

SKILLS GAP ANALYSIS IN METAL INDUSTRY

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CONTENT

<i>Table of Figures</i>	<i>1</i>
<i>INTRODUCTION</i>	<i>2</i>
<i>KEY FINDINGS</i>	<i>1</i>
<i>I. OVERVIEW OF THE METAL INDUSTRY IN KOSOVO</i>	<i>1</i>
<i>II. METHODOLOGY OF THE SKILLS GAP ANALYSIS</i>	<i>1</i>
<i>III. SKILLS GAP ANALYSIS FINDINGS</i>	<i>1</i>
1. BUSINESSES INFORMATION	1
1.1. Export capacity of enterprises	2
2. QUALIFICATION OF EMPLOYEES	3
2.1. Education level of employees	3
2.2. Employees Skills	4
2.3. Skills gap of employees	6
3. TRAINING	7
3.1. Previous trainings	8
3.2. Future trainings	10
3.3. Training financing	10
4. EMPLOYMENT	12
4.1. Difficulties in recruitment	12
4.2. Recruitment criteria and manner	15
<i>IV. RECOMMENDATIONS</i>	<i>17</i>
<i>V. ANNEXES</i>	<i>18</i>
Annex 1: Survey Questionnaire	19
Annex 2: Interviewed enterprises table	25

Table of Figures

Figure 1. Export by enterprise size	2
Figure 2. % of export by enterprise size	2
Figure 3. Education level of employees	4
Figure 4. Assessment of employees' technical skills according to regions	4
Figure 5. Technical skills of employees by economic activities	5
Figure 6. Education system compliance with the skills required in the metal industry.....	5
Figure 7. Skills gap of employees.....	6
Figure 8. Most professional lacking skills.....	7
Figure 9. Previous provided training.....	8
Figure 10. Previous provided trainings by economic activities	9
Figure 11. Form of providing training	9
Figure 12. Previous training topics	10
Figure 13. Future training plans.....	10
Figure 14. Training financing options	10
Figure 15. Training financing according to enterprise size	11
Figure 16. Affordable investment in training according to enterprises size	11
Figure 17. Agreements with training providers.....	12
Figure 18. Need for workers with specific skills	12
Figure 19. Need for workers with specific skills according to enterprises size	13
Figure 20. Need for workers with specific skills according to activity.....	13
Figure 21. Difficulties in finding workers with adequate qualifications and skills	13
Figure 22. Difficulties in finding workers with adequate qualifications and skills according to activity.....	14
Figure 23. Professional profiles difficult to find and hire as a worker.....	14
Figure 24. Actions to fill the gap in finding qualified workers.....	15
Figure 25. Plans for hiring new workers in the coming years.....	15
Figure 26. Plans for hiring new workers in the coming years according to activity.....	15
Figure 27. Most important criteria for hiring new employees	16
Figure 28. Most important criteria for hiring new employees according to enterprises location.....	16
Figure 29. Most important criteria for hiring new employees according to activity	17
Figure 30. Most important criteria for hiring new employee.....	17

Table of Tables

Table 1. Enterprises by region and size	1
Table 2. Classification based on NACE- number of enterprises, employment and turnover (source TAK).....	2
Table 3. Number of surveyed enterprises according to region.....	1
Table 4. Surveyed enterprises by economic activity and size.....	1

INTRODUCTION

Enhancing Youth Employment (EYE) project of Swiss Agency for Development and Cooperation (SDC), implemented by the consortium Helvetas Swiss Intercooperation (HSI) and Management Development Associates (MDA), aim for improved private training providers market that contributes to the development of youth and equipping them with necessary labour requested skills. The overall goal of EYE is to contribute to a dynamic and socially inclusive labour market that provides more and decent jobs, including self-employment for young people in Kosovo, that will be achieved in a socially inclusive and sustainable way through systemic interventions.

EYE is focused on working with training providers, associations and industry leaders in innovating and bringing new training packages to the market that will fulfil a specific need of the labour market. Metal Industry and Renewable Energy Cluster of Kosova - MIRECK and EYE project agreed to conduct a Skill Gap Analysis in Metal Industry.

The overall aim was to provide a clear idea of the needs of the employees in the metal industry, company willingness to invest in their current and future employees and the recommended options on designing and organizing training programs tailored for the employees in the metal industry. EYE and MIRECK expect that the skill gap analysis will provide deeper insights and information for intervention development in the skills component and possible post-COVID-19 activities for the Metal Industry.

This report describes the findings from the Skill Gap Analysis survey of 89 metal industry enterprises and 40 in-depth interviews with business owners and representatives of the metal industry in Kosovo. These surveys and interviews were conducted in October and November 2021. The findings of the report are presented into four main sections:

- The first section provides an overview of the metal industry and characteristics of the businesses which participated in the survey, including export capacities
- The second section describes the methodology adopted in this study. Information was collected using mixed research methods: a quantitative survey with private enterprises and in-depth interviews with representatives of selected enterprises covering targeted sectors and types of enterprises.
- The third section presents and discusses the skills gap analysis findings such as; qualification, skills and professional skills gap of employees; training provided and future training need and financial capacities to invest in the training; and the employment needs and qualifications required in the metal sector and difficulties in the recruitment process and employment criteria.
- The fourth section presents recommendations of the study derived from the findings of the survey and in-depth interviews with business representatives

KEY FINDINGS

Qualification of employees

- Employees in metal industry enterprises mainly work in the production department. This also indicates the level of education required. More than half of employees have **Vocational high school (59%)**, followed by **vocational training (14%)**, **university degrees (13%)**.
- Although employees' education, not all the surveyed enterprises' owners are satisfied with their skills. **36.4%** of surveyed enterprises declared that they rate their employees' skills as **excellent**, **44.2% good**, and **19.5% average**. At the economic activities level, **processing of machine parts and tools** showed to be more satisfied with their employees' skills, than enterprises of other economic activities. **80%** of this sector enterprises stated that they rated their employees' skills **excellent** and **20% good**.
- Most of the surveyed enterprises stated that there is a **skills gap among employees (63.6%)**.
- Among the most lacking skills in employees and most needed for surveyed enterprises are **welding skills (31.5%)**, **CNC machine programming (12.7%)**, **operating CNC machines (12.7%)**, **AutoCAD (7.9%)**. Among the welding skills, **Aluminium and TIG welding skills** are the most lacking skills.

Training

- More than **half** of the surveyed enterprises in the metal industry have **already provided training** for their employees. **71% of the enterprises involved in processing of metal structures have provided training**. Mostly the training was provided by **internal experts (41%)** of the enterprises, **external experts (23%)**, but there were other forms of training organizations.
- Almost all enterprises are ready to offer **training for the future (89.7%)**. The frequency of delivering training depends on the needs of the enterprise; **60.7%** of responses were **as needed**.
- **57.4%** of the surveyed enterprises state that **they can co-finance the training**, respectively **100% of large enterprises are ready to co-finance**. The amount that businesses can invest mainly reaches **1K EUR**. Around **half of the large enterprises** have stated that they can finance even **1-3 K EUR**. Agreements with training providers are not very common in the metal industry.

Employment

- Majority of the surveyed enterprises stated that, **the need for specific skills** has increased in recent years, while only 22.4% of them consider that there was no change.
- Nearly 90% of the surveyed enterprises operating in metal industry have encountered **difficulties in finding workers** with adequate qualifications and skills, mainly enterprises from Mitrovica, Peja and Gjilan.
- **Turnover of employees** presents a serious problem to a considerable number of interviewed enterprises, mainly due to **migration** of young workers into the Western European countries, and/or young workers don't find it **enough attractive** to work in this sector.
- More than 40% of the surveyed enterprises ranked **metalworkers** as the most difficult professional profile to be found and hired, followed by **production line maintenance technicians and mechanical engineers**. In order to fill the gap in finding qualified workers, 40% of the respondents have hired less skilled-workers, 24% trained the current staff, while 13.6% of the surveyed enterprises increased the salaries to attract more applicants.
- Vast majority of the surveyed enterprises are planning to **hire new workers** in the coming year, mainly those operating in **processing of machine parts and tools**, followed by enterprises operating in **processing of metal structures**.
- The work experience similar to their activity is the **most important criteria** for hiring new employees in their business. **The adequate education** was ranked as the second most important criteria.
- The preferred manner for finding new workers for 46.5% of the surveyed enterprises is through **personal contacts and references**, followed by 27.6% of the respondents which use **job vacancy announcements** for finding and hiring new workers.

I. OVERVIEW OF THE METAL INDUSTRY IN KOSOVO

The metal industry in Kosovo encompasses a number of enterprises estimated to be 250. To assess the number of enterprises in the metal industry two data sources are used and compared, the Kosovo Business Registration Agency (KBRA) and Tax Administration of Kosovo (TAK). Compared to the TAK database, the KBRA database has more registered enterprises in the metal industry. It is because the KBRA database also includes inactive enterprises. In comparison, the TAK database is more accurate regarding the number of active enterprises, categorization based on economic activity and number of employees.

According to the TAK database, as of December 2020, the number of active enterprises in the metal industry is 250. Out of 250, half of them (50% or 125 enterprises) are medium, 28.4% (71 enterprises) small, 18.8% (47 enterprises) are large, and 2.8% (7 enterprises) are micro. TAK classifies enterprises based on Law no. 06/L-032 on accounting, financial reporting and auditing, which stipulates that business organizations are classified as micro-enterprises, small enterprises, medium-sized enterprises and large enterprises, based on the indicators determined on the last day of the previous financial year, to prepare the financial statements for the current year, according to the following criteria: (1) statement of financial position; (2) net turnover; and (3) average number of employees during the financial year¹.

