車維修界別，平均月入超過 20,000 元的僱員佔比，從 2016 年的 18% 增加至 2019 年的 35%（見圖 3.9）。

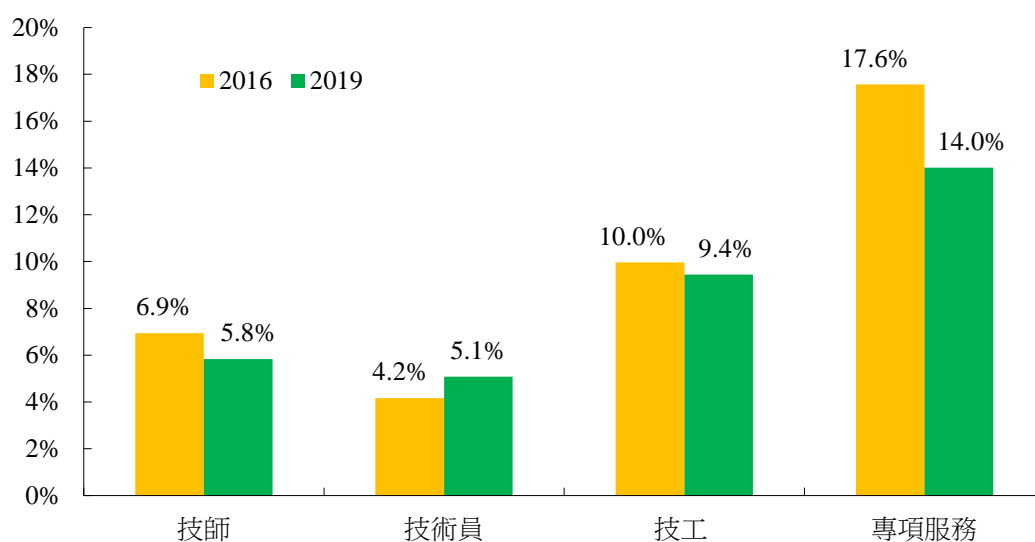
圖 3.9 僱員平均每月收入 - 汽車維修界別



## 僱員流失、招聘及退休

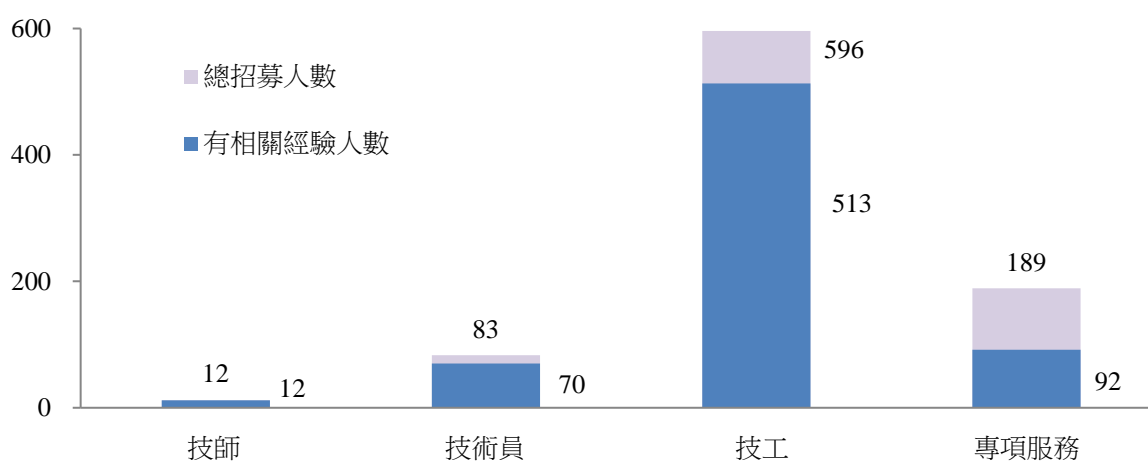
3.14 僱主填報，調查前 12 個月內汽車維修界別共有 1 228 名技師、技術員、技工及專項服務級僱員離職，其中技工和專項服務級僱員離職最多（分別為 802 人和 291 人）。2016 年與 2019 年按技能等級劃分的僱員流動率<sup>1</sup>比較見圖 3.10。

圖 3.10 僱員流動率 - 汽車維修界別



3.15 另一方面，調查前 12 個月內，汽車維修界別共招募 880 名新僱員，當中 687 人具有相關工作經驗。按技能等級劃分的招募人數分布如圖 3.11 所示。

圖 3.11 調查前 12 個月內的僱員招募人數 - 汽車維修界別

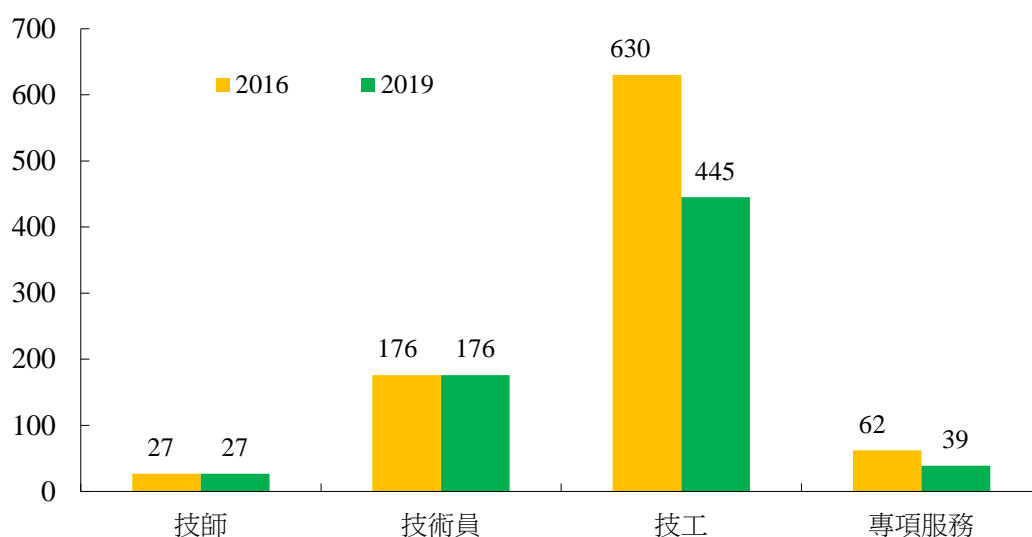


<sup>1</sup>

$$\text{僱員流動率} = \frac{\text{調查前 12 個月內僱員離職人數}}{\text{僱員人數} + \text{調查時職位空缺數目}}$$

3.16 根據汽車維修界別僱主估計，未來五年內將有 687 名僱員退休。按技能等級劃分的退休人數分布如圖 3.12 所示（2016 年收集到的數字亦列出作比較）。

圖 3.12 預計未來五年內退休僱員人數 - 汽車維修界別



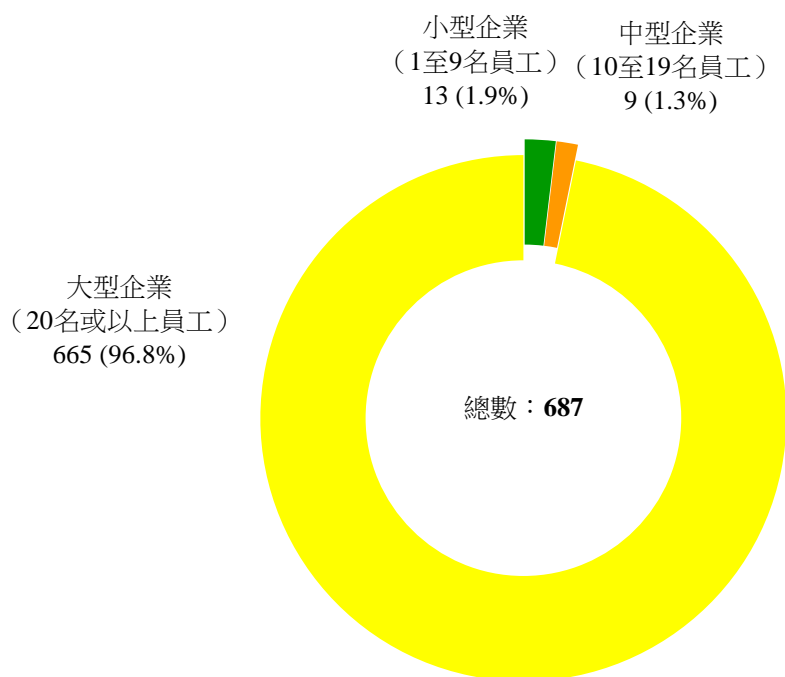
3.17 根據僱主估計數字，表 3.7 列出不同技能等級僱員的平均每年退休率。

表 3.7 預計平均每年退休率 - 汽車維修界別

技能等級	調查時 僱員人數(a)	估計未來五年內 退休人數(b)	平均每年退休率 $= \frac{(b)}{5 * (a)} * 100\%$
技師	317	27	1.7%
技術員	2 184	176	1.6%
技工	7 835	445	1.1%
專項服務	1 936	39	0.4%
總數	12 272	687	1.1%

3.18 調查發現，大型企業僱用汽車維修界別總人力的 46%，但未來五年內將退休員工之中，絕大多數（96.8%）也是在大型企業工作（圖 3.13）。至於中小企車房的退休率偏低，可能由於不同因素，例如缺乏接班人、招聘困難，以及彈性退休年齡等。

圖 3.13 按公司規模劃分未來五年內退休人數分布 - 汽車維修界別



### 宜有教育程度、訓練方式及訓練期

3.19 有關技師級僱員的教育程度要求，僱主認為 71% 宜有學士學位或以上學歷；技術員級別方面，僱主認為約三分之二（62%）僱員宜有文憑證書程度；最後僱主認為超過 70% 的技工和專項服務級僱員宜有中學或以下的學歷（表 3.8）。

表 3.8 汽車維修界別僱主意見：僱員宜有教育程度

技能等級	教育程度					
	研究生學位	學士學位 <sup>2</sup>	副學位 <sup>3</sup>	文憑或證書 <sup>4</sup>	中四至中七 <sup>5</sup>	中三或以下
技師	1%	70%	24%	5%	-	-
技術員	-	5%	16%	62%	17%	-
技工	-	-	-	28%	27%	45%
專項服務	-	-	-	16%	40%	44%

<sup>2</sup> 香港資歷架構第 5 級

<sup>3</sup> 香港資歷架構第 4 級（例如高級文憑）

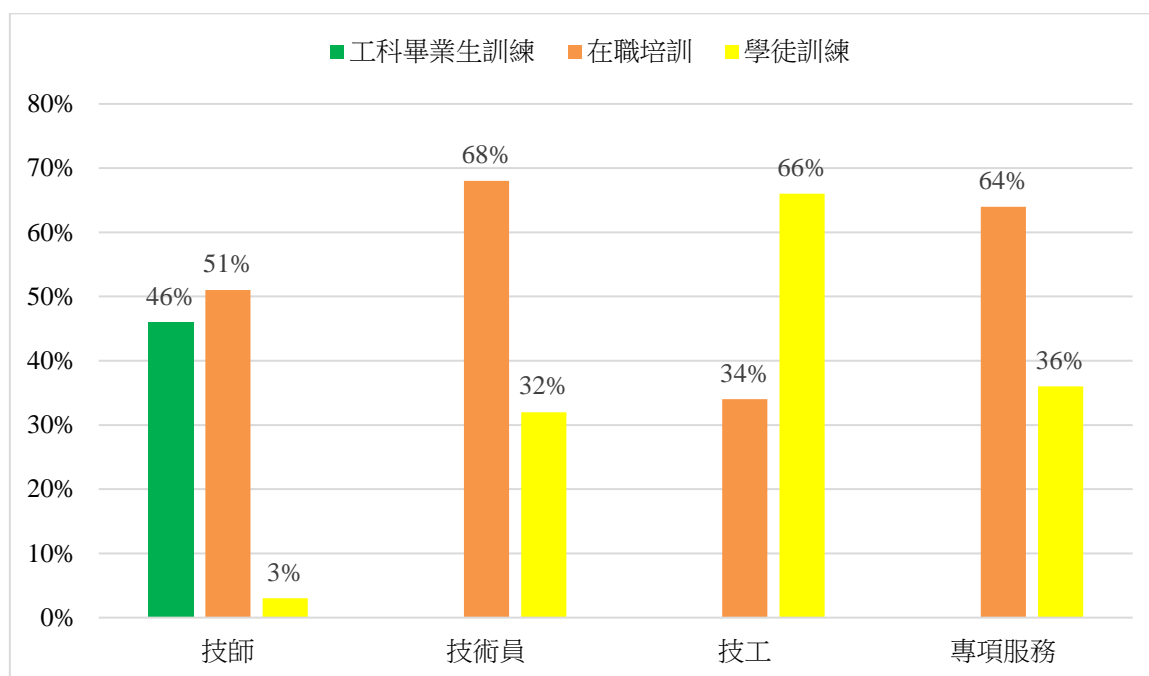
<sup>4</sup> 港資歷架構第 3 級（例如職專文憑）或第 2 級（例如職專證書）

<sup>5</sup> 香港資歷架構第 2 至第 3 級



3.20 有關技師級僱員的訓練模式，僱主認為 51% 適宜接受在職培訓，46% 適宜工科畢業生訓練。至於技術員和專項服務級別，僱主認為約三分之二(分別有 68% 及 64%) 僱員接受在職培訓較可取。而在技工方面，僱主認為 66% 僱員適宜接受學徒訓練 (圖 3.14)。

圖 3.14 汽車維修界別僱主意見：僱員宜有訓練方式



3.21 有關宜有訓練期，僱主認為 64% 技師級、87% 技術員級及 62% 技工級僱員適宜訓練三年或以上。至於專項服務級別，僱主認為 67% 僱員接受少於兩年的訓練已足夠 (表 3.9)。

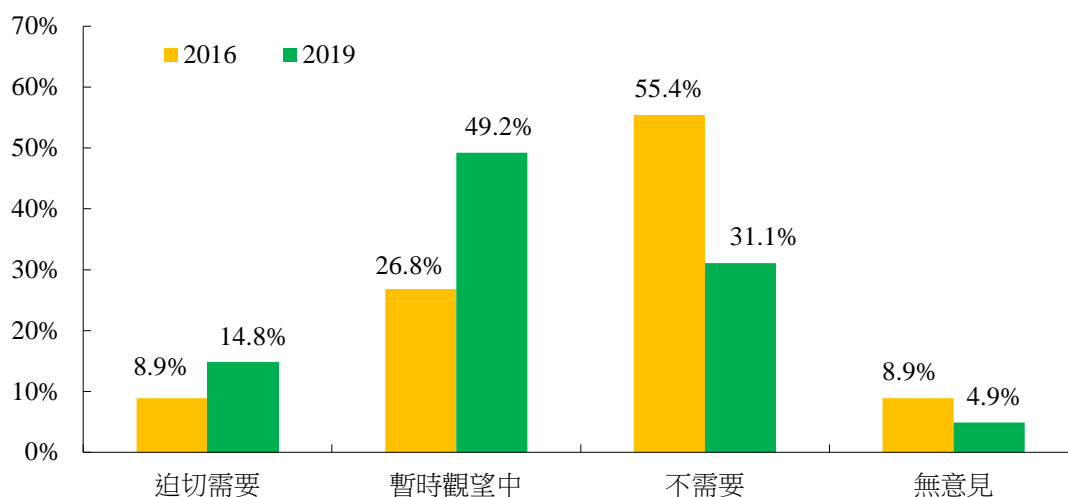
表 3.9 汽車維修界別僱主意見：僱員宜有訓練時間

技能等級	訓練時間				
	四年或以上	三年至四年以下	二年至三年以下	一年至二年以下	六至十一個月
技師	56%	8%	28%	8%	-
技術員	47%	40%	8%	5%	-
技工	16%	46%	14%	24%	-
專項服務	2%	7%	24%	35%	32%

### 電動車和混能車維修人員的培訓需求

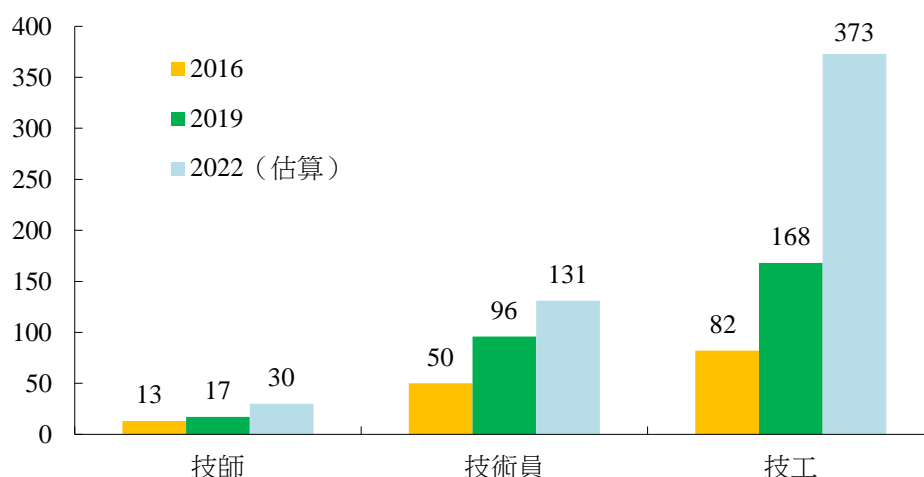
3.22 有關僱主對電動車、混能車維修培訓的意見，大多數小型車房（74%）認為「不需要」；只有 13.5% 選擇「迫切需要」，12.6% 則暫時抱持觀望態度；結果與上一輪 2016 年所收集到的意見分別不大。另一方面，大型企業（20 名或以上員工）的意見，卻可謂南轅北轍：僱主表示對電動車和混能車維修人員的培訓需求有明顯上升趨勢（圖 3.15）。

圖 3.15 2016 年及 2019 年大型企業對電動車及混能車維修人員培訓需求



3.23 2016、2019 及 2022 年合資格的電動車和混能車維修人員數目（2022 年數字由僱主估算）見圖 3.16。與整體技師、技術員和技工級的技術人員總數相比，電動車和混能車維修人員只佔極少數（例如 2019 年只佔 2.7%），但人數有明顯上升趨勢。

圖 3.16 合資格的電動車和混能車維修人員數目



## C. 汽車／零件零售界別

### 僱員人數

3.24 汽車／零件零售界別按職級及公司規模劃分的僱員人數分布，分別如圖 3.17 和圖 3.18 所示。

圖 3.17 按職級劃分的僱員人數分布 - 汽車／零件零售界別

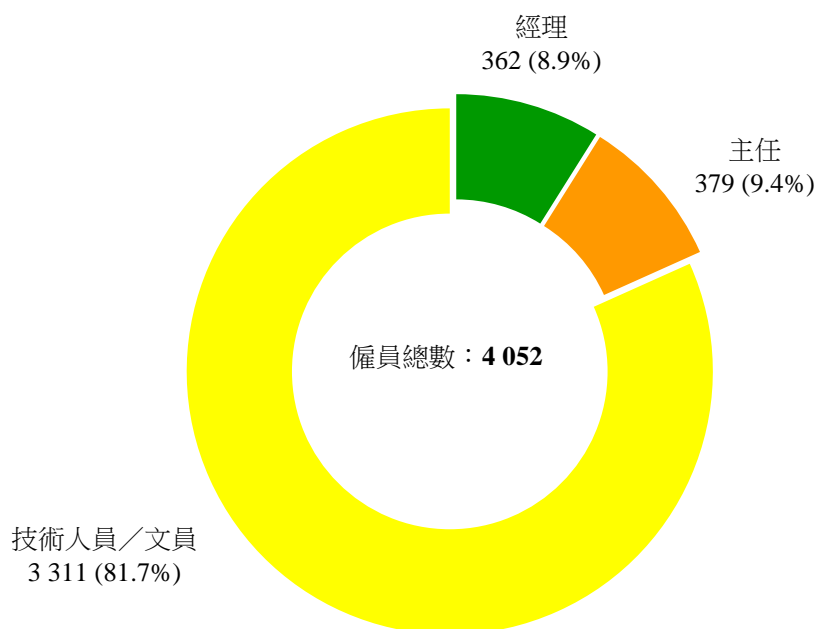
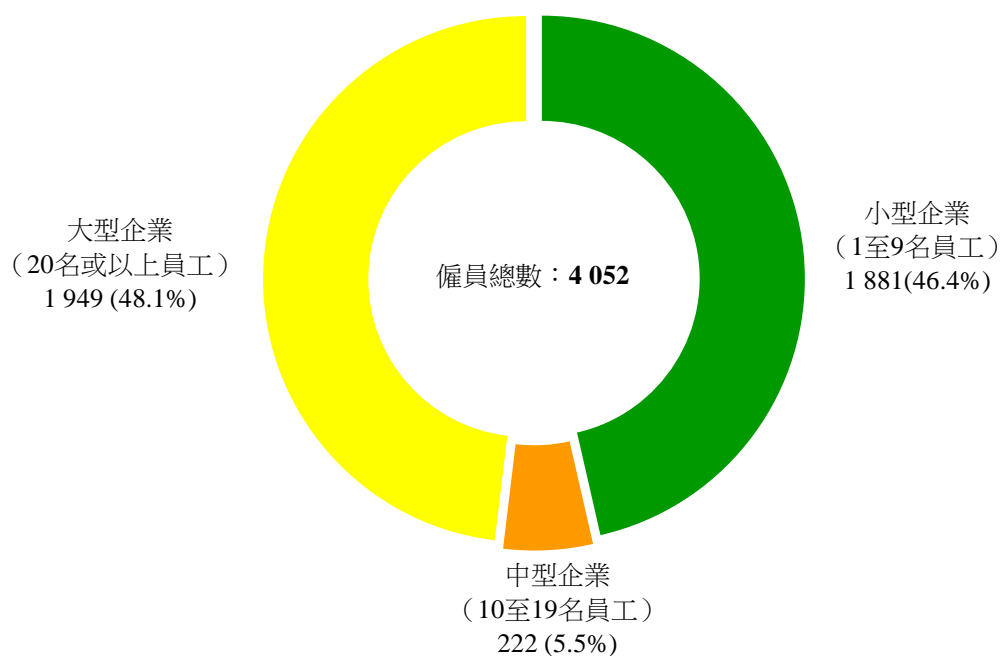
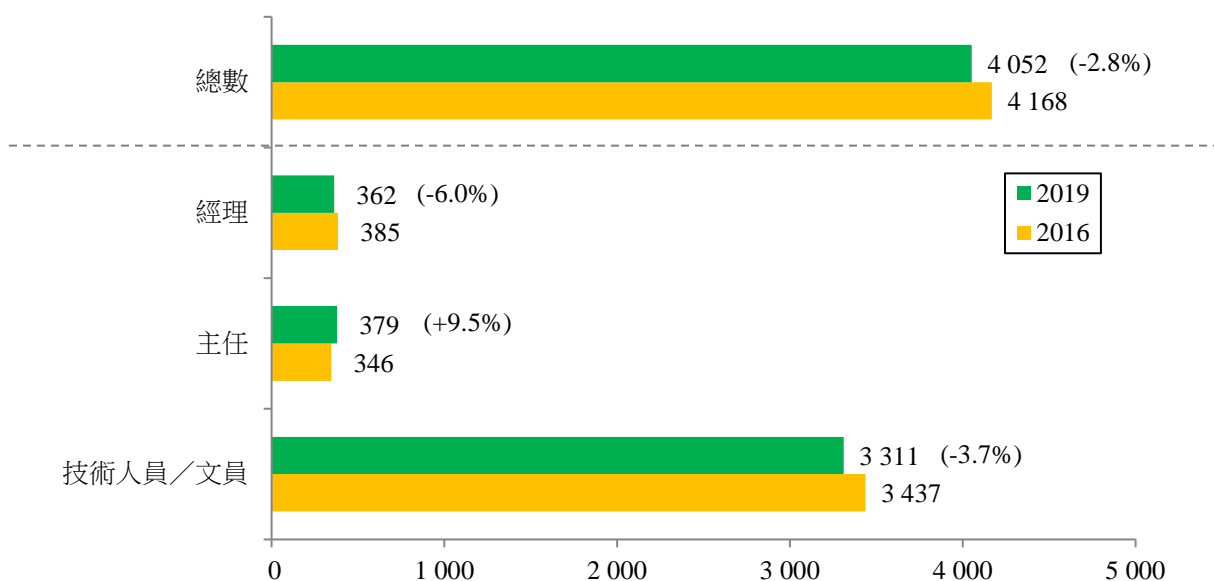


