



LAB-MOVIE
LABOUR MARKET OBSERVATORY
IN VIETNAM UNIVERSITIES

VIETNAM NATIONAL UNIVERSITY OF AGRICULTURE

Labour Market Survey in the Agri-food Sector

SURVEY RESULTS

LABOUR MARKET SURVEY IN THE AGRI-FOOD SECTOR

Vietnam, 11/2022

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CHAPTER 1. INTRODUCTION

Agri-food is one of the most important economic sectors in Vietnam. Besides production for an increasing domestic demand, Vietnam is a major exporter of agricultural and food products. Pre-pandemic, Vietnam's agri-food sector demonstrated strong contributions to the national economy. Findings from the report show that in 2019, Vietnam's agri-food sector made a GDP contribution of US\$86.4 billion. The sector is also responsible for half of the entire workforce with 27.5 million jobs, making it the single most critical source of employment in the economy. The sector also contributed a total of US\$13.2 billion in tax revenues. This was largely driven by Vietnam's dominant agricultural industry, which contributes over US\$55.3 billion in GDP, which is nearly two-thirds of the entire sector. However, the agri-food industry saw greater diversification over the years as both food and beverage manufacturing and distribution saw double-digit growth between 2015 and 2019 (Vietnam Economic news, 2021).

Throughout a tumultuous period for the Vietnamese economy, the agri-food sector has demonstrated its very important role. It has placed food on the table at stable prices, provided an income and employment for a huge proportion of the country's workforce, and created opportunities for businesses at each stage of the value chain. From farm to fork, the Vietnamese agri-food sector holds an unparalleled position in the economy and plays a pivotal role in its future economic development. Its performance is critical to household wellbeing and it is an economic powerhouse, responsible for millions of jobs, as well as being a major contributor to total economic output and government tax receipts. As a key pillar of the national economy, Vietnam's agri-food sector remained resilient during the COVID-19 pandemic and has great potential to drive economic recovery, ranking second in the region (Food industry Asia, 2021).

Labor intensive sectors continue to be the growth drivers for Vietnam's economic development. However, globalization, international competition, innovation and technology advancements have emphasized the importance of human resource management. Several studies have focused on some component of human resource management and their impact on higher education institutions and universities. In this context, Vietnam National University of Agriculture (VNUA) with the support of the Commission of the European Union and the coordination of University Degli Studi Padova is implementing the project "Lab-Movie - Labour Market Observatory in Vietnam universities" with the objective to increase the capacity of several target institutions – with a special focus on application of IT to close the linkage between the universities – human resource provider – with the labour market. In order to achieve this goal, VNUA firstly survey to assess a labor needs of agrifood enterprises in Vietnam, mainly in the northern provinces.

CHAPTER 2. LITE REVIEW ON VIETNAM LABOR MARKET FOR THE AGRIFOOD SECTOR

2.1. Driving activities of the agrifood sector

Vietnam produces a large number of food commodities supplied for domestic consumption and exported to the world. Table 1 displays Vietnamese food products over recent years. Milled rice and fishery frozen products are the most important food industries. The production of milled rice is almost constantly remained in the past 3 years from 2016-2018, approximately 40000 thousand tons. Meanwhile, fishery frozen products reached 2133 thousand tons in 2018, increasing by 6.1% compared to 2017. In beverage industry, beer production is a largest sector with 4214.3 million litres, growing by 5.2%. This economic sector may be strongly affected in the next years by Decree 100/2019/NĐ-CP on the alcohol drinking ban when driving.

Table 2.1. Food of selected commodities in Vietnam

Code		Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018
C1010	Canned meat	ton	4677	5209.2	5520	4568	4086	4384	4314	4092	3946
C10209	Canned fishery products	ton	76.9	86.2	96.6	107.5	103.5	100.6	102.3	105.1	109.2
C10201	Frozen fishery products	1000 ton	1278.3	1362.9	1372.1	1463.4	1586.7	1666	1763.1	1946.2	2133.1
C10203	Fish sauce	million litre	257.1	280.2	306	325.8	334.4	339.5	372.2	373.7	374.2
C10309	Canned vegetable	ton	48411	55680	60423	62371	63062	65096	69132	74262	79058
C10309	Canned grain and fruit	1000 ton	60.1	53.6	50	48.9	47.8	49.2	53.7	56.2	56.9
C10402	Cooking oil	1000 ton	565.9	568.7	631.6	826.5	862.9	966.1	1034.7	1078.6	1166.3
C10500	Fresh milk	million litre	520.6	645.3	701.3	760.7	846.5	1027.9	1105.5	1211.4	1258.4
C10500	Milk powder	1000 ton	58.9	76.1	81.2	87	90.2	99.3	107.7	111.7	121
C10611	Milled rice	1000 ton	33473	38289	39748	41017	42165	40770	38920	39326	41743
C10720	Sugar	1000 ton	1141.5	1306.8	1634.3	1860.3	1863.4	1842.1	1695.3	1747.5	1927.9
C10770	Powder and instance coffee	1000 ton	68.1	80.5	92	91.5	90.7	87.6	95.4	99.4	106.9
C10760	Processed tea	1000 ton	211	207.4	193.3	187.6	179.8	167.8	165.4	170.5	169.4
C11010	Spirit and traditional alcohol	million litre	349.4	337.1	330.9	318.1	312.7	310.3	306.8	309.7	316.3
C11030	Beer	million litre	2420.2	2625.7	2978.7	3004.1	3287.2	3526.8	3845.1	4004.8	4214.3
C11041	Mineral water	million litre	458.5	528	566.4	645.8	763.7	877.3	1016.6	1027.7	1121.8

(Source: GSO)

Total formal Value added (INDSTAT) for food processing grew from USD 1.128 billion in 2006 to USD 4.465 billion in 2016. Value added grew much faster than the average productivity per employee, increasing threefold in the decade 2006- 2016 (table 2).

Table 2.2. CAGR* per subsector, food processing, 2006-2016 (%)

Food products	Value added	Average size est.	Average productivity
Processing/preserving of meat	9.7%	-6.8%	5.5%
Processing/preserving of fish, etc	14.7%	-2.5%	12.1%
Processing/preserving of fruit, vegetable	22.6%	-10.2%	23.6%
Vegetable/animal oils/fat	28.3%	-8.0%	24.0%
Dairy products	10.6%	-2.9%	-1.6%
Grain mill products	21.2%	3.6%	20.4%
Sugar	1.0%	-4.6%	4.3%
Overall	14.7%	-2.2%	12.7%

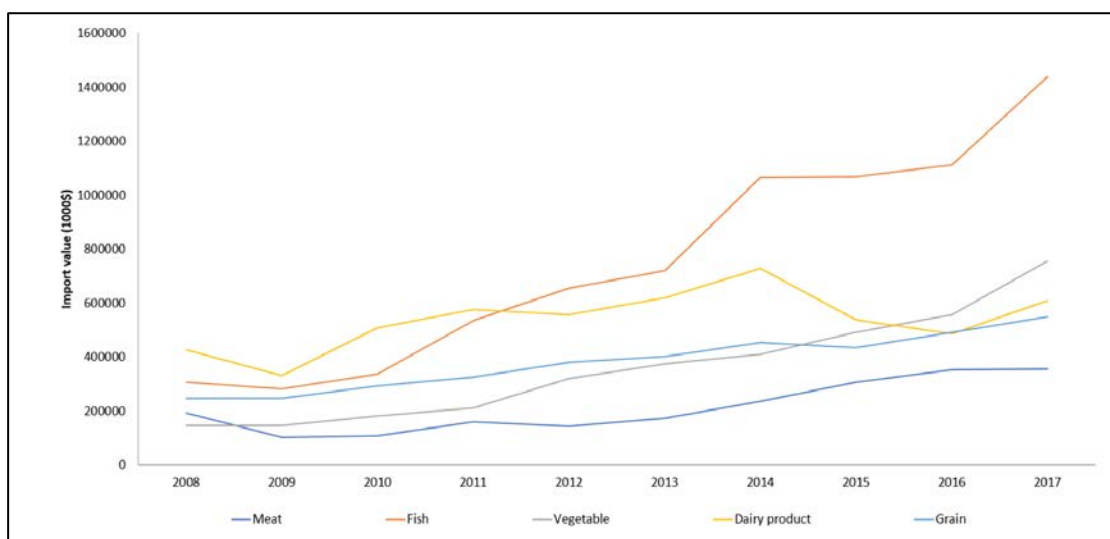
CAGR: Compound Annual Growth Rate

Source: UNIDO INDSTAT

In 2017, Viet Nam's food processing industry was worth more than USD 8.8 billion in terms of export values, the highest figure since 2007. However, the exceptional growth rate of 22.8 per cent in the period 2007-2011 was followed by a significant contraction in the subsequent period (2011- 2017), nonetheless avoiding negative figures and remaining positive at 1.73 per cent.

Fish processing has been the fastest growing subsector in all periods, with a growth rate of 13.3 per cent in the period 2007-2011, and 4.66 per cent in the subsequent period. Total export value peaked at USD 6.6 billion in 2017, followed by the processing of vegetables with an export value of roughly USD 1 million in 2017, and growing steadily at 2 per cent in the period 2012-2017.

In terms of import value, fish processing was the leading industry with over USD 1.4 billion in 2017, and this trend has continued to grow sharply. The processing of fruits and vegetables as well as dairy products follow, although the import value for dairy products decreased considerably between 2014 and 2017.



Source: UNCOMTRADE

Figure 2.1. Food processing export values, 2007-2017 (million USD)

2.2. Driving geographical areas

In the industry and construction including food and beverage manufacture, the manufacturing continued to be the main contributor to the economic growth, with a drastic increase of 12.98%, lower than the figure of the same period in 2017 but much higher than the growth rates in the years from 2012 to 2016, contributing 2.55 percentage points to the overall growth. The above-mentioned results showed that the economy escaped from its dependence on the mineral and resource exploitation as mining and quarrying endured a negative growth for the third consecutive years in 2018 (a decline of 3.11%), reducing 0.23 percentage points of the economy's total added value (Statistical Yearbook of Vietnam, GSO, 2018).

In Hanoi, in 2018 some manufacturing industries achieved a higher growth rate than the general growth rate of the whole industry such as: Beverage increased by 12.2% over the same period last year. Industrial production index of food production and processing increased by 3.3% over the same period last year (Statistical Yearbook of Hanoi, 2018). The main food products in Hanoi is presented in Table 2.3.

Table 2.3. Main food production in Hanoi

Code	Unit	2010	2015	2016	2017	2018
C10203	Fish sauce	1000 litres	2885	388	216	182
C11030	Beer	Million litre	375	455	462	453
	Cake and Candy	1000 tons	55	53	54	54
	Feed	Ton	369851	385116	391107	438112
						450216

(Source: Statistical Yearbook of Hanoi, 2018)

The table 3 shows that fish sauce production in Hanoi have steadily decreased over the years. In 2018, the number of fish sauce volume decreased by 93% compared to 2016. Meanwhile beer, cake and candy production have been constantly maintained in recent years.

2.3. Employment situation

Agricultural, forestry and fishery sector is an economic activity creating jobs the most, followed by industry and construction including food manufacture. According to the labour force survey, in 2018 the number of people working in industry and construction including food manufacture reached to 26.7%, increasing by 13.7% compared to 2000 (GSO, 2018). This survey also presented that there was a moving labour force from agricultural, forestry and fishery to industry and construction and services sector, making increase in the highest labour force for two these sectors (Table 2.4).

