

SKILLS NEEDS ASSESSMENT: IDENTIFYING EMPLOYERS' NEEDS



50
YEARS

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IN SIX ECONOMIC SECTORS IN KOSOVO

*Skills needs assessment:
Identifying employers' needs in six economic sectors in Kosovo*

The views expressed in this report are those of the authors and do not necessarily represent those of the United Nations Development Programme or the Ministry for Foreign Affairs of Finland.

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SKILLS NEEDS ASSESSMENT:
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economic sectors in Kosovo**

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List of Abbreviations

- BPO – Business Process Outsourcing
CCC – Customer Care Centres
GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit
ICT – Information and Communication Technology
ISCO - International Standard Classification of Occupations
KAS - Kosovo Agency of Statistics (KAS)
KCC - Kosovo Chamber of Commerce
MEST - Ministry of Education, Science and Technology
MLSW - Ministry of Labour and Social Welfare
MTI - Ministry of Trade and Industry
NACE - Nomenclature des Activités Économiques dans la Communauté Européenne
NQA - National Qualification Authority
PES - Public Employment Offices
SEECCEL - South East European Centre for Entrepreneurial Learning
SMEs – Small and medium enterprises
SOEs - Socially owned enterprises
STIKK - Kosovo Association of Information and Communication Technology
TAK – Tax Administration of Kosovo
UNDP - United Nations Development Programme
VET - Vocational Education and Training
VTC – Vocational Training Centres, MLSW

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Executive Summary

Written under the framework of the Active Labour Market Programmes, implemented by the United Nations Development Programme (UNDP) office in Kosovo, this report assesses workforce skills and competencies in selected occupations and strategic sectors identified by the Ministry of Trade and Industry (MTI) as having a higher potential for economic growth, generating employment and improving the large trade deficit in Kosovo¹. Sectors being assessed are food processing and packaging; information technology with a focus on business process outsourcing and customer care centres (IT-BPO and CSC); metal processing; textiles and apparel; tourism and wood processing.

The report highlights skills required by employers (*demand*) and acts as a resource to assist policy makers, training and education providers better align workforce development policies and programmes according to the needs of the labour market (*supply*).

Kosovo needs a regular mechanism for assessing and forecasting the labour market needs. In addition to providing updated information on skills needed by employers in the selected sectors, the report aims to contribute towards establishing a regular data collection system that facilitates matching market needs with training and education programmes.

The report offers a comprehensive analysis of data collected through an Employer Skills Survey with 587 private companies from selected sectors. The survey results provide information on specific tasks and skills of 13 occupations and addresses the importance of changes in general skills, workforce preparedness for future needs as well as the mechanisms implemented by firms to prepare workers (on-the-job training, hiring new employees, reorganisation, etc.). Drivers of change introduced by the interviewed companies such as innovation, adaption to environmental regulations and employee working conditions are also analysed. Recommendations for revision or development of new educational and training programmes are provided based on the results of this survey. Therefore, survey findings may serve as baseline information for developing occupational standards.

In general, survey data reveal that a number of firms experience difficulties filling vacancies for the selected occupations due to a dearth of applicants with adequate skills. Overall, results show that employers are not well informed about what Vocational Education and Training (VET) providers offer and the skill set of VET graduates and trainees from relevant study/training programmes. As a consequence, the majority of interviewed firms do not seem to have expectations from education and training systems and thus use on-the-job training for workforce development. Finally, results indicate that employers lack information concerning the level of education required for employees. This is suggested by a variation of responses provided for the same occupation; some employers stated a university level education is necessary, some cited secondary education and others mentioned on-the-job training.

Professional development of employees using on-the-job training suggests that for students to acquire occupation-specific skills VET schools ought to place students in companies. Moreover, there is a need for specialized trainers for the selected occupations and skill sets required by the labour market.

¹ References to Kosovo shall be understood to be in the context of Security Council Resolution 1244 (1999)

From an educational perspective, it seems that employees in Kosovo are expected to perform more tasks than those defined by the ISCO-08 classification. This is likely related to the small size of firms that require employees to have a broad range of occupation-specific skills. Therefore, with the existing structure of firms in Kosovo (largely unspecialised, micro and small in size) the education and training curricula should be adapted to private sector needs in Kosovo rather than follow international standards.

The assessment shows that employers require employees to have both occupational-specific skills and general skills. As such, any curricula and training programme should ensure that graduates have the necessary reading, writing, numeracy, computer skills, and other general skills such as: teamwork skills, communication, creative/innovation, adapting to new equipment or materials. The majority of firms surveyed consider the aforementioned skills to be increasingly more important. For the sectors attractive to women and youth, such as food processing and IT, it is recommended that adequate practical education be provided.

The firms surveyed are identified as innovative since the majority of them reported innovations in the last two years, including changing or adapting their practices, products or services in response to environmental awareness or regulations. This also suggests that education systems should be flexible and adjust to these changes.

1. Introduction and Methodology

The National Development Strategy (NDS) 2016-2021² emphasises that matching the skills acquired in education to those required by the labour market facilitate employment generation and foster economic growth. To ensure a correct match it is necessary to understand employers' needs. Although workforce skills were identified by several reports produced during recent years³, they focused on the lack of educated and skilled workers as an obstacle for business development. In general, assessments reveal that Kosovar firms regard the lack of qualified workers and specialized graduates as a significant impediment for business development. Therefore, these studies indicate that there is a need to harmonise curricula and labour market needs. Since the focus of these reports was primarily to understand firms' opinion of the labour force skills, this skills assessment evaluates in greater depth the tasks and skills (specific and general) required by the most in-demand occupations from six selected sectors in Kosovo.

Kosovo institutions developed several strategic documents to encourage the provision of quality education and training. Besides the Kosovo Curriculum Framework for pre-university education (KCF) for VET, institutions are currently developing the *Kosovo Education Strategic Plan (KESP) 2017-2021* with the aim of harmonising 'vocational education and training with labour market requirements in Kosovo and abroad, and the creation of an open system for adult education'. To address the lack of professional practicum and its limited quality for VET students, the *'Strategy for Professional Practice 2013-2020'* proposes several interventions to motivate employers to engage students and mechanisms to ensure that students have quality professional practice. Finally, the MLSW in the *'Sectoral Strategy 2014-2020'* aims to 'increase employment of women and men, skills development and better functioning of the labour market'. The two measures proposed to achieve this objective include the provision of professional training programs aligned with labour market needs and accreditation of professional training programs.

Laws and education policies regulate VET in Kosovo⁴. The current legal framework on VET in the country prepares trained-on-the-job training also suggests that relevance of this training system but standards are clearly stipulated that the education system needs to closely cooperate with employers to link the vocational education offered with labour market demands. This stipulation is in the Law on Vocational Education and Training requiring MLSW (through Employment Agency) and MEST (Agency for Vocational Education and Training of Adults) to use information from the labour market to inform policy making. The Administrative Instruction No.7/2014⁵ foresees that VET institutions propose new or amended professional training programmes and modules based on labour market analyses.

To ensure that education curricula reflect labour market demands, VET providers must be accredited and occupational standards verified by the law. So far, accreditation processes of public VET schools

2 http://www.kryeministri-ks.net/repository/docs/National_Development_Strategy_2016-2021_ENG.pdf

3 Sector profiles, MTI, 2014; report on state of SMEs in Kosovo, KOSME, 2014; enterprise survey focusing* on business climate, Riinvest, 2014; baseline studies, GLZ, 2012; the Kosovo Information and Communication Technology market analyses supported by STIKK; Kosovo human development report, UNDP, 2012; 'Business Climate in Kosovo: a cross regional perspective' study conducted by Riinvest, etc.

4 The core legal framework incorporates: Law No.04/L-032 on Pre-University Education; Law No. 04/L-138 for Vocational Education and Training; Law No. 04/L-143 on Adults Education and Training; Law No. 03/L-060 on National Qualifications that establishes National Qualifications System, and Law No. 03/L-068 on Education in the Municipalities.