圖 3.18 按公司規模劃分的僱員人數分布 - 汽車／零件零售界別



3.25 與 2016 年數字相比，汽車／零件零售界別僱員總數下降 2.8%，按職級劃分的比較如圖 3.19 所示。

圖 3.19 2016 年和 2019 年的僱員人數比較 - 汽車／零件零售界別



3.26 表 3.10 列出在 2019 年調查中，每個職級之中僱員人數佔比最高的主要職位。

表 3.10 各職級中僱員最多的主要職位 - 汽車／零件零售界別

職級	僱員最多的主要職位	佔同級僱員總數百分比
經理	東主／獨資經營者／執行合夥董事	27.9%
	營業經理	26.2%
主任	店舖／分店營業主任	50.4%
	配件／物流／運輸／倉庫主任	23.2%
技術人員／文員	高級營業員／售貨員	52.2%

## 職位空缺數目

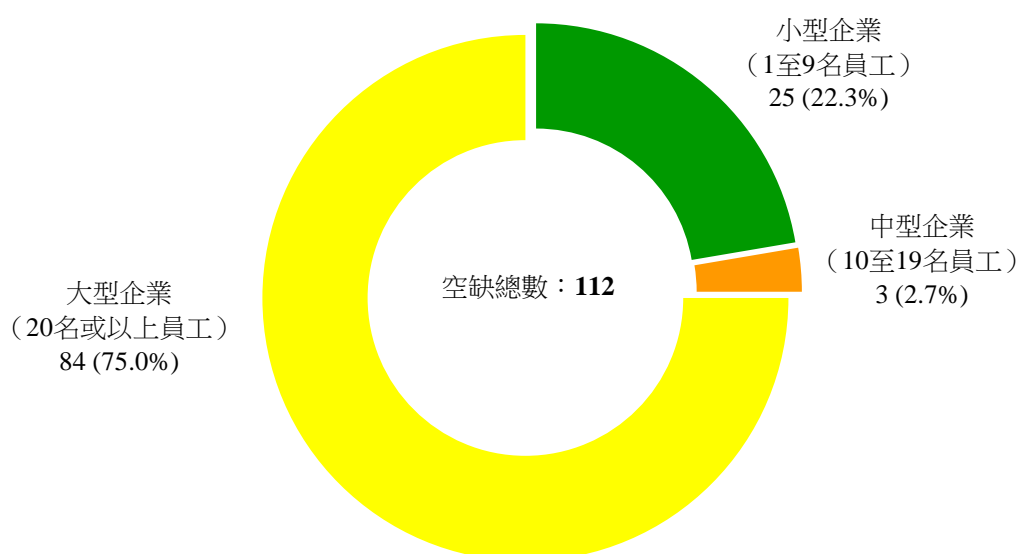
3.27 調查期間，汽車／零件零售界別填報共有 112 個職位空缺，約佔界別總人力的 2.7%，大多數空缺（105 個或 93.8%）屬於技術人員／文員職級。職位空缺的分布情況如表 3.11 所示。

表 3.11 汽車／零件零售界別按職級劃分的職位空缺數目分布

職級	僱員人數	空缺數目	空缺率 = $\frac{\text{空缺數目}}{\text{僱員人數} + \text{空缺數目}}$
經理	362	2	0.5%
主任	379	5	1.3%
技術人員／文員	3 311	105	3.1%
總數	4 052	112	2.7%

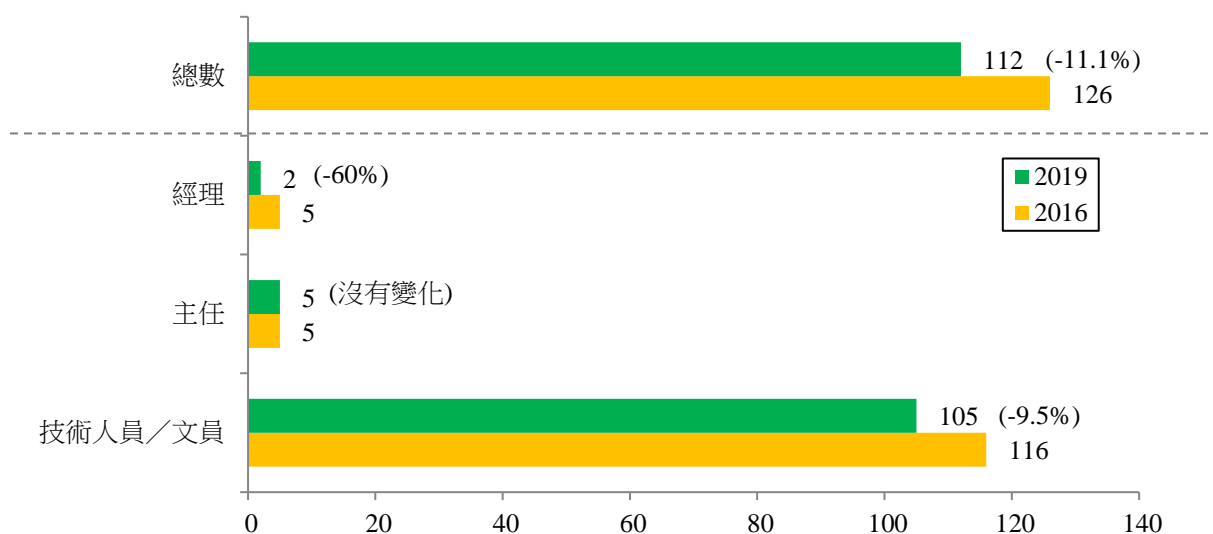
3.28 按公司規模劃分的職位空缺分布如圖 3.20 所示，調查發現四分之三的空缺由大型企業填報。

圖 3.20 按公司規模劃分職位空缺數目分布 - 汽車／零件零售界別



3.29 與 2016 年的調查數字相比，汽車／零件零售界別的整體職位空缺數目下跌 11.1%，如圖 3.21 所示。情況可能與過去三年汽車銷量放緩有關。

圖 3.21 2016 年與 2019 年職位空缺數目比較 - 汽車／零件零售界別



### 僱主預期人力需求

3.30 僱主預測 2020 年汽車／零件零售界別將有 4 165 名僱員。按職級劃分的僱員人數分布，如表 3.12 所示。

表 3.12 預測 2020 年的僱員人數 - 汽車／零件零售界別

職級	2019 年所需僱員人數 (包括空缺)	僱主預測 2020 年僱員 人數	上升／下降 百分比
經理	364	365	0.3%
主任	384	384	-
技術人員／文員	3 416	3 416	-
總數	4 164	4 165	-

## 僱員每月收入

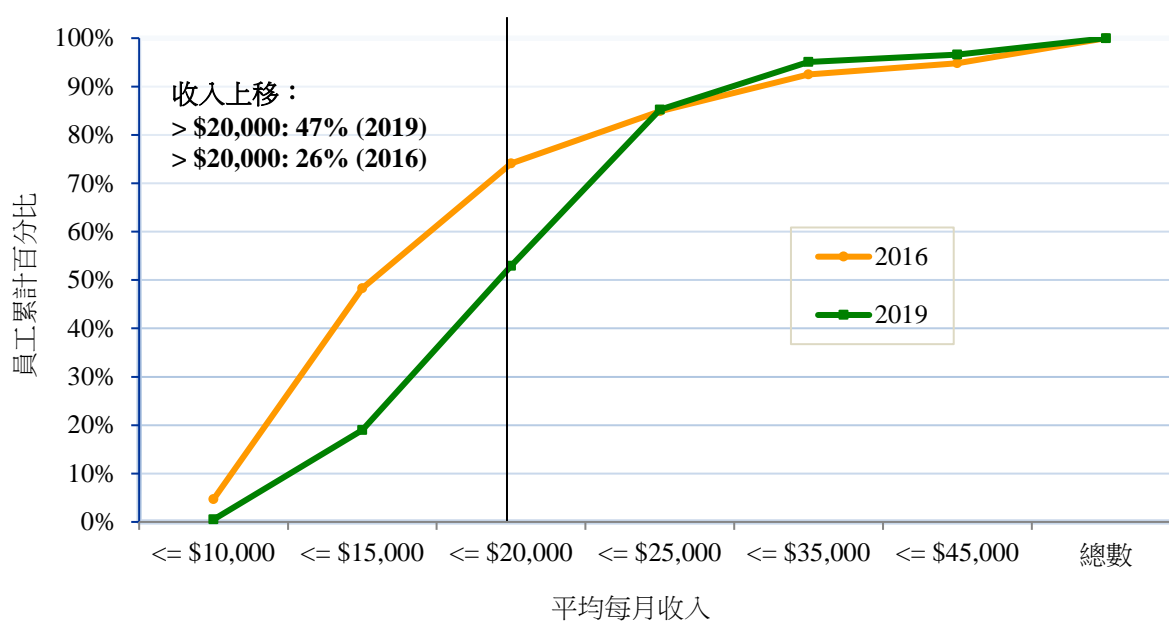
3.31 表 3.13 中詳細列出汽車／零件零售界別按職級劃分的僱員每月收入分布，而按主要職位劃分的收入分布則載於附錄 5 中的表四。

表 3.13 各職級僱員每月收入分布情況 - 汽車／零件零售界別

每月收入幅度	經理	主任	技術人員／文員	佔比
\$10,000 以下	-	-	0.6%	0.5%
\$10,001 - \$15,000	-	0.6%	22.4%	18.5%
\$15,001 - \$20,000	1.6%	11.9%	39.6%	33.8%
\$20,001 - \$25,000	8.2%	70.6%	30.8%	32.3%
\$25,001 - \$35,000	53.3%	15.6%	4.7%	9.9%
\$35,001 - \$45,000	18.0%	-	-	1.6%
\$45,000 以上	18.9%	1.3%	2.0%	3.4%

3.32 與 2016 年數字相比，僱員平均收入普遍向上調整。在汽車／零件零售界別，平均月入超過 20,000 元的僱員佔比，從 2016 年的 26% 增加至 2019 年的 47%（見圖 3.22）。

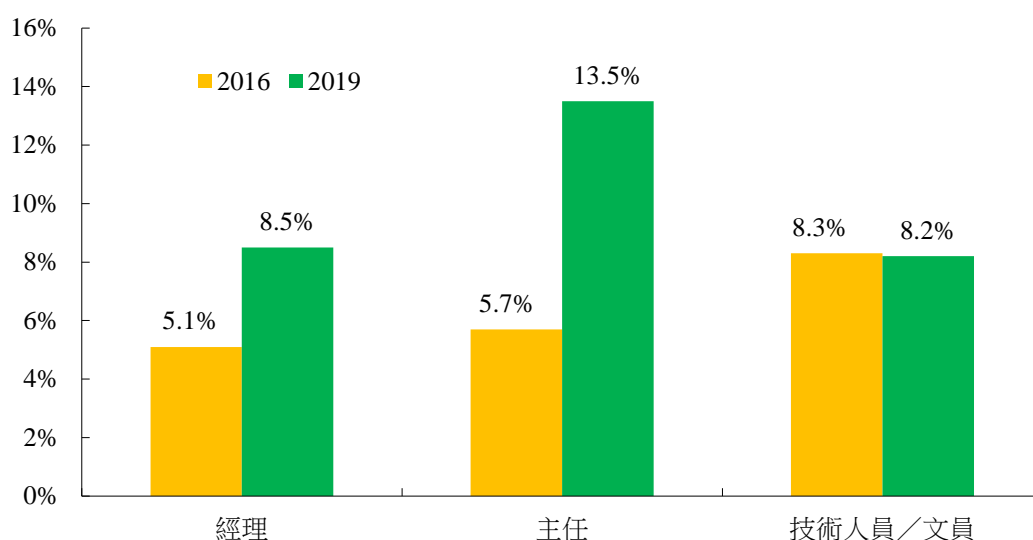
圖 3.22 汽車／零件零售界別僱員平均每月收入



## 僱員流失、招聘及退休

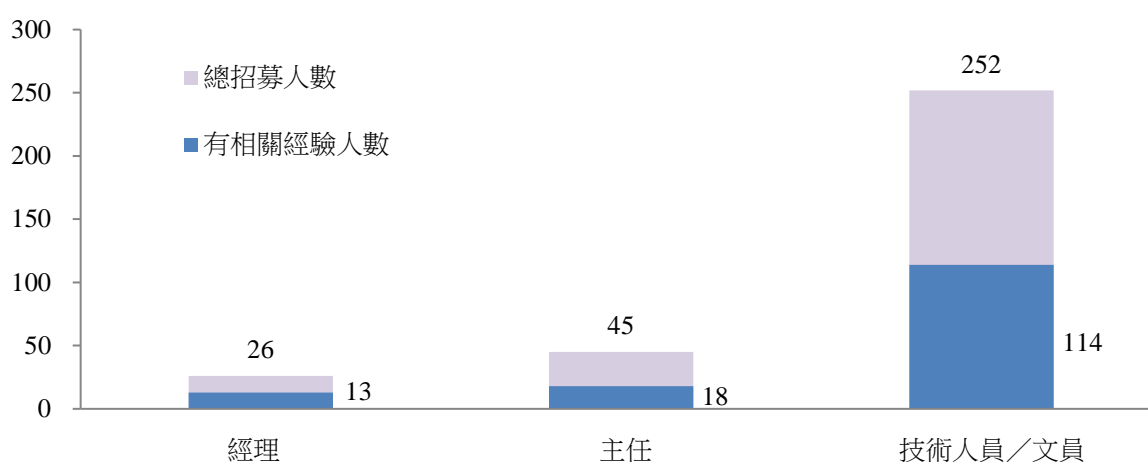
3.33 僱主填報，調查前 12 個月內汽車／零件零售界別共有 362 名僱員離職，其中以技術人員／文員職級僱員離職最多（279 人）。2016 年與 2019 年按職級劃分的僱員流動率比較見圖 3.23。

圖 3.23 僱員流動率 - 汽車／零件零售界別



3.34 另一方面，調查前 12 個月內汽車／零件零售界別共招募 323 名新僱員，當中 145 人具有相關工作經驗。按職級劃分的招募人數分布如圖 3.24 所示。

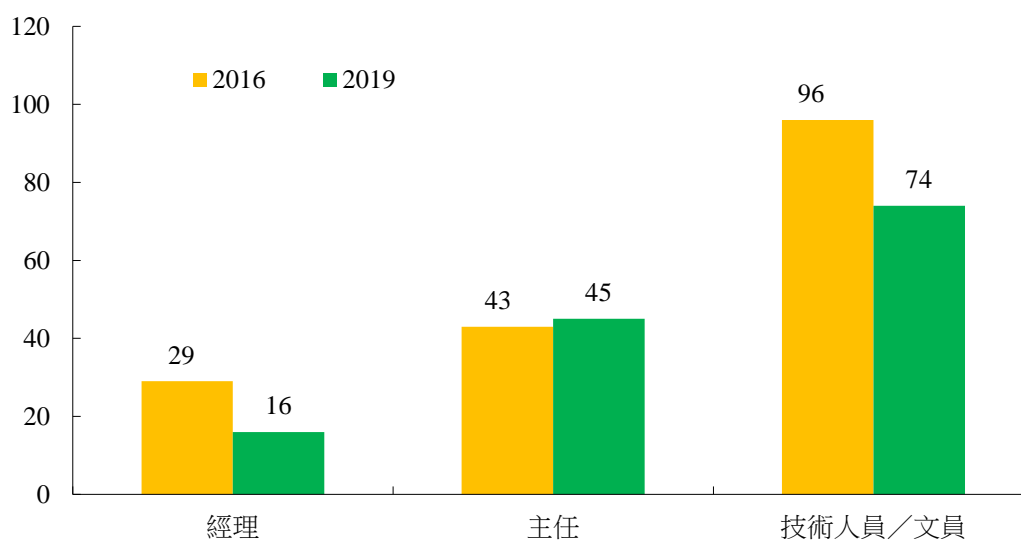
圖 3.24 調查前 12 個月內的僱員招募人數 - 汽車／零件零售界別



3.35 根據汽車／零件零售界別僱主估計，未來五年內將有 135 名僱員退休。按職級劃分的退休人數分布如圖 3.25 所示（2016 年收集到的數字亦列出作比較）。



圖 3.25 預計未來五年內退休的僱員人數 - 汽車／零件零售界別



3.36 根據僱主估計數字，表 3.14 列出不同職級僱員的平均每年退休率。

表 3.14 預計平均每年退休率 - 汽車／零件零售界別

職級	調查時僱員人數 (a)	估計未來五年內 退休人數(b)	平均每年退休率 $= \frac{(b)}{5 * (a)} * 100\%$
經理	362	16	0.9%
主任	379	45	2.4%
技術人員／文員	3 311	74	0.4%
總數	4 052	135	0.7%

3.37 與汽車維修界別情況相似，調查發現汽車／零件零售界別未來五年內將退休的員工之中，絕大多數（99%）在大型企業（20 名或以上員工）服務。

### 宜有教育程度及年資

3.38 有關經理級員工的教育程度要求，僱主認為 55%至 60%僱員宜有學士學位或以上學歷，40%至 45%僱員具備副學位程度即可；至於主任級別，僱主認為 31%至 64%僱員宜有文憑或證書學歷；超過 80%技術人員／文員擁有中學或以下的學歷便足夠（表 3.15）。

表 3.15 汽車／零件零售界別僱主意見：僱員宜有教育程度

教育程度	汽車零售	零件零售
經理		
學士學位或以上	55%	60%
副學位	45%	40%
主任		
學士學位或以上	35%	14%
副學位	16%	2%
文憑或證書	31%	64%
中四至中七	18%	20%
技術人員／文員		
副學位	12%	-
文憑或證書	4%	7%
中四至中七	84%	88%
中三或以下	-	5%

3.39 有關宜有年資，僱主認為所有經理級僱員宜有六年或以上的相關經驗；76%至 90%主任級僱員宜有三至六年相關經驗。至於技術人員／文員職級，僱主表示 45%至 63%僱員只需要一至三年相關經驗；22%至 52%僱員則需具有三至六年相關經驗才足夠（表 3.16）。

表 3.16 汽車／零件零售界別僱主意見：僱員宜有年資

宜有年資	汽車零售	零件零售
經理		
六年或以上	100%	100%
主任		
三年至六年以下	90%	76%
技術人員／文員		
一年至三年以下	45%	63%
三年至六年以下	52%	22%

### 前線銷售人員培訓需求

3.40 是次調查提出六項訓練範疇，邀請僱主評估各範疇對汽車／零件零售界別前線銷售人員的重要性。當中「客戶服務」和「銷售技巧」被普遍認為是最重要的兩個範疇（表 3.17）。

表 3.17 汽車／零件零售界別前線銷售人員培訓需求

訓練範疇	獲評為「十分重要」或「重要」百分比
(1) 客戶服務	98%
(2) 銷售技巧	97%
(3) 基礎汽車原理	91%
(4) 英語、普通話	66%
(5) 汽車保險、財務	63%
(6) 汽車車身處理	61%

## D. 統計表

3.41 汽車業各界別、技能等級（或職級）及主要職務的詳細人力統計數字，包括僱員人數、受訓者人數、職位空缺，以及僱主估計 2020 年的僱員及受訓者人數，分別載於附錄 5 中的表一及表二。

## IV. 觀察及結論

4.1 本會經仔細審閱調查結果後，認為所得資料大致能反映調查期間汽車業的就業情況。

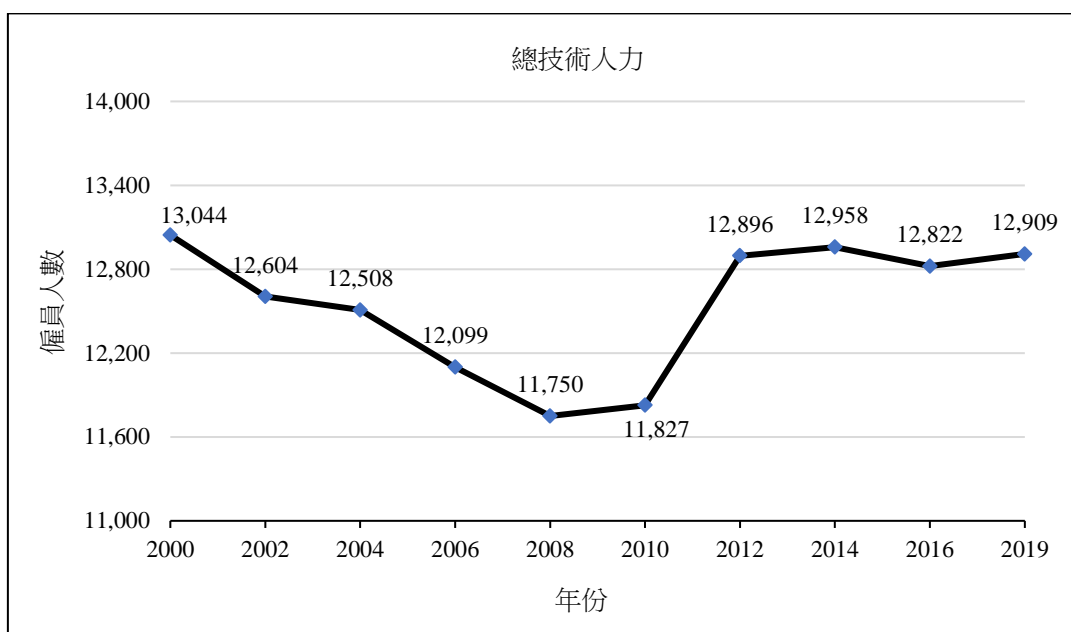
### A. 汽車維修界別

#### 人力變化

4.2 本港過去 41 年（即由 1978 年至 2019 年 3 月調查開始前）車輛數目與汽車維修界別總人力的比較見附錄 6。期間，領牌車輛總數增加 3.67 倍（由 1978 年 214 507 輛增至 2019 年 787 595 輛），但汽車維修界別人力卻僅增長 29%（由 1978 年 9 984 名增至 2019 年 12 909 名）。此現象是由於新款汽車的可靠性不斷提升；而現今汽車維修方式由零件層面，轉變至子系統及模組層面，也可能是箇中原因。