Table 2.4. Employment percentage in different occupation (%)

Year	Agriculture, Forestry and Aquaculture	Industry and Construction (including food manufacture)	Services
2000	62.2	13.0	24.8
2001	60.3	14.5	25.1
2002	58.6	15.4	26.0
2003	57.2	16.8	26.0
2004	56.1	17.4	26.5
2005	55.1	17.6	27.3
2006	54.3	18.2	27.6
2007	52.9	18.9	28.1
2008	52.3	19.3	28.4
2009	51.5	20.0	28.4
2010	49.5	21.0	29.5
2011	48.4	21.3	30.3
2012	47.4	21.2	31.4
2013	46.8	21.2	32.0
2014	46.3	21.5	32.2
2015	44.0	22.8	33.2
2016	41.9	24.7	33.4
2017	40.2	25.8	34.0
2018	37.7	26.7	35.6

(Source: Labor and employment survey in 2018, GSO)

According to labour force and employment survey (GSO, 2018), income of workers operating in manufacturing and processing industry including food and beverage production received higher salary than those working in agricultural sector, with amount of 5857800 VND/month. In general, however these levels of salary for workers operating in these sectors were still lower than that for those working in information and communication, education and training; or health service..

2.4. Distribution of enterprises and workers/labour force for Agrifood

According to GSO (2018), there was annually remarkable increase in enterprises performing food production in the past 7 years (2010-2017). The number of food enterprises rapidly increases to 7661 in 2017, growing by 53.9% and 7.3% compared to 2010 and 2016, respectively. This activity created approximately 547335 jobs in 2017, however this figure decreased by 1.2% compared to a previous year (Table 5). However, the number of beverage enterprises continued to increase over recent years and this industry created the opportunity for 50116 employees, increasing by 1.7% and 7.7% compared to 2016 and 2010, respectively. GSO (2018) also showed that enterprises operating in these sectors were mainly small ones which could employ less than 49 employees (Table 2.6).

Table 2.5. Number of acting enterprises having business outcomes and number of employees working in agrifood sector as of annual 31 December in Vietnam

	2010	2014	2015	2016	2017
1. Manufacture of food products					
Enterprises	4977	6275	6630	7137	7661
Employees	496446	527593	542339	553879	547335
2. Manufacture of beverages					
Enterprises	1711	2116	2190	2291	2373
Employees	46539	47064	49109	49260	50116

(Source: Statistical Yearbook of Vietnam, 2018-GSO)

Table 2.6. Number of enterprises in food manufacture by size of enterprise at 31/12/2017

	Manufacture of food products	Manufacture of beverages
< 5 employees	2142	1306
5 - 9 employees	1528	657
10 – 49 employees	2487	271
50-199 employees	977	97
200-299 employees	163	13
300-499 employees	148	11
500-999 employees	129	13

1000-4999 employees	82	5
> 5000 employees	5	-
Total	7661	2373

(Source: Statistical Yearbook of Vietnam 2018, GSO)

Hanoi is one of the biggest economic regions with many industrial zones. According to Hanoi Statistical Office (2018), enterprises operating in food sector includes state, non-state and foreign invested enterprises, in which non-state enterprises accounts for 99.8%. The number of enterprises slightly increased over recent years. In total, this activity created approximately 48911 jobs in 2018, and this figure slight increased over recent years. However, in recent years the number of beverage enterprises remarkably increased and in 2018 this industry created the opportunity for 4939 employees, increasing by 25% and 40.1% compared to 2016 and 2010, respectively (Table 2.7).

Table 2.7. Number of acting enterprises and establishments; and employees in food and beverage sector as of annual 31 Dec in Hanoi

	2010	2014	2015	2016	2017	2018
1. Manufacture of food products						
Total enterprises	14024	n/a	13738	13737	14215	14303
State enterprises	6	n/a	7	7	5	5
Non-state enterprises	14003	n/a	13716	13712	14192	14279
Foreign invested enterprises	15	n/a	15	18	18	19
Total employees	47096	n/a	14749	47250	47798	48991
State enterprises	3195	n/a	5555	5771	3337	3120
Non-state enterprises	42669	n/a	40131	38952	42345	43358
Foreign invested enterprises	1232	n/a	1805	2527	2116	2513
2. Manufacture of beverages						
Total enterprises	3511	n/a	3926	3928	5059	4939
State enterprises	4	n/a	4	4	4	4
Non-state enterprise	3500	n/a	3916	3918	5049	4929
Foreign invested enterprises	7	n/a	6	6	6	6
Total employees	12948	n/a	10881	10544	12126	12113
State enterprises	1800		1020	1014	1278	1295
Non-state enterprise	10411	n/a	8993	8855	10265	10223
Foreign invested enterprises	737	n/a	868	675	583	595

(Source: Statistical Yearbook of Hanoi, 2018)

2.5. The classification adopted in the sources used (which classification of economic activities has been used to define the sector, where possible using VSIC classification)

- Manufacture of food products: C10.
- Code of each subsector is described in more detail at table 2.1

VNUA conclusion:

Vietnam is a transitioning economy that is moving from agricultural, forestry and fishery production to industry and construction including food and beverage manufacture; and services. Therefore, over recent years there was a moving labour force from the agricultural, forestry and fishery sector to the industry and construction and service sector, making increase in the highest labour force in these economic sectors. Over recent years, although the number of enterprises in agricultural and food production has rapidly increased, but people operating in these sectors have slightly decreased. In contrast, the enterprises operating in beverage production has continued to increase and created more jobs.

Hanoi is still one of the biggest economic regions across the country. As can be seen that labour force in this region mainly has focused on service sector. Enterprises and peoples operating in agricultural, forestry and fishery sector remarkably has decreased, however food and beverage manufacture has been growing and created more jobs.

CHAPTER 3. SURVEY METHODOLOGY

This survey aims to collect data on the companies operating in the agri-food sector to determine their demand and human resources requirements in the labor market. In the future, this data will be used for matching between the supplier and employers in the labor market. The research team combined direct survey and indirect survey methods. At the beginning of 2021, we conducted a direct survey in the form of face-to-face interviews with 06 companies and in the form of interviews via Zoom of 05 companies. From mid-2021 onwards, due to a strong outbreak of the Covid-19 epidemic, the authorities of Hanoi and many neighboring provinces have applied blockade measures in many places. Therefore, we conducted an indirect survey using a questionnaire (created using Google Form application) for the remaining 47 companies. When surveying a number of companies, employers all said that it is necessary to adjust the questionnaire to suit the trend of recruitment demand and the output standards of the training program for the agri-food industry. Therefore, we have revised the questionnaire according to the comments of employers and alumni.

Key information of collected data as follow:

General information: organizational structure, activities, main products, and main/specific professional figure;

Information on personnel structure: number of employees based on responsibilities, qualifications, gender, type of recruitment contract;

Recruitment information: number of employees (undergraduate degree) recruited based on main/specific professional figures and training sectors in 2020 and 2021, recruitment planning in the year 2022 based on main/specific professional figures;

Prediction: Agri-food industry development trends in the coming years, promising main/specific professional figures in the agri-food sector;

Description of main/specific professional figures: main tasks in charge, necessary professional knowledge and skills, requirements for computer skills, foreign language proficiency, soft skills, personal qualities, willingness to work out of hours;

CHAPTER 4. RESULTS OF SURVEY

4.1. Results on general information

Out of 58 companies participating in the survey, 53 companies agreed to provide general information related to the company's activities, personnel structure and recruitment needs.

Survey area: The companies participating in the survey are mainly located in Hanoi and neighboring provinces such as: Bac Ninh, Thai Nguyen, Hung Yen, Ha Nam, Hai Duong, Hai Phong, Thai Binh, and Quang Ninh. , Ninh Binh, etc in which, the area with the most companies participating in the survey is Hanoi (19 companies).

Participants in the interview: Among 53 individuals representing companies participating in the interview, 19 are male, 34 are female; The interviewees hold different positions in the company: director, deputy director, head of administrative and human resources department, human resources specialist, head of human resources team, etc.

4.1.1. Company information

The survey results indicate that about 40% of the headquarters where the respondents work are the unique office, 32% of the headquarters are the operating offices have one or more branches, 15% headquarters are branches with operating offices in Hanoi and 13% of headquarters are branches with operating offices in provinces outside Hanoi.

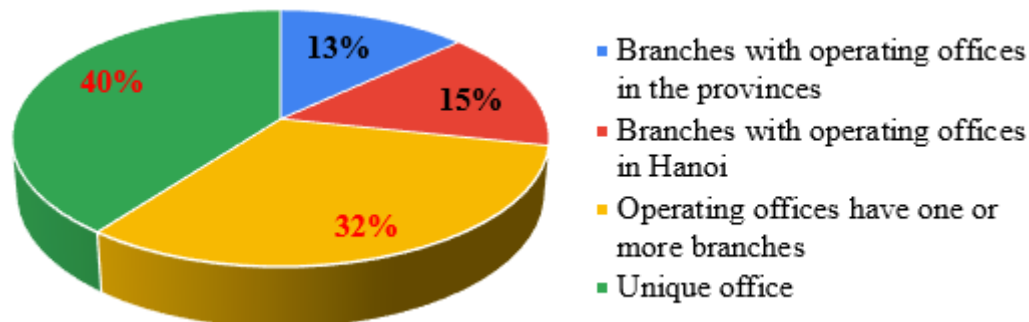


Figure 4.1. Headquarters of the companies participating in the survey

Surveying the company's main activities, the results show that 43% of companies have processing, distribution, and trading for food and/or beverages activities, 25% companies have food and/or beverage processing activities, 19% companies have food and/or beverage processing and trading activities, and 13% companies have food and/or beverage processing and distribution activities. Thus, the number of companies with all 3 activities of processing, distributing and trading food and/or beverages dominates over the number of companies with only 1 or 2 of the 3 activities above.

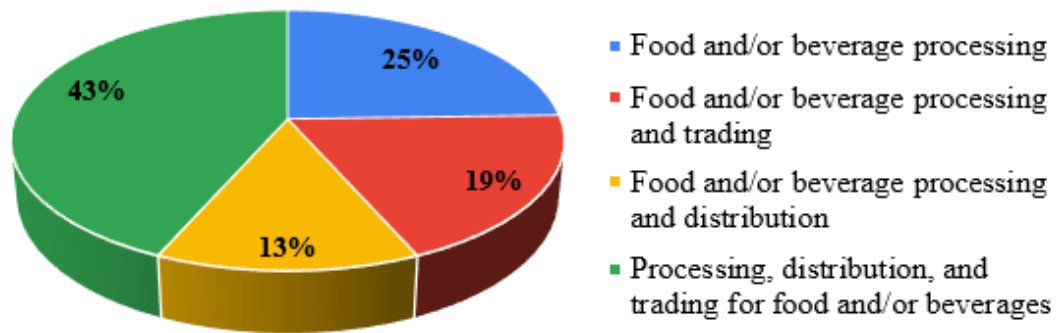


Figure 4.2. Main activities of the companies

Surveying the main food product industry groups of companies (according to the Vietnam Product Classification System, 2018), the results are shown in Figure 4.3.