As regards the regional concentration of metal industry enterprises, the region of Prishtina has the largest number, followed by Prizren and Ferizaj region:

	Prishtina	Mitrovica	Peja	Prizren	Ferizaj	Gjilan	Gjakova	TOTAL
MICRO	3			1	2		1	7
SMALL	21	5	6	7	16	10	6	71
MEDIUM	40	3	18	18	27	7	12	125
LARGE	14	2	4	12	10	2	3	47
TOTAL	78	10	28	38	55	19	22	250

Table 1. Enterprises by region and size

In terms of economic activities, metal industry enterprises are further classified based on NACE² (second revision REV2). Based on this classification, the largest number of metal industry enterprises (96) are involved in the "Manufacturing of metal structures and parts of structures". The second-largest group of enterprises (47) are primarily engaged in manufacturing metal doors and windows. There is significantly less activity in the

¹ <https://gzk.rks-gov.net/ActDocumentDetail.aspx?ActID=16268>

² The Statistical Classification of Economic Activities in the European Community, commonly referred to as NACE, is the industry standard classification system used in the European Union.

treatment and coating of metals (13 enterprises). Table 2 illustrate the classification, number of enterprises and number of employees in each economic activity:

Economic Activities	Enterprise		Employment		TURNOVER	
	No.	%	No.	%	EURO	%
Forging, pressing, stamping and roll-forming of metal; powder metallurgy	17	7%	227	12%	€ 13,924,297	11%
Manufacture of doors and windows of metal	47	19%	259	13%	€ 11,299,803	9%
Manufacture of metal structures and parts of structures	96	38%	749	38%	€ 48,796,641	39%
Manufacture of other fabricated metal products, n.e.c.	30	12%	212	11%	€ 7,775,311	6%
Manufacture of wire products, chain and springs	15	6%	141	7%	€ 5,755,173	5%
Treatment and coating of metals	13	5%	93	5%	€ 4,220,689	3%
Wholesale of metals and metal ores	32	13%	283	14%	€ 34,797,577	27%
TOTAL	250	100%	1964		€ 126,569,491	

Table 2. Classification based on NACE- number of enterprises, employment and turnover (source TAK)

Enterprises of the metal industry employ about 0.9% of the total of active work force employed population (210K³) in Kosovo. As indicated above, 250 active enterprises employ 1,964 employees. Again, the enterprises that manufacture metal structures and parts of structures employ more than one-third of total employment in the metal industry. It should be noted that enterprises involved in forging, pressing, stamping and roll-forming of metal employ 12% of total employment, although the share of such enterprises in the metal industry is only 7%. In terms of the gender composition of the employees, the vast majority of the workforce are male employees.

Concerning financial turnover, the annual (2020) turnover is about 127 million euro, again with the larger share covered by enterprises belonging to economic activity: "manufacture of metal structures and parts of structures."

³ <http://www.kosovo2040.com/>

II. METHODOLOGY OF THE SKILLS GAP ANALYSIS

To conduct Skill Gap Analysis in Metal Industry, we used a combined approach of qualitative (secondary research and interviews) and quantitative (survey) data collection method, managed through three phases:

Phase 1: Survey

Implementation of this phase will go through the following proposed steps:

STEP 1. Questionnaire design: The MDA and KIMERK have designed the questionnaires, which consisted mainly of closed questions. The questionnaire assessed the education and profile required from employees, skill gap, previous training provided to employees, and training and skills needed in the future (see Annex 1).

STEP 2. Selecting the survey sample. After identifying the metal industry-main economic activities, a survey frame (list) was established. To establish the survey frame, TAK data of 2018 were used because data of 2020 were not at our availability. Based on TAK 2018 data, the survey frame included 190 active businesses. The expectancy was to obtain answers from 40-50% of those active businesses.

STEP 3. Data collection. We have used SMS and email as tools for the distribution of the survey questionnaire. Respondents were able to click on the SMS link and directly answer the survey questions in their mobile browser or PC. At the end of the data collection process, the response rate was 47% or 89 out of 190 active businesses (survey frame).

STEP 4. Survey data analysis. All the data from the survey are analyzed based on a quantitative approach through statistical analysis. After completing the collection of all primary data, they are validated and analyzed using SPSS.

Phase 2 - Interviews

Forty in-depth interviews were conducted to validate the data collected and obtain more in-depth information about enterprises' future expectations and concerns regarding the skills gap of employees (see Annex 2). These interviews are conducted with KIMERK's presence and facilitation, especially for the companies that are members of KIMERK (see Annex 2 List of interviewed enterprises). The final selection of the enterprises for interviews is made based on enterprise size, region and economic activity of enterprises.

Phase 3 - Reporting

The final output of the **Skill Gap Analysis in Metal Industry** is this comprehensive report which presents findings from surveys and interviews, statistical description, and recommendations.

III. SKILLS GAP ANALYSIS FINDINGS

1. BUSINESSES INFORMATION

As presented in Table 1, the concentration of the metal industry enterprises is in the Pristina region. The survey data revealed that nearly one third (31.5%) of enterprises that participated in the survey were from the Pristina region, followed by Prizren and Ferizaj. The following table presents the regional distribution of the respondents:

	Prishtina	Mitrovica	Peja	Prizren	Ferizaj	Gjilan	Gjakova
Number of enterprises	28	3	12	17	15	4	10
%	31%	3%	13%	19%	17%	4%	11%

Table 3. Number of surveyed enterprises according to region

The responses according to the region are distributed normally and are significantly representative of the current number of enterprises in the metal industry, as presented above in Table 1.

Regarding the enterprises' size, survey results show that majority of them are medium (53.9%) and small enterprises (19.1%).

Economic Activity	By activity	By enterprises size			
	%	Micro	Small	Medium	Large
Forging, pressing, stamping and roll-forming of me	6.7%		33.3%	50.0%	16.7%
Manufacture of doors and windows of metal	14.6%	7.7%	23.1%	69.2%	
Manufacture of metal structures and parts of structures	52.8%	21.3%	14.9%	55.3%	8.5%
Manufacture of other fabricated metal products n.e.c	6.7%		50.0%	50.0%	
Manufacture of wire products, chain and springs	9.1%	25.0%	12.5%	50.0%	12.5%
Treatment and coating of metals	5.6%	20.0%	20.0%	40.0%	20.0%
Wholesale of metals and metal ores	4.5%			25.0%	75.0%
TOTAL		15.7%	19.1%	53.9%	11.2%

Table 4. Surveyed enterprises by economic activity and size

As shown in the table above, more than half of surveyed enterprises are engaged in manufacturing metal structures and parts of structures. It indicates the current landscape of the metal industry since most active enterprises (38%, see table 2) belong to the same economic activity, "Manufacture of metal structures and parts of structures". Further, due to the small number of enterprises in some economic activities and the proposal by

KIMERK, for analysis and interpretation of results, economic activities are aggregated into the following broader categories:

- Processing of metal structures
- Processing of machine parts and tools
- Other activities

As regards seasonal employment, 75% of enterprises stated that they do not employ seasonal workers. Those who employ reported a small number of seasonal employees, an average of 3 to 4 seasonal employees. In addition, female employees are rarely employed in the metal industry. More than 41% of the enterprises stated that they do not have any female employees. About half of enterprises said that they had employed 1 to 3 female employees. The largest share of enterprises has been established in the last ten years (up to five years 32.6%, and 6-10 years 22.5%).

1.1. Export capacity

Sixty-four per cent (64%) of surveyed metal industry enterprises are currently engaged in some degree of exporting their products, whereas 36% reported they do not export. As regards the size of the enterprise, all sort of enterprises exports their products; however, large (80%) and medium (62.5%) enterprises export their products abroad. Micro enterprises sell half of their products in the domestic market – about 57% of their products is sold domestically.

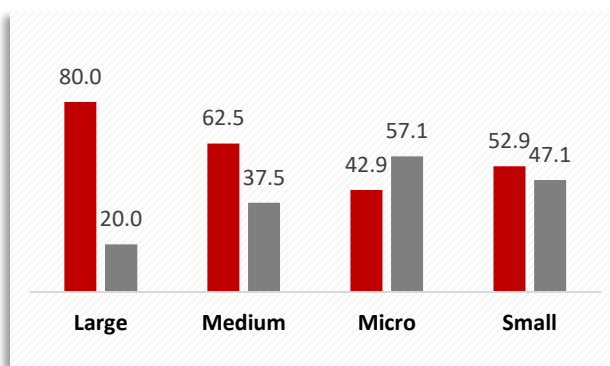


Figure 1. Export by enterprise size

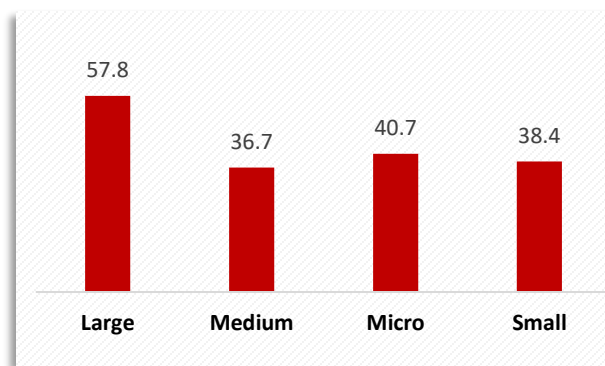


Figure 2. % of export by enterprise size

Further, we asked enterprises what percentage of the total production they export abroad. For the purpose of this study and enabling straightforward interpretation of the results, we computed the average rate of the export using the scale of 1-100%. Thus, as one can see in Figure 2, larger enterprises are primarily engaged in export by reporting they export (on average) 57.8% of their production.

As concluded by interviews, exports are not on a regular basis but are randomly based on clients' requests. Mainly clients have been identified with using the network of Kosovar diaspora companies and professionals.

2. QUALIFICATION OF EMPLOYEES

Most employees in the metal industry are part of the production department, and there are fewer employees in the administration. The level of education of employees in enterprises varies depending on the position, but more than half of them come from Vocational high schools.