4.3 圖 4.1 比對今次與過去九次人力調查中，汽車維修界別的總技術人力變化，而附錄 7 則顯示同期汽車維修界別各技能等級人力分布情況。2010 年調查範圍首次擴大至涵蓋「汽車／零件零售界別」。由於該界別聘用大量清潔工及加滑油工，以致所錄得的「非技術工人」級人力突然飆升。2012 年調查新增五個主要職務（輪胎工、電池工、更換機油工、車輛配件工、汽車美容工），亦令所錄得的專項服務級人力大幅增加。在 2019 年，調查新增非技術工人級別的主要職位「客戶服務大使／助理」，並錄得 113 名僱員。若排除上述因素，汽車維修界別的總人力，其實正處於溫和下降趨勢。

圖 4.1 汽車維修界別的總技術人力

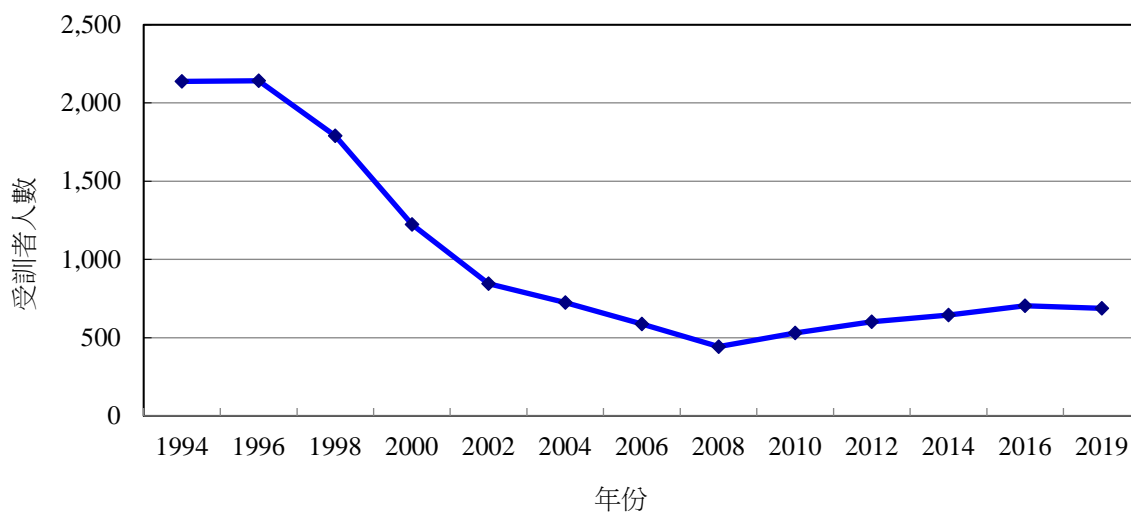


4.4 汽車維修界別的僱員及受訓者人數與本地經濟息息相關。表 4.1 及圖 4.2 顯示，汽車維修界別所聘請的受訓者人數自 1998 年起人數持續下滑後，由 2008 年開始出現逐漸回升跡象。

表 4.1 汽車維修界別受訓者人數

調查年份	僱員總人數 (a)	受訓者人數 (b)	受訓者所佔 僱員百分比 $= \frac{(b)}{(a) + (b)} * 100\%$
1994	11 225	2 139	16.0%
1996	13 888	2 142	13.4%
1998	13 366	1 791	11.8%
2000	13 044	1 223	8.6%
2002	12 604	846	6.3%
2004	12 508	725	5.5%
2006	12 099	588	4.6%
2008	11 750	443	3.6%
2010	11 827	531	4.3%
2012	12 896	602	4.5%
2014	12 958	645	4.7%
2016	12 822	704	5.2%
2019	12 909	688	5.1%

圖 4.2 汽車維修界別受訓者人數

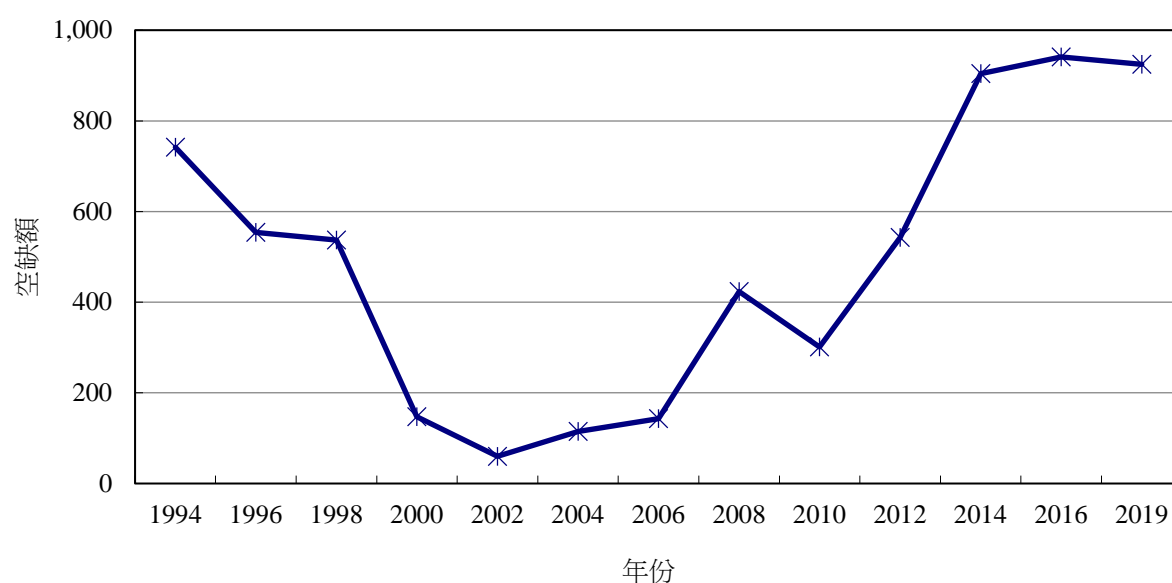


4.5 如表 4.2 及圖 4.3 中所示，自千禧年代中期本地經濟復蘇以來，汽車維修界別的空缺數目持續攀升，遠超受訓者人數的增速。直至 2019 年調查時，空缺率已升至 6.7%。

表 4.2 汽車維修界別按技能等級空缺額分布

調查年份	專業人士／技師	技術員	技術人員／技工	空缺總額 <sup>1</sup>
1994	5	44	672	742
1996	3	39	489	554
1998	6	34	405	537
2000	5	14	94	147
2002	0	7	53	60
2004	0	1	109	115
2006	2	15	119	143
2008	3	7	351	423
2010	1	20	248	301
2012	5	21	355	543
2014	3	77	530	904
2016	4	75	659	941
2019	9	97	660	925

圖 4.3 汽車維修界別空缺總額



<sup>1</sup> 包括專項服務及非技術工人

## 行業前景

4.6 本會對汽車維修界別的前景感樂觀。香港汽車的數量持續增長，即使由於本地經濟的各種不明朗因素，增速近年來有所放緩，但道路上仍有大量車輛需要熟練人手進行維修工作。

4.7 與此同時，本會認為影響界別增長的主因如下：

- (a) 為滿足政府規定的低排放要求，並為車主提供先進的駕駛輔助功能，新款汽車均採用先進電子設備和嶄新資訊科技；而且以電動車取代傳統柴油／汽油車的趨勢將進一步加快。也就是說，傳統機械工的需求將逐漸減少，而要求新技能的工種，例如專門維修電動車和混能車電器系統的技工，需求將與日俱增。
- (b) 由於租金高企，而且為滿足法規和技術要求需要投放龐大資金，再加上投身業界的新血不足，估計部分中小型車房將合併或結業。因此，汽車維修界別的整體人力亦將逐漸遞減。
- (c) 隨著2018年10月港珠澳大橋通車，以及內地及香港特區政府計劃促進粵港澳大灣區一體化和更緊密經貿合作，預計未來將有更多車輛來往香港和內地之間，並將為本地汽車維修界別帶來挑戰（例如須與內地汽車維修商競爭）及機遇（例如刺激本地汽車銷量、製造更多車輛檢驗的工作）。
- (d) 許多汽車業持份者均希望現行的「車輛維修技工自願註冊計劃」及「車輛維修工場自願註冊計劃」在將來能轉為強制性。業界相信強制註冊有助提升業內專業水平，從而吸引年青人入行；並可優化車輛維修工場的服務質素，減少不良競爭，確保僱員收入穩定。

## 未來人力和培訓需求

4.8 根據過往幾次的人力調查做法，本會決定採用「調節過濾法」（即 AFM，請參閱附錄 8 了解詳情）預測 2020 年至 2023 年汽車維修界別的人力狀況。

4.9 根據 1994 年至 2019 年的人力調查結果，本會選擇最佳擬合曲線（圖 4.4 至圖 4.7）來預測 2020 年至 2023 年的技師、技術員、技工、專項服務的人力狀況。估計數字見表 4.3。

圖 4.4 技師人力推算（汽車維修界別）

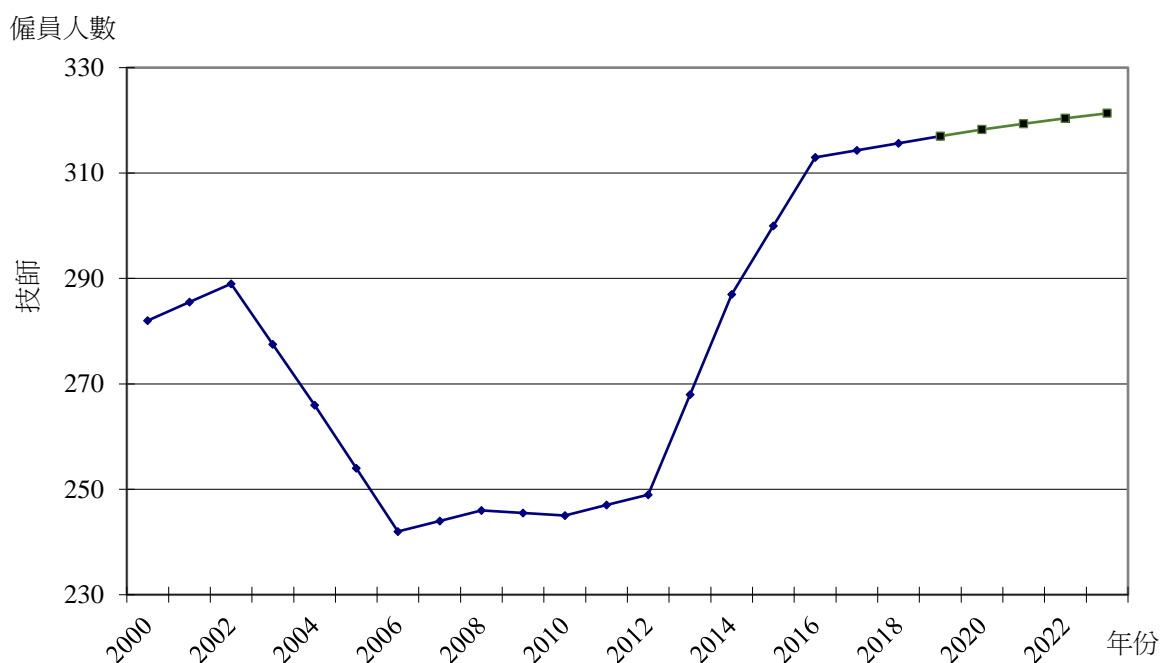




圖 4.5 技術員人力推算（汽車維修界別）

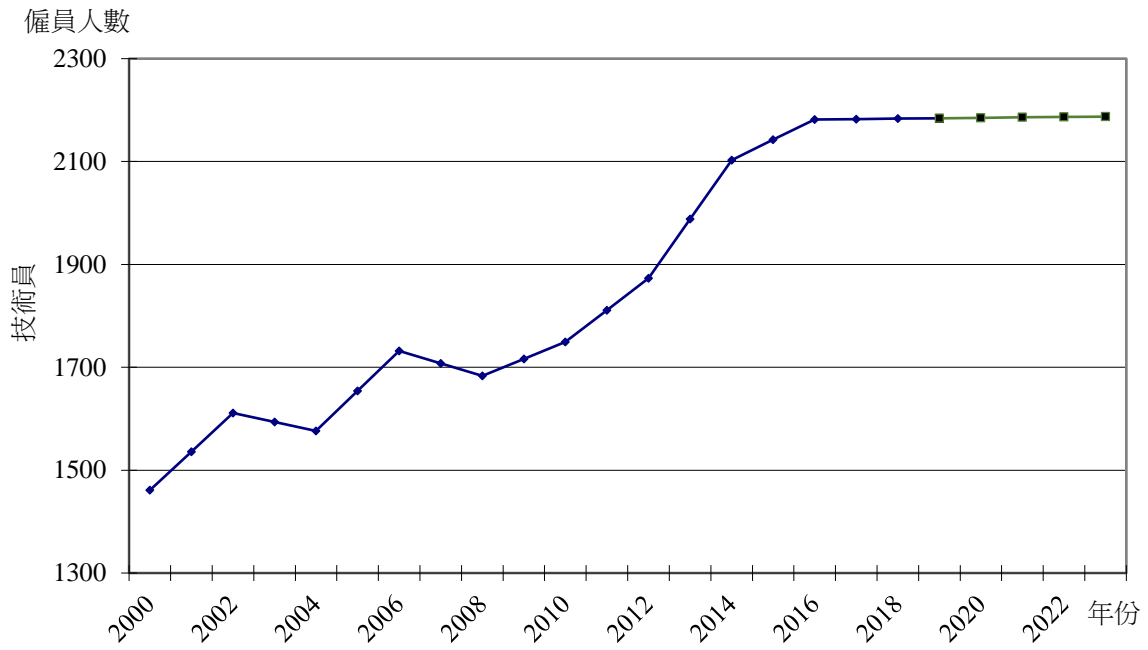


圖 4.6 技工人力推算（汽車維修界別）

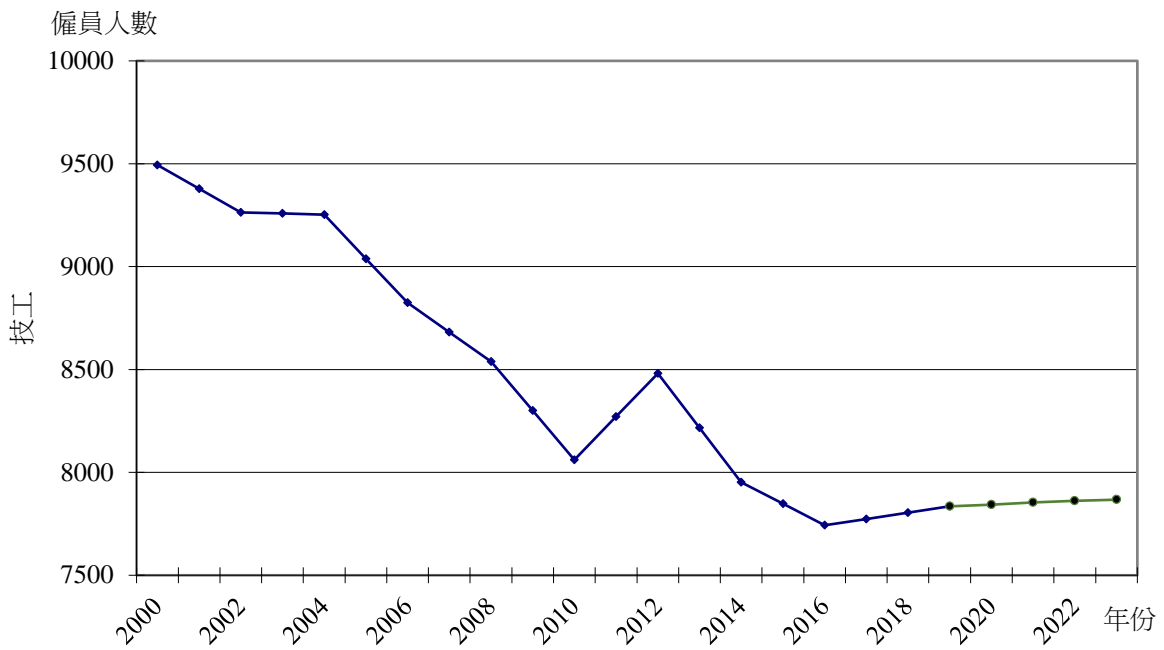


圖 4.7 專項服務人力推算（汽車維修界別）

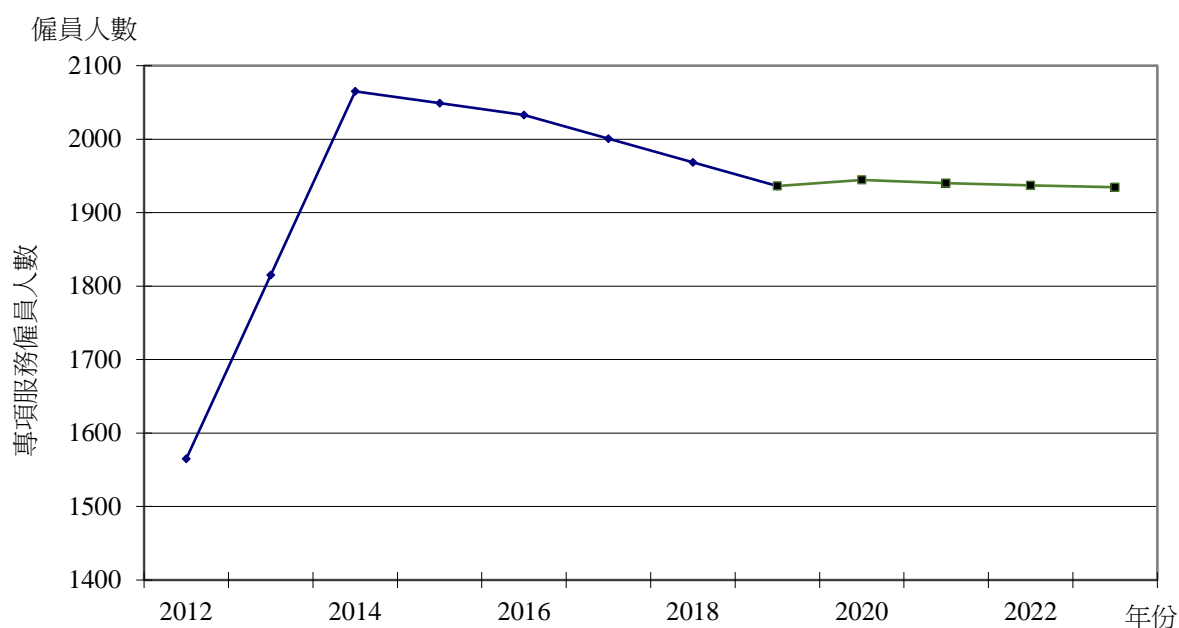


表 4.3 2020 至 2023 年汽車維修界別人力推算

年份	技師	技術員	技工	專項服務	總數
2019	317	2 184	7 835	1 936	12 272
2020	318	2 185	7 843	1 944	12 290
2021	319	2 186	7 853	1 940	12 298
2022	320	2 187	7 861	1 937	12 305
2023	321	2 187	7 867	1 935	12 310

4.10 在預計汽車維修界別因「僱員流失」而損失的人力（即僱員因各類原因離開本界別）方面，本會考慮到員工老化及新入職僱員的挽留率等因素後，決定繼續把技師、技術員及技工級的每年流失率分別定為 3%、4% 及 5%。

4.11 本會根據 AFM 推算的人力增長數字，加上補充流失人手所需的人數後，得出未來四年汽車維修界別各技能等級每年平均需培訓的僱員人數，見表 4.4。

表 4.4 2020 年至 2023 年間汽車維修界別每年平均需培訓僱員人數

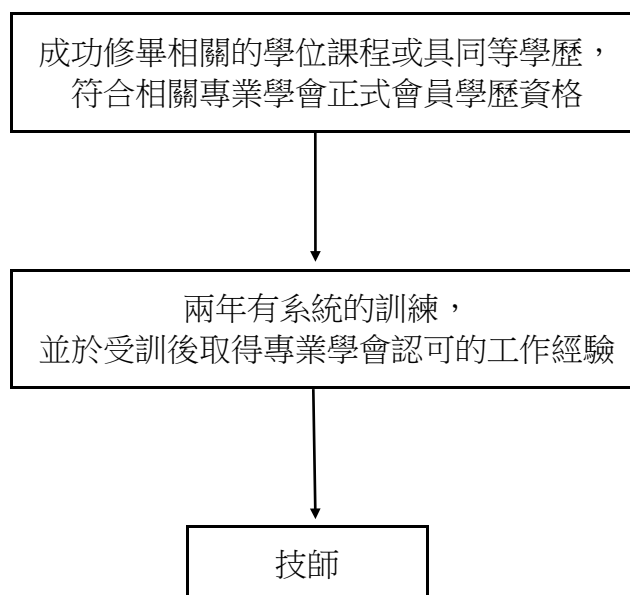
技能等級	調查時僱員人數	每年需培訓人數
技師	317	11
技術員	2 184	88
技工	7 835	401

### 技師級人力供應

4.12 汽車行業的技師通常擔任工程師和維修部經理職務，具備機械工程或道路交通工程的專業能力，獲專業學會認可。

4.13 技師應具備分析和解決各種技術問題的能力，能夠獨立發展和應用工程學原理，並須具創見和判斷力，運用最新的科技知識執行工作，及管理各種商業和技術職務。技師的訓練途徑建議見圖 4.8。