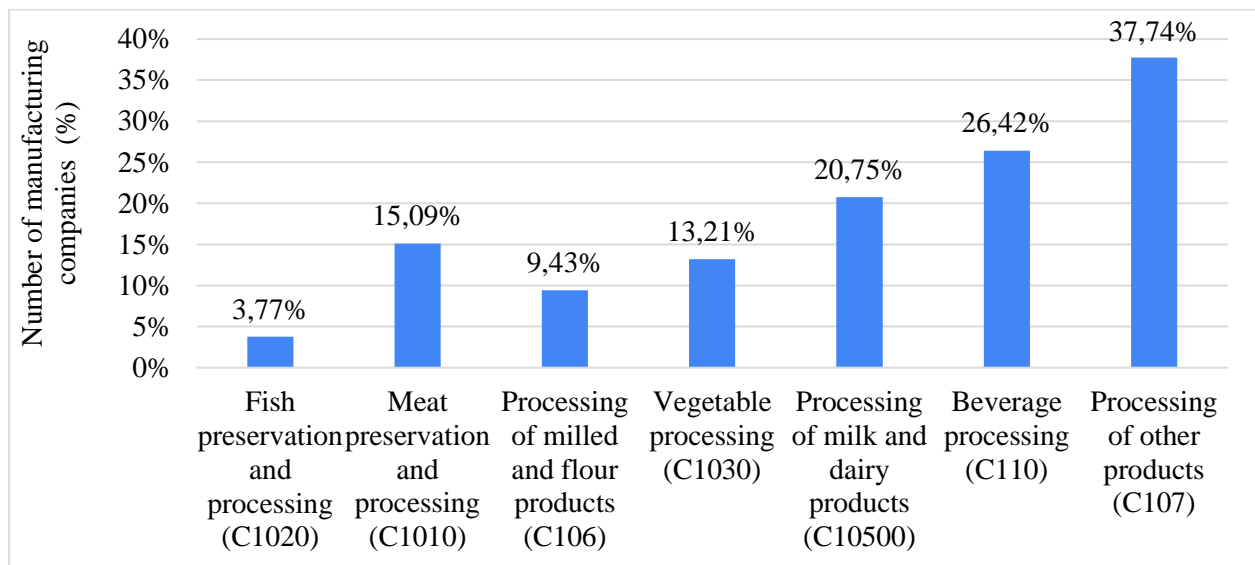


Figure 4.3. Main food products of the companies

Accordingly, industry group C107 dominated with the highest rate of 37.74%, with many different products such as: noodles, vermicelli, confectionery, jelly, bread, cakes, confectionery, jam, dried fruit, etc. Sugar, fish sauce, soup powder, etc. The second is the industry group C110 - beverage production - with a rate of 26.42%. Industry group C10500 - processing milk and dairy products - ranked 3rd with the rate of 20.75%. Industry group C1020 - fish preservation and processing - accounted for the lowest rate of 3.77%.

4.1.2. Staff information

We have surveyed 3 information about the human resource structure at companies: personnel structure by role, percentage of employees with university degrees by gender, percentage of employees employed in different forms- contract.

Regarding the structure of personnel by role, the survey results show that the rate of Employees/Workers (below undergraduate degree) is the highest - 51%, the rate of employees

(undergraduate degree) is 41%, the rate of Managers (excluding Business Owners/Shareholders) is 7%, and the rate of Business Owners/Shareholders is the lowest - 1%.

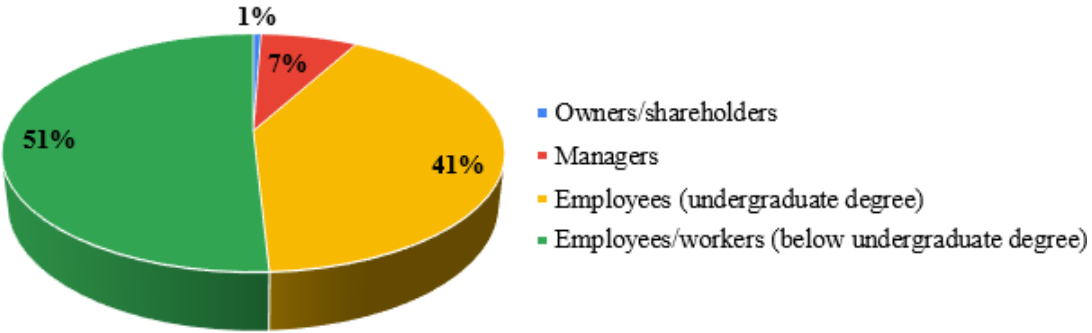


Figure 4.4. Structure of employees according to responsibility

Among employees with university degrees, female employees predominate at 54%, male employees have a lower rate at 46%.

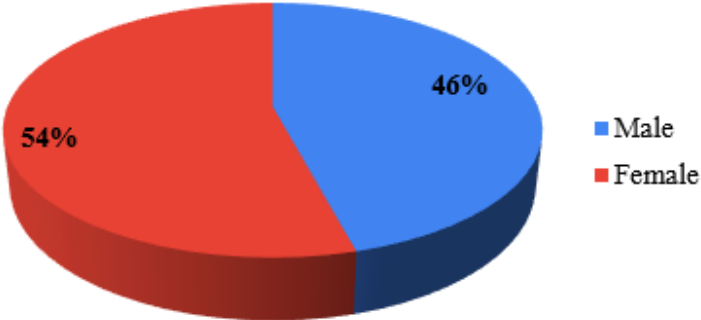


Figure 4.5. Structure of employees with undergraduate degrees according to sex

Regarding the form of recruitment, the majority of employees with university degrees sign contracts in one of two forms: indefinite - 74%, in term - 26%, other forms of contract signing account for a very low rate - approximately 0%.

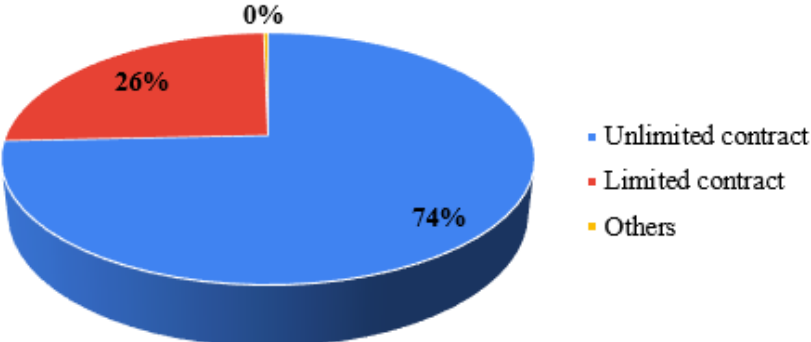


Figure 4.6. Types of recruitment

The results of the survey on the internal organizational structure of companies show that, depending on the company, there may be functional areas with different names. However, basically, companies will have the following main functional areas (Figure 4.7):

- Board of manager
- Administration and Human Resources (a few companies have 2 separate areas are Administration and Human Resources)
- Production
- Product Research and Development
- Quality Management (a few companies have 2 separate areas are QA, QC; a few companies give this room another name, ISO)
- Business (a few companies have 2 separate areas are Sales and Marketing)
- Accounting and Finance
- Technical areas
- Warehouse

A few companies have additional areas such as: Investment Planning, Purchasing, Logistics, Security, etc. Figure 4.7 depicts general information about the organisational chart. However, this organisational structure can change depending on how large or small, as well as the actual situation in the companies.

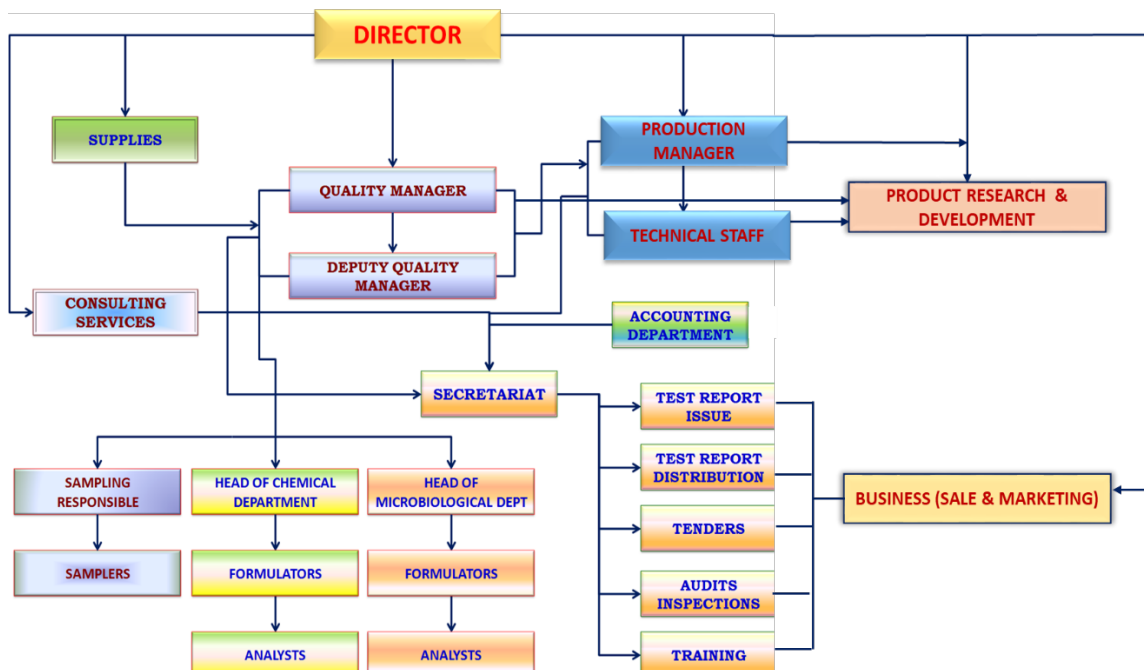


Figure 4.7. Organisational structure of companies

The areas employ university graduates with training majors in the agri-food sector include: Production, Research and Development, Quality Management, and Business.

Surveying the main job positions in functional departments of companies, 100% of companies have production positions and Quality Management positions (QA, QC, ISO, HACCP,

...), 65.38% of companies have “Product Research and Development (R&D)”, 63.46% of companies have Business position (marketing/sales, etc).

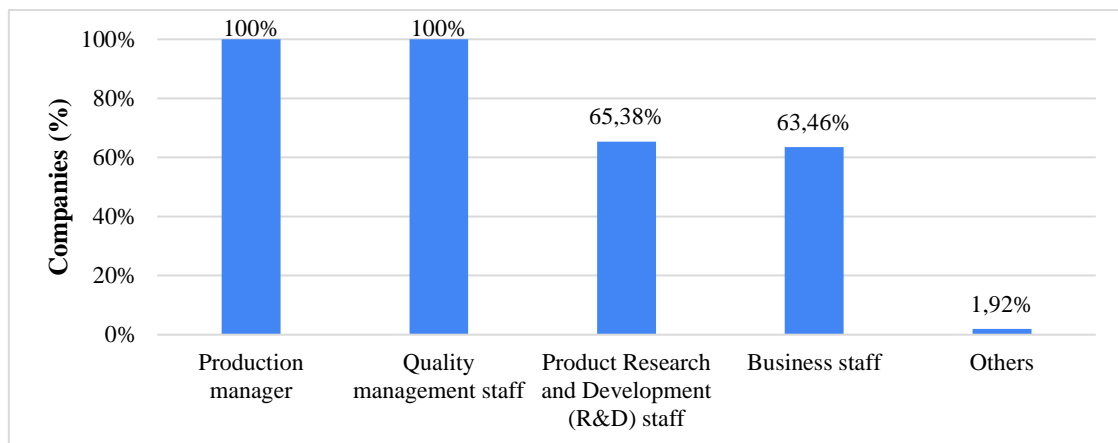


Figure 4.8. Main/specific professional figures at the companies

4.1.3. Predictions about recruitment needs

Surveying the recruitment situation in the past 2 years, the results show that the majority of companies have recruited more staff with university degrees (48 out of 53 companies), only 3 companies did not recruit more staff and 2 companies cut staff. The structure of personnel recruitment by job position is shown in Figure 4.9. Accordingly, in 2020, the number of personnel recruited for the position of Production and Business accounts for the majority. In 2021, in general, the number of recruited personnel will decrease (probably due to the impact of the Covid-19 epidemic), in which the number of personnel recruited for the position of Production will decrease significantly (nearly one half), while the number of personnel recruited for the Business position is still quite high. The number of employees recruited for the position of Product Research and Development is quite low due to the characteristics of this position that does not require many personnel. Some other job positions are also employed in small numbers (PR staffs, Animal husbandry engineer, Technical/ Machine operator/ Electrical maintenance staffs, Purchasing/ Delivery and Warehousing staff, Accountant, HR Administration/In charge of internal culture).

