



Manpower Update Report

Automobile Industry

2018

Automobile Training Board

ACKNOWLEDGEMENT

The Automobile Training Board (AUTB) would like to express gratitude to representatives from the trade who participated as members of the focus group, contributed their time in the discussion meeting and shared their valuable views on the manpower situation of the automobile industry. Their opinions have formed an integral part of this update report.

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Introduction

Background

The Automobile Training Board (AUTB) of the Vocational Training Council (VTC) is appointed by the Government of the Hong Kong Special Administrative Region (HKSAR). According to its Terms of Reference, the AUTB is to determine the manpower demand of the industry, assess and review whether the manpower supply matches the manpower demand, and to recommend to the VTC the development of Vocational and Professional Education and Training (VPET) facilities to meet the assessed training needs.

Following the rationalisation exercise for VTC Training Boards in 2017, a new approach for conducting manpower surveys was adopted which aimed to enhance the effectiveness and better reflect the dynamic manpower situation of industries. Under the new approach, one full manpower survey plus two information updates would be conducted for each industry on a 4-year cycle basis. For instance, from 2018 to 2021, the AUTB would conduct a full manpower survey in 2019 and two information updates in 2018 and 2021 respectively.

The 2018 manpower information update was conducted by means of:

- (a) desk research covering the period of Quarter 2 of 2017 to Quarter 1 of 2018, which analysed the job vacancies, salaries, qualifications, experience and skills requirements of principal jobs in the automobile industry;
- (b) focus group meeting held on 12 July 2018, which collected industry experts' views on the latest development of the industry, recruitment difficulties, manpower and training needs, and suggested measures to tackle the challenges.

Objectives

The objectives of the manpower information update are:

- (i) to examine the latest trends and development of the industry;
- (ii) to explore the job market situation and training needs;
- (iii) to identify the recruitment difficulties; and
- (iv) to recommend measures to meet the training needs and to ease the problem of manpower shortage.

Methodology

Overview

With reference to the 2016 full manpower survey of the automobile industry, this update report aims to provide qualitative descriptions of the recent development of the automobile industry through focus group meeting, supplemented quantitatively by desk research which tried to derive some useful findings from recruitment advertisements collected from Q2 of 2017 to Q1 of 2018.

Focus Group Meeting

The focus group meeting was intended to collect the views of industry experts on the latest trends, manpower situation and training needs of the automobile industry. Focus group members were invited from different sectors of the industry, including dealers of passenger and commercial vehicles, bus companies, SME garages, auto-parts suppliers, government departments and education institute. All members are experienced and knowledgeable practitioners of the automobile industry.

The focus group meeting was conducted on 12 July 2018. An experienced moderator led members to in-depth discussions on topics chosen by the Working Party on Manpower Survey of the AUTB. The discussions were recorded and transcribed to facilitate analysis.

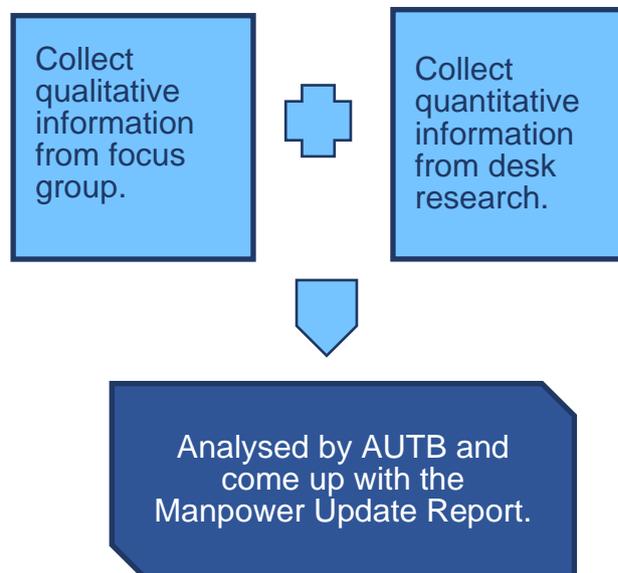
Desk Research

An integrated database was developed to capture the relevant recruitment data from major online recruitment portals on quarterly basis. The data include the number of job advertisements of each

principal job, offered remuneration, required qualification, experience, and competency, etc. Over 300,000 recruitment records of various industries were collected during the period of Q2/2017 to Q1/2018. After a de-duplication and mapping process, using the company lists based on the Hong Kong Standard Industrial Classification, 721 records relevant to the automobile industry were identified. Mapping of the 721 records with the 39 principal jobs of the automobile industry was made to facilitate further analysis.

Data Analysis

Based on the qualitative and quantitative analysis of focus group discussions and desk research, this manpower update report was drafted, discussed and endorsed by the AUTB.