圖 4.8 技師訓練

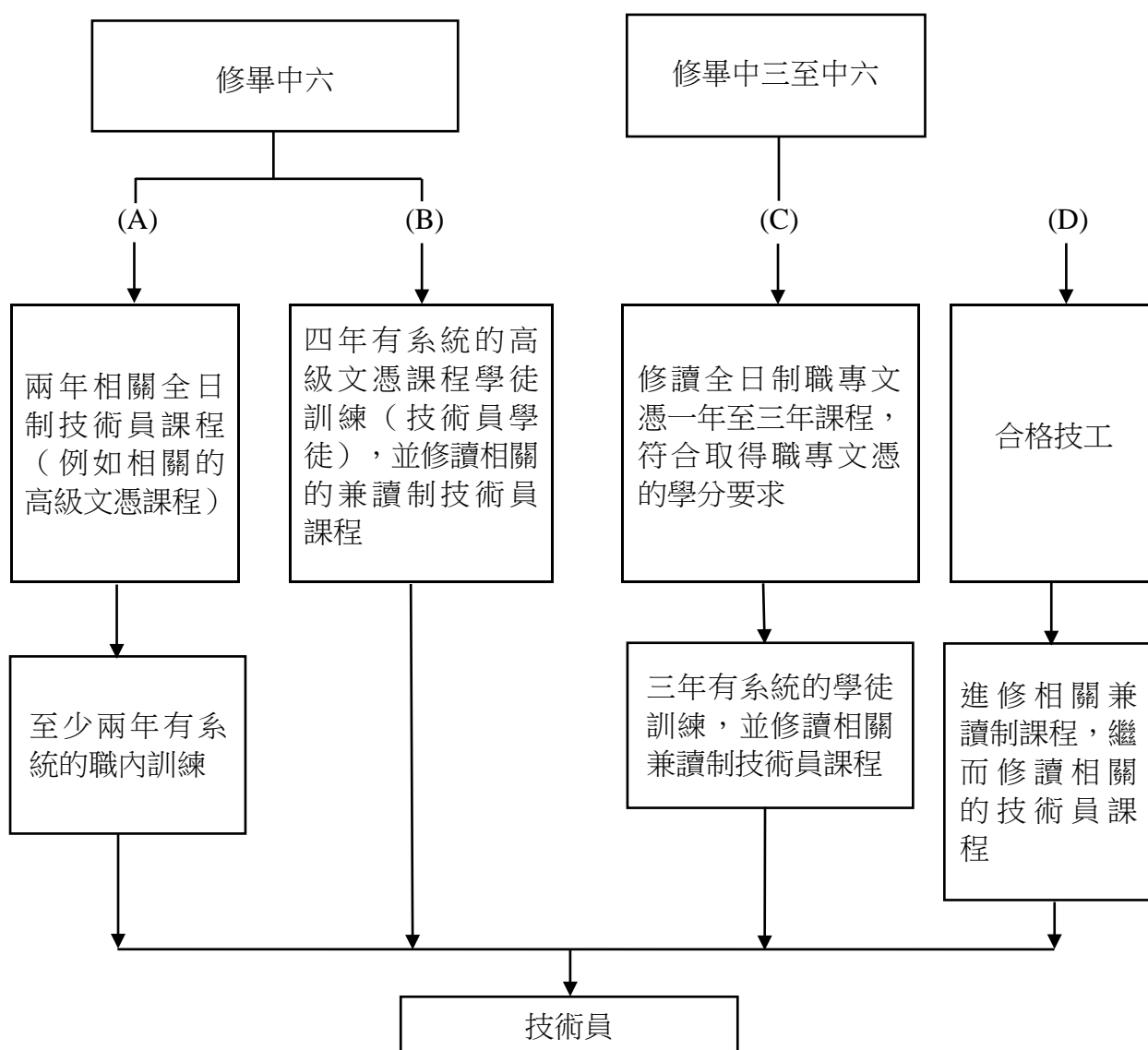


4.14 本地大學並沒有開辦汽車工程學學位課程，但機械工程學工學士學位或相關課程的畢業生，亦符合擔任汽車業見習技師的學歷要求。此外，部分僱主選擇以內部晉升填補空缺。由於據第 4.11 段所載每年需要訓練的技師人手不多（11 人），故本會認為未來幾年的人手供應充裕。

### 技術員級人力供應

4.15 技術員須具備一定教育水平、實務訓練及工作經驗，一般能夠在技師督導下，運用已確立的技術及程序執行技術任務。技術員的訓練途徑建議見圖 4.9。

圖 4.9 技術員訓練



4.16 香港專業教育學院（IVE）開辦汽車工程高級文憑課程，分為全日制（即途徑 A）及兼讀制夜間課程（即途徑 C 及 D）。

4.17 經考慮近兩年的就業數據後，本會估計從 2020 年至 2023 年，每年將有大約 30 名全日制畢業生加入汽車業。與第 4.11 段中所載的年度培訓需求（88 人）相比，單靠途徑 A 的人力供應明顯不足以滿足需求。人力差額可以由途徑 C（即技術員學徒）和途徑 D（即技工透過內部晉升至技術員）以及招聘其他相關課程的畢業生（如機械工程高級文憑）來填補。

4.18 為吸引更多中學生報讀汽車工程高級文憑課程，IVE 從 2017/18 學年開始於該課程中加設商務學習分流，旨在栽培學生從事與汽車商務相關的職位，例如維修服務員和車輛銷售員等。

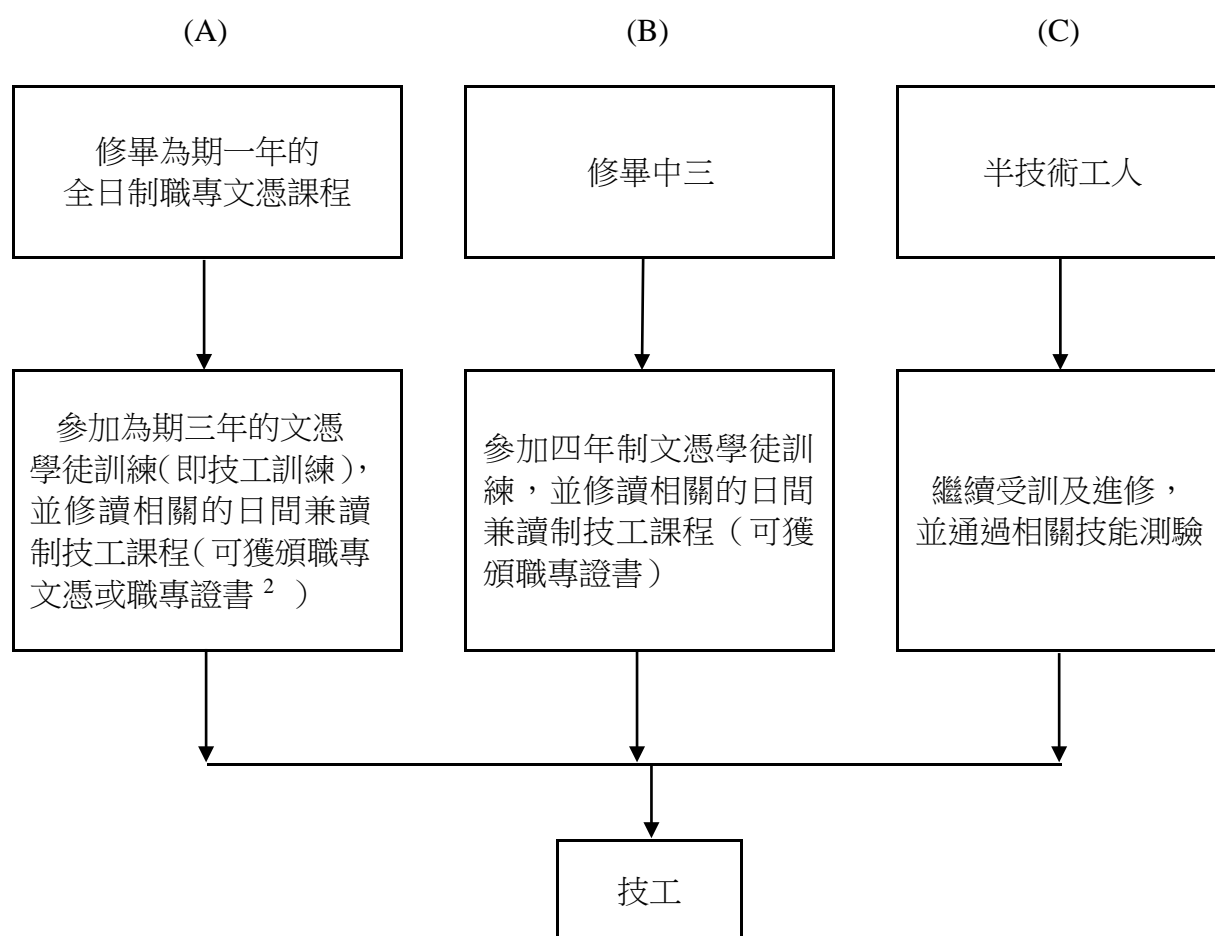
### **技工級人力供應**

4.19 技工須精於實務，並具備相當的技術知識，方能配合最新汽車科技發展，學習新技能。技工最少需具備中三程度。技工的訓練途徑建議見圖 4.10。

4.20 三個訓練途徑中，本會推薦途徑 A，因為參加者已接受過基本訓練，故在學徒訓練開始時即可擔任工作。

4.21 職業訓練局轄下的青年學院及卓越培訓發展中心（汽車業）開辦全日制職專文憑（汽車科技）課程，供中三及中六的結業學生修讀。本會參考近兩個學年的就業轉介數字，估計 2020 年至 2023 年間，每年約有 160 名畢業生經途徑 A 投身汽車業，當中大部分（超過 80%）為完成中三並已修畢一年職專文憑課程的學生。除了職專文憑學生外，僱主也會聘用從未接受過任何正規車輛維修訓練的年青人成為四年制文憑學徒（即途徑 B）。

圖 4.10 技工訓練



4.22 參考 2017/18 和 2018/19 學年的數字，每年平均新註冊的文憑學徒共 255 人（即途徑 A + 途徑 B），佔培訓需求的 64%（401 人，如第 4.11 段所載）。技工供應短缺情況已經持續十多年，也是導致汽車維修界別人力萎縮的主因。面對人手短缺問題，當中最受打擊的是中小型車房，尤其以維修商業車輛為主的車房，由於地點、工作環境和培訓機會均較難吸引年青人加入。

<sup>2</sup> 2016 年前，職專證書稱為技工證書。

## B. 汽車／零件零售界別

### 人力變化

4.23 自 2010 年起，汽車業人力調查開始涵蓋汽車／零件零售界別。表 4.5 和圖 4.11 顯示，過去的人力資源相對穩定，但在最近兩次調查則發現人力有逐漸下降現象，在空缺數目中也呈現類似走勢。表 4.6 和圖 4.12 反映 2019 年的空缺率跌至 2.7%。

表 4.5 汽車／零件零售界別人力分布

調查年份	經理	主任	技術人員／文員	總數
2010	276	546	3 026	3 848
2012	236	521	3 136	3 893
2014	296	443	3 471	4 210
2016	385	346	3 437	4 168
2019	362	379	3 311	4 052

圖 4.11 汽車／零件零售界別總人力變化

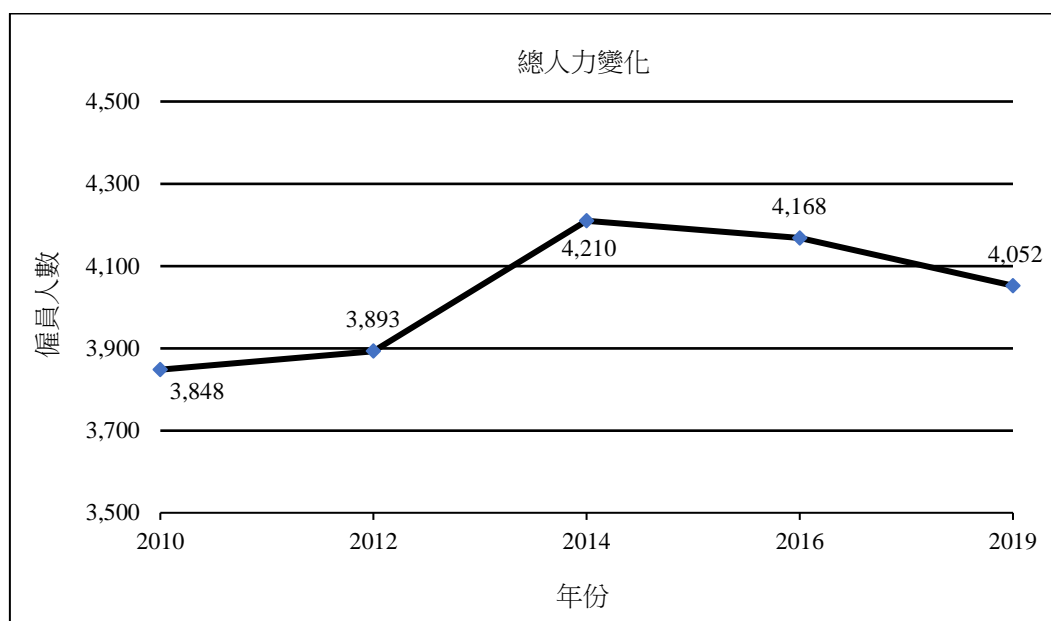
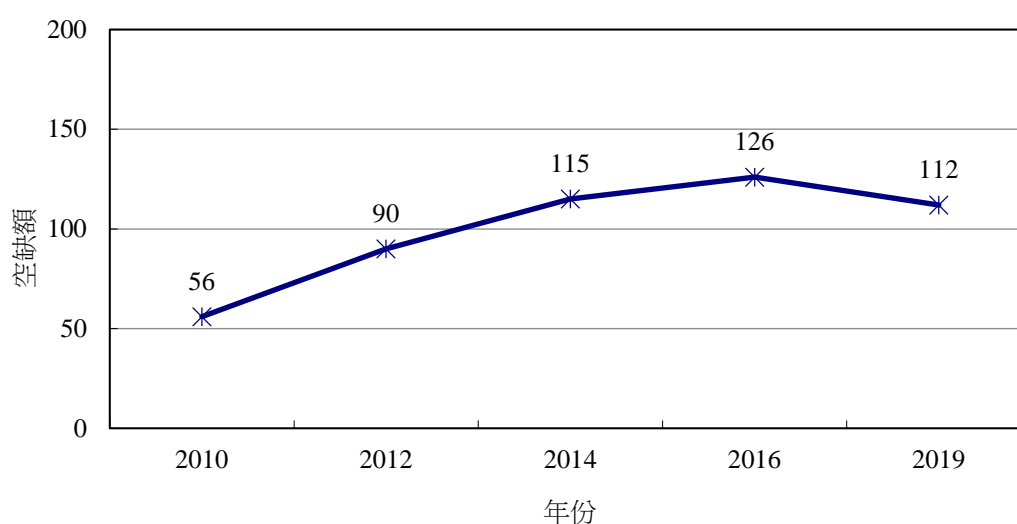


表 4.6 汽車／零件零售界別按職級空缺額分布

調查年份	經理	主任	技術人員／文員	空缺總額
2010	0	0	56	56
2012	1	2	87	90
2014	0	3	112	115
2016	5	5	116	126
2019	2	5	105	112

圖 4.12 汽車／零件零售界別空缺總額

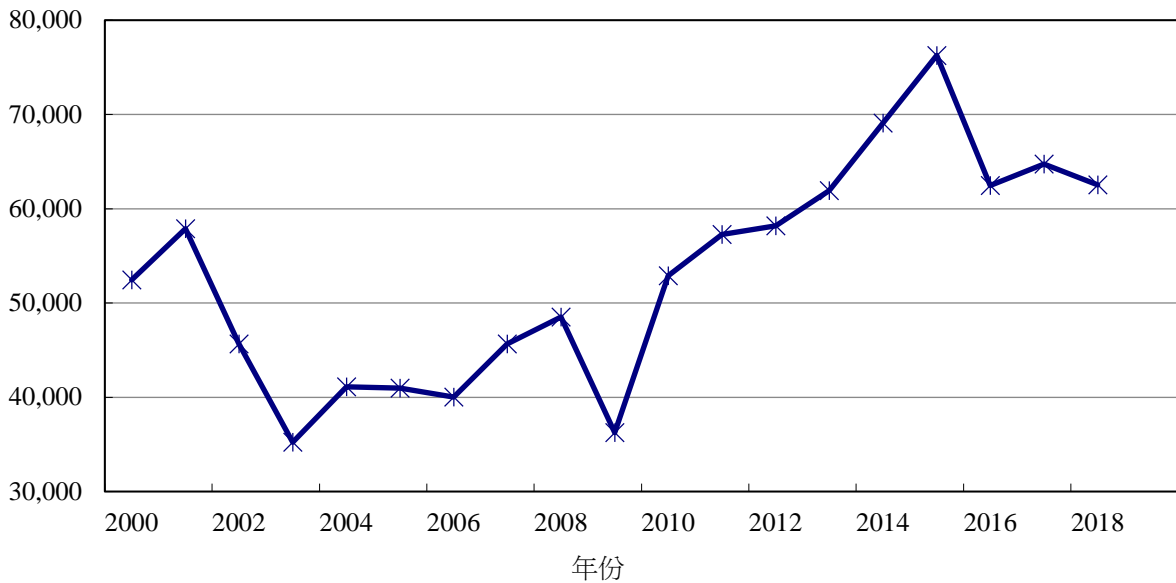


### 行業前景

4.24 由 2000 年至 2018 年每年新登記的車輛數目如圖 4.13 所示，該數字多少反映汽車／零件零售界別多年來的生意狀況。由 2009 年至 2015 年，汽車銷量急劇增長，主要是由於失業率低和低息環境所致。不過近年汽車銷量增長已有所放緩，例如 2019 年首六個月的新登記車輛數目，較 2018 年同期下跌 7.1%。原因與港鐵網絡擴大、泊車位供應不足，以及經濟的不確定性有關。



圖 4.13 每年新登記車輛數目



4.25 由於中美貿易摩擦和香港政治動盪的影響，預計 2019 年下半年及其後，本港經濟面臨的下行壓力將與日俱增。在未來幾年，汽車／零件零售界別的經營環境無疑十分嚴峻。若政府推出新優惠計劃或加強現有計劃，以鼓勵車主更換較環保的車型，界別面臨的暗淡市況或有望可局部紓緩。

#### 未來人力和培訓需求

4.26 由於歷史數據不足，在過去幾次人力調查中，本會單純採用僱主對汽車／零件零售界別未來一年的人力預測作分析。今年考慮到已累積五次調查數據（即 2010 年、2012 年、2014 年、2016 年和 2019 年），本會決定採用「調節過濾法」（即 AFM）推算 2020 年至 2023 年汽車／零件零售界別的人力狀況。按不同職級的人力推算如圖 4.14 至圖 4.16 所示，表 4.7 則列出有關數字。

圖 4.14 經理級人力推算（汽車／零件零售界別）

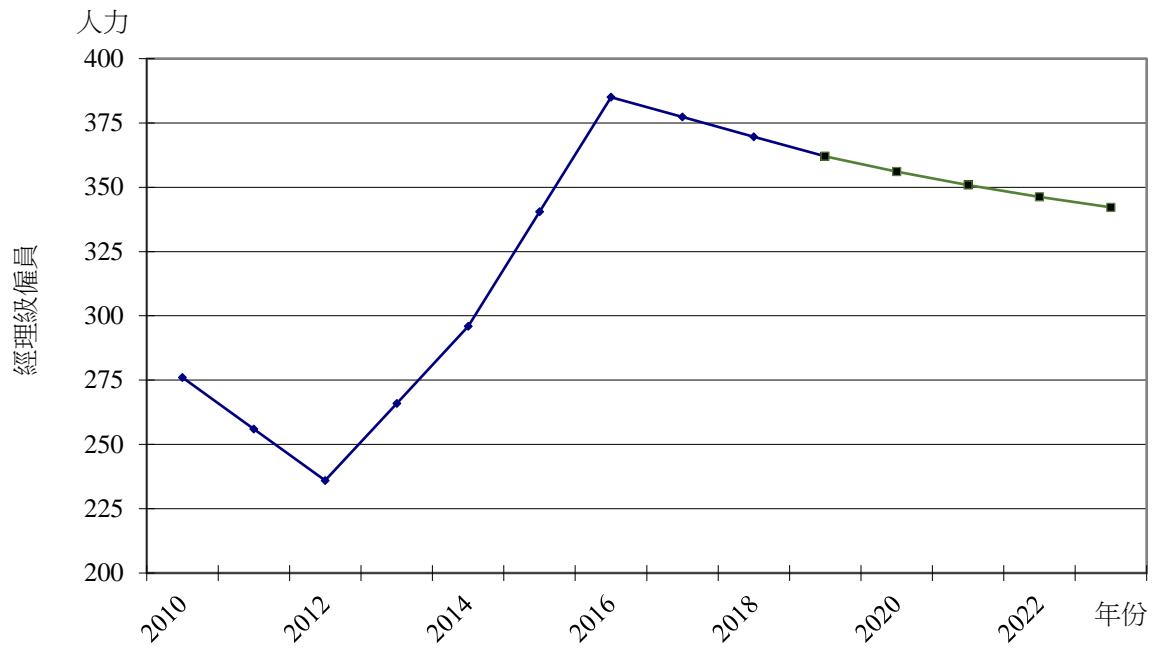


圖 4.15 主任級人力推算（汽車／零件零售界別）

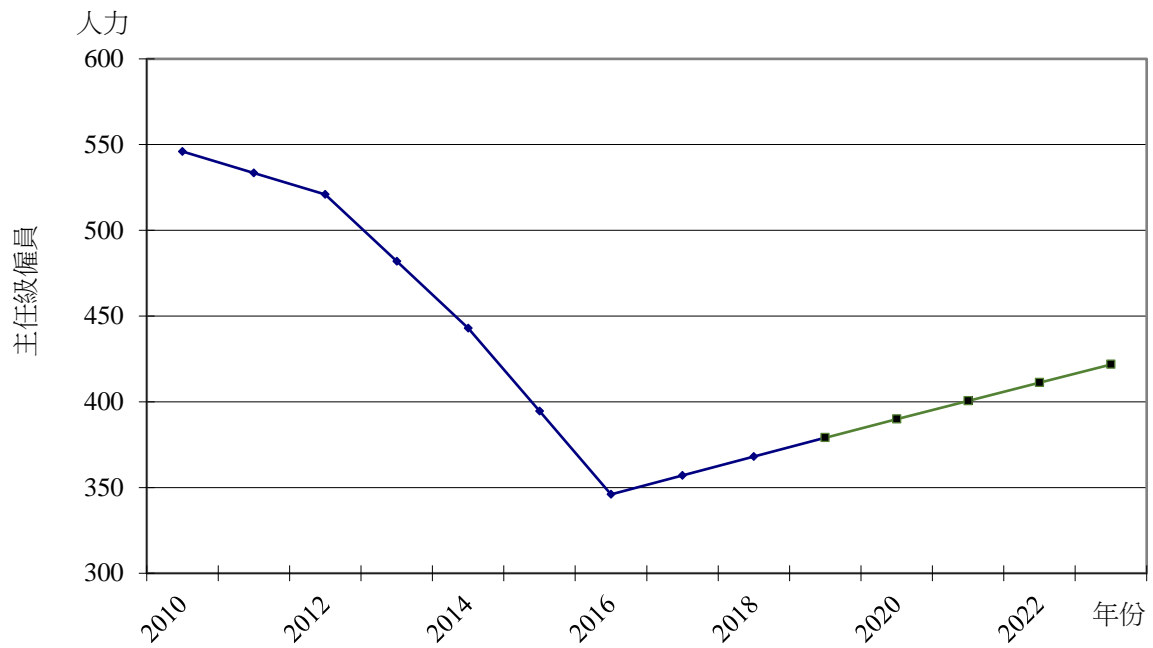


圖 4.16 技術人員／文員級人力推算（汽車／零件零售界別）

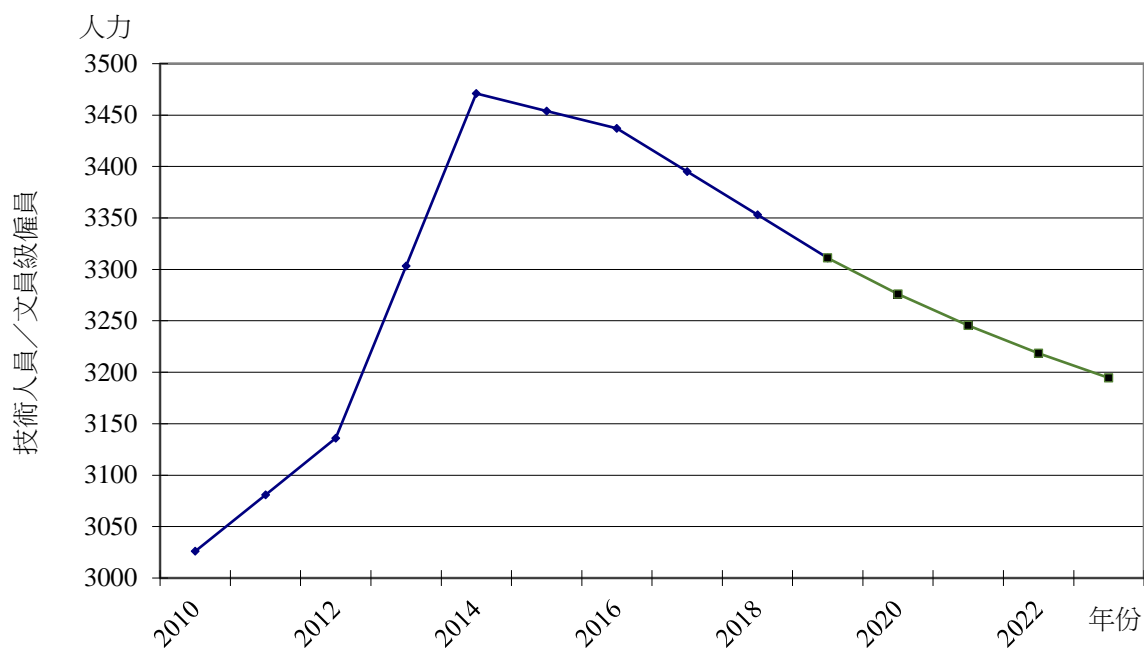


表 4.7 2020 至 2023 年汽車／零件零售界別人力推算

年份	經理	主任	技術人員／文員
2019	362	379	3 311
2020	356	390	3 276
2021	351	401	3 245
2022	346	411	3 218
2023	342	422	3 195