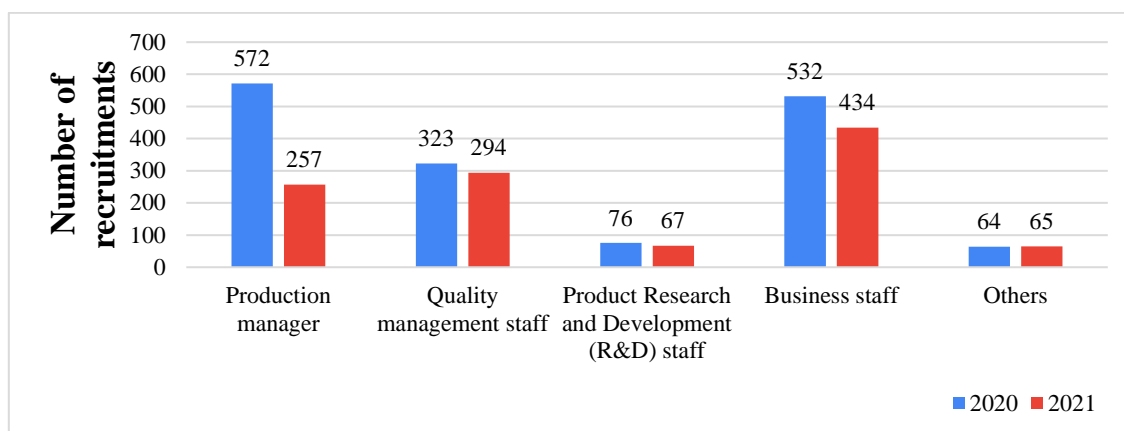


Figure 4.9. Recruitment according to specific professional figures - 2020 & 2021

Statistical results of the number of personnel recruited in 2020 and 2021 by tertiary training are shown in Figure 4.10. Accordingly, the number of employees with university degrees in Food Technology accounts for the majority - 69%, Post-Harvest Technology - 17%, and some other industries have a relatively low rate - 14% (Veterinary and/or Animal Husbandry, Horticulture science, Biotechnology, Mechanic/ Electric/ Automation, Economics/ Accounting/...).

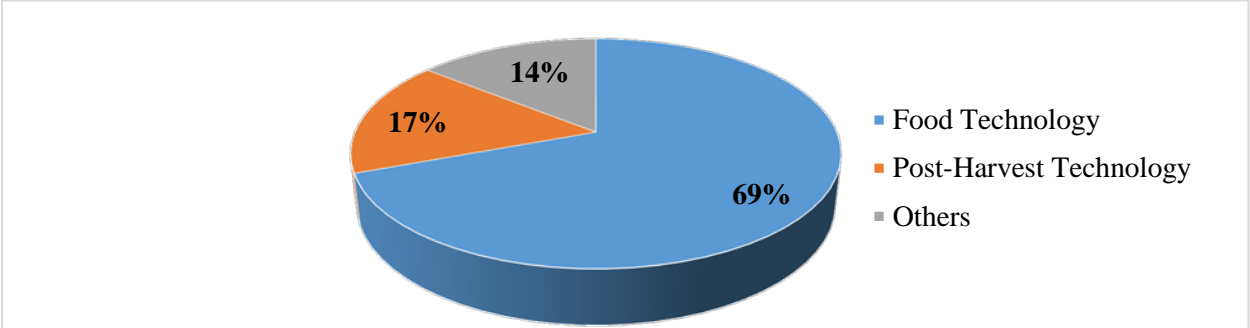


Figure 4.10. Recruitment according to training sectors 2020 & 2021

Survey of recruitment demand in 2022, 46/53 companies are expected to recruit new personnel, 5/53 companies are expected to remain unchanged, 2/53 companies are expected to cut personnel.

The results of the expected recruitment target statistics of companies in 2022 by job positions are shown in Figure 4.11. Accordingly, the recruitment target for the position of Business accounted for the highest proportion - 42%, followed by the position of Production - 25%, then the position of Quality Management - 18%, and finally the position of Product Research and Development - 11%. Other positions such as: Technical/ Operation/ Supervisor/ Electrical/ Machinery maintenance staffs, Procurement staff, Human Resource Management accounted for 4%.

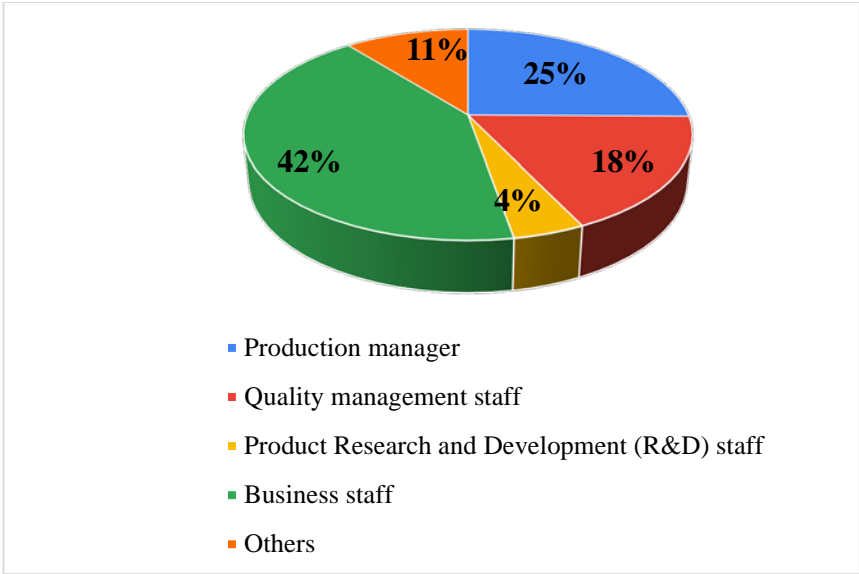


Figure 4.11. Expected recruitment target - 2022

In addition, it is predicted by the majority of interviewees that in the coming years the food industry will continue to grow (91% of interviewees predict that the food industry will continue to grow, only 9% of interviewees predict that the food industry will remain stable).

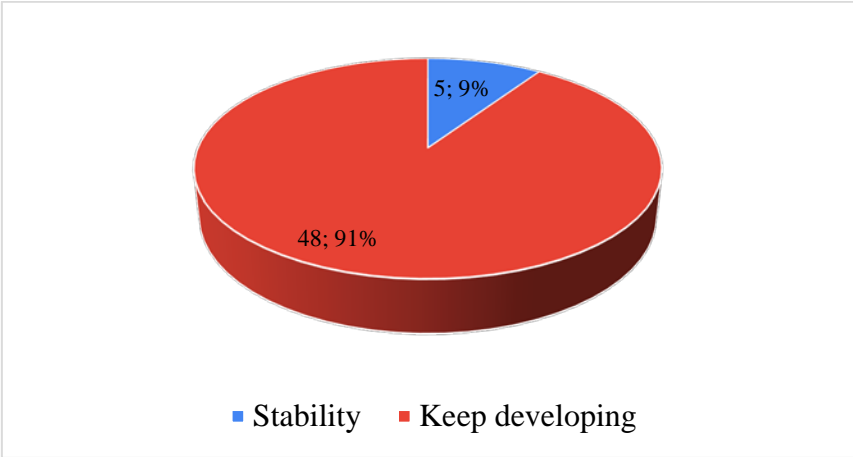


Figure 4.12. Predicting the development trend of the food industry in the coming time

The survey results for the positions with the best job prospects in the food sector in the near future are shown in Figure 4.13. The Product Research and Development staff position is widely predicted to have the best job prospects - 75.47%, followed by the Quality Management staff position - 64.15%, then Production manager position - 54.72%, and finally Business staff position - 50.94%.

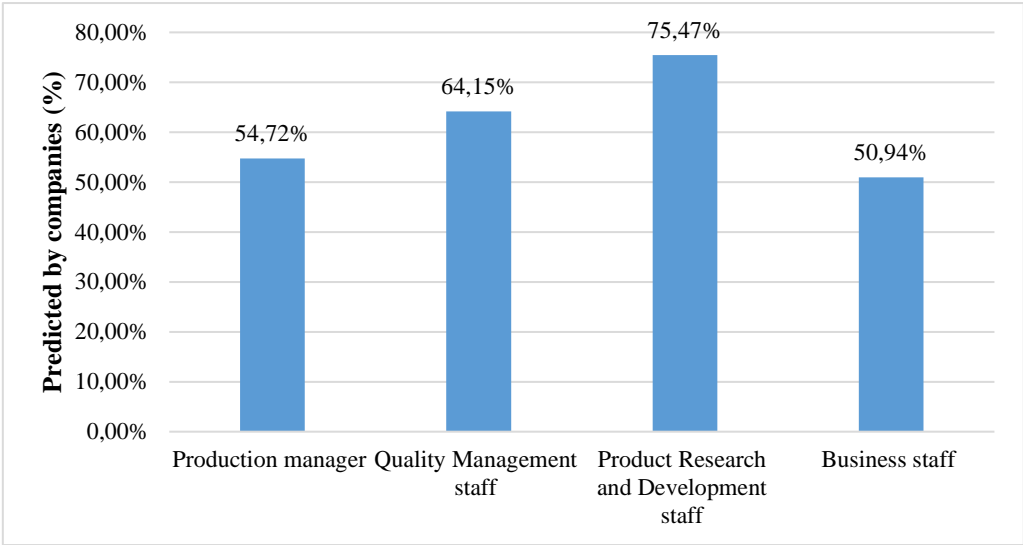


Figure 4.13. Predicting the best job prospects in the food sector in the near future

4.2. Results on main/specific professional figures

The survey results show that, at companies, most have 4 main types of activities (corresponding to 4 functional areas): Production, Research and Development, Quality management, and Business. Depending on the size of the company is small or large, each activity group may have one or several different professional figures:

- Production activities: Production Manager (requires employees to have a university diploma in a relevant major)/Production worker (a university diploma is not required).
- Product Research and Development activities: Product Research and Development Manager/Staff.
- Quality management activities: Quality management Manager/Staff. In a small number of large companies, this professional figure can be subdivided into QA and QC staff. However, in most small and medium sized companies, this professional figure is collectively known as Quality management staff.
- Business activities: Manager/Sales officer. In a small number of large companies, this professional figure can be subdivided into Sales and Marketing staff. However, in most small and medium sized companies, this professional figure is collectively known as Business staff.