Limitations

Unlike full manpower survey, the sources of information in the manpower update exercise are relatively limited. Although the AUTB has invited knowledgeable industry experts to participate in the focus group discussion, due to the constraint of group size and the duration of the discussion meeting, the views collected might not adequately reflect the whole picture of the industry.

Regarding desk research, the recruitment advertisements captured from major online recruitment portals were not exhaustive and enhancement of data sources should be made in future. Besides, it was noted that most of the

recruitment advertisements belonged to junior posts. Probably because of recruitment difficulties, employers tended to relax the qualification and experience requirements (compared with the findings of the 2016 full manpower survey) in the advertisements. The offered salaries were also noticeably lower than the figures recorded in the 2016 full manpower survey. To avoid giving a distorted picture to readers (e.g. decrease in salaries), the AUTB decided not to include the desk research data in this report .

It is believed that with the improvement in data sources and the accumulation of data for a few years, desk research will be able to generate more useful information for the manpower update exercise.

Findings

Factors Affecting the Development of the Industry

Technology

During the past decades, in order to meet the ever-increasing demand of more safe, more automatic, more fuel-efficient and more environment-friendly vehicles, carmakers have been applying lots of electronics and IT technologies in modern vehicles. With the anticipated shift from petrol and diesel cars to electric vehicles (EV) in future, it is foreseeable that less mechanical parts but more and more electrical and electronics components will be installed in our cars.

Thanks to the powerful onboard computers in modern vehicles and the

reliable communication infrastructure in place (e.g. 4G), technology advancement has not only brought unprecedented user experience to drivers (e.g. autopilot and auto-parking), but also introduced new approaches for vehicle servicing (e.g. remote diagnosis and predictive maintenance alerts to maintenance service providers).

Because of the above-mentioned technology developments, nowadays vehicle servicing workers should equip themselves with basic knowledge of electrical engineering, electronics and preferably IT as well, in addition to traditional mechanical skills (which will remain to be most important as disassembly and assembly are inevitable

procedures in vehicle servicing).

Considering the wide spectrum of knowledge and skills involved, a formal and structured training is considered necessary for newcomers while in-service practitioners should engage in lifelong learning in order to catch up with the technology advancement.

Public Policy

With a view to enhancing the standard of the vehicle maintenance trade, the HKSAR Government introduced the Voluntary Registration Scheme for Vehicle Mechanics and the Voluntary Registration Scheme for Vehicle Maintenance Workshops in 2007 and 2015 respectively. As at end of July 2018, around 9 303 (i.e. 90%) mechanics and 2 050 (i.e. 73%) workshops have registered in the schemes.

Most stakeholders of the automobile industry wish the voluntary registration schemes to become mandatory as they will uplift the standard and image of the industry, reduce unhealthy competition and hence ensure stable income for workers. With the higher level of professionalism, it was anticipated that more people would be willing to join the industry.

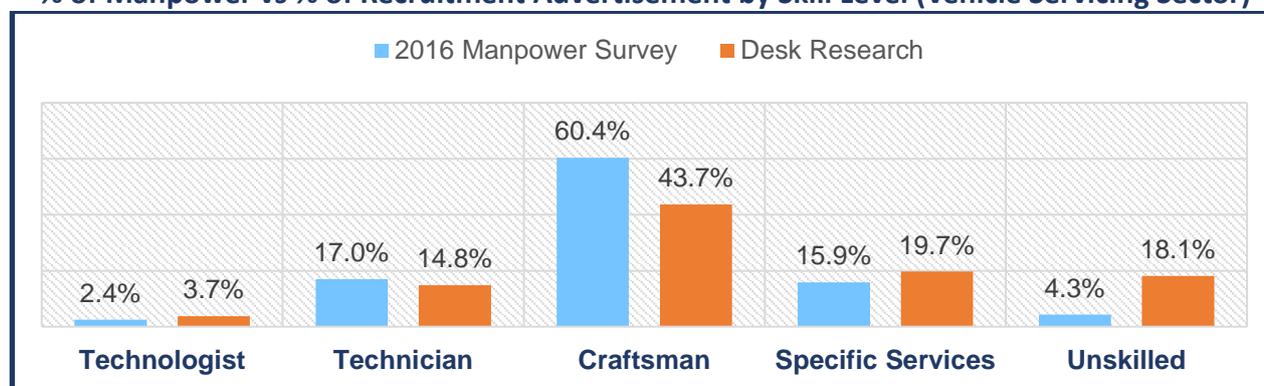
Infrastructure

The opening of the Hong Kong-Zhuhai-Macao Bridge (HZMB) in October 2018 has been stimulating the sales of coaches. In addition, the Third Runway construction project from 2018 to 2024 demands more special purpose vehicles such as dump trucks and tank trucks. In this connection, there should be an increasing demand of commercial vehicles servicing workers.