4.27 本會根據人力推算和 3% 的自然流失率，計算汽車／零件零售界別 2020 至 2023 年的每年平均培訓需求，並列於表 4.8。

表 4.8 2020 年至 2023 年間汽車／零件零售界別  
每年平均需培訓僱員人數

職級	調查時僱員人數	每年需培訓人數
經理	362	6
主任	379	23
技術人員／文員	3 311	69

## V. 建議

### A. 投放資源培育人才

5.1 有鑑於本港的汽車數目龐大，而且增長不斷，本會預計汽車業對人力的需求將持續。為滿足預計的人力需求，建議業界推行如第 4.11 及 4.27 段所述的培訓計劃。

5.2 籲請業界僱主規劃人力時留意，汽車維修界別每年平均需招聘的受訓者人數，分別約為現時技師、技術員及技工級人數的 3.4%、4.0% 及 5.1%；至於汽車／零件零售界別，每年平均需招聘的受訓者人數，分別約為該界別內經理、主任及技術人員／文員級人數的 1.7%、6.1% 及 2.1%。

5.3 本會了解汽車業僱主近年面對租金高企及人手短缺等問題，經營相當困難。但除非僱主願意提供培訓，並能挽留足夠的技術人才，以應付人力需求，否則汽車業的發展將會受阻。

5.4 本會樂見過去三年汽車業僱員的薪酬顯著上升。除提供吸引人的薪酬待遇外，建議僱主讓年輕員工看到清晰的晉升階梯，並強調業內成功例子，增強員工在汽車業發展事業的信心。

5.5 吸引更多新血入行，本會建議培訓機構將課程推廣至少數族裔。此外，僱主也可考慮其他招聘選項，例如聘用中年人士進行再培訓。

### B. 提升行業形象

5.6 現今各行各業爭相吸納人才，競爭激烈，除了優厚薪酬待遇外，僱主還須積極向學生、家長和老師推廣行業，以吸引新血入行。由於汽車業受社會文化及成見影響，大眾普遍覺得工作環境骯髒、低薪，而且前景有限，因而讓不少年青人卻步，故此行業推廣十分重要。本會建議採取以下措施來提升行業形象。

#### *商校合作計劃 (BSPP)*

5.7 教育局於 2005 年推出商校合作計劃 (BSPP)，旨在帶領學生走出課堂，認識不同的工種，瞭解工商企業的運作及僱主對僱員的要求，探索自己的職業目標，並建立正確的工作態度和價值觀，讓他們作好投身職場的準備，迎接未來的挑戰。

5.8 透過商校合作計劃，伙伴機構會為學生、教師及家長提供事業探索活動，包括參觀工作場地、講座和職業博覽等。而香港專業教育學院（IVE）及卓越培訓發展中心（汽車業）可舉辦實習工作坊作支援。透過這些活動，僱主和教育機構可向學生、教師和家長，推廣相關的職業和訓練課程。

5.9 商校合作計劃是針對中學推廣行業形象的簡便平台，故本會向僱主推薦。

### **技能比賽**

5.10 自 1986 年起，本會每年均舉辦「最佳汽車學徒比賽」，以推廣學徒培訓，並提升業內汽車維修的技術。在 2019 年，共有 43 名最後一年的學徒獲僱主提名參加該比賽，涵蓋汽車機械工、汽車電工、車身修理工和汽車噴漆工等工種。參賽者在首階段測試及總決賽中，須通過一系列實務作業。六名優勝者除現金獎和獎座外，還贏得一星期德國學習之旅，參觀汽車廠、車輛博物館和培訓學校。

5.11 「最佳汽車學徒比賽」不但引起僱主和學徒對優質培訓的興趣，而且還透過新聞發布、媒體採訪和 YouTube 精彩影片等不同渠道，向公眾推廣汽車維修業。比賽和學習之旅的照片和影片，更是課程宣傳活動的最佳材料。

5.12 本會每兩年亦會協助選出汽車業的青年才俊代表香港參加「世界技能大賽」。在 2017 年阿布扎比和 2019 年喀山大賽中，香港代表隊均包括有參加汽車噴漆比賽的選手。

5.13 本會認為技能比賽能有效提升公眾對職業專才教育的興趣，並呼籲僱主積極提名員工參加，建議職訓局可加強對公眾宣傳，尤其針對中學生及其父母。

## **C. 訓練資助計劃**

### **工科畢業生訓練計劃 (EGTS)**

5.14 為了讓工科畢業生能接受更有系統的實習訓練，職業訓練局（VTC）在創新及科技訓練委員會（ITTb）的協助下，實施此項津貼計劃，為工科畢業生提供為期十八個月並符合香港工程師學會正式會員要求的實務訓練。根據計劃，受訓畢業生將經由僱主獲發津貼，作為薪金的一部份。如果需要，VTC 的卓越培訓發展中心可安排長達八週的基礎工場訓練，讓攻讀學位課程期間未能接受合資格實習訓練的畢業生修讀。為訓練工科畢業生，本會向僱主強烈推薦此計劃。

## **再工業化及科技培訓計劃 (RTTP)**

5.15 2018年8月，香港特區政府創新科技署在科技專才培育計劃下推出「再工業化及科技培訓計劃」，並委託職業訓練局（VTC）和創新及科技訓練委員會（ITTB）為計劃處理行政管理事宜及課程審批。計劃以2:1的配對形式資助本地企業人員接受高端科技培訓，報讀公開課程（即接受公眾申請）或專門設計的課程（即為特定公司設計）均可申請。每個財政年度，每間公司最高可獲50萬元資助，申請人數則沒有限制。為加強員工在先進科技方面的培訓，本會向僱主強烈推薦此計劃。

## **Vplus 工程專才進修資助**

5.16 為進一步鼓勵持續教育，香港特區政府於2016年批准撥款推行一項名為「工程專才資助計劃」的試點計劃，向報讀VTC開辦的指定專業（經評定屬資歷架構第三至第五級別）自資兼讀制課程人士，提供學費資助。計劃涵蓋建造和工程課程，惠及2016/17至2018/19學年入學的三批新生。行政長官在2018年施政報告中宣布，該計劃將由2019/20學年起，繼續試行三屆至2021/22學年，並擴展至包括資訊科技及設計等創意產業相關的學科。為強調涵蓋範圍更廣，計劃重新命名為Vplus。

5.17 在汽車業就業的成年人，若想追求更高學歷以增加在社會的向上流動力，本會推薦「Vplus 工程專才進修資助」。就讀IVE兼讀制夜間汽車工程高級文憑課程，以及汽車科技及管理專業文憑課程的學生皆合資格申請。獲批資助的申請人可獲退還課程的六成學費，上限為每人港幣45,000元。

## **VTC Earn & Learn 職學計劃**

5.18 為吸引更多年青人參加學徒訓練計劃，投身人手需求殷切的行業，行政長官在《二零一四年施政報告》內，宣布推行職業教育和就業支援先導計劃（又稱Earn & Learn 職學計劃）。透過僱主、政府及職業訓練局（VTC）三方通力合作，為年青人提供清晰的升學及事業發展路徑，讓他們接受在職培訓的同時，亦可賺取可觀的薪酬。

5.19 由於該計劃證明行之有效，僱主和學徒的反應亦積極正面，行政長官在《二零一八年施政報告》中宣布，「Earn & Learn 職學計劃」由2019/20學年起恆常化，每年為各行業（包括汽車業）提供1 200個培訓名額，應對殷切的人力需求。

5.20 根據該計劃，文憑學徒（又稱技工學徒）在當學徒的三年期間，獲得下列工資及獎勵津貼：

- (i) 保證每月薪金不少於港幣8,000元；
- (ii) 政府平均每月津貼港幣2,500元；以及
- (iii) 僱主提供的額外津貼，總額為港幣30,800元。

5.21 在 2018/19 學年初，超過 70 名已完成全日制職專文憑（汽車科技）首年課程的學生參加「Earn & Learn 職學計劃」，投身成為學徒。本會向有意招聘和挽留更多學徒的僱主極力推薦該計劃。

### **職場學習及評核先導計劃 (PISE)**

5.22 由 2019/20 學年開始，參與「VTC Earn & Learn 職學計劃」的僱主可選擇參加職場學習及評核 (WLA)。傳統學徒會在訓練機構接受校本學習，並於受僱場所接受職場學習，校本學習和職場學習分別由訓練機構和僱主各自提供和進行評估。在職場學習及評核運作模式下，校本學習與職場學習會進行配對，在可行的情況下，兩者共有的相同元素，只會在職場進行，避免資源重複並可減少上課時間。

5.23 由於職場學習及評核也會在訓練機構的課程中授予學分，故此其質素保證標準應與校本學習一致。僱主在實施職場學習及評核時，須安排合資格的訓練員、核實員和評估員。

5.24 為鼓勵更多僱主參加職場學習及評核，VTC 在政府的支持下推出職場學習及評核先導計劃 (PISE)。參與職場學習及評核計劃的僱主，以每位學員計算，可獲政府回饋最高達港幣 36,000 元。

5.25 PISE 有助減輕學徒的學習負擔，從而提升挽留率，故本會向僱主推薦該計劃。

## **D. 終生學習**

5.26 汽車業從業員必須緊貼科技發展步伐，終身學習正是成功關鍵，有必要定期參加 VTC、政府部門及專業團體舉辦的技能提升課程、工作坊、研討會等。同樣重要地，僱主亦須了解僱員的學習需求，並支持僱員取得與先進科技相關的知識和技能。

5.27 香港專業教育學院 IVE 和卓越培訓發展中心（汽車業）為汽車業在職人士提供一系列兼讀制短期課程、工作坊和研討會。部分培訓課程更與汽車製造商合作舉辦，旨在與中小企車房分享相關專有技術，例如電動車和低排放汽車等。由於中小企車房的僱員熱切希望學習先進技術，故本會十分鼓勵此等合作模式。

5.28 為方便汽車業僱員靈活安排進修時間，本會建議培訓機構在課程中可多加使用電子學習平台，及擴增實境、虛擬實境等技術。

## E. 提升汽車業專業水平

### 車輛維修技工和工場註冊計劃

5.29 香港特區政府機電工程署於 2007 年 1 月推行「車輛維修技工自願註冊計劃」，涵蓋汽車機械工、汽車電工、車身修理工、汽車噴漆工及其他七類專項服務工種，凡具備應有資歷及／或經驗的汽車維修技工，均可透過計劃申請註冊。計劃旨在讓公眾可輕易識別註冊技工，並提升本地汽車維修業的水平。截至 2019 年 6 月為止，在該計劃下共有 9 351 名技工註冊，佔相關主要職位人數的九成。

5.30 《車輛維修工場實務指引》發布一年後，機電工程署於 2013 年邀請本港承諾恪守該指引的車輛維修工場加入「車輛維修工場約章計劃」。為進一步提升汽車維修業的服務水平、專業形象和競爭力，機電工程署於 2015 年 7 月推出「車輛維修工場自願註冊計劃」。註冊工場均須承諾經營質素不低於《車輛維修工場實務指引》在技術、環保、安全、員工培訓、服務和文件紀錄等方面的要求，並須聘用註冊車輛維修技工和設有牢固上蓋的工作車位，以及接受計劃下的投訴處理機制和決定。截至 2019 年 6 月為止，已有 2 060 間車輛維修工場註冊，約佔總數的 73%。

5.31 本會與業界多數持份者一致認為，是時候將現行的車輛維修技工和工場自願註冊計劃，轉為強制性。強制註冊將提升專業水平，從而吸引更多年青人入行，服務水平有所改善，讓顧客和從業員得益。

### 技能測驗

5.32 VTC 在各訓練委員會的協助下，為不同行業的在職僱員提供一系列技能測驗。技能測驗目的在於：

- (i) 確立技術工人的工藝水平；
- (ii) 協助業界為技術空缺物色合適人選；
- (iii) 協助技術達標的工人獲取認可資格，尤其是從未接受過任何正統訓練的工人，以提升熟練工人的地位；以及
- (iv) 建立技能等級制度，以促進技術工人的職業發展。



5.33 目前，汽車維修界別共有四項技能測試。獲頒授技能測驗證書，即可向「車輛維修技工自願註冊計劃」申請註冊。（表 5.1）。

表 5.1 「車輛維修技工自願註冊計劃」認可的汽車業技能測驗

技能測驗	註冊類別
(i) 汽車機械工	機械 (M)
(ii) 汽車電工	電工 (E)
(iii) 車身修理工	車身修理 (B1)
(iv) 汽車噴漆工	車身噴漆 (B2)

5.34 本會鼓勵沒有相關學歷的技工參加技能測驗。除機電工程署外，僱主也普遍接受技能測驗證書為相關技能的證明。

## F. 主要建議摘要

5.35 本會針對業界不同持份者的主要建議如下：

- (a) 培訓機構
  - (i) 把課程推廣至少數族裔（第 5.5 段）
  - (ii) 加強對公眾宣傳技能比賽，尤其針對中學生及其父母（第 5.10 至 5.13 段）
  - (iii) 與汽車製造商合作，提供有關汽車嶄新技術的在職培訓課程（第 5.27 段）
  - (iv) 在教學中多加利用電子學習、擴增實境、虛擬實境等技術（第 5.28 段）
- (b) 僱主
  - (i) 利用「商校合作計劃」（BSPP）向中學生宣傳汽車業前景（第 5.7 至 5.9 段）
  - (ii) 利用政府資助計劃，例如「再工業化及科技培訓計劃」（RTTP），進行僱員培訓（第 5.15 段）
  - (iii) 參加「VTC Earn & Learn 職學計劃」，以招募及挽留更多學徒（第 5.18 至 5.21 段）
  - (iv) 參加「職場學習及評核先導計劃」（PISE），支持職場學習及評核（WLA）（第 5.22 至 5.25 段）

- (c) 僱員
  - (i) 利用「Vplus 工程專才進修資助」修讀兼讀制課程，取得更高學歷（第 5.16 至 5.17 段）
  - (ii) 參加 VTC、政府部門及專業團體舉辦的技能提升課程、工作坊及研討會，展開終生學習（第 5.26 段）
  - (iii) 如有需要，可參加相關的 VTC 技能測驗，證明技能達標，滿足「車輛維修技工自願註冊計劃」的註冊要求（第 5.32 至 5.34 段）
  
- (d) 政府
  - (i) 推出車輛維修技工及車輛維修工場強制性註冊計劃(第 5.29 至 5.31 段)

Automobile Training Board

Membership

(As at 1<sup>st</sup> August 2019)

Chairman:

Mr LAM Kit, Wilson

Members:

Mr CHAN Siu-fai, Mark

Mr Kim CHANG

Mr LAM Hing-cheong

Mr LAM Wai-kong

Mr LAU Chi-wah, Johnson

Mr Steven LEE

Mr MOU Yun-nin

Ms PANG Ka-yi, Polly

Mr Raymond WONG

Mr WONG Yiu-kwong

Mr YUAN Kin-yu, Caris

Director of Electrical and Mechanical Services (or his representative)

Director of Environmental Protection (or his representative)

Commissioner for Labour (or his representative)

Commissioner for Transport (or his representative)

Executive Director of the Vocational Training Council (or her representative)

汽車業訓練委員會

委員名單

(截至 2019 年 8 月 1 日)

主席：

林杰先生

委員：

陳兆輝先生

曾金雄先生

林慶昌先生

林偉江先生

劉志華先生

李永智先生

繆潤年先生

彭嘉怡女士

黃文偉先生

王耀光先生

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環境保護署署長(或其代表)

勞工處處長(或其代表)

運輸署署長(或其代表)

職業訓練局執行幹事(或其代表)

Automobile Training Board

Membership of Working Party on Manpower Survey  
(As at 1<sup>st</sup> August 2019)

Convenor:

Mr CHAN Siu-fai, Mark

Members:

Mr LAM Wai-kong

Mr LAU Chee-fai

Mr LAU Chi-wah, Johnson

Ms PANG Ka-yi, Polly

Mr TONG Put-hung

Mr WONG Yiu-kwong

Mr YANG Wing-fung, Gary

Mr YIP Sui-pong, Ponthey

汽車業訓練委員會

人力調查工作小組委員名單

(截至 2019 年 8 月 1 日)

召集人:

陳兆輝先生

委員:

林偉江先生

劉志輝先生

劉志華先生

彭嘉怡女士

唐弼洪先生

王耀光先生

楊詠豐先生

葉穗邦先生

Automobile Training Board  
Terms of Reference

1. To determine the manpower demand of the industry, including the collection and analysis of relevant manpower and student/trainee statistics and information on socio-economic, technological and labour market developments.
2. To assess and review whether the manpower supply for the industry matches with the manpower demand.
3. To recommend to the Vocational Training Council (the Council) the development of vocational and professional education and training (VPET) facilities to meet the assessed manpower demand.
4. To advise the Council on the strategic development and quality assurance of its programmes in the relevant disciplines.
5. To prescribe job specifications for the principal jobs in the industry defining the skills and knowledge and advise on relevant training programme specifying the time a trainee needs to spend on each skill element.
6. To tender advice in respect of skill assessments, trade tests and certification for in-service workers, apprentices and trainees, for the purpose of ascertaining that the specified skill standards have been attained.
7. To advise on the conduct of skill competitions in key trades in the industry for the promotion of VPET as well as participation in international competitions.
8. To liaise with relevant bodies, including employers, employers' associations, trade unions, professional institutions, training and educational institutions and government departments, on matters pertaining to the development and promotion of VPET in the industry.
9. To organise seminars/conferences/symposia on VPET for the industry.
10. To advise on the publicity relating to the activities of the Training Board and relevant VPET programmes of the Council.
11. To submit to the Council an annual report on the Training Board's work and its recommendations on the strategies for programmes in the relevant disciplines.
12. To undertake any other functions delegated by the Council in accordance with Section 7 of the Vocational Training Council Ordinance.

汽車業訓練委員會  
職權範圍

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1. 確定業內的人力需求，包括收集、分析相關的人力和學生／學員統計數字，以及關於社會經濟、科技及人力市場發展的資料。
2. 評估及研究本業的人力供求是否平衡。
3. 就發展業內職業專才教育及訓練設施應付人力需求，向職業訓練局（下稱「局方」）提供意見。
4. 就相關學科的課程發展策略及質素保證，向局方提出建議。
5. 擬訂本業主要職務的工作範圍，界定所需的技能及知識，審議訓練方案，包括訂定每種技能所需的訓練期。
6. 對技術評估、技能測驗及認證制度提供意見，以確定從業員、學徒及見習員的技能水平。
7. 就本業主要行業舉辦技能比賽提供意見，以推廣職業專才教育和派員參加國際賽事。
8. 與僱主、僱主聯會、工會、專業團體、訓練及教育機構、政府部門等聯絡，共商本業職業專才教育的發展與推廣事宜。
9. 為本業舉辦有關職業專才教育的研討會和會議。
10. 就訓練委員會工作和相關職業專才教育課程之推廣宣傳，向局方提供意見。
11. 每年向局方呈交訓練委員會工作報告，以及相關學科課程發展策略建議。
12. 根據《職業訓練局條例》第 7 條，負責局方所委派的其他工作。



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機密文件



VOCATIONAL TRAINING COUNCIL  
職業訓練局

**THE 2019 MANPOWER SURVEY OF THE AUTOMOBILE INDUSTRY**  
**汽車業2019年人力調查**

The 2019 Manpower Survey of the Automobile Industry (AU) aims at collecting manpower information of the industry concerned for formulating recommendations on future manpower training. Please kindly provide the information of your establishment as at **1 March 2019** by answering the questionnaire. Thank you.

汽車業2019年人力調查旨在蒐集業內人力情況的最新資料，並按此為未來人力訓練制訂適當建議。懇請 貴機構根據**2019年3月1日**的人力情況填寫此問卷。多謝合作。

**Establishment Information****機構資料**

(For official use)

Industry Code \_\_\_\_\_

NAME OF ESTABLISHMENT: \_\_\_\_\_

機構名稱

ADDRESS: \_\_\_\_\_

地址

TOTAL NO. OF PERSONS ENGAGED: \_\_\_\_\_

僱員總人數

Principal Line of Business:

主要業務性質

- Body assembly of motor vehicles  
汽車的裝嵌
- Servicing and repairing of motor vehicles and motorcycles  
汽車及電單車維修服務
- Retail sale of motor vehicles  
汽車零售店
- Retail sale of motorcycles  
電單車零售店
- Retail sale of motor vehicle and motorcycle parts and accessories  
汽車及電單車配件及零件零售店
- Others            Please specify \_\_\_\_\_  
其他            請註明

**Details of Contact Person\*****聯絡人資料\***

NAME OF PERSON TO CONTACT: \_\_\_\_\_

聯絡人姓名

POSITION: \_\_\_\_\_

職位

TEL. NO. : \_\_\_\_\_ - \_\_\_\_\_

電話

FAX NO. : \_\_\_\_\_

圖文傳真

E-MAIL : \_\_\_\_\_

電郵

\* The information provided will be used for the purpose of this and subsequent manpower surveys.