5 Administrative Instruction No.7/2014 on advancement, autonomy and functioning of VET Institutions, Article 4

have not begun while other MLSW VTCs and some private ones have been accredited. Occupational standards are an important mechanism to ensure that curricula reflect labour market needs. The occupational standards have to fulfil two main criteria: they should be based on the labour market demands and developed in cooperation with all relevant stakeholders.

Education should be aligned with labour market needs and also indicate entities responsible for ensuring this harmonisation. However, the main barriers for the implementation of laws continues to be the absence of a labour market information system; poor cooperation between the education system and employers and limited financial resources available to properly equip VET schools and VTCs.

The network of formal and non-formal VET providers in Kosovo consists of:

- ✓ 57 public and private VET schools offering upper secondary vocational education (grades 10-12);
- ✓ Five Centres of Competence, governed by the newly established Agency of Vocational Education Training and Adult Education (AVETAE), that provide initial and further VET to youth and adults;
- ✓ Post-secondary VET (college-based for students that have completed upper secondary education);
- ✓ Eight Vocational Training Centres (VTC) that function under MLSW;
- ✓ Other public and private VET institutions providing non-formal education and training.

Currently, there is no regular data gathering system or mechanism for assessing and forecasting the labour market needs in Kosovo. The MLSW, through Public Employment Offices (PES), collects data on the unemployed and job vacancies. For jobseekers, PES records data on education, field of study and profession and provides information about job vacancies, including enterprise activity and job offers. However, administrative data sets do not provide accurate estimates of current and future labour demand and supply for specified occupations. Data on vacancies is incomplete since information is collected through individual PES counsellors' interviews with businesses in the field; only current, not future, skills needs are identified.

Kosovo Agency of Statistics (KAS) through the annual Labour Force Survey provides employment information according to economic activities (NACE Rev. 2) and professions (ISCO-88). The Tax Administration of Kosovo (TAK) records data on formally employed persons. This figure is likely underestimated given that the informal economy is estimated to comprise on average about one-third of the total turnover of enterprises and the estimate of informal employment in formal enterprises varies from 17.5 percent in the education sector to 70 percent in agriculture (Riinvest, 2013).

As reported by officials from MEST and MLSW, VET schools and employment advisors of PES regularly perform labour demand studies identifying the most in-demand occupations but do not assess tasks and skills required by employers. Employers' opinion concerning employee tasks and skills are only evaluated during the development of occupational standards. Presently, there are no occupational standards developed for the professions analysed within this research (interview with official from MEST).

1.1 Methodology

Given the aim of the survey, to provide inputs for revising VET education and training curricula, it applies a vocational approach of relating questions to occupational groups. During the workshops organized for each sector, employers selected up to five of the most prevalent occupational groups. Enterprises were asked to select the most common occupational groups and reference this group when answering the questionnaire.

The sample set for this study was extracted from KAS Statistical Register of Enterprises. The register contains only active enterprises. Active status is defined by enterprises that have either declared one of the taxes or an employed person during 2015. Additionally, following an employer proposal in the tourism sector, to ensure completeness of the sample set, the survey company has compiled a list of tour operators and event organizers for sampling.

The sample set is stratified based on size of enterprise (2-9; 10-49 and more than 49 employees) and NACE rev.2. The size threshold was set at enterprises with 2 or more employees. The rationale for excluding enterprises with only one employee is that in such settings it is difficult for the respondent to address the task and skills needed for the respective position without holding the individual jobholder in mind. Given that less than one percent of enterprises in Kosovo have more than 49 employees (KOSME, 2014), the aim was to include all enterprises in this size class in the survey. Additionally, since only 4% of enterprises had between 9-49 employees a larger number of enterprises were selected from this class compared to enterprises with fewer than 9 employees. The survey was conducted with 587 firms and the breakdown by sector is shown in Table 1.

Although the occupational group (and not the sector) is the main category of interest for the survey, to define the sample set, the activity of each sector has been used for sampling. This classification is applied because the existing list of employers does not provide information pertaining to the occupational categories of the workforce. The activity sectors serve as a proxy for identifying occupational groups that are of interest. Data on the number of interviews conducted by sector and sub-sector is shown in Table 1.

TABLE 1: Economic sectors chosen for the employer survey

Sector	NACE Rev. 2 sector	Sample size
Food processing	10 - Manufacturer of food products	88
	11 - Manufacturer of beverages	
IT- Business Processes Outsourcing and Customer Support Centres	61 – Telecommunications	70
	62 - Computer programming, consultancy and related activities	
	63 - Information service activities	
Metal processing	24 - Manufacturer of basic metals	104
	25 - Manufacturer of fabricated metal products, except machinery and equipment	
Textiles	13 - Manufacturer of textiles	112
	14 - Manufacturer of apparel	
	15 - Manufacturer of leather and related products	
Tourism	55 - Accommodation	114
	66 - Food and beverage services	
	79 - Travel agency, tour operations, reservation services and related activities	
	91 - Libraries, archives, museums and other cultural activities	
Wood processing	16 - Manufacturer of wood and of wood and cork products, except furniture; manufacturer of articles of straw and plaiting material	99
	31 - Manufacturer of wood products	

Table 2 outlines selected ISCO-08⁶ occupational groups for each industry (total 29), from which enterprises identified the most dominant group.

TABLE 2: List of main occupations defined by representatives of sectors

Sector	NACE Rev. 2 sector	ISCO-08 4 digit codes
Food processing	10,11	7514; 7513; 7515; 7511; 8160
IT- Business Processes Outsourcing and Customer Support Centres	61,62,63	2512; 2513; 2521; 2522; 2523
Metal processing	24,25	7212; 7213; 7222; 8122; 7214
Textile	13, 14, 15	7531; 7532; 8153; 8159; 7534
Tourism	55,66,79,91	5111; 5113; 3332; 5131; 5120
Wood processing	16,17	8172; 7522; 7521; 7317

For the purpose of this study, occupations with at least 17 observations were selected for analysis, in total 13 occupations were analysed (Table 3). The data for all other occupations is available.

⁶ http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_172572.pdf

TABLE 3: List of occupations analysed in this study

Sector	Occupations selected for analysis
Food processing	7511 Butchers, fishmongers and related food preparers ⁷
	7512 Dairy product manufacturers
	7514 Fruit, vegetable and related preservers
IT- Business Process Outsourcing and Customer Support Centres	2523 Computer network professionals
	2524 Software developers
	2513 Web and multimedia developers
Metal processing	7212 Welders and flame cutters
Textile	8153 Sewing machine operators
	7531 Tailors, dressmakers, furriers and hatters
	7532 Garment and related patternmakers and cutters
Tourism	5131 Waiters
	5120 Cooks
Wood processing	7522 Cabinet makers and related workers

Seventy-one percent of interviews were conducted with owners and/or directors of companies in order to access first-hand information on enterprises' skill needs, Managers (4%) or other workers (25%) responded to the survey when owners were unavailable.

This study also assessed whether education systems are offering study programmes for in-demand occupations. The list of study programmes for six selected sectors is in Annex 2. This Annex also provides general 'supporting' occupations relevant to most of these six sectors. National Qualification Authority (NQA) provided information on verified occupational standards. Finally, interviews were conducted with officials from MEST and MLSW.

Questionnaire

The questionnaire (Annex 1) was organized in the following four modules:

Module 1 contained questions related to characteristics of firms (size, economic activity, sales and training) including information on the selected occupation (number of employees and distribution by gender, age and education). This module included a section on training and education where employers were asked if they regularly review the skill and training needs of their employees. Further, employers were asked to indicate if their employees participated in any external or internal training courses during 2015, except any training obliged by the law.