Although most employees have education, not all enterprises are satisfied with their knowledge and skills. The reason why employees are not prepared, according to surveyed and interviewed enterprises, lies in the education system of Kosovo as they do not receive the necessary practical skills but only theoretical. At the same time, the interest of employees is low.

More than half of the surveyed enterprises claim that there is a skills gap among employees. The rest of them, who do not think there is a lack of skills, are mainly enterprises with long-term employees. Those employees have gained knowledge and skills over time and are now stable.

Among the most lacking skills in employees and most needed for enterprises are welding skills (Aluminium and TIG welding skills are more lacking than others), CNC machine programming, operating CNC machines, AutoCAD.

2.1. Education level of employees

Before being asked about employees' skills, enterprises have been asked about their employees' level of education. Many employees in metal industry enterprises have vocational high school education 59%, followed by vocational training 14%, university degree 13%. See *Figure 3*. Even during the enterprises' interviews, they emphasized that they have the highest number of employees in production, where they do not need a

university degree, but only high school-vocational high school. For higher positions as managers, a university degree is required.

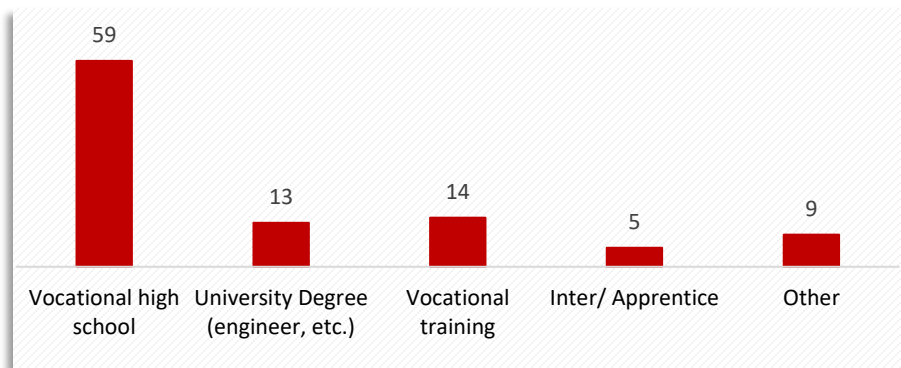


Figure 3. Education level of employees

2.2. Employees' Skills

This objective of this study was to initially identify the skills level of employees of the metal industry to better understand the following topics as the skills gap. When enterprises were asked about the technical skills of production staff, 44.2% of them responded that they rate them good, 36.4% of them rate them excellent and, 19.5% of them rate their skills average. During the interviews, it was revealed that the businesses assess their production staff skills as excellent or good because the majority of employees have been working for a long time, and their working experience improved their technical skills.

As presented in Figure 4, among different regions of Kosovo, the production staff skills were rated differently by enterprises' representatives. In Gjilan, there is the highest percentage of excellent rating up to 75%, while in Gjakova, there is the lowest percentage of excellent rate 30%. Mitrovica rated as average 66.7%, which is the highest average rating among other regions.

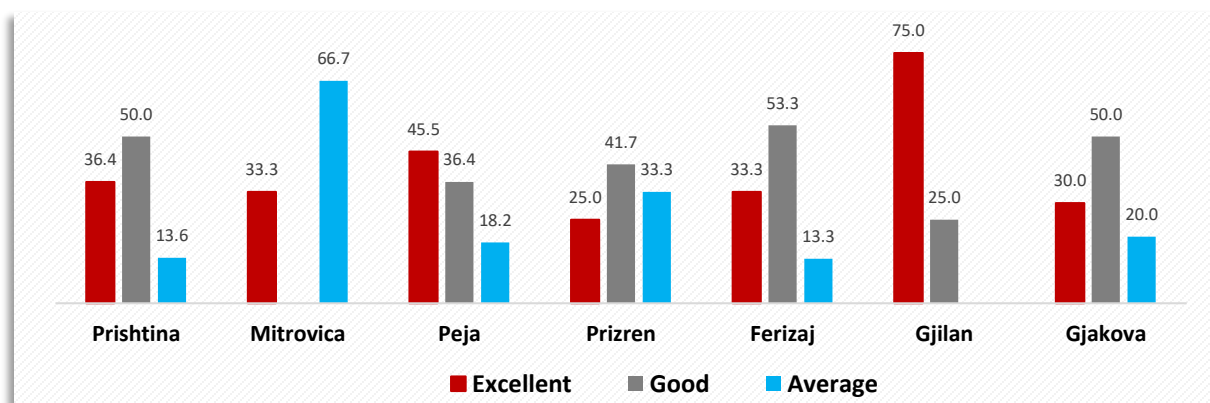


Figure 4. Assessment of employees' technical skills according to regions

Based on size, more than half of medium and large enterprises rate the employees' skills good, while 50% of surveyed micro-enterprises rate the employees' skills excellent.

At the economic activities level, enterprises active in processing of metal and structures assess their staff technical skills as excellent (28.3%) and good (47.8 %). In contrast, enterprises working in processing of machine parts and tools, 80% rate the production staff skills as excellent and good, and 20.0% average. See Figure 5.

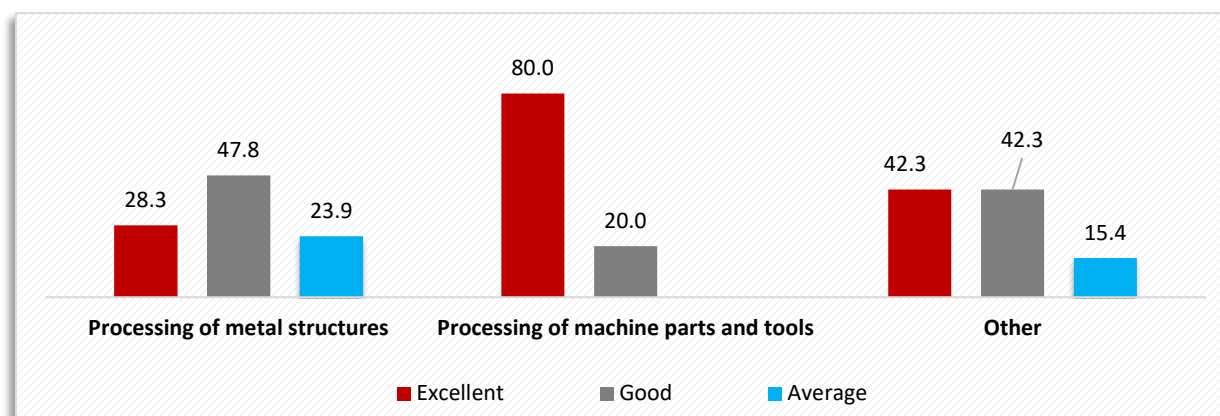


Figure 5. Technical skills of employees by economic activities

Based on survey data, most of the employees in the Metal industry businesses come from Vocational high schools. Nevertheless, there is also a moderate percentage of employees that have a university degree. Respondents were requested to respond to what extent the education system in Kosovo meets the skills requirements required in the metal industry, and more than half of surveyors' responses were unsatisfactory. Only 3.9% of respondents consider the education system meets entirely the skills requirement required in the metal industry, and 41.6% responses were average. See Figure 6.

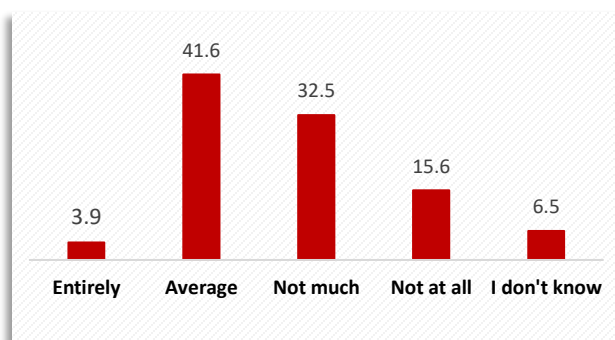


Figure 6. Education system compliance with the skills required in the metal industry

Interviewed enterprises emphasized the importance of practical work of students. They are sure that the dual system of education would improve the education quality in this field.

Based on the size of the enterprises, there are different opinions and evaluations of education system compliance with the skills required in the metal industry. Almost one-third of large enterprises think that the education system in Kosovo meets on average the required skills in the metal industry. 78.5% of micro-enterprises, 46% of small enterprises,

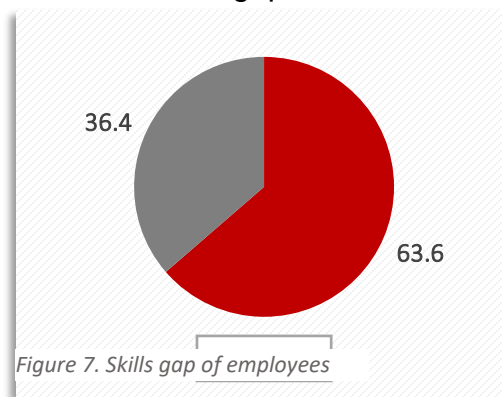
and 53.6% of medium enterprises do not think that the education system meets entirely or even on average the skills required in the metal industry.

Opinions among the processing of machine parts and tools enterprises are different. 40% of them have the opinion that the education system of Kosovo does not meet the skills required of the metal industry at all. The rest of the enterprises of this sector share the same opinion equally among other options: entirely, on average and, not much.

2.3. Skills gap of employees

This study aims to find the skills gap of metal sector employees and identify in which field it is more widespread. 63.6% of surveyors claim there is a skills gap between current employees' skills and the skills needed to work in their business. Only 36.4% of them have the opinion that there is no skills gap. See *figure 7*.

Enterprises in different regions of Kosovo also show the skills gap, in a similar percentage. Only in the region of Mitrovica and Peja, there is a higher difference in the opinion of enterprises, where more than half of them do not think there is a skills gap.