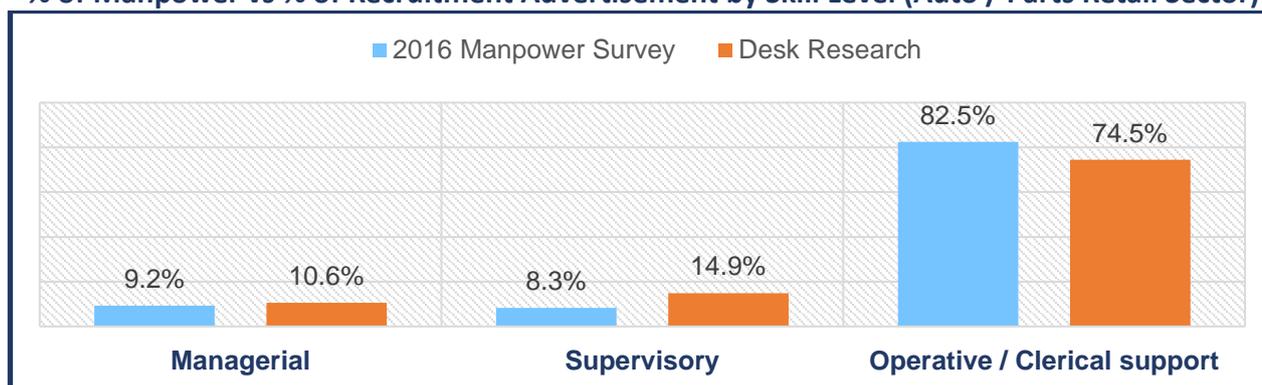
Future Manpower Demand

In general, the distribution of recruitment advertisements across different skill levels during the desk research period (Q2/2017 to Q1/2018) matched the percentages of manpower recorded in the 2016 manpower survey.

% of Manpower vs % of Recruitment Advertisement by Skill Level (Vehicle Servicing Sector)



% of Manpower vs % of Recruitment Advertisement by Skill Level (Auto / Parts Retail Sector)



Principal Jobs of High Demand

Of the 721 relevant recruitment advertisements captured in desk research, the following 10 principal jobs had the largest shares:

1. Vehicle Mechanic (21%)
2. Sales Representative / Staff (14%)
3. General Worker / Cleaner (13%)
4. Car Detailing Worker (12%)
5. Services Adviser (7%)
6. Vehicle Body Repairer (5%)
7. Stock Assistant (4%)
8. Vehicle Electricians (3%)
9. Engineering Technician (3%)
10. Other Clerical / Supportive Staff (3%)

Compared with each principal job's manpower figures in the 2016 manpower survey, the number of vacancies were particularly high for General Worker / Cleaner, Car Detailing Worker, Services Adviser and Stock Assistant. This might be attributed to the high turnover rates of these jobs.

Trends

As the supply of new bloods could not fully compensate the natural wastage (e.g. retirement), it was anticipated that the manpower of the automobile industry would have mild or single-digit growth in the coming years.

Focus group members shared the view that manpower supply would continue to be tight across the whole spectrum of trades, in particular commercial vehicle maintenance workers (due to the Hong Kong-Zhuhai-Macao Bridge and Third Runway System developments), Vehicle Body Repairers and Painters (due to the unpleasant working condition), Service Advisers and Car Detailing Workers.

With the powerful onboard computers in modern vehicles and the reliable telecommunication networks now available, applying IT technologies in fleet management has been gaining popularity among manufacturers and fleet operators. Some new posts are being created to support the operations.

Training Needs

EV and Hybrid Vehicles

As there are hazardous high voltages in the electrical system of EV and hybrid vehicles, most SME garages provided maintenance / repairing services for mechanical systems, e.g. brakes and suspension, only. What they needed to learn were: (i) how to identify the high voltage connections in EV and hybrid vehicles; and (ii) how to disconnect the battery and hence shut down the high voltage. Relevant safety training courses were available from VTC.

Compared with the total number of licensed vehicles in Hong Kong (766 200 as in December 2017), the number of EVs on the roads (about 10,600) are still relatively small. Unless the volume reaches a certain level, few SME garages will be interested in investing the hardware and software for providing full maintenance / repairing services to EV and hybrid vehicles. Hence, the training need will continue to be small, at least for the coming few years.

Petrol and Diesel Vehicles

Although there is no high voltage electrical system in petrol and diesel vehicles, their electronics and computer technologies are equally advanced nowadays. A vehicle service worker must understand the underlying working principles of these cars and the use of computerised diagnostic tools in order to provide effective maintenance / repairing services.