所提供資料將用作是次及日後人力調查之用。

**Part I – Manpower Information**

**第一部份 – 人力情況**

Please complete columns 'B' to 'G' of the questionnaire according to the list of principal jobs by referring to Appendix B for job description of individual job.

請根據列表中的主要職務，並參考附錄B有關各種職務的工作說明來填寫表內各'B'至'G'欄。

**Part IA - Vehicle Servicing Sector 汽車維修界別**

**Principal Jobs 主要職務**

Please refer to Appendix A for column explanations. 請參考附錄A內各欄的說明。

	(A) Principal Job 主要職務 (See Appendix B) (參閱附錄 B)	(B) No. of Employees as at Survey Reference Date (Excl. trainees*)	(C) No. of Vacancies as at Survey Reference Date (Excl. trainees*)	(D) Forecasted No. of Employees as at March 2020 (Excl. trainees*)	(E) No. of Trainees* as at Survey Reference Date	(F) Forecasted No. of Trainees as at March 2020	(G) Average Monthly Income 每月平均收入
	Wherever appropriate, the Service Classes of Voluntary Registration Scheme for Vehicle Mechanics are appended to the job titles, e.g. Vehicle Electrician (E, E(b)). 如有適當配對，「車輛維修技工自願註冊計劃」下之服務類別會列在職稱後，例如：汽車電工(E, E(b))。	在統計日期的僱員人數 (受訓者*除外)	在統計日期的空缺額 (受訓者*除外)	預計在2020年3月的僱員人數 (受訓者*除外)	在統計日期的受訓者*人數	預計在2020年3月的受訓者*人數	Code 編號 1 \$10,000 or below 或以下 2 \$10,001 - \$15,000 3 \$15,001 - \$20,000 4 \$20,001 - \$25,000 5 \$25,001 - \$35,000 6 \$35,001 - \$45,000 7 Over \$45,000 以上
Job Code 職位 編號							
e.g: 例子:	Job Title A (3 employees, 1 trainee and 2 vacancies) 職位甲 (3名僱員, 1名受訓者及2個空缺)	3	2	5	1	1	5
	<b>Technologist Level 技師級</b>						
	Technologists in the automobile industry are mostly engineers and service managers who have reached a level of professional competence in the discipline of mechanical or road transport engineering recognized by the appropriate professional institutions. 技師通常擔任工程師和維修部經理職務，具備機械工程或道路交通工程的專業才幹，獲專業學會認可。						
101	Mechanical Engineer (Automotive) 汽車機械工程師						
102	Service Manager 維修部經理						
	<b>Technician Level 技術員級</b>						
	Technicians are persons whose education, practical training and experience enable them to apply proven techniques and procedures and to carry a measure of technical responsibility, normally under the supervision of a technologist. 技術員有一定的教育水平及實務訓練，具備工作經驗，一般能夠在技師督導下，運用已確立的技術及程序執行技術任務。						
201	Service Instructor 維修教導員						
202	Motor Vehicle Examiner / Tester 汽車檢查員/測試員						
203	Service Supervisor 維修監督						
204	Service Adviser / Receptionist 維修服務員/款待員						
205	Engineering Technician 工程技術員						
	<b>Craftsman Level 技工級</b>						
	Craftsmen require both a high degree of practical skills and sound technical knowledge if they are to venture into new skills resulting from technological advancement. They need to have a general education of at least completion of Secondary 3. 技工須精於實務，並具備相當的技術知識，方可學習新技能以配合最新的科技發展。技工最少需具備中三程度。						
301	Vehicle Mechanic 汽車機械工 (M, M(b))						
302	Vehicle Electrician 汽車電工 (E, E(b))						
303	Vehicle Body Repairer 車身修理工 (B1, B1(b))						
305	Vehicle Painter 汽車噴漆工 (B2, B2(b))						

# The term "trainees" includes all trainees receiving any form of training and apprentices under a contract of apprenticeship.  
「受訓者」包括正在接受各種訓練的人士，以及簽有學徒合約的登記學徒。

Part IA - Vehicle Servicing Sector (continued) 汽車維修界別 (續)

Principal Jobs 主要職務

Please refer to Appendix A for column explanations. 請參考附錄A內各欄的說明。						
(A) Principal Job 主要職務 (See Appendix B) (參閱附錄 B)	(B) No. of Employees as at Survey Reference Date (Excl. trainees#)	(C) No. of Vacancies as at Survey Reference Date (Excl. trainees#)	(D) Forecasted No. of Employees as at March 2020 (Excl. trainees#)	(E) No. of Trainees# as at Survey Reference Date	(F) Forecasted No. of Trainees as at March 2020	(G) Average Monthly Income 每月平均收入
Wherever appropriate, the Service Classes of Voluntary Registration Scheme for Vehicle Mechanics are appended to the job titles, e.g. Vehicle Electrician (E, E(b)). 如有適當配對，「車輛維修技工自願註冊計劃」下之服務類別會列在職稱後，例如：汽車電工(E, E(b))。	在統計日期的僱員人數 (受訓者#除外)	在統計日期的空缺額 (受訓者#除外)	預計在2020年3月的僱員人數 (受訓者#除外)	在統計日期的受訓者#人數	預計在2020年3月的受訓者#人數	Code 編號 1 \$10,000 or below 或以下 2 \$10,001 - \$15,000 3 \$15,001 - \$20,000 4 \$20,001 - \$25,000 5 \$25,001 - \$35,000 6 \$35,001 - \$45,000 7 Over \$45,000 以上
	Please enter a zero '0' in the box if no employee /vacancy/trainee. 如沒有僱員/空缺/受訓者，請在方格內填入 '0'。					
<b>Specific Services 專項服務</b>						
304 Vehicle Body Builder 車身建造工 (S7)						
306 Vehicle Air-conditioning Mechanic 汽車冷氣工 (S6)						
307 Vehicle Upholsterer 車內裝飾工						
309 Industrial Vehicle Mechanic 工業機車技工						
310 Motorcycle Mechanic 電單車機械工 (S1)						
401 Tyre Worker / Battery Worker 輪胎工 (S2) / 電池工 (S3)						
403 Lubrication Worker 更換機油工 (S4)						
404 Car Accessories Worker 車輛配件工 (S5)						
405 Car Detailing Worker 汽車美容工						
<b>Unskilled Level 非技術工人級</b>						
501 Customer Services Ambassador / Assistant 客戶服務大使/助理						
502 General Worker / Cleaner 雜工/清潔工						
<b>Other Relevant Vehicle Servicing Staff 其他相關汽車維修人員</b>						
For Official Use						

# The term "trainees" includes all trainees receiving any form of training and apprentices under a contract of apprenticeship.  
「受訓者」包括正在接受各種訓練的人士，以及簽有學徒合約的登記學徒。

**Part IB - Auto / Parts Retailers Sector 汽車／零件零售界別**

**Principal Jobs 主要職務**

Please refer to Appendix A for column explanations. 請參考附錄A內各欄的說明。				
(A) Principal Job 主要職務 (See Appendix B) (參閱附錄 B)	(B) No. of Employees as at Survey Reference Date  在統計日期 的僱員人數	(C) No. of Vacancies as at Survey Reference Date  在統計日期的 空缺額	(D) Forecasted No. of Employees as at March 2020  預計在2020年 3月的僱員人數	(G) Average Monthly Income 每月平均收入  Code 編號 1 \$10,000 or below 或以下 2 \$10,001 - \$15,000 3 \$15,001 - \$20,000 4 \$20,001 - \$25,000 5 \$25,001 - \$35,000 6 \$35,001 - \$45,000 7 Over \$45,000 以上
Job Code 職位 編號  e.g: 例子:	Please enter a zero '0' in the box if there is no employee /vacancy. 如沒有僱員／受訓者，請在方格內填入 '0'。			
Job Title A (3 employees and 2 vacancies) 職位甲 (3名僱員及2個空缺)	3	2	5	5
<b>Managerial Level 經理級</b>				
111 Owner / Sole Proprietor / Working Partner 東主／獨資經營者／執行合夥董事				
112 General Manager 總經理				
113 Sales Manager 營業經理				
114 Marketing Manager 市場推廣經理				
115 Customer Services Manager 客戶服務經理				
116 Merchandising Manager 採購經理				
117 Parts Manager 零件經理				
<b>Supervisory Level 主任級</b>				
211 Store / Branch Supervisor 店舖／分店營業主任				
212 Customer Services Supervisor 客戶服務主任				
213 Merchandiser / Buyer 採購主任				
214 Parts / Logistics / Distribution / Warehouse Supervisor 配件／物流／運輸／倉庫主任				
215 Marketing Officer 市場推廣主任				
<b>Operative / Clerical Support Level 技術人員／文員級</b>				
511 Senior Sales Representative / Staff 高級營業員／售貨員				
512 Junior Sales Representative / Staff 初級營業員／售貨員				
513 Stock Assistant 存貨助理				
514 Sales / Service Staff (Part Time) 售貨員／服務員(兼職)				
515 Other Clerks / Supporting Staff 其他文員／輔助人員				
For Official Use				

**Part II**  
**第二部份**

**Employees Left**  
**離職人數**

1. Number of employees left your organization in the past 12 months (included those retired in the past 12 months)  
貴機構過去十二個月內離職的僱員人數 (包括年屆退休而離職的僱員) :

	<b>Vehicle Servicing Sector 汽車維修界別</b>			
	<u>Technologist Level</u> 技師級	<u>Technician Level</u> 技術員級	<u>Craftsman Level</u> 技工級	<u>Specific Services</u> 專項服務
No. of employees left 離職僱員人數				

	<b>Auto / Parts Retail Sector 汽車/零件零售界別</b>		
	<u>Managerial Level</u> 經理級	<u>Supervisory Level</u> 主任級	<u>Operative / Clerical Support Level</u> 技術人員/文員級
No. of employees left 離職僱員人數			

**Recruitment**  
**招聘**

2. Number of employees recruited by your organization in the past 12 months  
貴機構過去十二個月內招聘的僱員人數。

	<b>Vehicle Servicing Sector 汽車維修界別</b>			
	<u>Technologist Level</u> 技師級	<u>Technician Level</u> 技術員級	<u>Craftsman Level</u> 技工級	<u>Specific Services</u> 專項服務
(a) Total number of recruits 總招聘人數				
(b) Number of recruits who have performed related duties in their last job 當中入職前是從事相關職務的人數				

	<b>Auto / Parts Retail Sector 汽車/零件零售界別</b>		
	<u>Managerial Level</u> 經理級	<u>Supervisory Level</u> 主任級	<u>Operative / Clerical Support Level</u> 技術人員/文員級
(a) Total number of recruits 總招聘人數			
(b) Number of recruits who have performed related duties in their last job 當中入職前是從事相關職務的人數			

**Retirement**  
**退休**

3. Estimated number of employees retire within the coming 5 years  
預計未來五年內退休的僱員人數。

	<b>Vehicle Servicing Sector 汽車維修界別</b>			
	<u>Technologist Level</u> 技師級	<u>Technician Level</u> 技術員級	<u>Craftsman Level</u> 技工級	<u>Specific Services</u> 專項服務
Estimated no. of employees retire 預計退休僱員人數				

	<b>Auto / Parts Retail Sector 汽車/零件零售界別</b>		
	<u>Managerial Level</u> 經理級	<u>Supervisory Level</u> 主任級	<u>Operative / Clerical Support Level</u> 技術人員/文員級
Estimated no. of employees retire 預計退休僱員人數			

**Part III - For Vehicle Servicing Sector** (Please answer questions 4 to 6 of this part if manpower exist in part IA)  
**第三部份 – 適用於汽車維修界別** (如IA部份有填報僱員，請回答第三部份問題4至6)

**Preferred Level of Education, Mode of Training and Period of Training of Employees**

僱員宜有的教育程度、訓練方式及訓練期

4. Please choose preferred Level of Education, Mode of Training and Period of Training of employees (not as a trainee)  
 請選擇僱員(非受訓者)宜有的教育程度、訓練方式及訓練期

Job level 職級	Technologist Level 技師級	Technician Level 技術員級	Craftsman Level 技工級	Specific Services 專項服務
<b>(a) Level of Education</b> (Please tick “√” <b>1 box</b> for each job level) <b>教育程度</b> (每職級請剔“√” 選一項)				
(i) Postgraduate Degree 研究生學位	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ii) First Degree 學士學位	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iii) Sub-degree (e.g. Higher Diploma) 副學位 (例如高級文憑)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iv) Diploma/Certificate 文憑/證書	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(v) Secondary 4 to 7 中四至中七	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(vi) Secondary 3 or below 中三或以下	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>(b) Mode of training</b> (Please tick “√” <b>1 box</b> for each job level) <b>訓練方式</b> (每職級請剔“√” 選一項)				
(i) Graduate traineeship 工科畢業生訓練	<input type="checkbox"/>			
(ii) On-the-job training 在職訓練	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iii) Apprenticeship 學徒訓練	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iv) Others 其他	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>(c) Training Period</b> (Please tick “√” <b>1 box</b> for each job level) <b>訓練期</b> (每職級請剔“√” 選一項)				
(i) 4 years or above 四年或以上	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ii) 3 to less than 4 years 三年至四年以下	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iii) 2 to less than 3 years 二年至三年以下	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iv) 1 to less than 2 years 一年至二年以下	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(v) 6 months to less than 1 year 六個月至一年以下	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(vi) Below 6 months 六個月以下	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Training Demand and Manpower information of EV and Hybrid Maintenance**

電動車及混能車維修的訓練需求及人力情況

5. Please indicate the training demand for EV and Hybrid maintenance  
 請指出電動車及混能車維修的訓練需求。

Urgently needed 迫切需要 <input type="checkbox"/>	Wait and See at this moment 暫時觀望中 <input type="checkbox"/>	Not Required 不需要 <input type="checkbox"/>
---	--	---

6. Number of qualified EV and hybrid vehicle maintenance workers (who have received training from manufacturer(s)) in your organization  
 貴機構內合資格(指曾接受廠方訓練)的電動車及混能車維修人員的人數。

	Technologist Level 技師級	Technician Level 技術員級	Craftsman Level 技工級
(a) Number of qualified workers as at survey reference date 統計日期時人員數量			
(b) Estimated number of qualified workers required in the next 3 years 預計未來3年所需人員數量			

**Part IV - For Auto / Parts Retail Sector** (Please answer questions 7 and 8 of this part if manpower exist in part IB)  
**第四部份 – 適用於汽車／零件零售界別** (如IB 部份有填報僱員，請回答第四部份問題7及8)

**Preferred Level of Education and Year of Experience for Employee**  
**僱員宜有的教育程度及年資**

7. Please choose preferred Level of Education and Year of Experience of employees  
 請選擇僱員宜有的教育程度及年資

Job level 職級	Managerial Level 經理級	Supervisory Level 主任級	Operative / Clerical Support Level 技術人員／文員級
<b>(a) Level of Education</b> (Please tick “√” <b>1 box</b> for each job level) <b>教育程度</b> (每職級請剔“√” 選一項)			
(i) Postgraduate Degree 研究生學位	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ii) First Degree 學士學位	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iii) Sub-degree (e.g. Higher Diploma) 副學位 (例如高級文憑)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iv) Diploma/Certificate 文憑／證書	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(v) Secondary 4 to 7 中四至中七	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(vi) Secondary 3 or below 中三或以下	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>(b) Year of Experience</b> (Please tick “√” <b>1 box</b> for each job level) <b>年資</b> (每職級請剔“√” 選一項)			
(i) 10 years or more 十年或以上	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ii) 6 years to less than 10 years 六年至十年以下	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iii) 3 years to less than 6 years 三年至六年以下	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iv) 1 year to less than 3 years 一年至三年以下	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(v) Less than 1 year 一年以下	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Training of front-line sales person**  
**前線銷售人員的訓練**

8. Please indicate the importance on each training area of front-line sales person (Please tick “√” the appropriate box of level of importance)  
 請指出前線銷售人員各項訓練的重要性 (請按重要性剔“√” 選合適方格)。

Training area 訓練範疇	Very Important 十分重要	Important 重要	Not Very Important 不太重要	Not Necessary 無需要
(a) Customer Service 客戶服務	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Selling Skills 銷售技巧	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Automotive Fundamentals 基礎汽車原理	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Automotive Body Treatments 汽車車身處理	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Finance and Insurance of Automotive Trade 汽車保險、財務	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) English, Putonghua 英語、普通話	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(g) Others (please specify) 其他(請說明)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**End of Questionnaire. Thank You for Your Co-operation.**  
 問卷完，多謝合作。

The 2019 Manpower Survey of the Automobile Industry  
汽車業 2019 年人力調查

Explanatory Notes

附註

1. Please fill in information as accurate as possible because the information collected from this survey is vital for determining the training needs of the industry in order that the Automobile Training Board can make meaningful recommendations to Government on how to meet these training needs.  
請填入準確資料，因這些資料對於確定本業的訓練需求極為重要，而汽車業訓練委員會，亦會就應付這些訓練需求，向政府提出建議。

**Part I**

**第一部份**

2. Principal Jobs - Column 'A'

主要職務 —— 'A' 欄

- (a) Please go through column 'A' and mark those principal jobs applicable to your establishment. For detailed job descriptions for principal jobs, please refer to Appendix B.  
請瀏覽 'A' 欄，選取適用於 貴機構的主要職務。有關詳細的工作說明，請參閱附錄 B。
- (b) Please add in column 'A' titles of any principal jobs not mentioned in job descriptions (Appendix B); briefly describe them in respect of the appropriate job categories.  
如 貴機構另有技術性主要職務未載於工作說明（附錄 B），請一併填入 'A' 欄內，並簡述其所屬的職務類別及等級。
- (c) The job titles may not be the same as those adopted by your company, but if the description of a certain job in your company is the same or substantially the same as the job description of, for example, Vehicle Mechanic, then for the purpose of this survey you should regard the job holder as a Vehicle Mechanic regardless of his/her actual title in your company.  
調查表所列的職稱可能與 貴公司所採用的有別，但如 貴公司某職務的工作性質與調查表所載職務（例如「汽車機械工」）相同或相近，則擔任該職務者不論在 貴公司的實際職稱為何，在是次調查中亦應歸類為「汽車機械工」。
- (d) In the event where an employee's duties in your company are split between two or more job titles, please use the job title that best describes his/her principal responsibility.  
如 貴公司有員工身兼多項職責，請選用最能反映其主要職責的職稱。

3. Number of Employees as at Survey Reference Date (Excl. trainees) - Column 'B'

在統計日期的僱員人數（受訓者除外） —— 'B' 欄

For each principal job, please fill in the total number of employees (excluding trainees) as at survey reference date.  
請填寫 貴機構於統計日期僱用的每個主要職務的僱員總數（受訓者除外）。

'Employees' include proprietors, partners and unpaid family members working for your company. This definition also applies to 'employee(s)' appearing in other parts of the questionnaire.

「僱員」包括在公司內工作的東主、合夥人及涉及業務的無薪家庭成員。調查表他處出現的「僱員」一詞，定義亦同。

4. Number of Vacancies at Survey Reference Date (Excl. trainees) - Column 'C'

在統計日期的空缺額（受訓者除外） —— 'C' 欄

Please fill in the number of existing vacancies as at survey reference date. 'Existing Vacancies' refer to those unfilled, immediately available job openings for which the establishment is actively trying to recruit personnel as at survey reference date.

請填上在統計日期每一主要職務的空缺額（受訓者除外）。「統計日期的空缺額」是指該職位於統計日期仍懸空，須立刻填補，而現正積極招聘人員填補。



5. Forecasted Number of Employees as at March 2020 (Excl. trainees) - Column 'D'  
預計在 2020 年 3 月的的僱員人數（受訓者除外）—— 'D' 欄

Please fill in the forecasted number of employees as of March 2020 (excl. trainees). The number given could be less than existing employees if a contraction is expected.

請填上在 2020 年 3 月每個主要職務的預計僱員人數（受訓者除外）。如估計業務可能收縮，此欄所填人數可能少於現有僱員人數。

6. Number of Trainees as at Survey Reference Date - Column 'E' (Vehicle Servicing Sector)  
統計日期的受訓者人數—— 'E' 欄（汽車維修界別）

Please fill in the number of employees undergoing training for each type of jobs as at survey reference date.  
請填寫於統計日期正在接受訓練的僱員人數。

The term 'trainees' includes all trainees receiving any form of training and apprentices under a contract of apprenticeship.

「受訓者」包括正在接受各種訓練的人士以及簽有學徒合約的登記學徒。

7. Forecasted Number of Trainees as at March 2020 – Column "F" (Vehicle Servicing Sector)  
預計在 2020 年 3 月的受訓者人數—— 'F' 欄（汽車維修界別）

The forecasted number of trainees means the number of employees undergoing training as at March 2020.  
預計的受訓者人數指 貴機構於在 2020 年 3 月的受訓者總數。

8. Average Monthly Income Range of Employees - Column 'G'  
僱員每月平均收入—— 'G' 欄

Please enter the code of average monthly income range during the past 12 months for each principal job of employees. This should include basic wages, regular overtime pay, cost of living allowance, meal allowance, commission and bonus etc. (less employees' contribution to MPF). If you have more than one employee doing the same job, please enter the average range.

請在此欄填入每個主要職務僱員過去十二個月每月平均收入幅度的編號，這包括底薪、恆常發放的超時工作補薪、生活津貼、膳食津貼、佣金及花紅等（扣除僱員所支付的強制性公積金供款）。若從事同類工作的僱員多於一名，則請取其平均收入。

### **Part III** 第三部份

9. Question 4 – Preferred Level of Education, Mode of Training and Period of Training of Employees  
問題 4 —— 僱員宜有的教育程度、訓練方式及訓練期

In question 4, please tick the boxes the preferred level of education, mode of training and period of training which an employee in each of the four job levels (i.e. technologist level, technician level, craftsman level and specific services) should have if he/she was to carry out his/her work competently. (Please tick 1 box for each job level).

請在問題 4 之方格內選擇技師級、技術員級、技工級及專項服務的僱員宜具備何種教育程度、訓練方式及訓練期，才能勝任其工作。（每職級請別選一項）

### **Part IV** 第四部份

10. Question 7 – Preferred Level of Education and Year of Experience of Employees  
問題 7 —— 僱員宜有的教育程度及年資

In question 7, please tick the boxes the preferred level of education and year of experience which an employee in each of the three job levels (i.e. managerial level, supervisory level and operative/clerical support level) should have if he/she was to carry out his/her work competently. (Please tick 1 box for each job level).