Respondents were asked to select the five (5) most lacking and most needed skills of their employees. Welding skills appear to be the most deficient and needed skills (31.5%), followed by CNC machine programming skills and skills for operating CNC machines (25.4%), AutoCAD skills (7.9%), see *figure 8*. Aluminium welding skills and TIG welding skills are the most lacking skills among welding skills in general.

Except advanced skills gaps, interviewed enterprises declared that there are even more basic skills that employees do not have, such as: precise and accurate measurements, cutting. Interviewed enterprises also report those profiles and skills mentioned above as most needed in the last years in the metal industry.

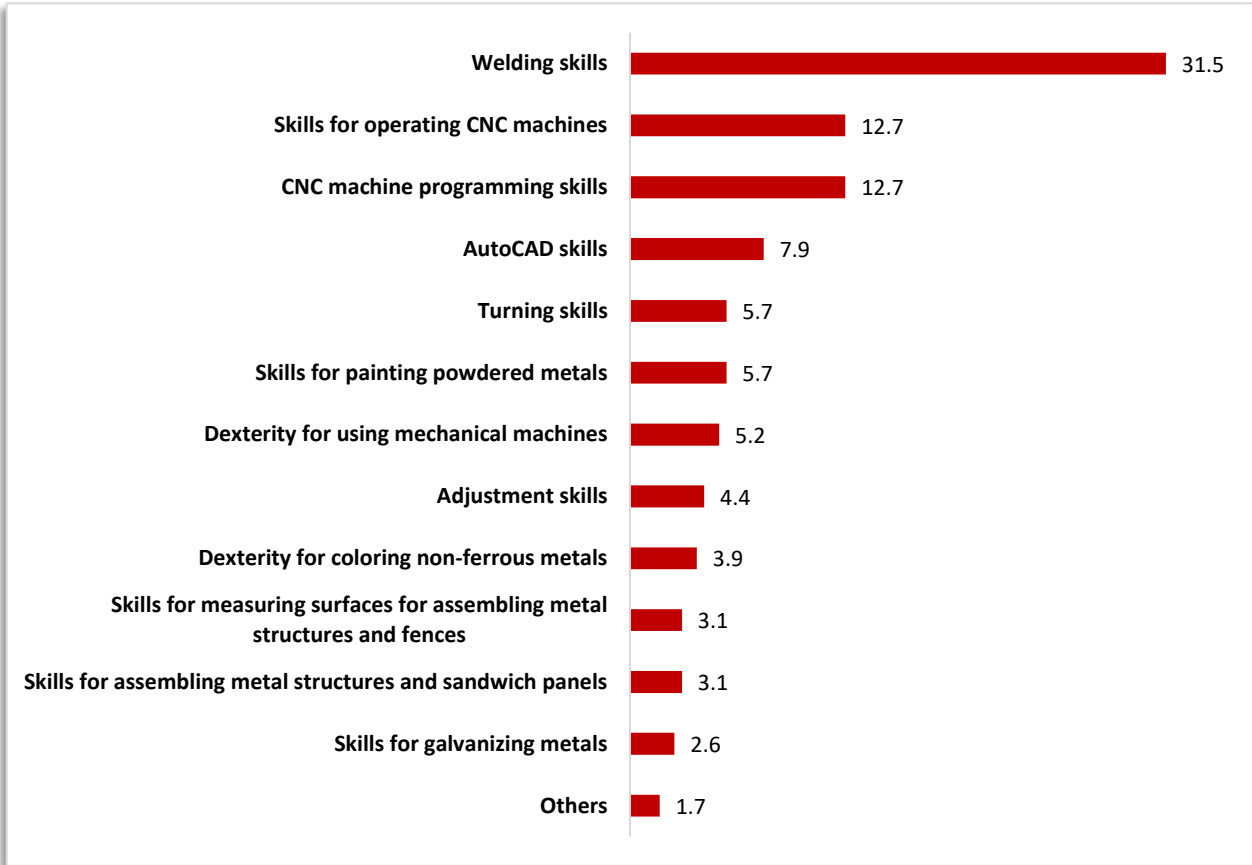


Figure 8. Most professional lacking skills

3. TRAINING

Despite the previous education of the employees, training still has its importance for gaining the specific skills needed for the concrete business, or for strengthening the knowledge which has been learned before but may not have been practiced enough. More than half of the enterprises in the metal industry have already provided training for their employees, and if we analyze them by sectors, about 71% of the processing of metal structures sector enterprises have provided training. Mostly the training was provided by internal experts of the enterprises, however, other forms of training such as online training or training by external experts were organized as well.

Whether they have provided training before or not, almost all enterprises are ready to offer training for the future. The frequency of delivering training depends on the needs of the enterprise.

The most sensitive part is the financing of this training. Regarding the funding of the training, there was a change of opinions based on the enterprise size. Overall, 57.4% of the surveyed enterprises state that they can co-finance the training, respectively 100% of large enterprises are ready to co-finance. The amount that businesses can invest mainly

reaches 1K EUR. Around half of the large enterprises have stated that they can finance even 1-3 K EUR. Agreements with training providers are not very common in the metal industry.

3.1. Previous trainings

A significant part of the study was the collection of information on the issue of training by enterprises. The previous training shows a lot about the nature of enterprises and their willingness to organize training in the future. Survey data show that 56.3% of enterprises have provided training in the past, while 43.7% have not provided training so far. See *Figure 9*. One of the reasons why some enterprises did not organize training for their employees, is the turnover of employees. Therefore, the training costs for a considerable number of enterprises can be unreasonable due to high employees' turnover and for some unaffordable. Also, many enterprises, when they declare that they provided training, they refer to on-job-training (practice with the senior employees).

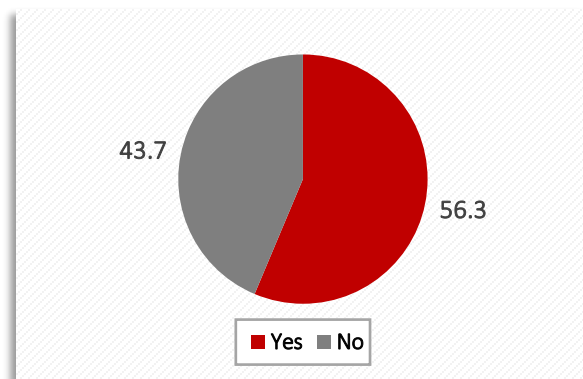


Figure 9. Previous provided training

Experience with training varies slightly across enterprises from different regions of Kosovo. It is noticed that in the region of Ferizaj there is a higher percentage of provided training 71.4%. The region that has provided the least training is Mitrovica, 33.3%.

As presented in *Figure 10*, the Processing of metal structures economic activity, provided more training (71.4%) than the processing of machine parts and tools economic activities (40%) or other economic activities (33.3%). These changes in the providing of training by different economic activities come as a result of the nature of the work and the activities they engage in. This issue has also been analyzed during interviews and, enterprises that are highly automated or have a long tradition are not too inclined to provide much training to employees.

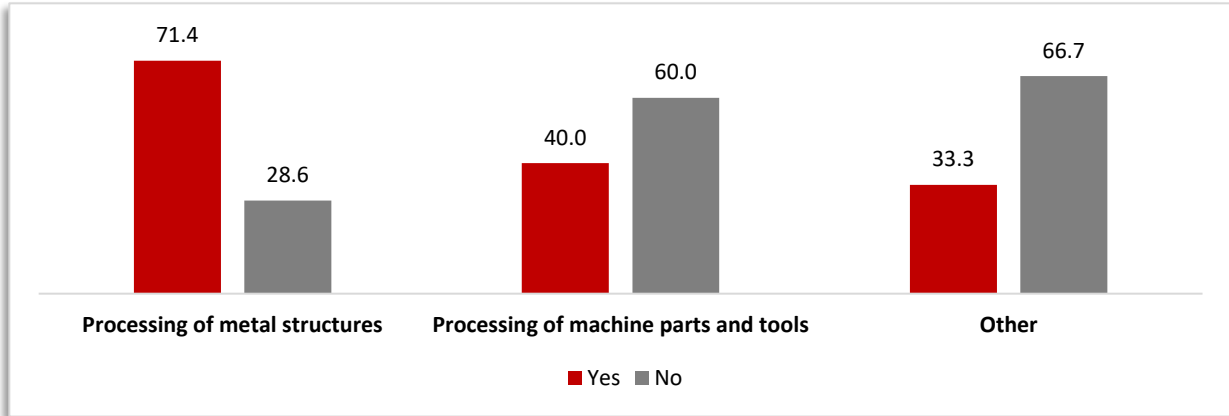


Figure 10. Previous provided trainings by economic activities

41% of the enterprises that stated that they provided training, the way they offered this training was through in-house business experts. Other enterprises had hired external experts to provide this training to their staff 23%. The rest of the enterprises have chosen other training methods, as shown in *Figure 11*.

Smaller interviewed enterprises declared that most of the time, the owners of the enterprises get trained by the company that produces the specific machine. Furthermore, they transfer that new knowledge to the rest of the employees.



Figure 11. Form of providing training

Enterprises that have provided training for their employees tried to select the most needed skills for their activity. It appears that 44.4% of surveyed enterprises have chosen welding as training, followed by 28.6% of enterprises that have provided training in CNC machine operation (See *Figure 12*). Welding is highly requested by enterprises due to the direct link with the certification of the enterprises with ISO 9606 standards and European standards that regulate the fabrication and assembly of steel and aluminum structures (EN 1090 and EN 3834).