In addition, in reality, Management positions have a very small number of recruitment targets and often require employees to be competent and have a lot of work experience (number of years of work) in the professional field. For workers who have just graduated from university, the popular vacancies are Staff positions. When surveying directly at enterprises, the obtained results show that there are 4 main professional figures: Production Manager, Product Research and Development staff, Quality Management staff, Business staff.



Figure 4.14. Main main/specific professional figures in companies

4.2.1. Main tasks in charge, necessary professional knowledge and skills

a) Production manager

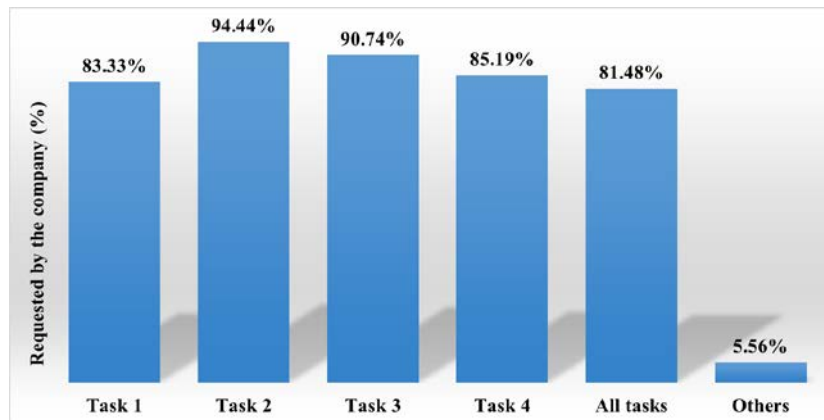


Figure 4.15. Main tasks for production manager

Notifications:

Task 1: Planning and arranging suitable personnel for each position in the production shift to ensure sufficient staffing for the production line.

Task 2: Implement production plans including preparation of input and auxiliary materials production/processing of products, to ensure punctuality and quality

Task 3: Implement shift production control, monitor compliance for production processes, and correct problems occurring during the production

Task 4: Manage and supervise the factory, equipment, and machinery in production

Others:

- *Organize and manage occupational safety;*
- *Manage hygiene in the production process*
- *Operate machinery and equipment*
- *Prepare dossier of product quality announcement*

As shown in Figure 4.15, most companies suggested that employees should do all main tasks when working in production. Some companies focused on task 2 (94.44%) and/or task 3 (90.74%) more than others. However, they also suggested that almost employees need to focus on implementing production plans including preparation of input and auxiliary materials production/processing of products, to ensure punctuality and quality when working in this position. Some companies answered that employees working in this position need to perform other tasks such as organizing and managing occupational safety; managing hygiene in the production process; operating machinery and equipment, and preparing a dossier of product quality announcements.

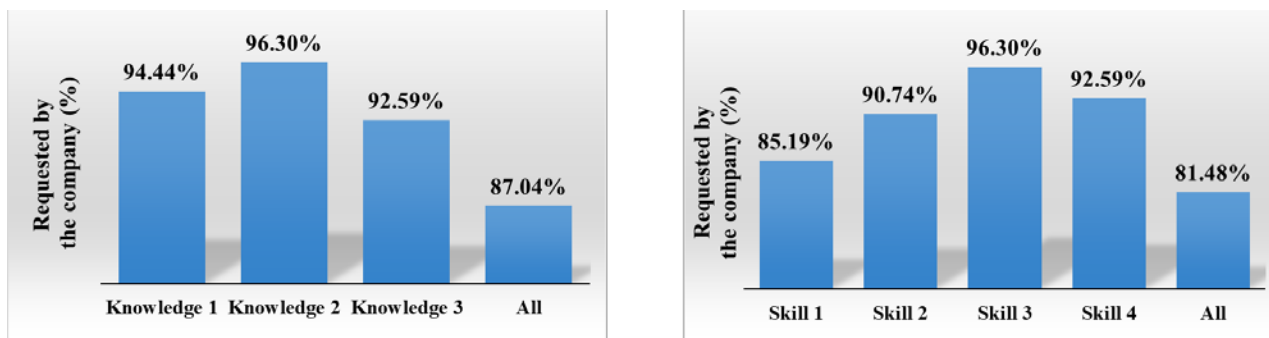


Figure 4.16. Specialized knowledge and skills for the production manager

Notifications:

<i>Knowledge 1: processes and equipment in food technology</i>	<i>Skill 1: Apply general, basic and specialized knowledge to the field of production</i>
<i>Knowledge 2: food-production technology</i>	<i>Skill 2: Calculate production balance and efficiency</i>
<i>Knowledge 3: food law and food quality management systems</i>	<i>Skill 3: Apply technical standards, technological processes, equipment, hygiene and occupational safety requirements... in the field of production</i>
	<i>Skill 4: Predict and analyze possible problems in production, and provide solutions or preventive measures</i>

When interviewing all companies participating in the survey, they replied that employees working in production positions should have in-depth specialized knowledge of processes and equipment in food technology, technology food production and knowledge of food law and quality management systems. Depending on the requirements of each company, they need one of the three knowledge mentioned above, however, many companies require undergraduate students to have all this specialized knowledge.

For specialized skills, some companies suggested that employees should apply technical standards, technological processes, equipment, hygiene and occupational safety requirements... in the field of production (skill 3, 96.30%). However, many companies required them to master all skills.

b) Quality management staff

The survey results are shown in Figure 4.17.

Notifications:

Task 1: Monitor input materials (main materials, additives, chemicals, stamps, labels...), storage conditions of raw materials and food, status of machines, tools and cleaning of the factory before, during and after producing process

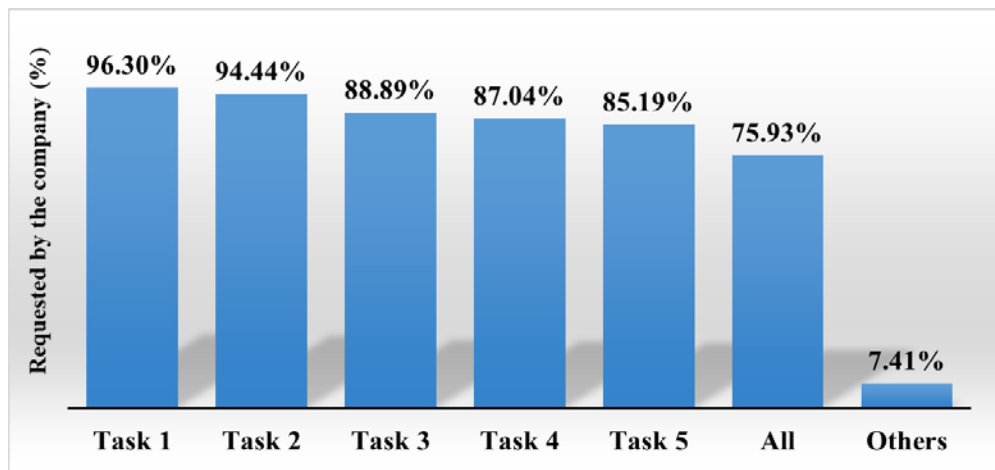


Figure 4.17. Main task for quality management staff

Task 2: Inspect, collect samples and analyze the physicochemical, chemical and microbiological criteria of raw materials, finished products, semi-finished products...

Task 3: Coordinate with related parties to overcome and handle problems occurring in production

Task 4: Establish basic standards of materials, finished products, and semi-finished products; set up work instructions, build and operate quality management systems

Task 5: Urging the implementation of the occupational health and quality management system, remedial measures

Others:

- Inspect, monitor, record all stages in the production process from defrosting, preparing ingredients, mixing, shaping, cooking, cooling, packing, warehousing, storage and export.

- Inspect the cleaning process of machines, tools, workshops, take notes and keep records

- Analysis of hazards affecting product quality and remedial measures

In their opinion, employees working in this position should be responsible for checking input materials (main materials, additives, chemicals, stamps, labels...), conditions of raw materials, food, and machinery condition, cleaning tools and workshops before, during, and after the production process (task 1, 96.30%), and at the same time, they need to inspect, take samples and analyze physical, chemical, and microbiological criteria of raw materials, final products, and semi-finished products (task 2, 94.44%). Some companies suggested that employees need to be responsible for all tasks mentioned above. In addition, they also recommended that employees working in this position should get other duties such as inspecting, monitoring, and recording all stages in the production process from defrosting, preparing ingredients, mixing, shaping, cooking, cooling, packing, warehousing, storage, and export; inspecting the cleaning process of machines, tools, workshops, take notes and keep records; and analyzing of hazards affecting product quality and remedial measures.

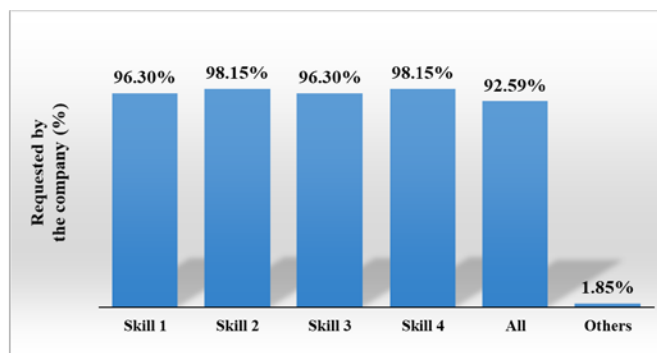
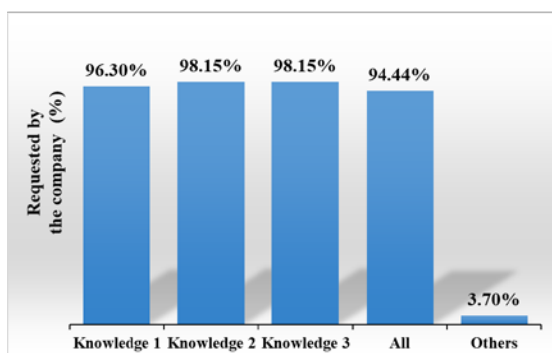


Figure 4.18. Specialized knowledge for quality management staff

Notifications:

<i>Knowledge 1: Processes, equipment and technology in food production</i>	<i>Skill 1: The ability to observe, analyze and evaluate problems occurring in production, and coordinate with related parties to promptly handle incidents.</i>
<i>Knowledge 2: Quality management systems</i>	<i>Skill 2: Manipulate knowledge well about food quality management systems in production</i>
<i>Knowledge 3: Food standards, regulations and laws</i>	<i>Skill 3: Operate and perform food analysis equipment and instruments competently</i>
<i>Others: In-depth knowledge of biochemistry, analytical chemistry, packaging, sensory evaluation</i>	<i>Skill 4: Apply knowledge of traceability, standards and food law in production</i>
	<i>Others: Proficient in using statistical tools: learn six sigma.</i>

Based on the questionnaire we have provided information about the knowledge and skills required for workers in this position, companies suggested that all these knowledge and skills are important. Some companies responded that employees should have in-depth knowledge of biochemistry, analytical chemistry, packaging, sensory evaluation. Some companies also have recommended that students after graduation need to master some statistical tools to process data in this quality management position in addition to the necessary skills mentioned above.

c) Product research and development (R&D) staff

The survey results are shown in Figure 4.19.