Module 2 focused on the occupational-specific tasks and skills according to occupation. Using open-ended questions, interviewees were asked to list up to five tasks and corresponding skills to achieve the expected performance results. This module includes information on businesses' opinion of whether the selected skills are to be acquired at school or on-the-job and their future significance. In addition, information on emerging skills needs and measures employed by businesses to address them was obtained.

⁷ Note that only butchers are included as the interviewed firms offer these services. Therefore, in the rest of the report this occupation is referred to as Butchers only.

Module 3 covered the importance and workers' preparedness to accomplish general skills and

Module 4 asked background questions of businesses on major changes, innovations and the impact on the corresponding occupational group.

A note on standardisation of responses to occupation specific tasks

Given that occupation specific task and skills questions were of an open-ended style, responses for tasks were standardised and aligned to the best possible extent with the ISCO-08 classification. The responses to open-ended questions concerning tasks did not always provide the desired level of detail or were not always according to expectations/definitions; however, they were reported when deemed potentially useful for policy-makers, education/training institutions, or prospective students or job seekers. For instance, at times, the reported tasks for certain occupations were not typical or specific to that occupation (e.g. the task of milking cows in the dairy producers' sector); or, at other times, the tasks were not sufficiently specific (e.g. "milk processing", or "producing the final product"); or tasks, products, etc. were reported instead of skills (e.g. in the case of newly emerging skills, new products, professionalism, efficiency, etc. were cited).

The frequency of standardised tasks within each occupation, are reported as firms' original responses, while for main tasks the necessary skills/abilities/knowledge needed to perform the tasks are listed. For instance, only two interviewed companies mentioned knowledge of food safety and hygiene standards as important for the task of separation of milk from fat, but this does not mean that this should be given less importance when designing education and training programs. For each occupation specific task, firms listed main skills needed to adequately perform the tasks. Questions related to general skills were organised using a closed-ended question style.

FOOD PROCESSING A



AND PACKAGING

2

Since 60% of Kosovo's population lives in rural areas, Agriculture plays a very important role in the economy.⁸ Food processing and packaging is still a small sub-sector accounting for 2.3% of total active businesses and 3.07% of the total employed persons in 2015 (Table 4).

TABLE 4: Active businesses and employment of food processing and packaging firms (2013-2015)

NACE Rev.2 sector	Active businesses/no. employees	2013	2014	2015
10,11 Manufacturer of food products and Manufacturer of beverages	No. of active businesses	1,428	1,632	1,845
	<i>Participation in the total no. of active businesses</i>	2.34%	2.35%	2.33%
	No. of employees	6,462	7,031	7,702
	<i>Participation in the total no. of employees</i>	2.75%	2.92%	3.07%

Source: TAK, 2016

The dairy industry is the leading sub-sector according to output level while non-wood forest production is one of the few sectors with a positive trade balance.⁹ Conversely, in general, food processing and packaging is characterised by a negative trade balance. Although there is no major difference in educational attainment, women are less represented in the workforce. Overall, employees typically have a secondary school level education and firms believe that graduates suitable for the industry are lacking.

2.1 Food processing and packaging survey results

Basic firm data

All 88 firms interviewed in this sector are privately owned; almost three-fourths of them employ nine or fewer employees, 25% of them are small businesses and one is medium sized. On average, the number of workers employed by the surveyed firms is 11. Around three-fourths of the surveyed firms sell their products in local and nearby regional markets, 20% Kosovo wide and only two companies export their products to the European Union. The most common occupations identified by firms operating in three sub-sectors of the food-processing sector are discussed in the following sections.

2.1.1. Meat products: Butchers

In total, 43 firms reporting butcher as the most prevalent occupation have been interviewed. The average number of employees in these firms is six.

Nearly 60% of the employees from the firms interviewed work as butchers. This occupation seems to be attractive for youth who represent 40% of the total workforce. Still, middle-aged workers aged 30 to 49 years represent half of butchers and related workers. Although mainly male, one-sixth of butchers are women. This certainly is a small share, however it should be counted as a positive sign since the occupation of butcher is typically considered to be a 'male' occupation.

⁸ Green Report 2015, Ministry of Agriculture, Forestry and Rural Development, Kosovo.

⁹ Unless otherwise specified, information presented in the general overview is based mainly on the Sector profile for Food Processing and Packaging Industry, MTI, 2014.

The average number of employed butchers is four. Forty-two percent of meat processing firms consider that formal education to not be relevant and that on-the-job training is sufficient to perform this job. Only 14% of firms stated that secondary vocational education is the required level/type of education compared to one-third who stated that gymnasium is the relevant type of study (Table 5) Currently, there is only one vocational school located in Prishtinë/Priština that offers vocational education specifically for the meat sector and there are no training programmes offered by the MLSW or other VET providers.

While nearly three-fourths of firms stated they regularly assess employee skills, the vast majority of firms do not invest in training.

TABLE 5: Level of education required by firms for this job

Level of education	Share
Primary school	2%
Secondary general	33%
Secondary vocational	14%
University	9%
On-the-job training (educational level not relevant)	42%
<i>Total number of observations</i>	43

An important finding is that about half of the firms find it difficult to fill current vacancies for this occupation due to the lack of adequate skilled applicants. The average length of training in the company is close to five months.

i. Occupational-specific tasks and skills for butchers

The surveyed firms were asked to name the main tasks butchers need to accomplish in order to do their job (Table 6). Table 6 also compares firms' answers regarding the tasks to ISCO-08. Notably butchers employed in Kosovo are expected to perform more tasks when compared to a 'typical' butcher as defined by the ISCO-08. Butchers in Kosovo are also expected to maintain equipment and machines, pack meat and meat products, monitor and test product quality. It is possible that employees are required to have a wider range of skills because of the small size of firms.

TABLE 6: Tasks of a butcher based on employers' responses and ISCO-08 classification

Tasks	Share	ISCO-08
Classifying meat for different purposes/products	67%	
Preparing ingredients and making sausages and similar products using chopping, mixing and shaping machines	60%	√
Boning, cutting and dressing meat for sale	56%	√
Packing meat or meat products	40%	
Flaying and trimming carcasses	35%	√
Slaughtering animals	33%	√
Sterilizing machines and equipment	28%	
Storing meat or meat products	26%	
Selling meat to customers	19%	√
Operating equipment to smoke meat	16%	√
Monitoring/supervising production	9%	
Maintaining and adjusting cutting equipment	5%	
Monitoring and testing product quality (and modification as needed)	5%	
Curing and cooking meat (not reported by firms)		√

Table 7 provides information concerning the skills needed to successfully perform the top most frequently reported tasks. The data show that knowledge of/compliance with food safety and hygiene standards and ability to evaluate the quality of meat were the skills most referenced as necessary. Additionally, Table 7 provides information on firms' opinions of whether the skillset to perform the four most commonly selected tasks are to be acquired at school or on-the-job. In general, firms believe that the majority of skills are to be learned on-the-job. Notably, employers consider the skills needed to perform deboning, cutting and dressing the meat for sale to be learned only on-the-job. One of the explanations for this could be that schools do not possess properly equipped workshops/facilities for relevant student practical training.