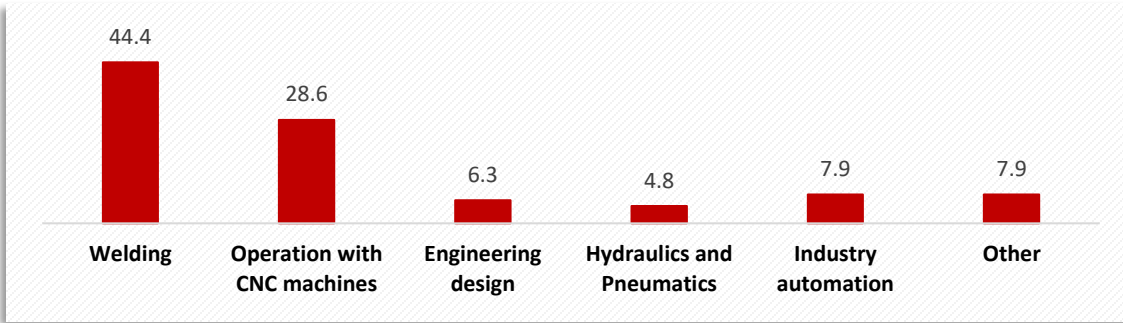


Figure 12. Previous training topics

3.2. Future trainings

Whether enterprises had provided training previously or not, most of the surveyed enterprises plan to provide training for the future, respectively 89.7% of them (Figure 13). During the interviews, it was noticed that the enterprises tend to grow and advance their operation in the future, and consequently, it will be necessary to train the staff to be in line with the new technology. On the other side, most of the traditional enterprises consider that there is no need to provide training, since their activity and almost all employees remain the same from the beginning.

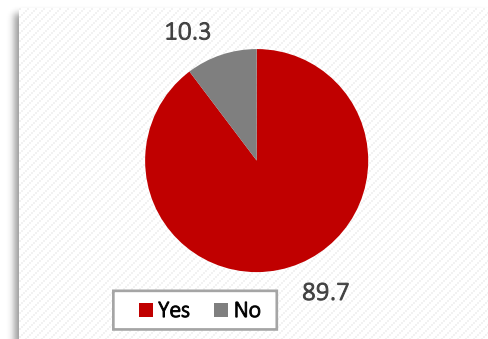


Figure 13. Future training plans

As regards organization of training in the future, majority of enterprises cannot predict from now how often it will be necessary for them to organize training. Therefore, they will provide training to their employees as often as needed.

3.3. Training financing

Providing training to employees, although it is valuable, can be costly at the same time. For this reason, when enterprises were asked how they plan to finance the training, the majority of them, 57.4%, stated that co-financing with donors is the best solution. However, 23% of surveyed enterprises expect total funding from donors, and 19.7% are willing to fund the training themselves fully. See Figure 14.

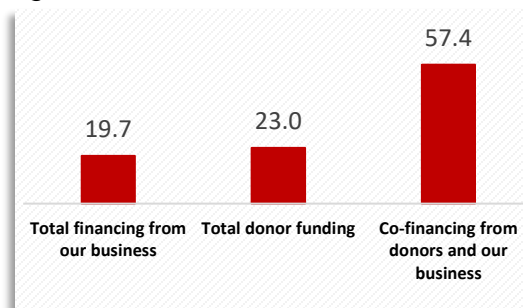


Figure 14. Training financing options

Enterprises of different sizes have different opportunities for financing training. At the same time, they have a different level of knowledge about the costs of training. All large

surveyed enterprises share the same opinion that they could co-finance future training with donors. With the reduction of the size of enterprises, the percentage of co-financing options decreased, 61.1% of medium-sized enterprises, 53.8% of small enterprises, and 33.3% of micro-enterprises. Micro-enterprises showed more willingness than the larger enterprises when it comes to total financing of training by the company, respectively 44.4% of them. See Figure 15.

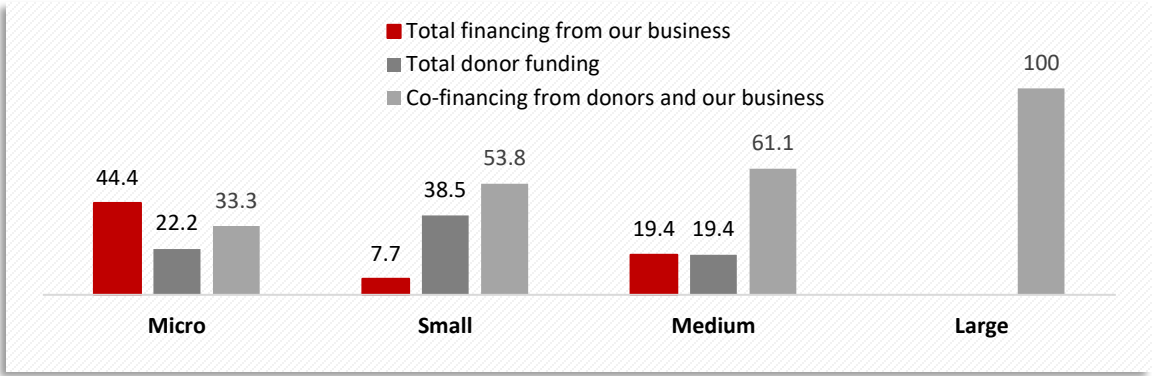


Figure 15. Training financing according to enterprise size

Although businesses had an attitude about how to finance future training, it was necessary to know the amount of money that would be affordable for enterprises through this study. 40.3% of enterprises stated that they could finance up to 1K, 25.4% 1-3K, 22.4% stated that they could not finance at all.

Most of the smaller enterprises state that the amount they can finance for training is up to 1K. Half of large enterprises have stated that they can finance 1-3K training, while 25% over 6K. It is understandable given the consolidation of larger companies and the higher number of employees. See Figure 16.

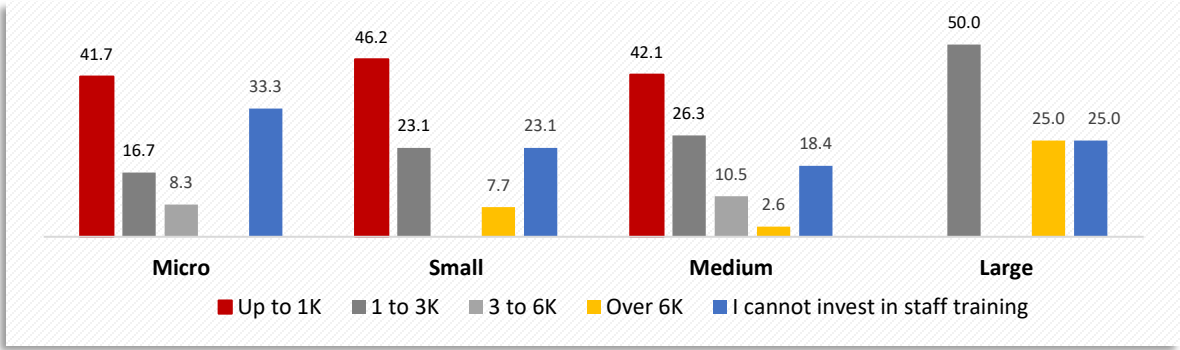


Figure 16. Affordable investment in training according to enterprises size

Many enterprises stated that they are ready to provide future training for their employees and finance them in any form. However, they don't know who provides the relevant training, respectively 85.1% of surveyed enterprises share this opinion.

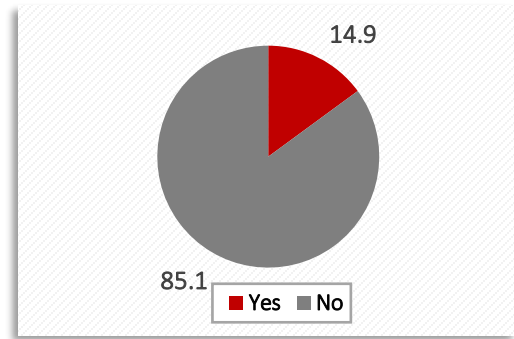


Figure 17. Agreements with training providers

4. EMPLOYMENT

Availability of workers with adequate skills and qualifications is crucial for processing industries. Most of the surveyed enterprises operating in metal industry have encountered difficulties in finding workers with adequate qualifications and skills. While, turnover of employees presents a serious problem to a considerable number of interviewed enterprises, mainly due to migration of young workers into the Western European countries, and/or young workers don't find it enough attractive to work in this sector.

Nearly half of the surveyed enterprises ranked metalworkers as the most difficult professional profile to be found and hired, followed by production line maintenance technicians and mechanical engineers.

Most of the surveyed enterprises are planning to hire new workers in the coming year, mainly those operating in processing of car tools and details, followed by enterprises operating in processing of metal structures. The work experience similar to their activity is the most important criteria for hiring new employees in their business. The adequate education was ranked as the second most important criteria.

The preferred manner for finding new workers for nearly half of the surveyed enterprises is through personal contacts and references, followed by job vacancy announcements.

4.1. Difficulties in recruitment

According to majority of the surveyed enterprises, due to the technological advancements in the industry, the need for specific skills has increased in recent years, while only 22.4% of them consider that there was no change.

In terms of size, 81.6% of the surveyed medium-sized and 69.2% of the small-sized enterprises have the opinion that the need

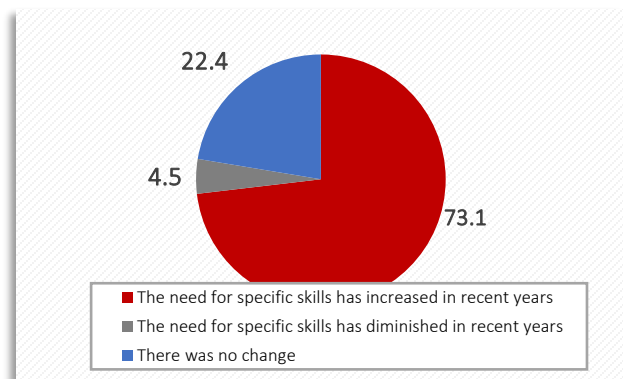


Figure 18. Need for workers with specific skills

for specific skills in their industry has increased over the last years. This finding was mostly evident at enterprises operating in processing of metal structures, where about 80% of them emphasized this issue.