Workers employed by dealers received the necessary training and support from manufacturers, whereas workers of SME garages had to pick up the knowledge by other means, e.g. internet, technical documents published overseas, sharing among peer workers. Although VTC and government departments such as the Environmental Protection Department (EPD) and the Electrical and Mechanical Services Department (EMSD) regularly organised seminars and training workshops and invited manufacturers to share their technical information with the participants, in-depth training might not be readily accessible to all workers.

Given the sophisticated and proprietary technologies used by manufacturers, nowadays SME garages probably need to focus their services for a few brands only. Otherwise, their equipment and training investment may become unmanageable.

Recruitment Challenges

Compared with other engineering trades, e.g. Construction, Electrical & Mechanical Services, the remuneration packages offered by the automobile industry were less competitive. Although it was noted that the gap has been narrowing in recent years, employers, especially SME garages still found it difficult to attract and retain new bloods. This could be attributed to the following factors:

Social Culture and Stereotyping

Although the working environment of vehicle maintenance workshops had been vastly improved over the years, some workshops still looked dirty and oil-stained. In addition, a significant number of these old-fashioned workshops were situated in residential districts. The poor image deterred parents from allowing their children to join the automobile industry.

Long Training Period

The apprenticeship training period of vehicle servicing trades lasts for four years. This lengthy duration appeared appalling to teenagers despite the availability of the Earn & Learn incentive scheme.

Some focus group members suggested that certain form of promotion, e.g. from Technician Trainee to Technician, should be provided during the apprenticeship training period in order to satisfy the aspiration of the trainees.

Keen Competition among Employers

Because of the better working environment and more structured training programmes, most VTC graduates chose to work in dealers and bus companies, leaving extremely few new bloods to SME workshops.

Hard to Catch up with Technology Advancement

Unlike their peers in dealers, workers of SME garages often needed to acquire technical knowledge through self-learning which imposed heavy stress on them, especially the middle-aged group. Some found it too demanding and changed their job.

Misconception about the Industry

Apart from vehicle servicing, there are other posts in the automobile industry, such as car detailing, parts managements, sales, etc. Many youngsters were not aware of the career development routes in the automobile industry.

Recommendations

Measures to Meet the Training Needs

Currently, VTC offers a full range of training programmes for the automobile industry, including Higher Diploma in Automotive Engineering, Diploma / Certificate of Vocational Education in Automotive Technology and Vehicle Body Repair, as well as skill upgrading courses for in-service practitioners. With the support of manufacturers and government departments, VTC would keep on organising seminars and training workshops to satisfy workers' training needs on new technologies, in particular those related to low emission, EV and hybrid vehicles.

Suggestions to Ease the Problem of Manpower Shortage

Uplift the Image of the Industry

Knowing that the manpower supply could not fully fulfill the demand of the industry, VTC would continue to work closely with employers to promote the career prospects of the automobile industry to students. The annual Best Apprentice Competition organised by the AUTB and the winners' overseas study tour are good examples of publicity events.

Employers and trade associations are encouraged to offer more school talks and workplace visits to secondary school students. The AUTB Secretariat can help to co-ordinate these activities by using Education Bureau's Business-School Partnership Programme (BSPP) platform.

Trade associations may explore the feasibility of seeking Government's

funding support to develop short promotional drama series or videos to highlight the job nature of vehicle maintenance mechanics and the promotion hierarchy to technicians, engineers or even management level.

Establish Mandatory Registration Schemes

To foster a higher level of professionalism and hence attract people to join the automobile industry, many focus members suggested that employers and workers should urge the Government to make the registration schemes for vehicle mechanics and maintenance workshops mandatory.

Review the Apprenticeship Training Scheme

While some employers were of the view that four years were indeed necessary to train up a competent vehicle mechanic, some suggested that the duration should be reviewed, given the changes in technology and work practice over the years. For trainees of this generation, a shorter training period may help to elevate their interests and aspirations.

Further consultation about the training duration is required before a majority consent can be reached. Meanwhile, employers may consider adopting better job titles for their trainees.

Broaden the Recruitment Targets

At present, almost every industry in Hong Kong is competing for manpower and youngsters have lots of choices, in terms of studying and employment. Employers of the automobile industry should broaden their recruitment targets to include ethnic minorities, females, middle-aged group and people who look for security and satisfaction in their jobs.

Strengthen Collaboration among Trade Associations

Some focus group members suggested that an automobile industry council could be established to forge consensus on long-term strategic issues and convey the needs of the industry to the Government. The council could be empowered to formulate codes of conduct and promote good practices across the industry.