TABLE 7: Most important skills/knowledge for top four identified tasks

Task	Skills/knowledge	Skills for this task to be learned:	
		At school	On-the-job
Classifying meat for different purposes/ products	Knowledge of animal anatomy	33%	67%
	Ability to evaluate the quality of meat		
	Knowledge of the raw material requirements/ standards for different products		
	Ability to operate cutting machines/equipment		
	Knowledge of/compliance with food safety and hygiene standards		
Preparing ingredients and making sausages and similar products using chopping, mixing and shaping machines	Ability to evaluate the quality of meat	40%	60%
	Knowledge of the raw material requirements/ standards for different products		
	Ability to operate machines for grinding meat and preparing sausages		
	Knowledge of recipes		
	Ability to create new products		
	Knowledge of/compliance with food safety and hygiene standards		
Deboning, cutting and dressing meat for sale	Ability to evaluate the quality of meat	0	100%
	Knowledge of the type of equipment needed for different processes		
	Ability to operate cutting equipment		
	Knowledge of/compliance with food safety and hygiene standards		
Packing meat or meat products	Ability to operate packing and labelling equipment	50%	50%
	Knowledge of how products need to be packed (e.g. to ensure they are not damaged in the process or afterward)		
	Knowledge of how products need to be stored (e.g. appropriate temperature)		
	Knowledge of/compliance with food safety and hygiene standards		

Another interesting finding is that firms stated that knowledge of/compliance with food safety and hygiene standards are to be acquired on-the-job only. This is a very important skill that students should acquire in school, and continuously be updated by on-the-job training. A potential explanation for this may be because firms employ/demand graduates with a general education and often lack sector specific education. Thus, on-the-job training is the mechanism that employers can cheaply provide.

ii. Newly emerging skills

Skills for developing new products/product ideas, operating/introducing new technology/techniques and food processing technology were the top skills identified by firms as emerging future skills (Table 8). Selection of the first three indicates firms' plans engage in innovative practices in the future.

TABLE 8: Newly emerging skills

Newly emerging skills	Number of firms
Developing new products/product ideas	14
Operating/introducing new technology/technique	14
Food processing technology (processing, preservation, etc.)	11
Computer skills	1
Sales skills	1
<i>Total number of observations</i>	<i>41</i>

Employers that reported newly emerging skills were asked about how they intend to enhance the skills of their employees; 88% of firms stated training their employees as a means to enhance employee skills, 9% by recruiting new staff and only 2% through internal reorganization. An important finding shows that 63% of firms reported difficulties in finding courses or trainers for emerging skills while for 2% declared this was not a problem¹⁰. Further, among firms that reported emerging skills, 70% encounter difficulties in recruiting staff to perform the new skills. Without training courses, trainers and a skilled workforce for the emerging skills of the sector, on-the-job training remains the main mechanism for workforce development.

iii. Drivers of change

Ninety-one percent of firms reported introducing innovations in the last two years, predominantly by launching new products and services or improving existing ones (26% each). Firms whose innovative activities are in sales and marketing categories represent 21% of total firms surveyed, followed by 19% that focused on changes in work organization and 9% of those that have not engaged in any innovative activity. To benefit from these changes, workforce development of specific and general skills is a key prerequisite.

Survey data indicate that firms reporting changes and innovations differ slightly in terms of the impact of changes/innovations on butchers' tasks (Table 9).

¹⁰The remaining 12% reported that they do not know if this is a problem.

TABLE 9: Impact of changes/innovations on butchers' tasks

Impact of changes/innovations	Share
Processes (for producing goods or supplying services)	32%
Goods or services	26%
Sales and marketing methods	24%
Work organisation	18%
None	0%
<i>Total number of observations</i>	38

Surveyed firms were asked if they have changed/adapted their practices, products or services, in the last two years in response to environmental awareness or regulations. The vast majority of them (77%) reported to have responded to environmental awareness or regulations while 23% of them did not do so. In addition, firms that have reported positive response to environmental awareness or regulations declared that the adjustment process had an impact on butchers' tasks.

Eighty-one percent of firms reported that from all occupations employed by surveyed firms, butchers are currently the group most affected by changes in working tasks and skill requirements. Notably, when asked to name the occupational group that is undergoing the greatest changes, two-fifth of all firms reported sales/marketing (Table 10). This is an interesting finding considering that only one company mentioned sales as an emerging skill (Table 10).

TABLE 10: Occupations/tasks undergoing the greatest changes

Occupations/tasks	Share
Sales/marketing	40%
Butchers	31%
Technologist/processing	23%
Labs	3%
Management	3%
<i>Total number of observations</i>	35

iv. General skills

- *Reading, writing, numeracy and computer skills*

Although reading skills are expected to be increasingly more important in the future, half of firms stated that the education system is not adequately preparing employees for this skill (Table 11). Butchers should be able to do simple calculations and write simple text, fill in forms and prepare short reports. Although, firms are more satisfied with the quality of numerical and writing skills compared to reading skills, there is room for improvement in these areas as well (Table 11). Half of the firms stated that butchers do not need computer skills and around 40% require elementary or

moderate computer use. The latter group is quite satisfied with the skills imparted by education system.

TABLE 11: Level of necessary reading, writing, numeracy and computer skills

		Number	Share	Increasing future importance	Very well prepared and adequately prepared workers coming directly from school/ university
On the job reading skills required	No reading is required on this job	10	23%	67%	50%
	Reading simple instructions, guidelines, texts	16	37%		
	Reading occupation specific texts with some technical content	11	26%		
	Reading with understanding complex texts which are important for work	5	12%		
	Reading complex content from a wider context	1	2%		
On the job writing skills required	No writing is required on this job	12	28%	65%	65%
	Writing simple texts, filling in forms, self reporting on activities	17	40%		
	Writing texts which describe known occupation specific content	10	23%		
	Writing complex occupation specific texts	4	9%		
	Writing analyses, reports which assess the wider context of the business	0	0%		
Using and understanding numerical or statistical information	No need for this skill	6	14%	57%	57%
	Doing simple calculations (addition, division, multiplication)	26	60%		
	Calculation of averages, shares, percentages, etc.	9	21%		
	Knowing advanced calculus, statistical methods, etc.	2	5%		
	Developing models, performance indicators, complex calculations	0	0%		

Computer use	None	22	51%	57%	82%
	Elementary (e.g. data entry, sending and receiving e-mails, printing)	10	23%		
	Moderate (e.g. word processing or spread sheets)	8	19%		
	Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages)	1	2%		
	Advanced (e.g. software programming, managing computer networks)	2	5%		

- *Other general skills*

For employers, butchers should also possess problem-solving skills, creativity/innovation, manual dexterity, teamwork skills, independence (autonomy) and adaptation to new equipment or materials. These skills are expected to remain important in the future (Table 12). An important finding shows that firms think butchers should become skilled in giving instruction. This may be related to the finding that the majority of firms use on-the-job training as a key mechanism for workforce development. It might also be a result of their small size and limited resources to pay for off-the-job training. Though less important currently, firms foresee that basic foreign language skills, communication skills and budgeting resources will become more important in the future.

TABLE 12: Level of importance of other general skills

Skill	Level of importance		
	Very or Fairly important	Not important or Does not apply	Increasing future importance
Complex problem solving	100%	2%	81%
Communicating in a foreign language	49%	51%	65%
Manual dexterity	98%	2%	95%
Communication	60%	40%	89%
Team work	98%	2%	100%
Sales	84%	16%	94%
Creativity/innovation	98%	2%	93%
Adapting to new equipment or materials	95%	5%	98%
Teaching/instructing	88%	12%	90%
Environment protection	100%	0%	91%
Autonomy	98%	2%	82%
Planning resources	67%	33%	91%

Concerning foreign language ability, two-fifths of the surveyed firms believe that employees coming directly from school/university are adequately prepared while the same percentage of firms (27%) regard them as very well prepared or not well prepared and only 7% believe that they are not prepared at all.

- *Working conditions and required physical preparedness of employees*

For butchers and related meat preparers, 86% of firms report that work is predominantly on working premises; the other firms declare work occurs both on and off working premises.

Cold environments (or with changing temperatures) and artificial light are the prevailing described working conditions. Physical preparedness is important; the majority of firms reported that employees must have good hand-eye coordination, the physical ability to stand, walk, kneel or lie down and have considerable physical strength.