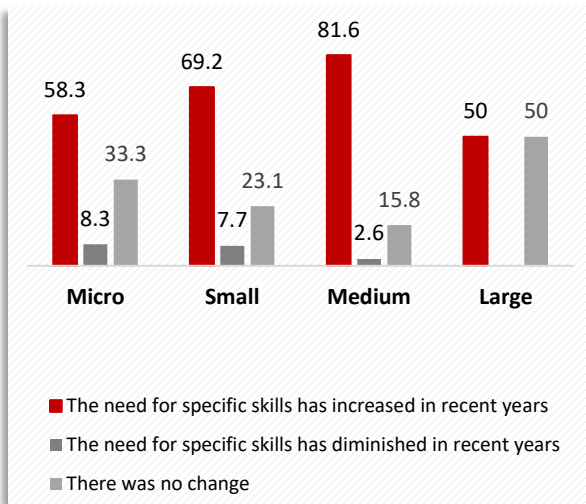


Figure 19. Need for workers with specific skills according to enterprises size

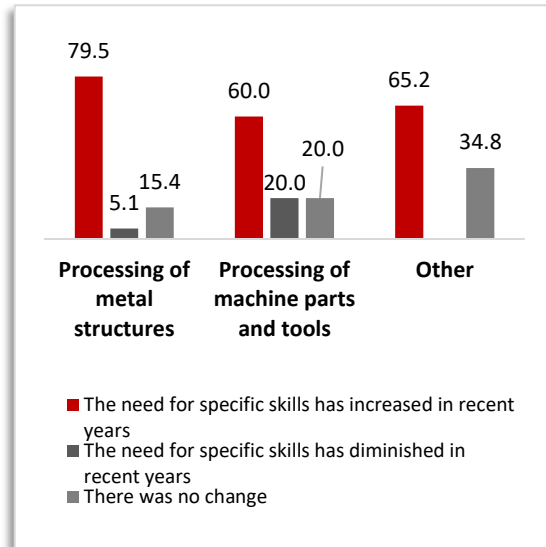


Figure 20. Need for workers with specific skills according to activity

Availability of workers with adequate skills and qualifications is crucial for processing industries. Nearly 90% of the surveyed enterprises operating in metal industry have encountered difficulties in finding workers with adequate qualifications and skills. As per geographical location, all surveyed enterprises from Mitrovica, Peja and Gjilan complained about the difficulty in finding adequate workers, while this concern was less evident at the metal industry enterprises located in Gjakova.

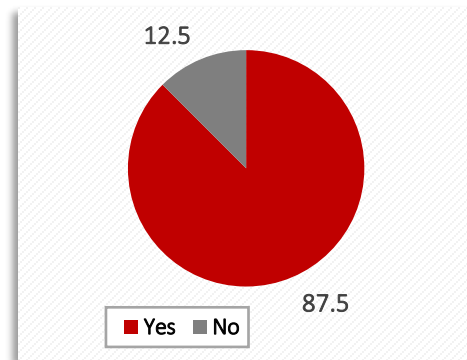
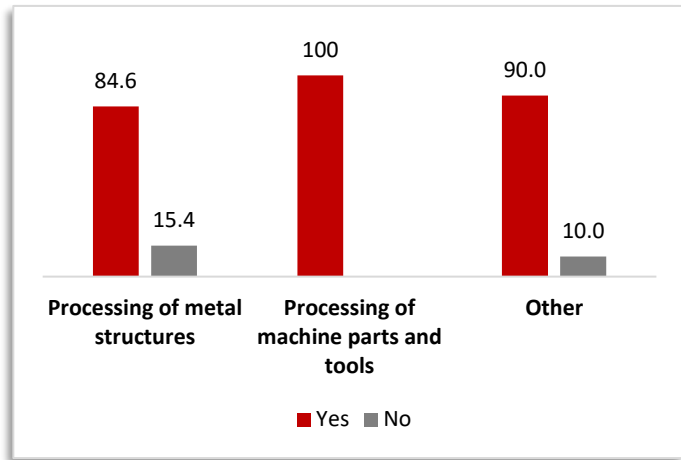


Figure 21. Difficulties in finding workers with adequate qualifications and skills

While from the size aspect, all small-sized enterprises, followed by large enterprises declared to have encountered difficulties in finding individuals with adequate skills and qualifications. Another issue which presents a serious problem to a considerable number of interviewed enterprises is the turnover of employees. According to representatives of enterprises, this happens mainly due to migration of young workers into the Western European countries, and also because a lot of young workers don't find it enough attractive to work in this sector.

The difficulty in finding workers with adequate qualifications and skills was analyzed also from the business activity aspect. Based on the results shown in *figure 22*, all of the surveyed enterprises operating in processing of machine parts and tools reported difficulties in hiring workers with adequate skills and qualifications, followed by enterprises operating in processing of metal structures. These findings were also supported by the results from interviews with enterprises, where majority of them confirmed these difficulties.



With regard to professional profiles that enterprises had difficulties in finding and hiring as workers, more than 40% of the surveyed enterprises ranked metalworkers as the most difficult professional profile to be found and hired, followed by production line maintenance technicians and mechanical engineers. See *Figure 23*.

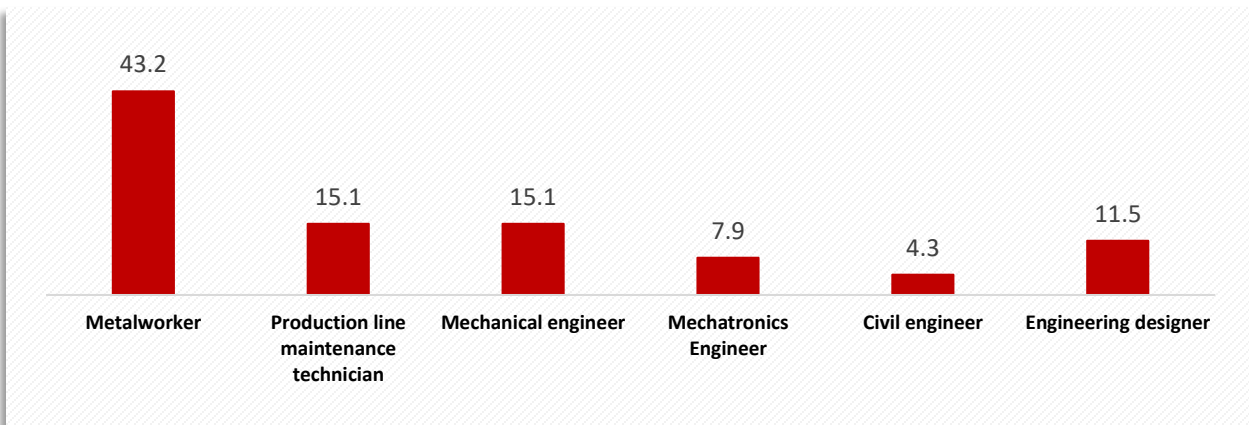


Figure 23. Professional profiles difficult to find and hire as a worker

On the other hand, in order to fill the gap in finding qualified workers, 40% of the respondents have hired less skilled-workers, 24% trained the current staff, while 13.6% of the surveyed enterprises increased the salaries to attract more applicants. See *Figure 24*.

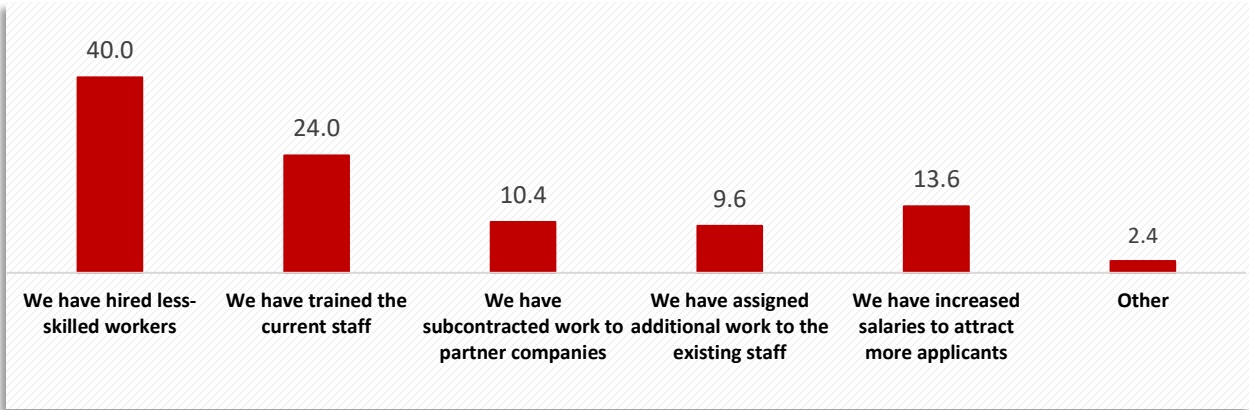


Figure 24. Actions to fill the gap in finding qualified workers

4.2. Recruitment criteria and manner

Enterprises operating in metal processing industry were also asked about recruitment plans, criteria and manner. Vast majority of the surveyed enterprises are planning to hire new workers in the coming years.

In terms of location, nearly all enterprises located in Gjilan, Prizren and Gjakova reported to have plans for hiring new workers at their businesses, while as per business activity, all surveyed enterprises operating in processing of machine parts and tools, plan to hire new workers in the coming years, followed by enterprises operating in processing of metal structures. See figure 26.