請在問題 7 之方格內選擇經理級、主任級及技術人員／文員級的僱員宜具備何種教育程度及年資，才能勝任其工作。（每職級請別選一項）

## 11. Definition of Preferred Level of Education

宜有的教育程度的定義

- ◆ “Postgraduate Degree” refers to higher degrees (e.g. master degrees) offered by local or non-local education institutions, or equivalent.  
「研究生學位」是指本地或非本地教育機構提供的高等學位（如碩士學位），或同等教育程度。
- ◆ “First Degree” refers to First degrees offered by local or non-local education institutions, or equivalent.  
「學士學位」是指本地或非本地教育機構提供的學士學位，或同等教育程度。
- ◆ “Sub-degree” refers to Associate Degrees, Higher Diplomas, Professional Diplomas, Higher Certificates, Endorsement Certificates, Associateship or equivalent programmes offered by local or non-local education institutions.  
「副學位」是指本地或非本地教育機構提供的副學士、高級文憑、專業文憑、高級證書、增修證書、院士銜或同等課程。
- ◆ “Diploma/Certificate” refers to technical and vocational education programmes including Diploma/Certificate courses, Diploma of Foundation Studies, Diploma of Vocational Education and programmes at the craft level, or equivalent.  
「文憑／證書」是指技術及職業教育課程之文憑／證書、基礎課程文憑、職專文憑及技工程度的課程，或同等教育程度。
- ◆ “Secondary 4 to 7” refers to Secondary 4-7, covering the education programmes in relation to the Hong Kong Certificate of Education Examination (HKCEE), the Hong Kong Diploma of Secondary Education (HKDSE) Examination, Diploma Yi Jin, or equivalent.  
「中四至中七」是指中四至中七（包括與香港中學會考、香港中學文憑考試、毅進文憑等相關的教育課程）或同等教育程度。
- ◆ “Secondary 3 or below” refers to Secondary 3 or below, or equivalent.  
「中三或以下」是指中三或以下，或同等教育程度。



Code No. 編號	Job Title 職稱	Job Description 工作說明
<b>TECHNOLOGIST LEVEL (Continued) 技師級 (續)</b>		
102	Service Manager  維修部經理	Manages all commercial and technical activities of an organization engaged in motor vehicle repairs and servicing, including safety and health matters.  負責管理汽車維修機構內一切業務及技術方面的工作，包括工作安全及員工健康。
<b>TECHNICIAN LEVEL 技術員級</b>		
201	Service Instructor  維修教導員	Instructs apprentices, trainees and other employees in motor vehicle servicing and repairs.  教導學徒、受訓者及其他僱員有關汽車維修的知識及技能。
202	Motor Vehicle Examiner / Tester  汽車檢查員／測試員	Inspects and tests motor vehicles for their conditions and road-worthiness compliance, including inspection before and after repairs, as well as testing in compliance with legal requirements.  檢查及測試汽車的狀況和路面行駛性能，包括維修前或維修後檢查或測試有關車輛是否符合法律的規定。
203	Service Supervisor  維修監督	Performs supervisory duties contributory to:  (i) the planning and allocation of tasks to foremen and other employees,  (ii) the inspection, servicing and repairs of motor vehicles, and  (iii) the installation and maintenance of workshop equipment.  執行下列監督工作，以便協助：  (i) 策劃及分配工作予管工及其他僱員；  (ii) 檢查與維修汽車；  (iii) 安裝與維修工場設備。
204	Services Adviser / Receptionist  維修服務員／款待員	Records customers' requirements, recommends repairs and servicing, advises and liaises with customers regarding progress of work.  記錄顧客的要求，建議適當的維修服務，並與顧客聯絡，知會有關工作的進展。

Code No. 編號	Job Title 職稱	Job Description 工作說明
<b>TECHNICIAN LEVEL (Continued) 技術員級 (續)</b>		
205	Engineering Technician  工程技術員	Performs technical tasks contributory to the modification or improvement work on vehicles, the design, installation and maintenance of workshop facilities, and technical support for vehicle servicing, either independently or under the direction of a mechanical engineer (automotive) or a service manager.  獨立或在汽車機械工程師／維修部經理的指導下執行技術職務，以協助進行：汽車的改裝或改良；工場設備的設計、安裝及維修；汽車維修方面的技術支援。
<b>CRAFTSMAN LEVEL 技工級</b>		
301	Vehicle Mechanic 汽車機械工 (M, M(b))	Services and repairs all types of vehicles. 維修各類型汽車。
302	Vehicle Electrician 汽車電工(E, E(b))	Services and repairs electrical and electronic systems and components of motor vehicles. 維修汽車電氣、電子系統和組件。
303	Vehicle Body Repairer 車身修理 (B1, B1(b))	Repairs motor vehicle bodies. 修理汽車車身。
305	Vehicle Painter 汽車噴漆 (B2, B2(b))	Prepares and paints vehicle bodies. 負責噴漆前的準備工作以及噴塗車身。
<b>SPECIFIC SERVICES 專項服務</b>		
304	Vehicle Body Builder 車身建造工 (S7)	Constructs and converts motor vehicle bodies. 建造與改裝汽車車身。
306	Vehicle Air-Conditioning Mechanic 汽車冷氣工 (S6)	Installs, services and repairs vehicle air-conditioners. 安裝與維修汽車冷氣機。
307	Vehicle Upholsterer 車內裝飾工	Provides seats, seat covers, floor covers and interior trim in vehicles. 製造及裝設車椅、車椅面、車地板面及車內一切裝飾。

Code No. 編號	Job Title 職稱	Job Description 工作說明
<b>SPECIFIC SERVICES (Continued) 專項服務 (續)</b>		
309	Industrial Vehicle Mechanic  工業機車技工	Services and repairs all types of industrial vehicles (e.g. fork lift truck, straddle carrier, shovel loader, etc.).  維修各類型工業機車（例如：叉式鏟車、貨櫃搬機車及鏟斗式裝載車等）。
310	Motorcycle Mechanic  電單車機械工 (S1)	Services and repairs motorcycles.  維修電單車。
401	Tyre Worker / Battery Worker  輪胎工 (S2) / 電池工 (S3)	Replaces and repairs vehicle tyres, tests and replaces vehicle batteries.  更換及維修汽車輪胎，測試及更換汽車電池。
403	Lubrication Worker  更換機油工 (S4)	Replaces lubrication oils for vehicles.  更換汽車機油。
404	Car Accessories Worker  車輛配件工 (S5)	Installs and repairs vehicle accessories, e.g. audio, bugler alarm system, etc.  安裝及維修汽車配件，如音響、防盜系統等。
405	Car Detailing Worker  汽車美容工	Cleans, polishes and waxes vehicles.  為汽車清潔，拋光和打蠟。
<b>UNSKILLED LEVEL 非技術工人級</b>		
501	Customer Services Ambassador / Assistant  客戶服務大使／助理	Welcomes customers and handles enquiries. Assists in customer services activities.  招待客戶和處理查詢。協助客戶服務工作。
502	General Worker / Cleaner  雜工／清潔工	Performs duties of a general nature not requiring any training or skill, such as cleaning and polishing of motor vehicles after repairs and servicing, and tidying up garage.  擔任不需專門訓練或技能的一般性質工作，例如汽車維修後的清抹，以及車房的清潔工作。

## B. Auto / Retails Sector

Code No. 編號	Job Title 職稱	Job Description 工作說明
<b>MANAGERIAL LEVEL 經理級</b>		
111	Owner / Sole Proprietor / Working Partner  東主／獨資經營者／執行合夥董事	Owns and runs the business.  擁有和經營業務。
112	General Manager  總經理	Assumes total responsibility for retail operations, merchandising, sales and marketing functions.  負責機構內零售業務、採購、銷售和市場推廣所有事宜。
113	Sales Manager  營業經理	Plans, directs and manages sales-related activities aiming at maximizing sales. Directly contacts clients to promote sales.  策劃、指導和管理有關銷售的工作，以盡量提升營業額。直接聯絡客戶，以推廣業務。
114	Marketing Manager  市場推廣經理	Plans, directs and manages marketing functions including advertising, public relations and corporate communications.  策劃、指導和管理市場推廣工作，包括廣告、公共關係及企業傳訊。
115	Customer Services Manager  客戶服務經理	Plans, organizes, directs and controls activities relating to customer services. Contacts customers, liaises with internal departments to ensure provision of high standard customer services.  策劃、組織、指導客戶服務工作。聯絡客戶及公司內部門，確保客戶服務達到理想水平。
116	Merchandising Manager  採購經理	Plans, organizes, directs and controls merchandising or buying activities. Assesses market demand by carrying out market surveys or studies. Contacts suppliers, coordinates with appropriate departments to ensure continuity and quality of merchandise supply.  策劃、組織、監管採購工作。調查和研究市場情況，以釐訂需求。聯絡供應商，協調有關部門工作，確保貨源充足，並符合品質要求。

Code No. 編號	Job Title 職稱	Job Description 工作說明
<b>MANAGERIAL LEVEL (Continued) 經理級 (續)</b>		
117	Parts Manager  零件經理	Manages spare parts business operation, inventory control and warehouse management to serve internal and external customers.  管理零部件業務操作，庫存控制和倉庫管理，以服務內部和外部客戶。
<b>SUPERVISORY LEVEL 主任級</b>		
211	Store / Branch Supervisor  店舖／分店營業主任	Responsible for the sale of a particular merchandise or a range of merchandises in a store/outlet. Checks and studies sales figures, stock and customers' preference and makes subsequent recommendations. Supervises a team of sales staff.  負責某種貨品或數種貨品在一間店舖／經銷店的銷售。查核和研究銷售數字、貨品存貨及顧客要求，然後提出建議。監督一組售貨員的工作。
212	Customer Services Supervisor  客戶服務主任	Supervises and implements activities relating to customer services. Provides services directly to customers.  監督、推行與客戶服務有關的工作。直接向客戶提供服務。
213	Merchandiser / Buyer  採購主任	Responsible for merchandising or buying functions. Liaises and negotiates with suppliers and appropriate departments to ensure continuity and quality of merchandise supply.  負責商品採購工作。與供應商及有關部門聯絡洽商，確保貨源充足，並符合品質要求。
214	Parts / Logistics / Distribution / Warehouse Supervisor  配件／物流／運輸／倉庫主任	Engaged in promotion and effect of the sales of automotive parts and accessories. Supervises logistics, distribution and warehousing of merchandise to achieve planned levels of services to users and customers.  推銷、出售汽車零件及附件。監督貨品的物流、運輸及存倉工作，以便為使用者及顧客提供有系統服務。



Code No. 編號	Job Title 職稱	Job Description 工作說明
<b>SUPERVISORY LEVEL (continued) 主任級 (續)</b>		
215	Marketing Officer  市場推廣主任	Implements marketing functions including advertising, public relations and corporate communications.  執行市場推廣工作，包括廣告、公共關係及企業傳訊。
<b>OPERATIVE / CLERICAL SUPPORT LEVEL 技術人員／文員級</b>		
511	Senior Sales Representative / Staff  高級營業員 / 售貨員	Sells merchandise, provides customer service, and/or operates cash register in retail store. Typically has more sales experiences and/or good sales records. (If companies do not have their own system of classification, sales staff having 5 years or more relevant experience in the industry will be classified as senior.)  在零售店／經銷店售賣貨品，提供顧客服務及／或負責收銀工作；具較多銷售經驗及／或良好銷售紀錄。（如公司沒有特別說明，具五年或以上相關經驗者為高級售貨員）
512	Junior Sales Representative / Staff  初級營業員 / 售貨員	Sells merchandise, provides customer service, and/or operates cash register in retail store. Usually has less sales experience. (If companies do not have their own system of classification, sales staff having less than 5 years of relevant experience in the industry will be classified as junior.)  在零售店／經銷店售賣貨品，提供顧客服務及／或負責收銀工作；通常銷售經驗較少。（如公司沒有特別說明，具少於五年相關經驗者為初級售貨員）
513	Stock Assistant  存貨助理	Delivers and receives merchandise, arranges storage, fills up shelves in warehouse and/or in stores.  收發貨品，安排儲存，添補貨倉及／或店舖貨架的存貨。
514	Sales / Service Staff (Part Time)  售貨員／服務員 (兼職)	Employed on part time basis. Sells merchandise, provides customer service, and/or operates cash register in retail store.  以兼職方式受僱。在零售店／經銷店售賣貨品，提供顧客服務及／或負責收銀工作。

Code No. 編號	Job Title 職稱	Job Description 工作說明
OPERATIVE / CLERICAL SUPPORT LEVEL (continued) 技術人員／文員級 (續)		
515	Other Clerks / Supporting Staff  其他文員／輔助人員	Clerks/Supporting Staff involve in secretarial, accounting, finance, IT or other administrative work.  參與 秘書、人事、會計、財務、資訊科技或其他行政工作的文員。

TABLE 1 : AUTOMOBILE INDUSTRY MANPOWER STATISTICS

(Sector A: Vehicle Servicing)

表一：汽車業人力統計數字（汽車維修界別）

Job Title	Number of Employees 現有僱員 人數	Number of Trainees 現有受訓者 人數	Number of Vacancies 現有的 空缺額	Forecast of number of employees in 2020 預計在 2020 年的僱員 總數	Forecast of number of Trainees in 2020 預計在 2020 年的受訓者 總數
<b>Technologist Level 技師級</b>					
Mechanical Engineer (Automotive) 汽車機械工程師	114	1	5	119	1
Service Manager 維修部經理	203	0	4	207	0
<b>Sub-total: 分類總數</b>	<b>317</b>	<b>1</b>	<b>9</b>	<b>326</b>	<b>1</b>
<b>Technician Level 技術員級</b>					
Service Instructor 維修教導員	80	0	3	83	0
Motor Vehicle Examiner / Tester 汽車檢查員／測試員	364	8	13	378	8
Service Supervisor 維修監督	1 049	4	40	1 085	5
Service Adviser / Receptionist 維修服務員／款待員	381	1	16	397	0
Engineering Technician 工程技術員	310	23	25	336	18
<b>Sub-total: 分類總數</b>	<b>2 184</b>	<b>36</b>	<b>97</b>	<b>2 279</b>	<b>31</b>
<b>Craftsman Level 技工級</b>					
Vehicle Mechanic 汽車機械工 (M, M(b))	5 663	438	569	6 246	477
Vehicle Electrician 汽車電工 (E, E(b))	719	84	12	753	69
Vehicle Body Repairer 車身修理工 (B1, B1(b))	815	90	23	841	102
Vehicle Painter 汽車噴漆工 (B2, B2(b))	638	29	56	691	33
<b>Sub-total: 分類總數</b>	<b>7 835</b>	<b>641</b>	<b>660</b>	<b>8 531</b>	<b>681</b>

<b>Job Title</b>	<b>Number of Employees</b> 現有僱員 人數	<b>Number of Trainees</b> 現有受訓者 人數	<b>Number of Vacancies</b> 現有的 空缺額	<b>Forecast of number of employees in 2020</b> 預計在 2020 年的僱員 總數	<b>Forecast of number of Trainees in 2020</b> 預計在 2020 年的受訓者 總數
<b>Specific Services</b>					
Vehicle Body Builder 車身建造工 (S7)	174	7	1	181	3
Vehicle Air-conditioning Mechanic 汽車冷氣工 (S6)	85	0	3	88	0
Vehicle Upholsterer 車內裝飾工	102	0	49	151	0
Industrial Vehicle Mechanic 工業機車技工	34	0	0	34	0
Motocycle Mechanic 電單車機械工 (S1)	192	2	6	198	4
Tyre Worker / Battery Worker 輪胎工 (S2)/電池工 (S3)	358	0	50	408	0
Lubrication Worker 更換機油工 (S4)	70	0	0	70	0
Car Accessories Worker 車輛配件工 (S5)	139	0	0	139	0
Car Detailing Worker 汽車美容工	782	0	31	813	1
<b>Sub-total:</b> 分類總數	<b>1 936</b>	<b>9</b>	<b>140</b>	<b>2 082</b>	<b>8</b>
<b>Unskilled Level 非技術工人級</b>					
Customer Services Ambassador / Assistant 客戶服務大使/助理	113	0	2	115	1
General Worker / Cleaner 雜工/清潔工	524	1	17	539	0
<b>Sub-total:</b> 分類總數	<b>637</b>	<b>1</b>	<b>19</b>	<b>654</b>	<b>1</b>
<b>Total:</b> 總數	<b>12 909</b>	<b>688</b>	<b>925</b>	<b>13 872</b>	<b>722</b>

TABLE 2 : AUTOMOBILE INDUSTRY MANPOWER STATISTICS  
(Sector B : Auto/Parts Retail)

表二：汽車業人力統計數字（汽車／零件零售界別）

Job Title	Number of Employees 現有僱員人數	Number of Vacancies 現有的空缺額	Forecast of number of employees in 2020 預計在 2020 年的僱員總數
<b>Managerial Level 經理級</b>			
Owner / Sole Proprietor / Working Partner 東主／獨資經營者／執行合夥董事	101	0	101
General Manager 總經理	76	0	76
Sales Manager 營業經理	95	1	96
Marketing Manager 市場推廣經理	44	0	44
Customer Services Manager 客戶服務經理	15	0	16
Merchandising Manager 採購經理	10	1	11
Parts Manager 零件經理	21	0	21
<b>Sub-total: 分類總數</b>	<b>362</b>	<b>2</b>	<b>365</b>
<b>Supervisory Level 主任級</b>			
Store / Branch Supervisor 店舖／分店營業主任	191	1	192
Customer Services Supervisor 客戶服務主任	28	0	28
Merchandiser / Buyer 採購主任	46	1	47
Parts / Logistics / Distribution / Warehouse Supervisor 配件／物流／運輸／倉庫主任	88	3	91
Marketing Officer 市場推廣主任	26	0	26
<b>Sub-total: 分類總數</b>	<b>379</b>	<b>5</b>	<b>384</b>

<b>Job Title</b>	<b>Number of Employees</b> 現有僱員人數	<b>Number of Vacancies</b> 現有的空缺額	<b>Forecast of number of employees in 2020</b> 預計在 2020 年的僱員總數
<b>Operative / Clerical Support Level 技術人員／文員級</b>			
Senior Sales Representative / Staff 高級營業員／售貨員	1 729	18	1 747
Junior Sales Representative / Staff 初級營業員／售貨員	413	33	446
Stock Assistant 存貨助理	189	16	205
Sales / Service Staff (Part Time) 兼職售貨員／服務員	48	12	60
Other Clerks / Supporting Staff 其他文員／輔助人員	932	26	958
<b>Sub-total:</b> 分類總數	<b>3 311</b>	<b>105</b>	<b>3 416</b>
<b>Total:</b> 總數	<b>4 052</b>	<b>112</b>	<b>4 165</b>

TABLE 3: DISTRIBUTION OF EMPLOYEES BY MONTHLY INCOME RANGE

(Sector A: Vehicle Servicing)

表三：每月總收入幅度的僱員分布情況（汽車維修界別）

Job Title 職稱	\$10,000 or below 以下	\$10,001 - \$15,000	\$15,001 - \$20,000	\$20,001 - \$25,000	\$25,001 - \$35,000	\$35,001 - \$45,000	Above \$45,000 以上	Unspecified 未列明
<b>Technologist Level 技師級</b>								
Mechanical Engineer (Automotive) 汽車機械工程師	0	0	0	2	29	55	27	1
Service Manager 維修部經理	0	0	0	21	27	85	65	5
<b>Sub-total: 分類總數</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>56</b>	<b>140</b>	<b>92</b>	<b>6</b>
<b>Technician Level 技術員級</b>								
Service Instructor 維修教導員	0	0	1	19	58	2	0	0
Motor Vehicle Examiner / Tester 汽車檢查員／測試員	0	5	28	137	76	109	9	0
Service Supervisor 維修監督	0	0	39	290	225	8	0	487
Service Adviser / Receptionist 維修服務員／款待員	0	81	94	141	29	2	0	34
Engineering Technician 工程技術員	0	2	48	208	42	0	0	10
<b>Sub-total: 分類總數</b>	<b>0</b>	<b>88</b>	<b>210</b>	<b>795</b>	<b>430</b>	<b>121</b>	<b>9</b>	<b>531</b>

Job Title 職稱	\$10,000 or below 以下	\$10,001 - \$15,000	\$15,001 - \$20,000	\$20,001 - \$25,000	\$25,001 - \$35,000	\$35,001 - \$45,000	Above \$45,000 以上	Unspecified 未列明
<b>Craftsman Level 技工級</b>								
Vehicle Mechanic 汽車機械工 (M, M(b))	0	1 104	2 883	1 419	43	2	0	212
Vehicle Electrician 汽車電工 (E, E(b))	0	37	455	225	0	0	0	2
Vehicle Body Repairer 車身修理工 (B1, B1(b))	0	11	507	264	3	0	0	30
Vehicle Painter 汽車噴漆工 (B2, B2(b))	0	16	358	249	0	0	0	15
<b>Sub-total: 分類總數</b>	<b>0</b>	<b>1 168</b>	<b>4 203</b>	<b>2 157</b>	<b>46</b>	<b>2</b>	<b>0</b>	<b>259</b>
<b>Specific Services 專項服務工級</b>								
Vehicle Body Builder 車身建造工 (S7)	0	4	158	6	2	0	0	4
Vehicle Air-conditioning Mechanic 汽車冷氣工 (S6)	0	1	12	0	0	0	0	72
Vehicle Upholsterer 車內裝飾工	0	2	100	0	0	0	0	0
Industrial Vehicle Mechanic 工業機車技工	0	0	3	0	0	0	0	31
Motocycle Mechanic 電單車機械工 (S1)	0	70	86	36	0	0	0	0
Tyre Worker / Battery Worker 輪胎工 (S2) / 電池工 (S3)	0	40	225	88	0	0	0	5
Lubrication Worker 更換機油工 (S4)	0	1	20	48	0	0	0	1
Car Accessories Worker 車輛配件工 (S5)	0	87	52	0	0	0	0	0
Car Detailing Worker 汽車美容工	0	354	311	70	0	0	0	47
<b>Sub-total: 分類總數</b>	<b>0</b>	<b>559</b>	<b>967</b>	<b>248</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>160</b>



Job Title 職稱	\$10,000 or below 以下	\$10,001 - \$15,000	\$15,001 - \$20,000	\$20,001 - \$25,000	\$25,001 - \$35,000	\$35,001 - \$45,000	Above \$45,000 以上	Unspecified 未列明
<b>Unskilled Level - 非技術工人級</b>								
Customer Services Ambassador / Assistant 客戶服務大使／助理	26	47	30	10	0	0	0	0
General Worker / Cleaner 雜工／清潔工	17	439	29	0	0	0	0	39
<b>Sub-total: 分類總數</b>	<b>43</b>	<b>486</b>	<b>59</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>39</b>
<b>Total: 總數</b>	<b>43</b>	<b>2 301</b>	<b>5 439</b>	<b>3 233</b>	<b>534</b>	<b>263</b>	<b>101</b>	<b>995</b>