Notifications:

Task 1: Planning, organizing and implementing product research and development

Task 2: Establishing and developing processes; technology training and transferring

Task 3: Organize testing of new products on the production line

Task 4: Organize testing on production lines and improve technology

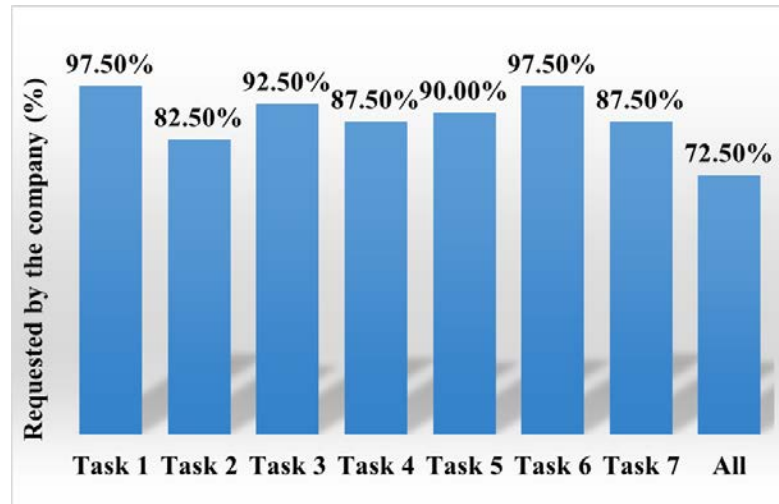


Figure 4.19. Main task for product research and development (R&D) staff

Task 5: Conduct surveys and evaluate new products on the market

Task 6: Research and adjust new products according to the Company's product development orientation

Task 7: Establish conformity and standardization procedures for products

According to Figure 4.19, when interviewing managers as well as employees working in product research and development positions, some companies said that employees working in this position need to fully perform the above tasks (72.50%). Depending on the company, they may need employees to be responsible for some typical tasks. However, the percentage of companies that want employees to work in this position has been constantly conducting research and development of new products (task 1) as well as always researching and adjusting new products according to the company's product development orientation (task 6).

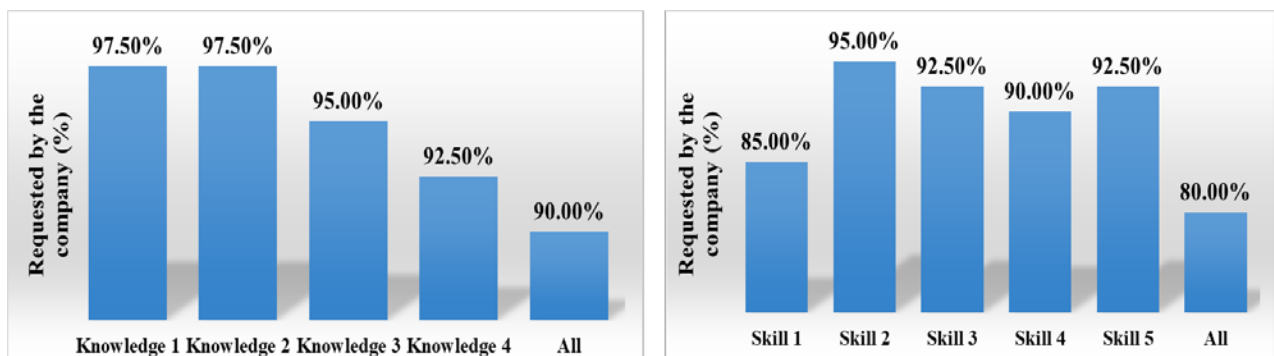


Figure 4.20. Specialized skills for R&D staff

Notifications:

<i>Knowledge 1: Specialized knowledge of food technology and related knowledge</i>	<i>Skill 1: Proficient in calculations to establish new product manufacturing processes</i>
--	---

<i>Knowledge 2: Firmly grasp the market situation and new product developing trends</i>	<i>Skill 2: Manipulate knowledge well about process equipment, physical, chemical and biological changes of products in processing</i>
<i>Knowledge 3: Strong understanding of food law and new product formulation standards</i>	<i>Skill 3: Apply food law in new product development</i>
<i>Knowledge 4: Ability to evaluate and forecast new products</i>	<i>Skill 4: Ability to predict and analyze the market for new products</i>
	<i>Skill 5: Ability to practice, make samples to deploy test production</i>

Many companies suggest that employees working in product research and development, in addition to knowledge of the food industry and related knowledge, need to firmly grasp the situation and market trends to develop new products (Figure 4.20). Some companies said that employees in this position who want to develop new products need to have a deep understanding of food laws and new product development standards. In addition, they need to be able to evaluate and forecast new products. For specialized skills, employees working in this position need to focus on skills 2, 3, and 4 more (Figure 4.20). However, about 80% of companies require them to have all these skills.

d) Business position

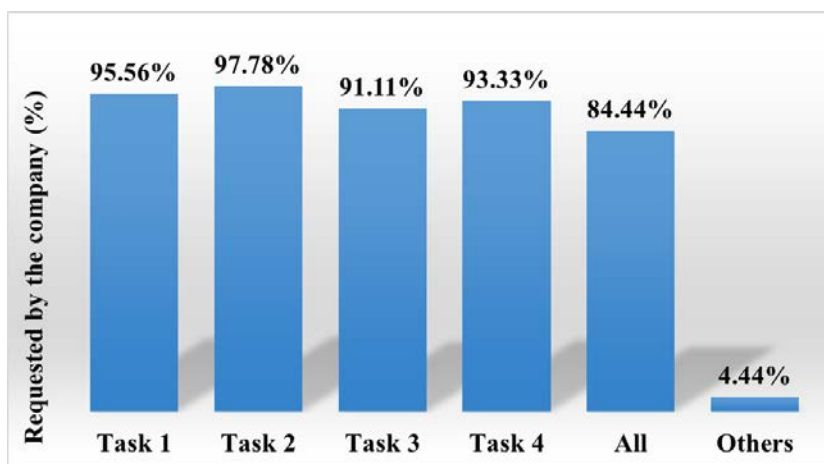


Figure 4.21. Main task for business staff

Notifications:

Task 1: Marketing and promoting products to customers

Task 2: Receiving, managing orders and tracking debts of customers

Task 3: Working with the transportation staff to arrange the delivery vehicle on time, with the correct vehicle weight so that the transportation cost is the lowest

Task 4: Combining with the planning department, the warehouse department to control the goods in the warehouse without shortage of goods and not leaving the goods near the date

Others:

- Find customers, building business and sales plans
- Manage company assets in the market, and support customer complaint settlement

Business position plays an important role in promoting and marketing products to customers in order to bring profits to the company. When interviewing managers as well as employees working in this position, they all want their employees to be able to focus on one of the above jobs. However, some companies want employees to perform all four tasks. In addition, some companies offer employees to perform some other tasks depending on the specific situation of the company.

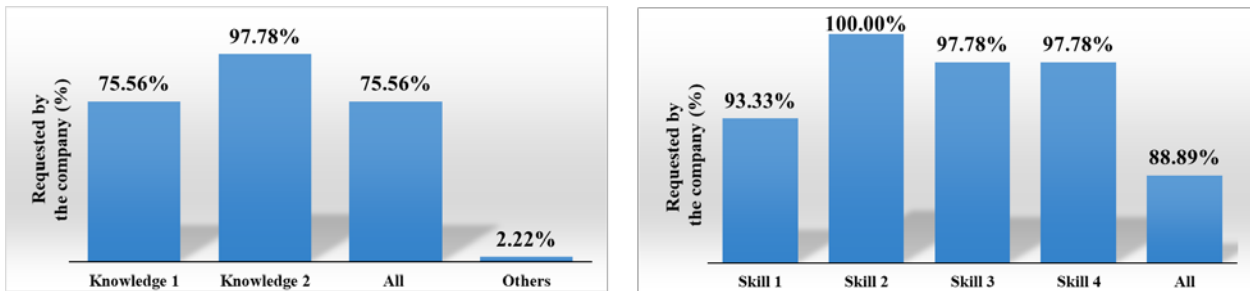


Figure 4.22. Specialized knowledge

Notifications:

<i>Knowledge 1: Basic knowledge of food science</i>	<i>Skill 1: Establish plans to solve practical situations in the food business</i>
<i>Knowledge 2: Knowledge of principles of business administration, accounting, finance, and marketing</i>	<i>Skill 2: The ability to predict and analyze the company's product market</i>
<i>Others: Dairy food expertise</i>	<i>Skill 3: Proficient in statistics and using application software in business</i>
	<i>Skill 4: Make reports fast, easy to understand</i>

Based on the questionnaire on knowledge and skills when interviewed, most companies said that employees in this position have in-depth knowledge of business administration principles, accounting, and finance marketing (97.78%). Besides, some companies suggest that they need basic knowledge in the field of food science (75.56%). It is important for employees doing this position that they have the ability to predict and analyze the company's product market (100%). Most companies recommended that all skills are essential for peoples working in this position.

4.2.2. Computer literacy, language, soft skills, personal quality, and required availabilities for the activity

In addition to the necessary tasks, knowledge and skills, employees working in all main/professional figures including production, food research and development, quality

management need to be trained in computer skills, foreign language proficiency, soft skills, personal qualities, and willingness to work out of hours.

a) Computer skills

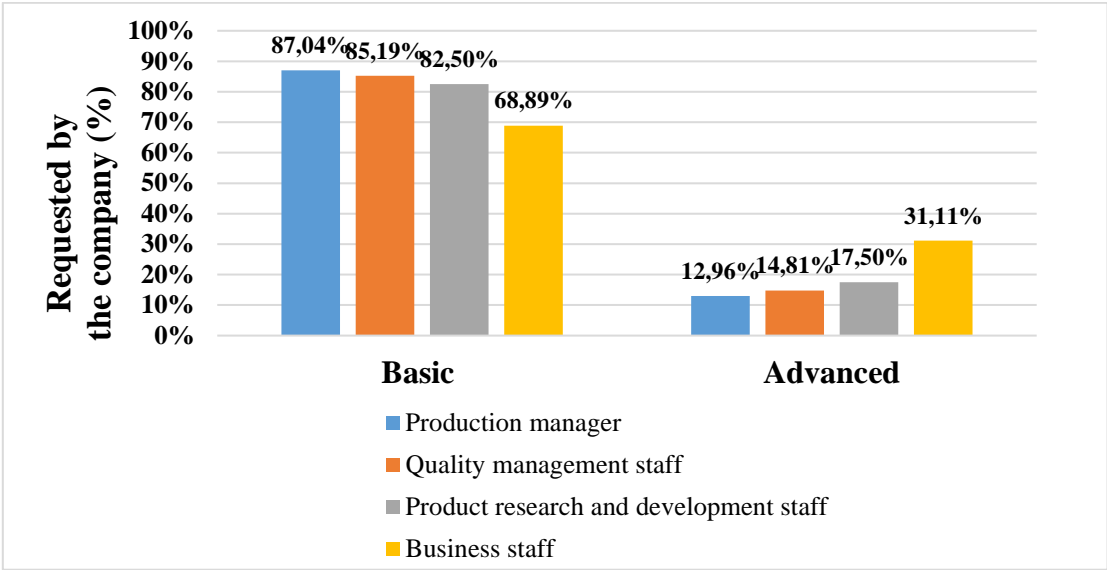


Figure 4.23. Computer literacy requirements for all main/specific professional figures