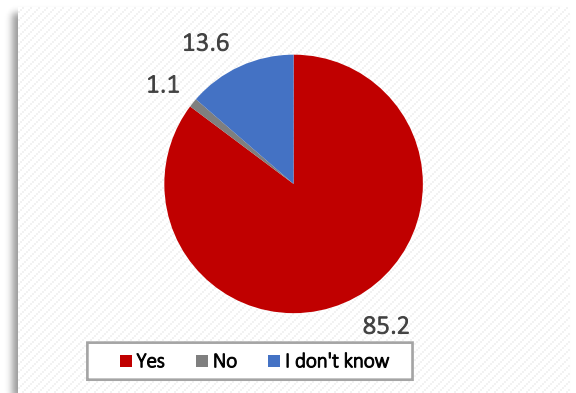


Figure 25. Plans for hiring new workers in the coming years

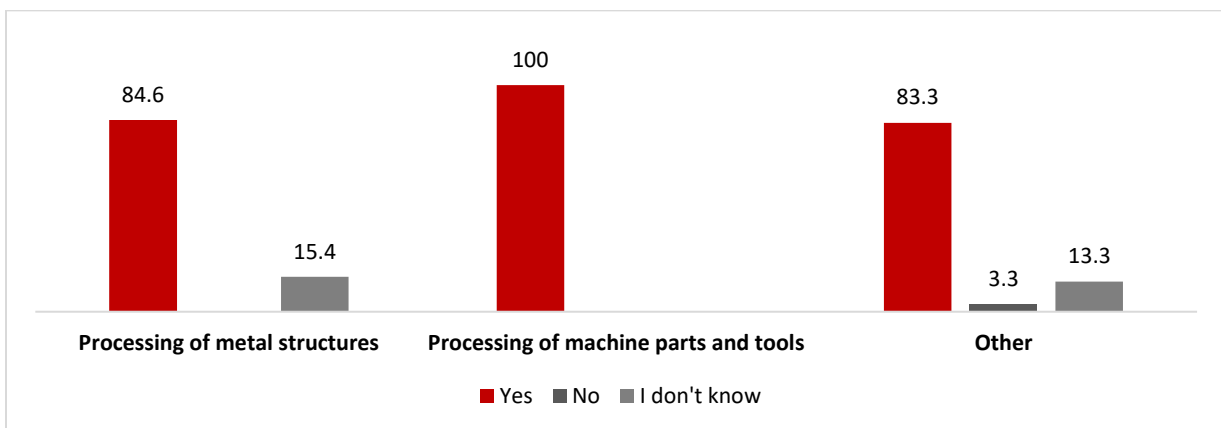


Figure 26. Plans for hiring new workers in the coming years according to activity

The criteria for hiring new employees were also part of this survey. On this question, the majority of the surveyed enterprises declared that the work experience similar to their activity is the most important criteria for hiring new employees in their business. The adequate education was ranked as the second most important criteria.

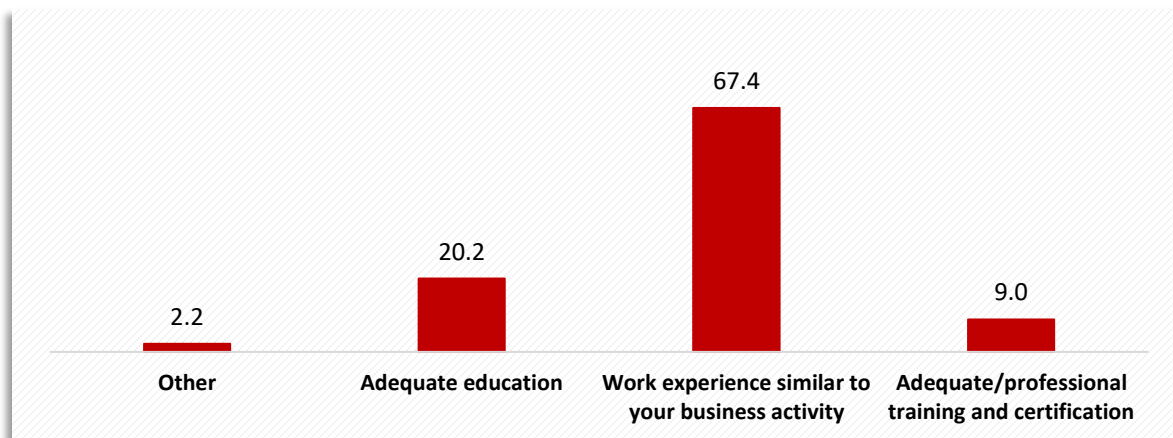


Figure 27. Most important criteria for hiring new employees

From the location point of view, the work experience similar to their activity was chosen as the most important criteria for hiring new employees for all the surveyed enterprises located in Mitrovica and Gjakova and for the majority of enterprises from Gjilan, Peja and Ferizaj as well. The adequate education was ranked second most important by a considerable number of enterprises from Prizren and Prishtina, 35.3% and 29.6% respectively.

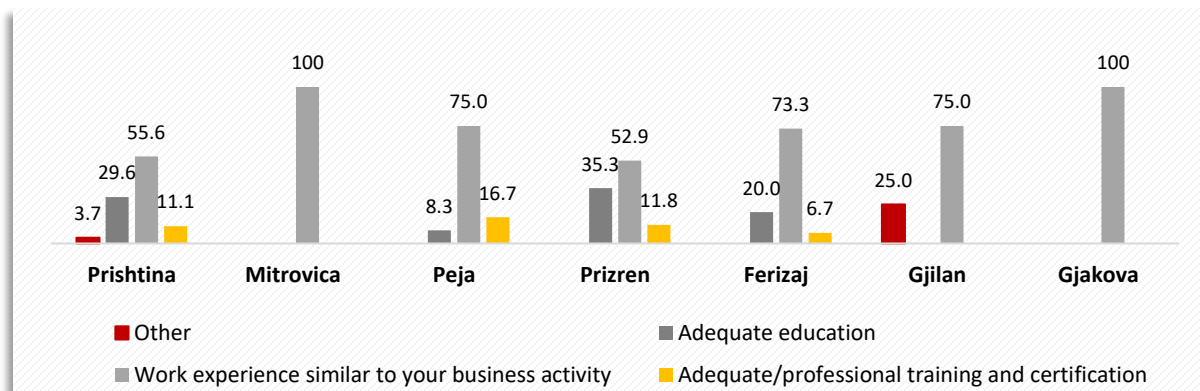


Figure 28. Most important criteria for hiring new employees according to enterprises location

In terms of business activity, 69.2% of the surveyed enterprises operating in processing of metal structures and 33.3% of the surveyed enterprises operating in processing of machine parts and tools consider the work experience similar to their activity as the most important criteria for hiring new employees. See Figure 29.

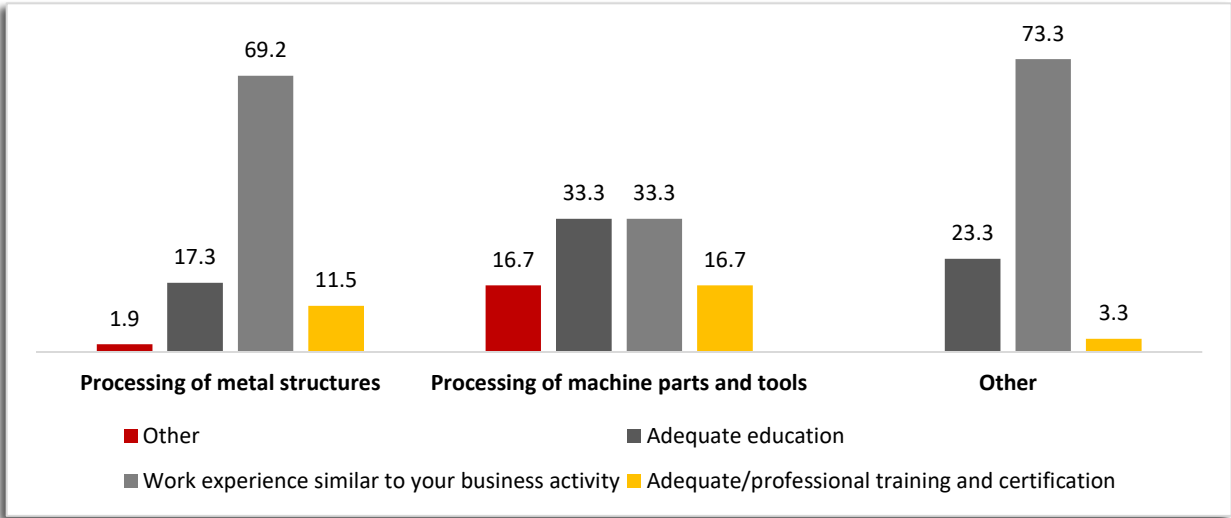


Figure 29. Most important criteria for hiring new employees according to activity

Respondents were also asked about the manner they use in finding new workers. From the survey results presented in *Figure 30*, the preferred manner for finding new workers for 46.5% of the surveyed enterprises is through personal contacts and references, followed by 27.6% of the respondents which use job vacancy announcements for finding and hiring new workers. The reason for finding new workers mainly through personal contacts and references is that it has been proven to be the most effective method so far.