Recommendations

- MEST and MLSW should consider offering education and training programmes for the meat processing sector;
- Education and training programmes should ensure that employee skills (shown in Table 3) that employers expect students to learn in education programmes are incorporated in curricula;
- Since employers in Kosovo expect their employees to perform more tasks, these should be reflected in Kosovo education curricula. Alternatively, MEST and MLSW might identify areas which are not typical of the VET school programmes and design a training programme offered by MLSW and other providers; Education and training systems should equip students/trainees with general skills including skills in reading occupation specific texts with some technical content, writing texts with occupation specific content, basic numeracy skills, communication skills, language skills, teamwork skills creativity, and competences in allocating resources.
- Knowledge of/compliance with food safety and hygiene standards should be strongly embedded in any education and training curricula in the food processing and packaging sector.
- Career advice and educational counselling at early ages for all, but particularly for women, in related fields of study should be organised;
- The school offering professional studies for the meat-processing sector should establish connections with firms and adapt the current curricula to the firms' needs.

2.1.2 Dairy products: Dairy product makers

Twenty-five firms that reported dairy product makers as the dominant occupation employ on average nine employees.

More than half of all employees (57%) in the surveyed companies work as dairy product makers, from which 42% are women. About one third of them are younger than 30 years of age, 61% are between 30 to 49 years of age and only 8% are over 50 years of age.

As shown in Table 13, for nearly half of the interviewed employers, higher education is the most frequently required education level of employees followed by secondary vocational (16%) and primary education (16%), which may imply that those firms are engaged in low value-added production processes. For 12% of firms, education level of employees is not relevant at all, but on-the-job training is sufficient. This approach may have two consequences: first, the VET schools in Kosovo that provide study programmes relevant to dairy product makers are not serving and contributing to the sector, and second, dairy product making firms are spending their scarce resources to train employees.

Nearly 65% of dairy product makers review skills and training needs of their employees on a regular basis, 12% review these needs for some groups of employees and the remaining 24% do not undertake any assessments. Although the majority review training and skills needs, only two from all the surveyed firms reported to have employees that attained trainings (one on-the-job training and one external training during 2015).

TABLE 13: Level of education required by firms for this job

Level of education	Share
Primary school	16%
Secondary general	12%
Secondary vocational	16%
University	44%
Only on-the-job training (educational level not relevant)	12%
<i>Total number of observations</i>	25

Forty-four percent of the interviewed firms that have vacancies for the position of dairy product makers reported difficulties in finding adequately skilled employees. To compensate for unskilled new hires, on average, firms provide 5 months of initial on-the-job training.

Firms face difficulties finding adequately skilled workers, 40% of firms require employees to have low and no specified level of education and there is very little training in these firms. This low level of education and training might hinder the development of this sector for Kosovo.

i. Occupational-specific tasks and skills for dairy product makers

The surveyed firms were asked to report the most common tasks required of workers to achieve expected results. Table 14 provides a comparison of employer reported tasks to the ISCO-08 classifications for the dairy product makers. To some extent, dairy product makers in Kosovo are required to perform more tasks than described in the ISCO-08 classification. Surprisingly, 12% of firms require dairy product makers to also milk cows. Conversely, dairy product makers are not required to record amounts of ingredients used, test results and time cycles. This may also explain the low levels of employee numeracy and statistical skills required by firms. However, none of the firms stated that their employees are expected to *place and turn cheese blocks on shelves to cure cheese* (a task included under ISCO-08 occupational task description), though this may have been thought as a sub-task under other reported tasks.

TABLE 14: Tasks of dairy product makers based on employers' responses and ISCO-08 classification

Tasks	Share	ISCO-08
Separating cream from milk or other raw material classification	84%	√
Monitoring and testing product quality (and modification as needed)	64%	√
(Monitoring of) packing and labelling, and storage of products	48%	
Curdling milk or other processes in cheese production	44%	√
Boiling or pasteurizing milk	16%	√
Adding measured amounts of starter and other ingredients to milk	16%	√
Sanitizing equipment and/or packaging articles	16%	
Processing/producing final product	16%	
Milking cows	12%	
Salting cheese	4%	√
Recording amounts of ingredients used, test results, and time cycles (not reported by surveyed firms)		√
Placing and turning cheese blocks on shelves to cure cheese (not reported by surveyed firms)		√

Further, firms were asked to indicate the skills and knowledge that employees need to adequately perform the top four tasks. Knowledge of/compliance with food safety and hygiene standards followed by the ability to evaluate properties of products (e.g. how firm is the product) are the two most frequently reported skills required (Table 14).

Further, according to firms' responses, education and on-the-job training are almost equally important to equip employees with necessary skills/knowledge needed to perform the first three tasks. However, the majority of firms stated that skills/knowledge needed to accomplish the last task are to be learned primarily through on-the-job training.

TABLE 15: Most important skills/knowledge for top four selected tasks

Task	Knowledge/skills	Skills for this task to be learned:	
		At school	On-the-job
Separating cream from milk or other raw material classification	Knowledge of (biological and chemical properties) or content of milk/product	56%	44%
	Knowledge about the extension of the milk/product use		
	Knowledge of/compliance with food safety and hygiene standards		
Monitoring and testing product quality (and modification as needed)	Ability to define food, safety and hygiene standards	56%	44%
	Knowledge of/compliance with food safety and hygiene standards		
	Knowledge of standard requirements for product content/characteristics (e.g. fat content, pH, bacteriological test, acidity tests, etc.)		
	Ability to operate testing equipment and interpret the results of the analyses		
	Ability to evaluate properties of products (e.g. how firm is the product)		
	Ability to modify products as needed (e.g. reduce or increase fat content)		
(Monitoring of) packaging and labelling, and storage of products	Knowledge of how products need to be packaged (e.g. to ensure they are not damaged in the process or afterward)	50%	50%
	Knowledge of how products need to be stored (e.g. appropriate temperature)		
	Knowledge of/compliance with food safety and hygiene standards		
Curdling milk or other processes in cheese production	Ability to conduct the fermentation/acidification process	16%	84%
	Ability to evaluate properties of products (e.g. how firm is the product)		
	Knowledge of/compliance with food safety and hygiene standards		

ii. Newly emerging skills

Firms expect that skills for developing new products/product ideas and operating/introducing new technology and/or techniques will become very important for their future business development (Table 16). Some firms also expect that skills to introduce new product lines will become important for the future.

TABLE 16: Newly emerging skills

Newly emerging skills	Number of firms
Developing new products/product ideas	13
Operating/introducing new technology/techniques	7
Introducing new product lines	5
Computer skills	1
<i>Total number of observations</i>	26

Firms that reported emerging skills were asked about their activities to enhance employee skill sets. Above 80% of them stated that they will use training to prepare employees for emerging skills, 8% will do so through internal reorganization and the same share of firms would hire new staff. According to responses, 60% of firms declared to have encountered difficulties in recruiting staff to perform new skills. Moreover, training seems to be challenging since 60% of firms have experienced difficulties in finding courses or trainers for such skills.

iii. Drivers of change

Firms are found to be innovative; half of the surveyed firms launched new products or services or significantly improved the current products and services. Nearly one-fourth of firms (24%) enhanced their production/service provision processes, 12% changed/improved their sales and marketing methods and the remaining firms declared to have changed/modified the work of the organisation. When asked to identify which innovations had an impact on the tasks performed by dairy product makers, two-fifths of the surveyed firms indicated that innovations in the product/service provision processes were responsible for changing employee tasks (Table 17).

TABLE 17: Impact of changes/innovations on the tasks performed by dairy product makers

Impact of changes/innovations	Share
Processes (for producing goods or supplying services)	40%
Sales and marketing methods	28%
Goods or services	20%
Work organisation	12%
<i>Total number of observations</i>	25

Firms are also responsive to environmental regulations, 72% of firms declared to have adapted their working practices, products or services in the last two years.

Of those that reported to have adapted to environmental awareness and regulations, 94% stated that these adjustments impacted the dairy product makers' tasks. An almost equal share of firms (92%) stated that this occupational group is currently the most affected by changes in working tasks and skill requirements. Survey findings indicate that sales/marketing and technologist/processing tasks are the occupational groups undergoing the greatest changes (Table 18).