Figure 4.23 showed that all employees working in these positions need computer skills, but only at a basic level. Companies require them to have advanced computer skills when working in the business position (17.11%), because they need to make reports and statistics processing quickly and easily.

b) Language literacy



Figure 4.24. Language literacy requirements for all main/specific professional figures

When interviewed about the foreign language requirements for these positions, most companies responded that foreign languages are necessary. However, English is more popular than

other languages. In particular, only some companies required foreign languages other than English such as Japanese, Korean and Chinese when these companies associate with countries using these languages. Employees in all these positions only have a basic level of English to be able to meet the recruitment requirements of companies. In contrast, some foreign enterprises require employees with advanced English efficacy.

c) Required soft skills

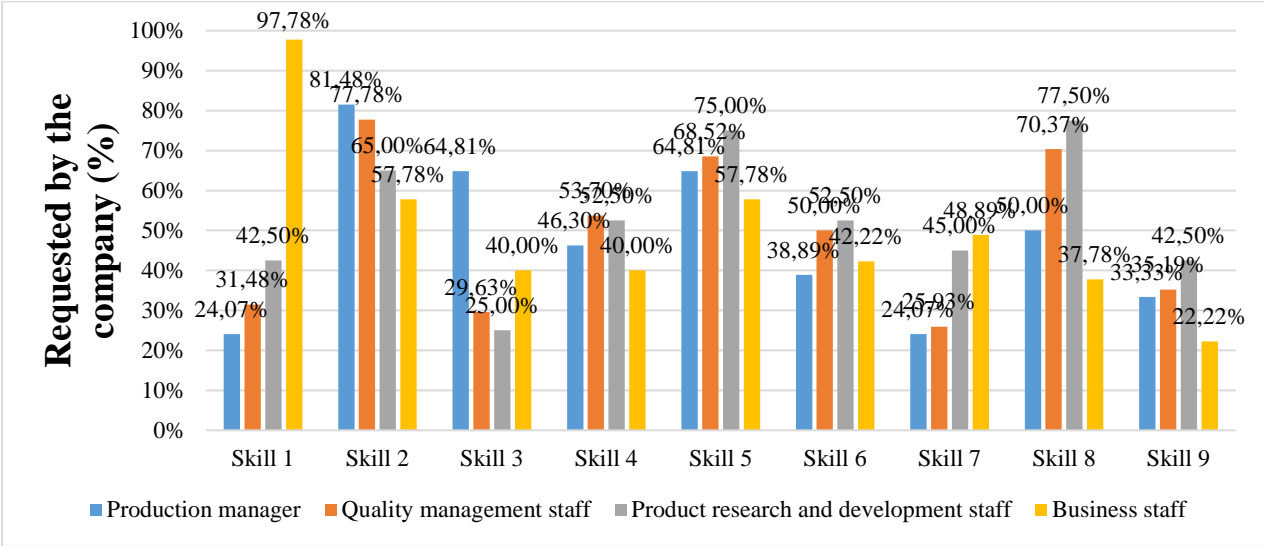


Figure 4.25. Soft skill requirements for all main/specific professional figures

Notifications:

- Skill 1: Communication skills with customers and suppliers*
- Skill 2: Problem solving skills (decision making, handling complex situations)*
- Skill 3: Skills to organize work for others*
- Skill 4: Personal work organization skills*
- Skill 5: Teamwork skills*
- Skill 6: Report writing skills*
- Skill 7: Presentation skills*
- Skill 8: Analytical skills*
- Skill 9: Problem summarization skills*

Surveying results on soft skills showed that all these skills are necessary for each main/specific professional figure. In particular, depending on the main/specific professional figure, employers expect employees to have different soft skills. For example, for the business position, Communication skills with customers and suppliers are most important (97.78%). On the other hand, more than 75% of companies requested employees have skill 5 (teamwork skills) and

skill 8 (analytical skills). Besides, more than 57% of companies recommend employees should have all these skills in all main/specific professional figures.

d) Personal qualities

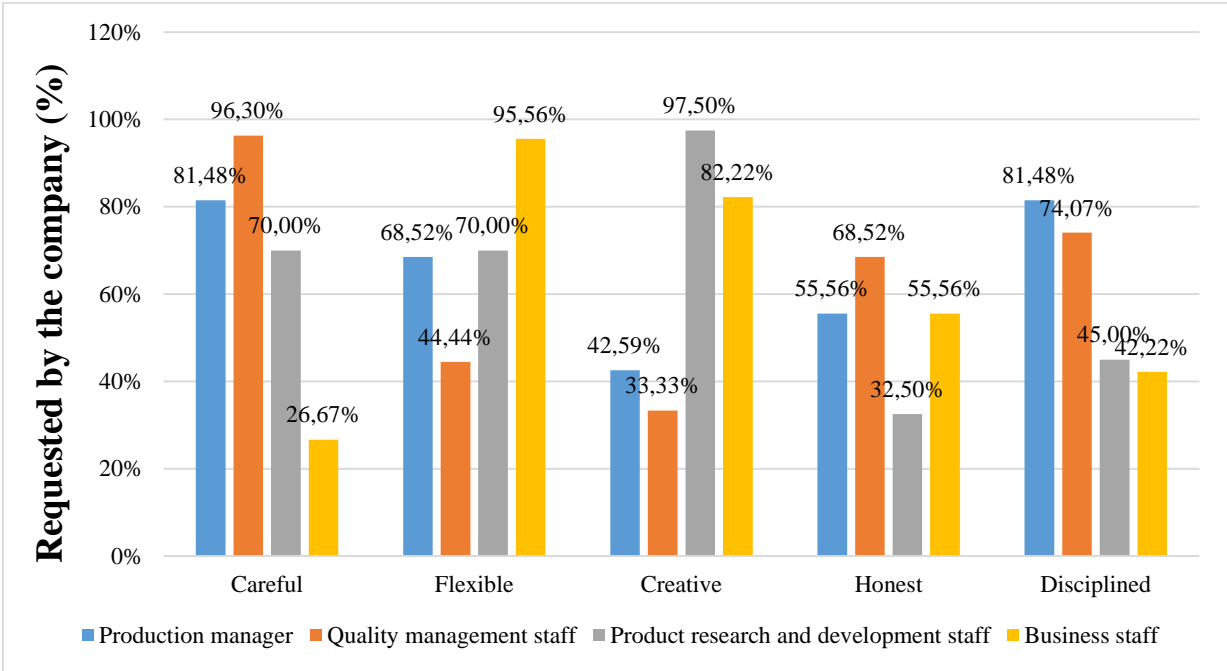


Figure 4.26. Personal qualities for all main/specific professional figures

Based on the survey results on the personal qualities of employees in all main/specific professional figures, almost all employers responded that employees should have all these personal qualities. In particular, in the position of production and quality management, employees appreciate carefulness and discipline. In contrast, 95.56% of companies require employees in business positions to have flexibility. For product research and development positions, creativity is most important (97.50%).

e) Required availabilities for the other activity

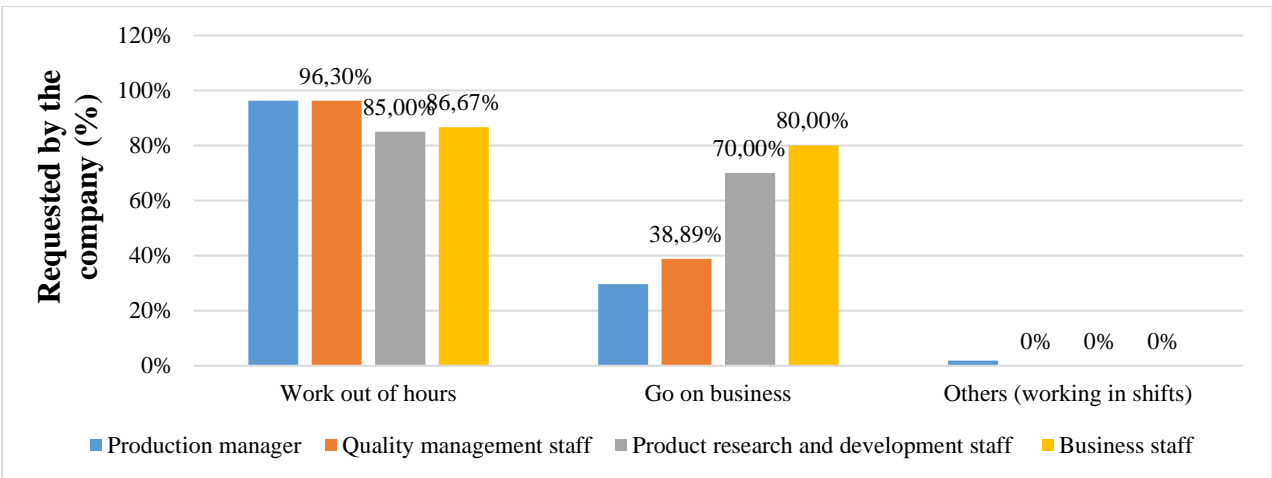


Figure 4.27. Required availabilities for the other activity

Due to the nature of the agri-food sector, employees may have to be willing to work out of hours. Most employers suggest that employees working in this position should be willing to participate in other activities. Especially, R&D and business staffs need to go on business when required to understand the market as well as develop new products.

CHAPTER 5. CONCLUSION

Based on the results of the labour market survey in the agri-food sector, we have some conclusions as follows:

- The related food companies have main offices/manufactures in all surveyed provinces. It is great ideal for the fresh graduate students to have a wide location to get jobs. Female graduated students have a good chance to get jobs in the agri-food sector labor market;
- Demand for main/specific professional figures is quite high in the production, quality management and business positions. It is a good signal for VNUA and other agri- cultural universities in term of providing the human resources in the agri-food sector.
- Based on the surveyed results, it is found that all professional knowledge and skills, as well as foreign languages, informatics skills, soft skills, and personal qualities mentioned in the specific professional figures, are highly required for freshly graduated students.
- Demand for human resources in the agri-food sector is predicted to remain at a high level in the near future. Therefore, VNUA will revise our training program's expected learning outcomes as well as improve the professional skills of our students with support from food-related companies to meet the employer's requirements.

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APPENDIX
QUESTIONNAIRE FOR LABOUR MARKET SURVEY IN THE
AGRI-FOOD SECTOR

PART 1: GENERAL INFORMATION

Date: / / 20.....

A. INFORMATION OF INTERVIEWEES

- A.1 Full name:**
- A.2 Gender:**
- A.3 Phone number:**
- A.4 E-mail:**
- A.5 Job title:**

B. INFORMATION OF COMPANY

- B.1 Name company:**
- B.2 Address:**
- B.3 Website:**
- B.4 E-mail:**
- B.5 The company where you are working is:** *(choose one answer)*

(please click to choose the answer, click again to cancel the answer)

- Unique office
- Operating offices have one or more branches
- Branches with operating offices in Hanoi
- Branches with operating offices in the provinces

- B.6 What are main activities in your company?** *(choose one answer)*

- Food and/or beverage processing

- Food and/or beverage processing and trading
- Food and/or beverage processing and distribution
- Processing, distribution and trading for food and/or beverages

B.7 Which are main products of your company (according to the Vietnam Product Industry System in 2018) (can choose one or more/add multiple fields)

- Fish preservation and processing (C1020)
- Meat preservation and processing (C1010)
- Processing of milled and flour products (C106)
- Vegetable processing (C1030)
- Processing of milk and dairy products (C10500)
- Beverage processing (C110)
- Other products (C107):.....