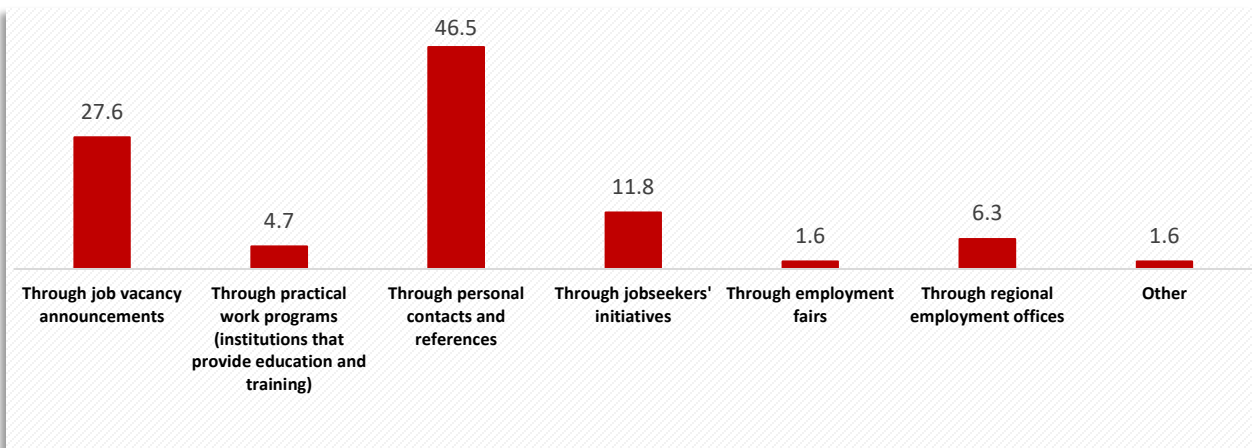


Figure 30. Most important criteria for hiring new employee

IV. RECOMMENDATIONS

Recommendation for MIRECK

- Establishing a database of pool of experts to support metal industry enterprises to identify potential training providers or/and individual experts.
- Providing practical training to improve skills of metal industry employees and potential job seekers on welding skills, programming CNC machine operating with CNC machines and using AutoCAD.
- Working jointly with metal industry enterprises to encourage them to invest in skills development through co-financing (including in kind contributions).
- Functionalization of MIRECK job matching platform to enable better employment opportunities for job seekers and easier identification and hiring qualified employees (metal workers, production line maintenance technicians and mechanical engineers, etc.)
- Facilitate internship schemes for university and VET students at MIRECK member enterprises.
- Facilitate certification of enterprises and employees with industry relevant international certification (ISO 9606, European standards that regulate the fabrication and assembly of steel and aluminum structures EN 1090 and EN 3834).

Recommendation for EYE

- Provide assistance to MIRECK to continue conducting research on the skills needs in the metal industry in the future.
- Provide support to MIRECK in providing professional training for the employees and job seekers
- Provide support to training providers to improve quality of their training and capacity building programs dedicated to the metal industry employees
- Provide support to internship schemes for VET students to improve their practical skills
- Support MIRECK to provide training and certification of employees on ISO 9606.

Recommendation for government / policy level

- Improving practical skills of the IVET staff (teachers and instructors) to implement core curriculum and recent technical development in the industry.
- Improve cooperation between IVET and private enterprises by empowering industrial boards to increase presence of private sector in the VET system
- Establishing scholarship schemes to support university and IVET students to gain practical skills through specific training and apprenticeship in metal industry enterprises.

V. ANNEXES

Annex 1: Survey Questionnaire

SKILLS GAPS ANALYSIS IN THE METAL INDUSTRY

Questionnaire for online survey with business representatives

BUSINESS INFORMATION

1. Business name?

(Enter business name)

2. Business size by the number of employees?

1. Micro (up to 10 workers)
2. Small (11- 50 workers)
3. Medium (51-250 workers)
4. Large (over 250 workers)

3. Business location?

(Please enter the municipality)

4. Business experience?

1. More than ten (10) years
2. 6-10 years
3. 1-5 years
4. Less than a year

5. Primary business activity?

1. Processing of metal structures
2. Processing of car tools and details
3. Others

6. In total, how many employees does your business have? (Please enter the total number of employees _____)

7. How many of the workers are seasonal workers? (Please enter their number____)

8. How many of the employees are female?

9. Do you export the products you produce?

1. yes
2. no

10. If 9a (Yes), what percentage (%) of the total production do you export abroad?
(Please enter the percentage (%) of the manufactured products do you export)

QUALIFICATION OF EMPLOYEES

11. What vocational education level do your employees have, and the number of employees for each level?

Education	Number of employees (enter the number of employees for each level)
Vocational high school	
University Degree (engineer, etc.)	
Vocational training	
Inter/ Apprentice	
Other	

12. How would you rate the technical skills of the production staff involved in your business?

1. Excellent

2. Good
3. Average
4. Poor
5. Very poor

13. To what extent does the education system in Kosovo meet the skills requirements required in the metal industry?

1. Entirely
2. Average
3. Not much
4. Not at all
5. I do not know

14. Is there a "gap" between current employees' skills and the skills needed to work in your business?

1. Yes
2. No

15. If 14a (Yes), what professional skills are lacking in your current employees? (Choose up to 5 skills that are lacking and most needed for your business)

1. Adjustment skills
2. TIG welding skills
3. MIG MAG welding skills
4. Electrode welding skills
5. Aluminium welding skills
6. Tube welding skills
7. Stainless steel welding skills
8. Skills for operating CNC machines
9. CNC machine programming skills
10. Dexterity for using mechanical machines
11. Turning skills
12. AutoCAD skills
13. Skills for painting powdered metals
14. Dexterity for colouring non-ferrous metals

15. Skills for galvanizing metals
16. Skills for measuring surfaces for assembling metal structures and fences
17. Skills for assembling metal structures and sandwich panels
18. Others

TRAINING

16. Have you previously provided training sessions for your employees?

1. Yes
2. No

17. If 16 a (Yes), how did you provide these training sessions?

1. We have trained our staff with our in-house business expert
2. We have trained our staff with external trainers
3. We have sent workers to training sessions provided by business associations and other training providers
4. We use the online training method
5. Other (please write)

18. What training did your staff attend?

1. Welding
2. Operation with CNC machines
3. Engineering design
4. PLC programming
5. Hydraulics and Pneumatics
6. Industry automation
7. Other (please write)

19. Do you plan to provide training for your employees in the future?

1. Yes
2. No

20. If 19a (Yes), how often?

1. Once a year
2. Once in 6 months
3. As needed

21. If 19a (Yes), how do you plan to fund training for your employees?

1. Total financing from our business
2. Total donor funding
3. Co-financing from donors and our business
4. Other

22. Within a year, how much money can you invest in training your staff?

1. Up to 1000 euros
2. 1001-3000 euros
3. 3001-6000 euro
4. Over 6000 euros
5. I cannot invest in staff training

23. Do you have agreements with any training providers for your staff training?

1. Yes
2. No

24. If 23a (Yes), with which of the training providers?

Write: _____

EMPLOYMENT

25. Has the need for workers with specific skills in the metal industry changed?

1. The need for specific skills has increased in recent years
2. The need for specific skills has diminished in recent years
3. There was no change

26. Have you encountered difficulties in finding workers with adequate qualifications and skills?

1. Yes
2. No

27. If 26a (Yes), which professional profiles did you have difficulty finding and hiring as a worker?

1. Metalworker
2. Production line maintenance technician
3. Mechanical engineer
4. Mechatronics Engineer
5. Civil engineer
6. Engineering designer
7. Others

28. If 26a (Yes), what have you done to fill the gap in finding qualified workers?

1. We have hired less-skilled workers
2. We have trained the current staff
3. We have subcontracted work to partner companies
4. We have assigned additional work to the existing staff
5. We have increased salaries to attract more applicants
6. Other (please write)

29. Does your business plan to hire new workers in the coming years?

1. Yes
2. No
3. I do not know

30. What are the criteria you consider most important for hiring new employees in your business? (Choose the two most important)

1. Adequate education

2. Work experience similar to your business activity
3. Adequate/professional training and certification
4. Other (please write)

31. How do you find new workers?

1. Through job vacancy announcement
2. Through practical work programs (institutions that provide education and training)
3. Through personal contacts and references
4. Through jobseekers' initiatives
5. Through employment fairs
6. Through regional employment offices
7. Other (please write)

Annex 2: Interviewed enterprises table

Nr	Enterprise name	Municipality
1	METAL BAU	Prishtine
2	NEW DIAMOND GROUP SH.P.K.	Prizren

3	ZINKUNIE	Prizren
4	SHEHU	Drenas
5	BAKALLI METAL	Peje
6	METALFIX	Suhareke
7	" UNICRON " SH.P.K.	Peje
8	"ENGINEERING IB " SH.A.	Istog
9	" NDERTUESI " SH.P. K	Suhareke
10	"FRON METAL" SH.P.K.	Suhareke
11	"VAM BEND" SH.P.K.	Gracanice
12	NEWCO MEHUKA METAL SH.P.K.	Gjilan
13	UNION METAL SH.P.K.	Gjilan
14	HOTI GROUP SH.P. K	Kline
15	SMART SIGNAL SIGNS SH.P.K.	Fushe Kosove
16	NOVOLANI SH.P.K.	Vushtrri
17	"FAM-ALUMIN" SH.P.K.	Fushe Kosove
18	PERPARIMI MONT SH.P.K.	Podujeve
19	PROMETAL SH.P.K.	Prizren
20	DAIJA METAL SH.P.K.	Gjakove
21	ALUMINIUM 2016 SH.P.K.	Mitrovica
22	N.T.P. "ELITA 94'	Ferizaj
23	HAJDIN N. BERISHA B.I.	Podujeve
24	PLAST - TECH " SH.P.K.	Kamenice
25	METAL LACI	Ferizaj
26	POLYTEC SH.P.K.	Ferizaj
27	QEMAJL QMEGA B.I.	Rahovec
28	BELKIZE GREZDA B.I.	Gjakova

29	NDERIMI & IEN SH.P.K.	Podujeve
30	VALMIR HALILI B.I.	Vushtrri
31	FE- METAL SH.P. K	Prizren
32	EING COM SH.P.K.	Podujeve
33	JANJEVA STEEL	Prishtine
34	ALLIANCE INTERNACIONAL	Fushe Kosove
35	KAMELEONI SH.P.K.	Fushe Kosove
36	SWISS METAL " SH.P.K.	Ferizaj
37	EURO STEEL SH.P.K.	Ferizaj
38	ARCH TIME	Gracanice
39	CNC NOLL	Fushe Kosove
40	ALBED	Vushtrri