TABLE 4: DISTRIBUTION OF EMPLOYEES BY MONTHLY INCOME RANGE

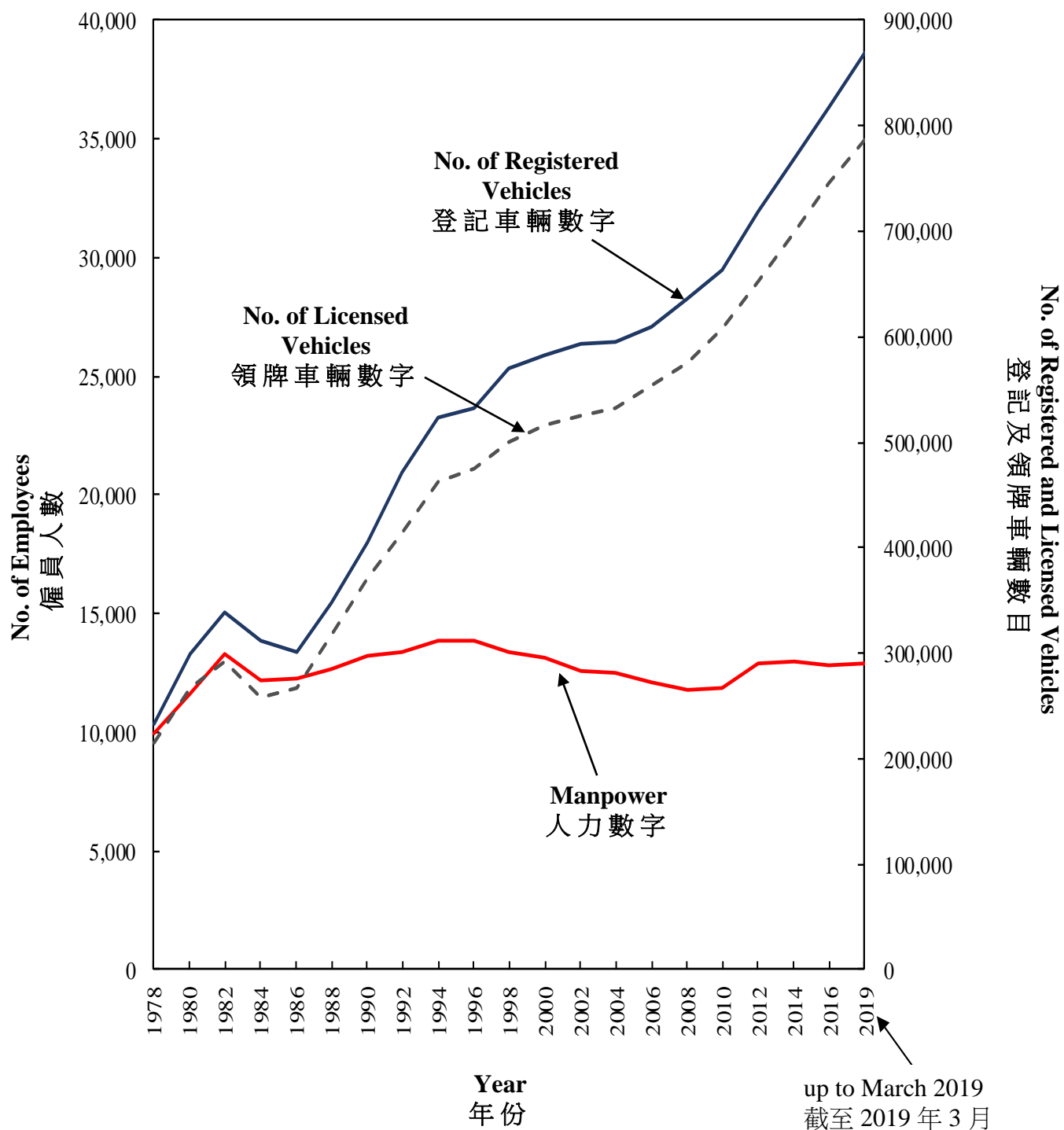
(Sector B : Auto/Parts Retail)

表四：每月總收入幅度的僱員分布情況（汽車／零件零售類別）

Job Title 職稱	\$10,000 or below 以下	\$10,001 - \$15,000	\$15,001 - \$20,000	\$20,001 - \$25,000	\$25,001 - \$35,000	\$35,001 - \$45,000	Above \$45,000 以上	Unspecified 未列明
<b>Managerial Level 經理級</b>								
Owner / Sole Proprietor / Working Partner 東主／獨資經營者／執行合夥董事	0	0	2	7	60	13	4	15
General Manager 總經理	0	0	0	1	27	3	39	6
Sales Manager 營業經理	0	0	0	16	45	15	11	8
Marketing Manager 市場推廣經理	0	0	2	1	17	16	1	7
Customer Services Manager 客戶服務經理	0	0	0	1	7	3	1	3
Merchandising Manager 採購經理	0	0	1	0	5	0	1	3
Parts Manager 零件經理	0	0	0	0	8	7	3	3
<b>Sub-total: 分類總數</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>26</b>	<b>169</b>	<b>57</b>	<b>60</b>	<b>45</b>

Job Title 職稱	\$10,000 or below 以下	\$10,001 - \$15,000	\$15,001 - \$20,000	\$20,001 - \$25,000	\$25,001 - \$35,000	\$35,001 - \$45,000	Above \$45,000 以上	Unspecified 未列明
<b>Supervisory Level 主任級</b>								
Store / Branch Supervisor 店舖 / 分店營業主任	0	0	6	118	13	0	4	50
Customer Services Supervisor 客戶服務主任	0	0	1	19	8	0	0	0
Merchandiser / Buyer 採購主任	0	0	5	32	5	0	0	4
Parts / Logistics / Distribution / Warehouse Supervisor 配件 / 物流 / 運輸 / 倉庫主任	0	2	20	43	21	0	0	2
Marketing Officer 市場推廣主任	0	0	6	14	3	0	0	3
<b>Sub-total: 分類總數</b>	<b>0</b>	<b>2</b>	<b>38</b>	<b>226</b>	<b>50</b>	<b>0</b>	<b>4</b>	<b>59</b>
<b>Operative / Clerical Support Level 技術人員 / 文員級</b>								
Senior Sales Representative / Staff 高級營業員 / 售貨員	0	81	516	860	115	0	59	98
Junior Sales Representative / Staff 初級營業員 / 售貨員	0	198	160	32	0	0	0	23
Stock Assistant 存貨助理	0	89	75	11	0	0	0	14
Sales / Service Staff (Part Time) 兼職售貨員 / 服務員	18	13	15	0	0	0	0	2
Other Clerks / Supporting Staff 其他文員 / 輔助人員	0	292	423	23	25	0	0	169
<b>Sub-total: 分類總數</b>	<b>18</b>	<b>673</b>	<b>1 189</b>	<b>926</b>	<b>140</b>	<b>0</b>	<b>59</b>	<b>306</b>
<b>Total: 總數</b>	<b>18</b>	<b>675</b>	<b>1 232</b>	<b>1 178</b>	<b>359</b>	<b>57</b>	<b>123</b>	<b>410</b>

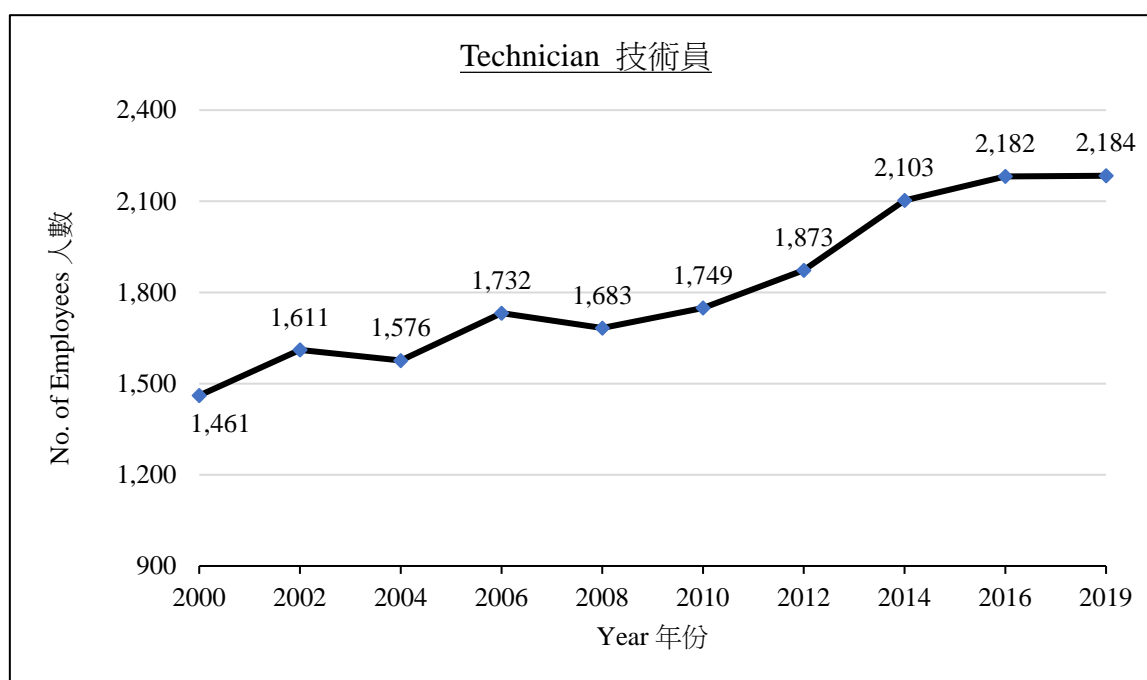
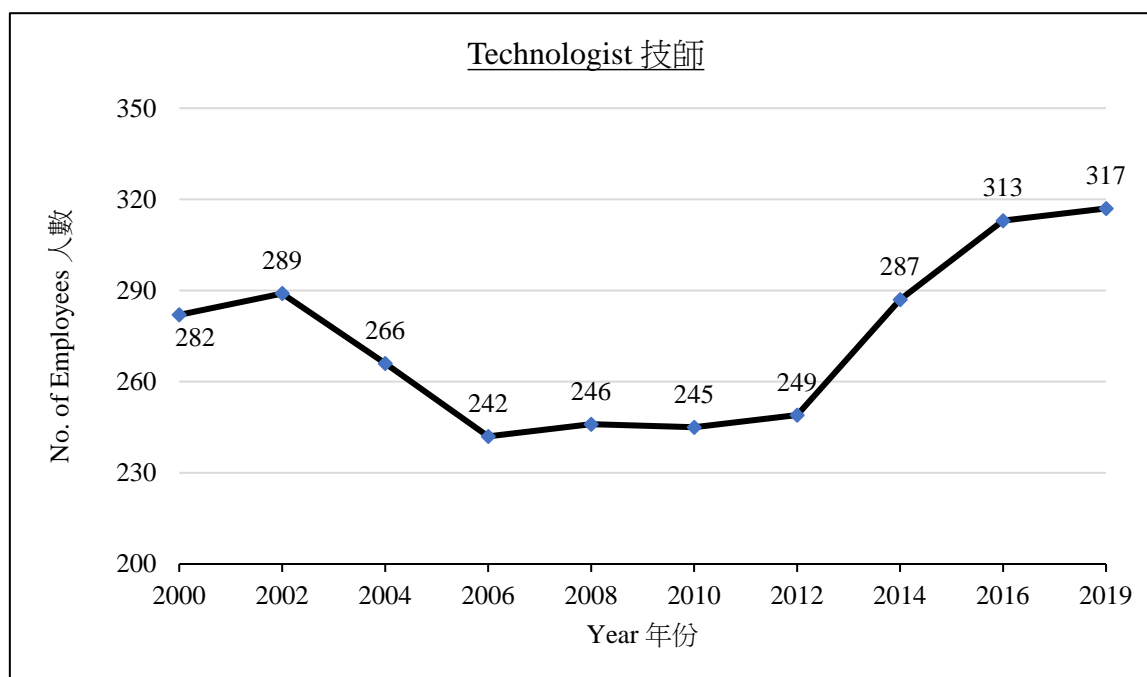
**Registered and Licensed Vehicle Population and  
Manpower in the Servicing Sector of the Automobile Industry**  
登記及領牌車輛總數  
及汽車業維修界別人力數字



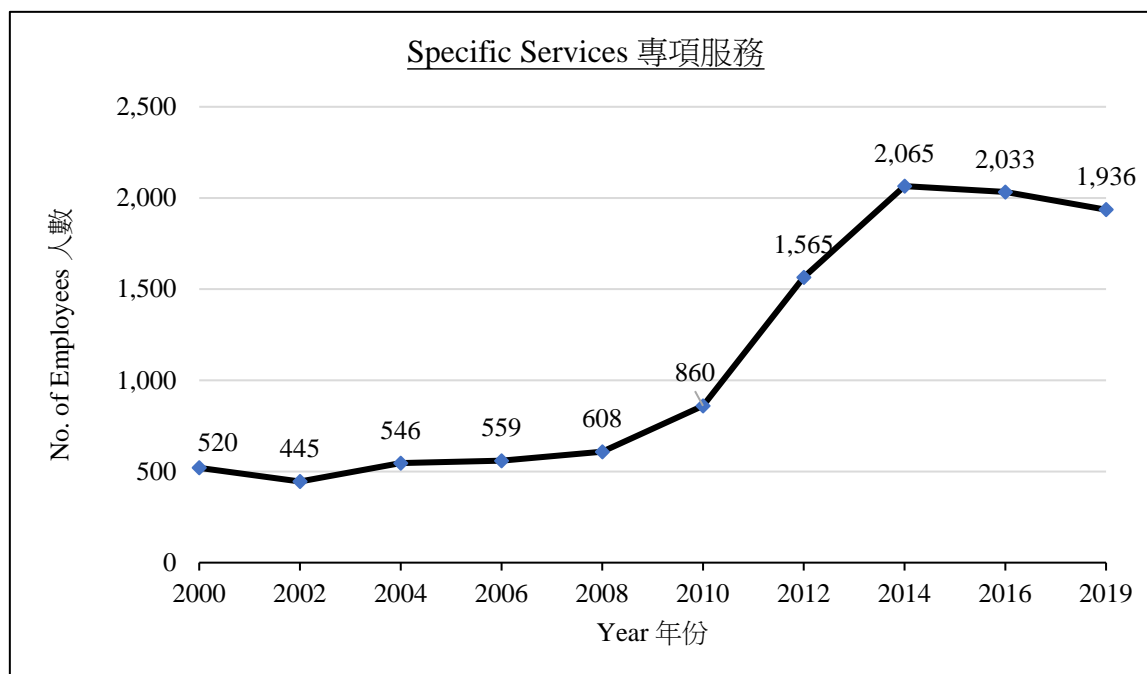
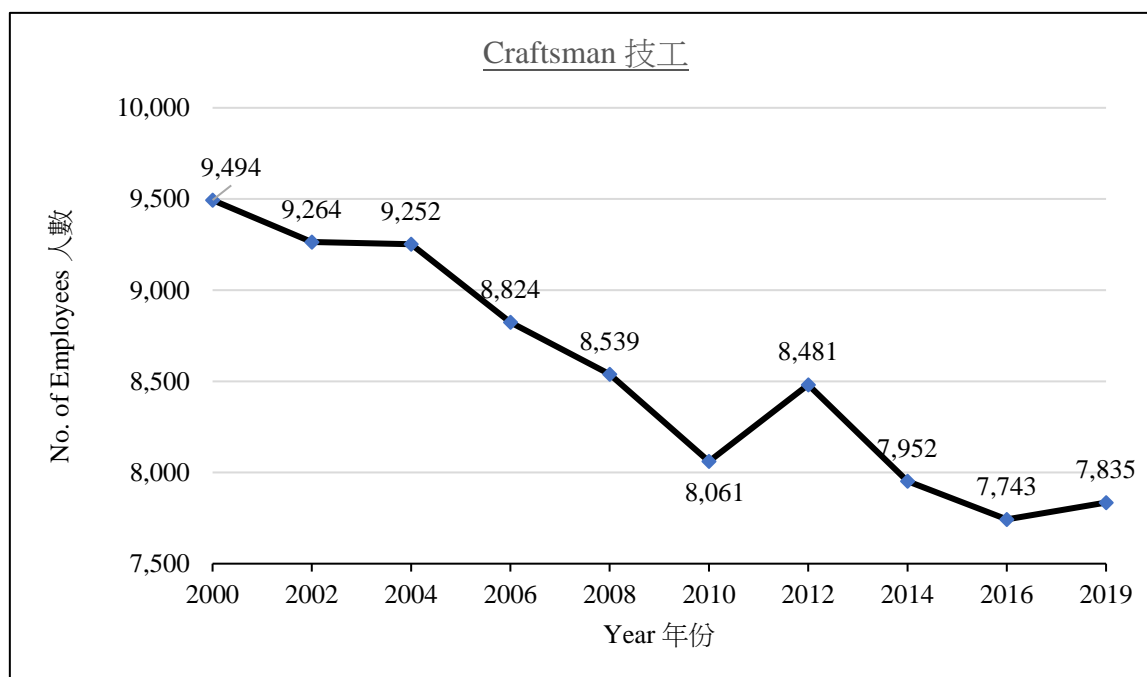
Registration, which is normally a one-off matter, means giving the vehicle a registration mark and putting it into its appropriate class, e.g. private car, light goods vehicle, etc. Licensing, which is annually or four-monthly, conveys the right for a vehicle to be driven on a road.

一部車輛通常只要登記一次，由運輸署編配車輛登記（車牌）號碼，並將車輛予以適當分類，例如私家車、輕型貨車等。發出車輛牌照，即給予車輛在道路上行駛的權利。牌照有效期分一年及四個月兩種。

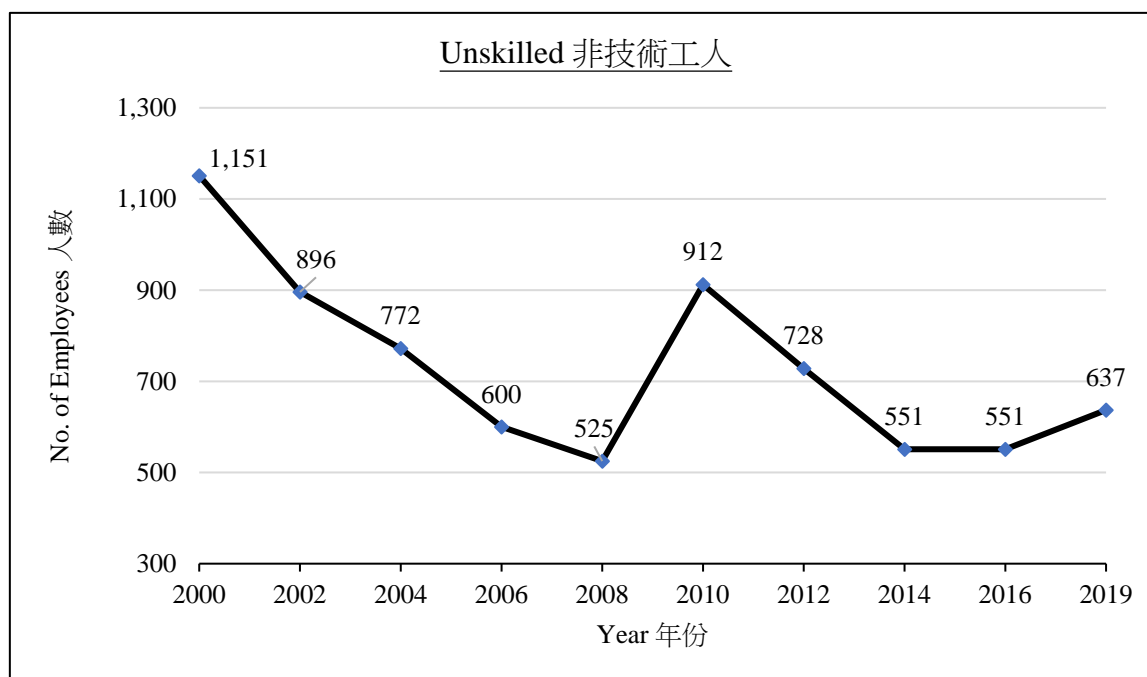
**Distribution of Employees by Skill Level – Vehicle Servicing Sector**  
各級技能等級僱員分布情況 - 汽車維修界別



## Distribution of Employees by Skill Level – Vehicle Servicing Sector 各級技能等級僱員分布情況 - 汽車維修界別



## Distribution of Employees by Skill Level – Vehicle Servicing Sector 各級技能等級僱員分布情況 - 汽車維修界別





## Manpower Forecasting Method

### Adaptive Filtering Method for Manpower Projection

#### *Introduction*

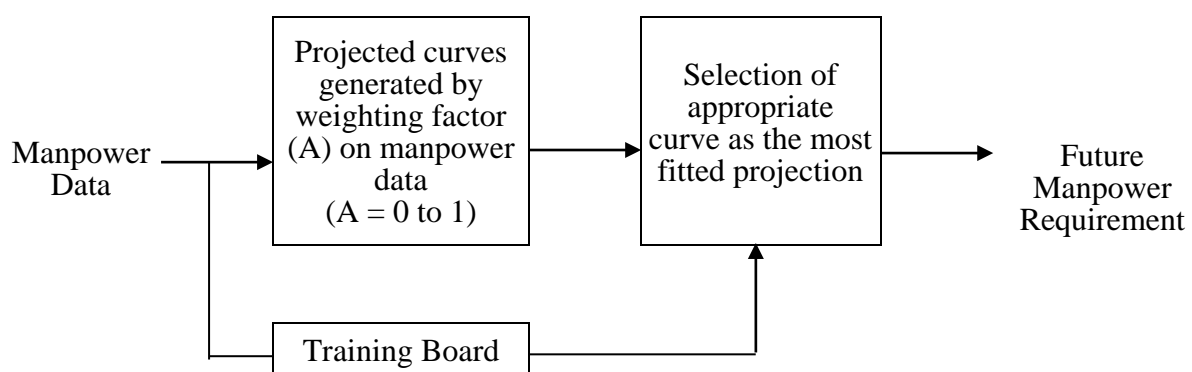
Primitive methods for forecasting, often used when insufficient historical data are available, have severe limitations. However, when a moderate history of data is available, the forecast can be refined to lead to a better forecasting of data.

#### *Adaptive Filtering*

2. The 'Adaptive Filtering Method' (AFM) is a forecasting method which rested on the principle of "Weighted Exponential Smoothing". In this method, past manpower data are weighted. Heavier weightings are given to the data from more recent surveys. Thus, the forecast is more dependent on the more recent manpower information. The degree of emphasis on the more recent survey data can however be varied by adjusting the weighting factor (A). The higher the value of 'A', the heavier the weightings of the more recent data are.

3. Finally the forecast may also be optimised to suit decisions by training boards based on factors such as market trends, technological development, social-economical factors, future expectations and so on. The method is illustrated in *Figure 1 below*.

*Figure 1 Adaptive Filtering Method*



## 採用調節過濾法 推算人力情況

### 簡介

當歷史數據不足而又需要預測人力情況時，往往會採用粗略的估算方法。這類預測方法大有局限；而當掌握到一定的歷史數據，就可以把預測優化，達至更理想的預測結果。

### 調節過濾法

2. 「調節過濾法」使用「加權指數平滑法」的原則預測人力情況。將過往的人力數據加權，較近期的數據加權比重較高，亦即倚重較近期的數據而作人力預測。同時，亦可以透過調整加權因子“A”來調較這些近期數據所佔的比重。“A”的數值愈高，新近的數據所佔比重愈大。

3. 不同行業的訓練委員會可以根據市場趨勢、科技發展、社會經濟因素、行業未來展望等，調整推斷，以預測最符合實際的人力情況。見下圖 1：

圖 1 調節過濾法