TABLE 18: Occupations/tasks undergoing the greatest changes

Occupations/tasks	Share
Sales/marketing	47%
Technologist/processing	41%
Agro-economist	6%
Labs	6%
Total number of observations	17

v. General skills

- *Reading, writing, numeracy and computer skills*

Table 19 shows about one-half of employers require dairy product makers to be able to read simple instructions, guidelines and texts while the remaining half require they be able to read occupation specific and complex text with technical content. Reading skills are expected to be increasingly more important in the future. Yet, one-third of employers stated that the education system is not adequately preparing graduates with such skills.

Writing simple texts, filling in forms, drafting short reports is the most often cited level of writing skills for dairy product makers. According to the majority of firms, writing skills will also be increasingly more important for the future but improvements in the education system are needed: one-fourth of firms stated that the education system is not adequately preparing graduates with necessary writing skills.

With regard to numeracy and statistical skills, half of firms require dairy product makers be able to make simple calculations and about 30% require more advanced skills (Table 19). Likewise, the majority of firms expect numeracy skills to be increasingly relevant for the future, 40% of firms are not satisfied with the skill level of graduates.

Nearly 40% of firms stated that employees do not need to be skilled in computer use, 28% stated that moderate competency is expected, one-fifth require elementary usage and fewer demand that dairy product makers possess advanced computer skills. The need for computer skills in the future is expected to increase. In this capacity, employers are content with graduates' computer skills.

TABLE 19: Level of necessary reading, writing, numeracy and computer skills

		Number	Share	Increasing future importance	Very well prepared and adequately prepared workers coming directly from school/ university
Reading skills required of workers	No reading is required on this job	0	0%	76%	68%
	Reading simple instructions, guidelines, texts	12	48%		
	Reading occupation specific texts with some technical content	6	24%		
	Reading complex texts important for work with understanding	7	28%		
	Reading complex content from a wider context	0	0%		
Writing skills required of workers	No writing is required on this job	0	0%	80%	75%
	Writing simple texts, filling in forms, drafting short reports	12	48%		
	Writing texts which describe known occupation specific content	5	20%		
	Writing complex occupation specific texts	8	32%		
	Writing analyses, reports which assess the wider context of the business	0	0%		
Using and understanding numerical or statistical information	No need for this skill	1	4%	83%	60%
	Doing simple calculations (addition, division, multiplication)	13	52%		
	Calculation of averages, shares, percentages, etc.	7	28%		
	Knowing advanced calculus, statistical methods, etc.	4	16%		
	Developing models, performance indicators, complex calculations	0	0%		

Computer use	None	9	36%	75%	92%
	Elementary (e.g. data entry, sending and receiving e-mails, printing)	5	20%		
	Moderate (e.g. word processing or spread sheets)	7	28%		
	Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages)	0	0%		
	Advanced (e.g. software programming, managing computer networks)	4	16%		

- *Other general skills*

Besides occupational specific skills, for a vast majority of firms, dairy product makers should be creative/innovative, able to teach and instruct others, able to ensure environment protection, solve complex problems, have manual dexterity skills, possess team work skills, perform their tasks independently (i.e. autonomy) and be adaptable to new equipment or materials. Firms expect relevant future skills to include communication, selling and responsiveness to environmental regulations (Table 20). A large proportion of firms expect that allocating resources and communication in a foreign language will be increasingly important in the future.

TABLE 20: Level of importance of other general skills

Skill	Level of importance		
	Very or Fairly important	Not important or Does not apply	Increasing future importance
Complex problem solving	96%	4%	84%
Communicating in a foreign language	52%	48%	92%
Manual dexterity	96%	4%	88%
Communication	60%	40%	100%
Team work	96%	4%	96%
Sales	76%	24%	100%
Creativity/innovation	100%	0%	96%
Adapting to new equipment or materials	96%	4%	92%
Teaching/instructing	100%	0%	88%
Environment protection	100%	0%	100%
Autonomy	92%	8%	87%
Planning resources	72%	28%	95%

Half of the surveyed firms reported that employees coming directly from school/university are very well prepared to communicate in foreign languages, one-third of them (33%) regard graduates as adequately prepared and an equal share of firms consider them either not well prepared or not prepared at all (8% each).

- *Working conditions and required physical preparedness of employees*

About 90% of surveyed firms reported that dairy product makers work mostly on work premises. Environments with changing temperatures (or cold) with artificial light are the dominant working conditions.

Required employee physical preparedness demands that employees be able to stand, walk, kneel or lie down and have good hand-eye coordination. The ability to sit for long periods of time and physical strength are considered less essential.

Recommendations

- Employers should be informed about the availability of VET programmes and the level of knowledge and skills VET graduates from relevant study programmes possess. This would contribute to change employers' demand from low-educated and tertiary education to vocational education as the adequate level of education. Assuming employers would be interested in employing VET graduates, cooperation with VET schools could be enhanced, which may also contribute to increased internship opportunities and alignment of VET curricula with labour market demand;
- Occupational standards should be developed for this occupation;
- With the existing structure of firms in Kosovo (not very specialised and predominantly micro and small in size), the design of education and training curricula should be based on Kosovo specific findings (shown in Table 13) rather than internationally defined standards;
- To adequately equip students with occupation specific skills, schools and MEST should ensure that all students undergo a qualitative internship experience in the workplace;
- To facilitate that dairy product making firms reap the benefits from new technology developments, VET system should ensure that curricula include modules that prepare students to develop new products and the ability to apply new techniques.
- Acknowledging the limited budget allocated to VET schools and the subsequent impediments to schools to become fully equipped with the latest technologies, placing students in firms that use modern technologies is very important. Establishing training centres within companies would be a good model to ensure that students become skilled in using the latest technologies. Another possibility could be for VET school students to partake in a practicum at Centres of Competence or VTCs.
- Students and trainees should be educated about the necessity to adapt to environmental awareness and regulations, which have more impact on businesses and consumer taste and behaviour;
- With regard to general skills, dairy product makers should be competent in reading occupation specific and complex text with technical content, be able to write simple texts, filling in forms, drafting short reports and be prepared to perform moderate calculations. The education system should work to improve dairy product makers' reading, writing and numeracy skills. Most of these skills are learned in primary school, where primary schools have not adequately equipped

students with these general skills, then VET providers should ensure that these skills are attained by graduates;

- Other general skills considered to be important for dairy product makers include: creativity/innovation; complex problem solving; communication skills; selling skills; the ability to adapt to environmental awareness and regulations; team working and adaptation to new equipment and materials;
- Finally, there seems to be a need to enrich the trainings offered by having specialized trainers/experts for dairy production to meet the local demands.

2.1.3 Fruit and vegetable processing: Fruit, vegetable and related preservers

Twenty firms that declared fruit, vegetable and related preservers as the predominant occupation were interviewed. The average number of employees of these firms is 21.

Fruit, vegetable and related preservers represent the majority of employees (58%) in the surveyed firms. Women represent 65% of total employees. The job is attractive for youth (under the age of 30) who comprise almost 40% of the total workforce, 55% are middle aged (30 to 49 years) and the remaining 8% are 50 years of age or more.

Data in Table 21 show that two-thirds of the surveyed firms consider formal education to be essential to perform this job, whereas the other firms think only on-the-job training is required.

Three-fifths of the surveyed firms claimed to regularly assess the skills and training needs of their employees, 15% review skills and training needs only for selected groups of employees and the remaining 25% do not conduct such reviews at all.

TABLE 21: Level of education required by firms for this job

Level of education	Share
Primary school	20%
Secondary general	5%
Secondary vocational	20%
University	20%
Only on-the-job training (educational level not relevant)	35%
<i>Total number of observations</i>	20

Only 10% of the firms reporting vacancies stated having difficulties finding appropriately skilled employees. To prepare new employees, employers provide on average three months of initial training.

i. Occupational-specific tasks and skills for fruit, vegetable and related preservers

According to the firms surveyed, the most frequent tasks employees are required to complete are: transferring preserved foods to sterile jars, bottles or other containers, preparing fruit or vegetables (e.g. washing, peeling, removing stems, cutting, etc.), cooking or drying fruit, vegetables and related foods, and harvesting fruit or vegetables (Table 22).