C. INFORMATION OF EMPLOYEES

C.1 How many people do you currently have in the Company/Institution where you are working (including Business Owners and Shareholders, excluding Seasonal Employees and Trainees)?

Number of employees:

Including:

1. Owners/shareholders:
2. Managers
3. Employees (undergraduate degree)
4. Employees/workers (below undergraduate degree)

C.2 Number of employees (undergraduate degree):

C.3 How many employees (with university degree) have been employed under the contract form?

1. Unlimited contract:
2. Limited contract:

3. Other contract:

C.4 Please indicate the internal organizational structure of the company (list departments):

C.5 Please list the main positions in the functional departments of the company (we are especially interested in professional figures in the food industry) (can choose/ add more professional figures)

- Production manager
- Quality management staff
- Product research and development staff
- Business staff
- Others:.....

Please fill in the "DESCRIPTION OF MAIN/PROFESSIONAL FIGURES"

D. HUMAN RESOURCES PLAN

D.1 In the last 2 years, has the company recruited employees with undergraduate degree? (choose one answer)

- Yes
- No, no personnel changes (**GO to D.4**)
- No, even reducing personnel (**GO to D.4**)

D.2 Please, list the number of employees with university degrees employed for the main/professional furers in the last 2 years:

	Year	2020	2021
Main/professional furers			
Production manager			
Quality management staff			
Product Research and Development staff			
Business (Marketing/sales) staff			
Others:			

D.3 Please, list training sectors with undergraduate degree and the number of new hires in the last 2 years (2020 và 2021):

1. Food technology Number:
2. Post-Harvest technology Number:
3. Other (if having) Number:
4. Other (if having) Number:
5. Other (if having) Number:

D.4 In 2022, does your company plan to recruit new employees (including seasonal employees)? (choose one answer)

- Yes
- No, no personnel changes (**GO to D.6**)
- No, even reducing personnel (**GO to D.6**)

D.5 Do you have a recruitment plan for main/professional furers in 2022?

1. Production manager Number:
2. Quality management staff Number:

3. Product Research and Development staff Number:
4. Business (Marketing/sales) staff Number:
5. Other professional figure (if having)..... Number:
6. Other professional figure (if having)..... Number:
7. Other professional figure (if having)..... Number:

D.6 In your opinion, what is the development trend of the food industry in the coming years? (choose 01 answer)

- Keep developing
- Stability
- Downward trend

D.7 In your opinion, in the coming years, which main/professional figures have the best job prospects in the agri-food sector? (can choose one/add multiple positions)

- Production manager
- Quality management staff (KCS, QA, QC, ISO)
- Product Research and Development staff (R&D)
- Business (Marketing/sales) staff
- Others:

PART 2: DESCRIPTION OF MAIN/SPECIFIC PROFESSIONAL
FIGURES

Professional figure: PRODUCTION MANAGER

M.1 Professional figure: PRODUCTION MANAGER

M.2 Department:

M.3 What are the main tasks required for this position?

- Planning and arranging suitable personnel for each position in the production shift to ensure sufficient staffing for the production line.
- Implement production plans including preparation of input and auxiliary materials production/processing of products, to ensure punctuality and quality
- Implement shift production control, monitor compliance for production processes, and correct problems occurring during the production
- Manage and supervise the factory, equipment, and machinery in production
- All above tasks
- Others

M.4 In your opinion, what specialized knowledge is necessary for this position?

- Knowledge of processes and equipment in food technology
- Knowledge of food-production technology
- Knowledge of food law and food quality management systems
- All the above knowledge
- Othes

M.5 In your opinion, what specialized skills are needed for this position?

- Apply general, basic and specialized knowledge to the field of production
- Calculate production balance and efficiency
- Apply technical standards, technological processes, equipment, hygiene and occupational safety requirements... in the field of production
- Predict and analyze possible problems in production, and provide solutions or preventive measures

- All above skills
- Others:

M.6 What level of computer skills does this professional figure require? (please, choose 01 answer)?

- Basic
- Advanced
- Developer/Analyst

M.7 Which foreign language is most necessary for professional figure require? (Please choose 01 answer)?

- English
- Japanese
- Korean
- Chinese
- Others:
- Not requested (GO to M.9)

M.8 What is the language level required for this ? (Please choose 01 answer)?

- Basic
- Advanced

M.9 In your opinion, which of the following soft skills is the most important for this position? (Choose up to 3 answers)

- Communication skills with customers and suppliers
- Problem-solving skills (decision making, handling complex situations)
- Ability to organize work for others
- Personal organization skills
- Teamwork skill
- Report writing skills
- Presentation skill
- Analytical skills

Problem summarization skills

Others:

M.10 In your opinion, which of the following personal qualities is the most important for this position (Please choose up to 3 answers)

Careful

Flexible

Creative

Honest

Disciplined

Others:

M.11 What activity does this position require willingness to participate in? (You can choose more than one answer)

Work out of hours

Go on business

Others:

Professional figure: QUALITY MANAGEMENT STAFF

M.1 Professional figure: QUALITY MANAGEMENT STAFF

M.2 Department:

M.3 What are the main tasks required for this position?

- Monitor input materials (main materials, additives, chemicals, stamps, labels...), storage conditions of raw materials and food, status of machines, tools and cleaning of the factory before, during and after producing process
- Inspect, collect samples and analyze the physicochemical, chemical and microbiological criteria of raw materials, finished products, semi-finished products...
- Coordinate with related parties to overcome and handle problems occurring in production
- Establish basic standards of materials, finished products, and semi-finished products; set up work instructions, build and operate quality management systems
- Urging the implementation of the occupational health and quality management system, remedial measures
- All above tasks
- Others:.....

M.4 In your opinion, what specialized knowledge is necessary for this position?

- Processes, equipment and technology in food production
- Quality management systems
- Food standards, regulations and laws
- All above knowlegde
- Others:.....

M.5 In your opinion, what specialized skills are needed for this position?

- Ability to observe, analyze and evaluate problems occurring in production, and coordinate with related parties to promptly handle incidents
- Manipulate knowledge well about food quality management systems in production
- Operate and perform food analysis equipment and instruments competently
- Apply knowledge of traceability, standards and food law in production
- All above skills

Others:.....

M.6 What level of computer skills does this professional figure require? (please, choose 01 answer)?

Basic

Advanced

Developer/Analyst

M.7 Which foreign language is most necessary for professional figure require? (Please choose 01 answer)?

English

Japanese

Korean

Chinese

Others:.....

Not requested (**GO** to M.9)

M.8 What is the language level required for this ? (Please choose 01 answer)?

Basic

Advanced

M.9 In your opinion, which of the following soft skills is the most important for this position? (Choose up to 3 answers)

Communication skills with customers and suppliers

Problem-solving skills (decision making, handling complex situations)

Ability to organize work for others

Personal organization skills

Teamwork skill

Report writing skills

Presentation skill

Analytical skills

Problem summarization skills

Others:.....

M.10 In your opinion, which of the following personal qualities is the most important for this position (Please choose up to 3 answers)

Careful

Flexible

Creative

Honest

Disciplined

Others:.....

M.11 What activity does this position require willingness to participate in? (You can choose more than one answer)

Work out of hours

Go on business

Others:.....

Professional figure: PRODUCT RESEARCH AND DEVELOPMENT STAFF

M.1 Professional figure: PRODUCT RESEARCH AND DEVELOPMENT STAFF

M.2 Department:

M.3 What are the main tasks required for this position?

- Planning, organizing and implementing product research and development
- Establishing and developing processes; technology training and transferring
- Organize testing of new products on the production line
- Organize testing on production lines and improve technology
- Conduct surveys and evaluate new products on the market
- Research and adjust new products according to the company's product development orientation
- Establish conformity and standardization procedures for products
- All above tasks
- Others:.....

M.4 In your opinion, what specialized knowledge is necessary for this position?

- Specialized knowledge of food technology and related knowledge
- Firmly grasp the market situation and new product developing trend
- Food standards, regulations and laws
- Strong understanding of food law and new product formulation standards
- All above knowledge
- Others:.....

M.5 In your opinion, what specialized skills are needed for this position?

- Proficient in calculations to establish new product manufacturing processes
- Manipulate knowledge well about process equipment, physical, chemical and biological changes of products in processing
- Apply food law in new product development
- Ability to predict and analyze the market for new products

- Ability to practice, make samples to deploy test production
- All above skills
- Others:.....

M.6 What level of computer skills does this professional figure require? (please, choose 01 answer)?

- Basic
- Advanced
- Developer/Analyst

M.7 Which foreign language is most necessary for professional figure require? (Please choose 01 answer)?

- English
- Japanese
- Korean
- Chinese
- Others:.....
- Not requested (**GO** to M.9)

M.8 What is the language level required for this ? (Please choose 01 answer)?

- Basic
- Advanced

M.9 In your opinion, which of the following soft skills is the most important for this position? (Choose up to 3 answers)

- Communication skills with customers and suppliers
- Problem-solving skills (decision making, handling complex situations)
- Ability to organize work for others
- Personal organization skills
- Teamwork skill
- Report writing skills
- Presentation skill

- Analytical skills
- Problem summarization skills
- Others:.....

M.10 In your opinion, which of the following personal qualities is the most important for this position (Please choose up to 3 answers)

- Careful
- Flexible
- Creative
- Honest
- Disciplined
- Others:.....

M.11 What activity does this position require willingness to participate in? (You can choose more than one answer)

- Work out of hours
- Go on business
- Others:.....

Professional figure: BUSINESS STAFF

M.1 Professional figure: BUSINESS STAFF

M.2 Department:

M.3 What are the main tasks required for this position?

- Marketing and promoting products to customers
- Receiving, managing orders and tracking debts of customers
- Working with the transportation staff to arrange the delivery vehicle on time, with the correct vehicle weight so that the transportation cost is the lowest
- Combining with the planning department, the warehouse department to control the goods in the warehouse without shortage of goods and not leaving the goods near the date
- All above stasks
- Others:.....

M.4 In your opinion, what specialized knowledge is necessary for this position?

- Basic knowledge of food science
- Knowledge of principles of business administration, accounting, finance, and marketing
- All above knowledge
- Others:.....

M.5 In your opinion, what specialized skills are needed for this position?

- Establish plans to solve practical situations in the food business
- The ability to predict and analyze the company's product market
- Proficient in statistics and using application software in business
- Make reports fast, easy to understand
- All above skills
- Others:.....

M.6 What level of computer skills does this professional figure require? (please, choose 01 answer)?

- Basic
- Advanced

Developer/Analyst

M.7 Which foreign language is most necessary for professional figure require? (Please choose 01 answer)?

English

Japanese

Korean

Chinese

Others:.....

Not requested (**GO** to M.9)

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Advanced

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Communication skills with customers and suppliers

Problem-solving skills (decision making, handling complex situations)

Ability to organize work for others

Personal organization skills

Teamwork skill

Report writing skills

Presentation skill

Analytical skills

Problem summarization skills

Others:.....

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Careful

Flexible

- Creative
- Honest
- Disciplined
- Others:.....

M.11 What activity does this position require willingness to participate in? (You can choose more than one answer)

- Work out of hours
- Go on business
- Others:.....

We sincerely thank you for your valuable cooperation and would like to inform you that we will soon publish the research results at a conference in the near future. Please provide your email address to receive the invitation to attend the workshop.

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Thank you very much for your cooperation!