Table 22 provides a comparison of tasks reported by employers and those mentioned by the ISCO-08 classification for the fruit, vegetable and related preservers. Fruit, vegetable and related preservers working at the interviewed firms complete a wide range of tasks mostly of a general nature and less specialised than those defined by ISCO-08. For example, a fruit, vegetable and related preserver is expected to plant and harvest fruits or vegetables but is not required to cook, salt or dry fruits, vegetables and related foods or to extract juices from various fruits. This may be due to the specialisation of processes used in firms within this subsector in Kosovo.

TABLE 22: Tasks of a fruit, vegetable and related preserver based on employers' responses and ISCO-08 classification

Tasks	Share	ISCO-08
Transferring preserved foods to sterile jars, bottles or other containers	65%	√
Preparing fruit or vegetables (e.g. washing, peeling, removing stems, cutting, etc.)	60%	
Cooking or drying fruit, vegetables and related foods	55%	√
Harvesting fruit or vegetables ¹¹	55%	
Classifying fruits or vegetables for different purposes	50%	
Mixing and adding ingredients to assist preservation and enhance texture, appearance and flavour	50%	√
Labelling packaged products	45%	
Sterilising jars or other packaging articles	30%	
Planting fruit or vegetables	20%	
Extracting juices from various fruits		√
Extracting oils from oil-bearing seeds, nuts or fruits		√
Cooking, salting or drying fruit, vegetables and related foods		√

Firms were also asked to specify the skills and knowledge that fruit, vegetable and related preservers need to adequately perform the top four selected tasks. As Table 23 shows, knowledge of/compliance with food safety and hygiene standards is the most required skill/knowledge for the three reported tasks. Half of employers responded that skills for classifying fruits or vegetables for different purposes should be taught at school and the other half reported that those skills are to be learned on-the-job. For other skills (shown in Table 23) firms think they should be learned through on-the-job trainings. For employers, knowledge of/compliance with food safety and hygiene standards is a highly demanded skill, which may indicate that this is a weak area of employees and/or that this aspect is very important for the subsector. Firms stated that food safety skills are the only skills needed to transfer preserved foods to sterile jars and bottles and for preparing fruit or vegetables (e.g. washing, peeling, removing stems, cutting, etc.). The possible explanation for this finding may be that firms are not aware that VET schools do offer education for this programme hence, have relied on preparing the workforce within the companies.

¹¹ Note that planting and harvesting are not processing activities however it seems to be required by some companies.

TABLE 23: Most important skills/knowledge for top four selected tasks

Task	Knowledge/skills	Skills for this task to be learned:	
		At school	On-the-job
Transferring preserved foods to sterile jars, bottles or other containers	Knowledge of/compliance with food safety and hygiene standards	0%	100%
Preparing fruit or vegetables (e.g. washing, peeling, removing stems, cutting, etc.)	Knowledge of/compliance with food safety and hygiene standards	0%	100%
Cooking or drying fruit, vegetables and related foods	Ability to evaluate the proper level of cooking/drying for products	0%	100%
Harvesting fruit or vegetables	Ability to select the proper fruit/vegetable for processing	0%	100%
	Ability to use equipment		
Classifying fruits or vegetables for different purposes	Ability to select the proper fruit/vegetable for processing based on quality, size, colour, etc.	50%	50%
Mixing and adding ingredients to assist preservation and enhance texture, appearance and flavour	Knowledge of the preservation process and product recipes	0%	100%
	Knowledge of/compliance with food safety and hygiene standards		

ii. Newly emerging skills

The surveyed firms were also asked to name the skills they believe will be important for this job in the future. Besides the innovative skills such as development of new products/product ideas and operation/introduction of new technology/techniques, the interviewed firms stated that food processing technology skills and management skills will also become important (Table 24).

TABLE 24: Newly emerging skills

Newly emerging skills	Number of firms
Developing new products/product ideas	8
Food processing technology, principles, procedures, etc.	5
Operating/introducing new technology/technique	4
Management and oversight of the production process	2
<i>Total number of observations</i>	19

When firms were asked how they intend to promote emerging skills, the majority of them (85%) cited employee training and 15% intend to promote emerging skills by recruiting new staff. This finding may suggest that firms do not expect education and training systems to adequately prepare the workforce for their business needs. On-the-job training remains the sole mechanism training

since 85% of firms have had difficulties finding courses or trainers for emerging skills and 75% of firms declared to have difficulties in recruiting staff to perform new skills.

iii. Drivers of change

All the interviewed firms declared to have engaged in innovative activities during the last two years. Innovations were in new or considerably improved products and services and advancing product/service provision processes (30% each). The remaining firms stated to have changed/improved their sales and marketing methods and the work of the organisation (25% and 15%, respectively).

Additionally, the surveyed firms were requested to indicate the changes and innovations that had an impact on the tasks to be performed by the fruit, vegetable and related preservers. As Table 25 shows, almost two-thirds of firms indicated that innovations in goods and services and production/service provision processes had the biggest impact.

TABLE 25: Impact of changes/innovations on the tasks performed by fruit, vegetable and related preservers

Impact of changes/innovations	Share
Goods or services	35%
Processes (for producing goods or supplying services)	30%
Work organisation	25%
Sales and marketing methods	10%
<i>Total number of observations</i>	25

Moreover, two-fifths of the surveyed firms reported to have responded to environmental awareness or regulations by adapting their working practices, products or services in the last two years. These firms also stated that these changes impacted the tasks performed by fruit, vegetable and related preservers.

Firms stated that the occupational group of fruit, vegetable and related preserver is one of the most affected by changes in task and skill requirements among all occupations employed by their firms.

Finally, the occupational group of technician was reported as the occupational group undergoing greatest changes (Table 26).

TABLE 26: Occupations/tasks undergoing the greatest changes

Occupations/tasks	Share
Technician	43%
Vegetable preservers	21%
Sales/marketing	14%
Fruit preservers	7%
Vegetable planter	7%
Labs	7%
<i>Total number of observations</i>	14

iv. General skills

- *Reading, writing, numeracy and computer skills*

The large majority of employers reported that computer skills are not relevant for this occupation. More than three-fourths of employers claimed that fruit, vegetable and related preservers need modest reading, writing and numeracy skills (Table 27). More specifically, according to firms, fruit, vegetable and related preservers should be able to read simple instructions, guidelines, texts, write simple texts, fill in forms, draft short reports and be able to do simple calculations (addition, division, multiplication). A large proportion of the firms interviewed envisage almost all these skills to be increasingly more important. In general, with the exception of numeracy skills, firms are quite satisfied the level of preparedness and knowledge taught in schools, especially related to computer skills.

TABLE 27: Level of necessary reading, writing, numeracy and computer skills

		Number	Share	Increasing future importance	Very well prepared and adequately prepared workers coming directly from school/university
Reading skills required from workers	No reading is required	1	5%	53%	70%
	Reading simple instructions, guidelines, texts	16	80%		
	Reading occupation specific texts with some technical content	0	0%		
	Reading with understanding complex texts which are important for work	3	15%		
	Reading complex content from a wider context	0	0%		
Writing skills required from workers	No writing is required	1	5%	42%	75%
	Writing simple texts, filling in forms, drafting short reports	16	80%		
	Writing texts which describe known occupation specific content	0	0%		
	Writing complex occupation specific texts	3	15%		
	Writing analyses, reports which assess the wider context of the business	0	0%		
Using and understanding numerical or statistical information	No need for this skill	1	5%	58%	50%
	Doing simple calculations (addition, division, multiplication)	15	75%		
	Calculation of averages, shares, percentages, etc.	2	10%		
	Knowing advanced calculus, statistical methods, etc.	2	10%		
	Developing models, indicators of performance, complex calculations	0	0%		

Computer use	None	17	85%	100%	100%
	Elementary (e.g. data entry, sending and receiving e-mails, printing)	0	0%		
	Moderate (e.g. word processing or spread sheets)	0	0%		
	Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages)	0	0%		
	Advanced (e.g. software programming, managing computer networks)	3	15%		

- *Other general skills*

According to the surveyed employers, there is a wide range of other general skills that fruit, vegetable and related preserves should have. Currently the most in-demand skills are: teamwork skills, manual dexterity, creativity/innovation and environment protection skills, teaching and instructing and autonomy (Table 28). A vast majority of firms stated that communication skills, teamwork skills, allocating resources, environmental protection, creativity/innovation and sales skills will gain more importance in the future (Table 28).

Lastly, the ability to communicate in foreign languages was considered irrelevant for fruit, vegetable and related preservers.

TABLE 28: Level of importance of other general skills

Skill	Level of importance		
	Very or Fairly important	Not important or Does not apply	Increasing future importance
Solving complex problems	90%	10%	53%
Communicating in a foreign language	45%	55%	40%
Manual dexterity	100%	0%	95%
Communication	65%	35%	100%
Team work	100%	0%	100%
Sales	85%	15%	94%
Creativity/innovation	95%	5%	95%
Adapting to new equipment or materials	75%	25%	87%
Teaching/instructing	95%	5%	79%
Environment protection	100%	0%	95%
Autonomy	95%	5%	63%
Planning resources	85%	15%	94%

- *Working conditions and required physical preparedness of employees*

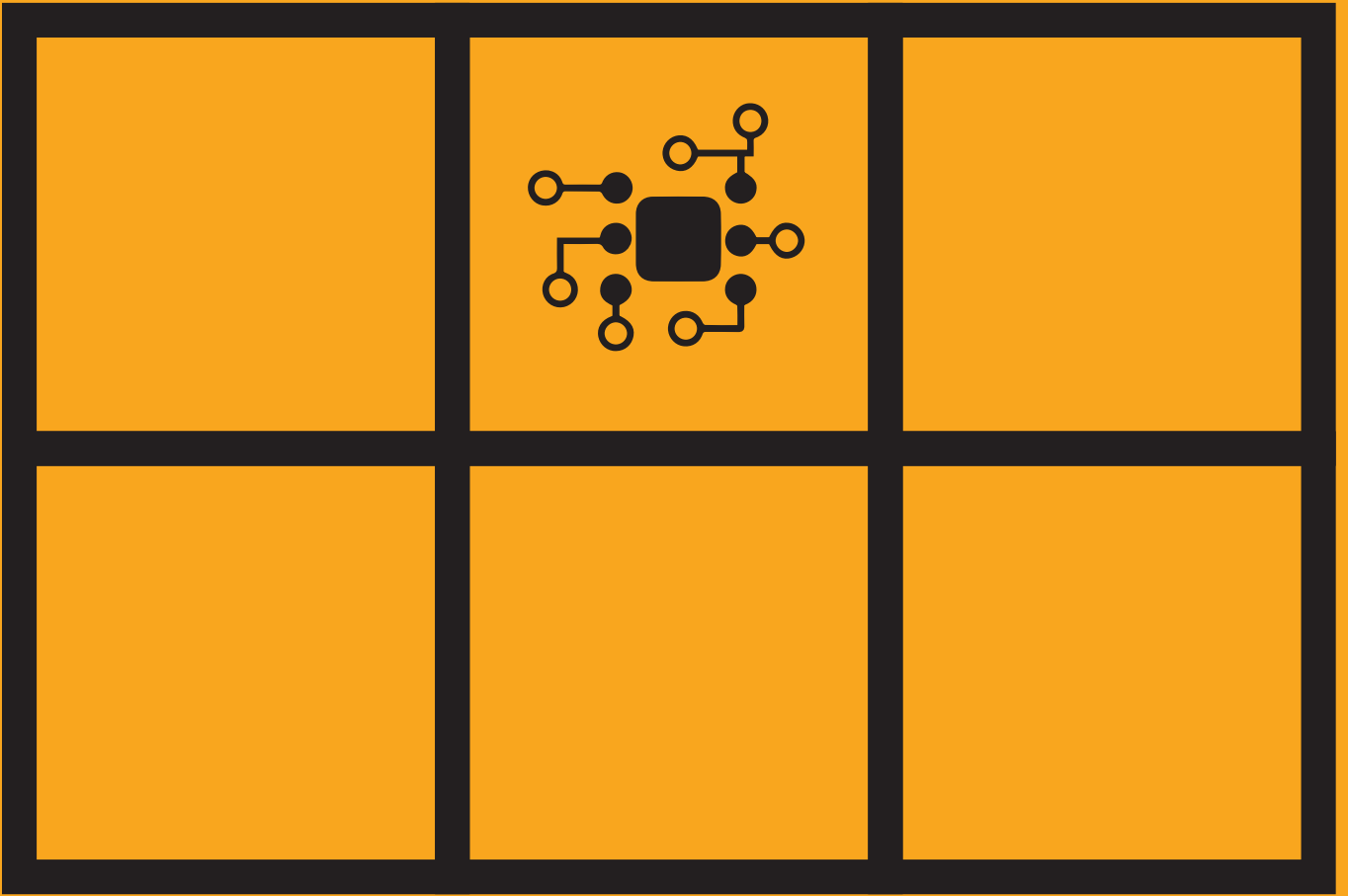
Fruit, vegetable and related preservers mostly work on and off premises (declared by 65% of firms). For almost one-third of firms, work occurs indoors. Employees usually work under changing temperatures (or cold) with artificial light.

Concerning physical preparedness, as reported by the majority of firms, employees must stand, walk, kneel or lie down and have good hand and eye coordination. The ability to sit for long durations of time and physical strength are deemed less essential.

Recommendations

- When designing curricula, responses from this survey should be considered alongside relevant curricula implemented in other countries. To determine relevant curricula to include, employers in Kosovo should be consulted. Once a clear occupational programme of fruit, vegetable and related preservers is defined, education and training curricula should ensure that basic reading, writing and numeracy skills are transferred to the workers of this occupational group. Educational systems should enhance numeracy skills since some employers seek employees with advanced calculus and statistical methods skills;
- Presentation of curricula and proper information of capacities of VET graduates related to fruit, vegetable and related preservers should be provided to firms in this sub-sector;
- Other general skills were also reported to be of relevance for fruit, vegetable and related preservers, which include: teamwork skills, creativity/innovation and environment protection skills, teaching and instructing and autonomy, communication skills, planning resources, environment protection, creativity/innovation and sales skills;
- Any education or training curricula should include training for compliance with food safety and hygiene standards;
- It would be very beneficial to closely analyse processes and added value in this subsector, which was not in the scope of this study;

IT — BUSINESS PROCESS OUTSOURCING AND CUSTOM



CUSTOMER SUPPORT CENTRES (BPO AND CSC)

3

IT is an important sector for Kosovo, especially for youth that represent 52%¹² of the total population. This sector's contribution to GDP during the past six years ranged between 8% and 11%¹³ and the three major market companies that dominate the sector are Post and Telecommunications of Kosovo (PTK), the Slovenian-based IPKO, a subsidiary of Telekom Slovenia, and Kujtesa, a local business offering Internet and Digital Media Services¹⁴.

According to TAK records, the IT-BPO and CSC sector was characterized by a slowly expanding trend over the last three years. As shown in Table 29, the sector accounted for 1.46% of total active businesses and 1.60% of employees in 2015.

Micro firms dominate this sector and products and services are mainly sold within Kosovo. The most common products/services provided by these companies are related to telecommunications, hardware consultancy, software consultancy and supply and other computer related activities.

TABLE 29: Active businesses and employment of IT – BPO and CSC firms (2013-2015)

NACE Rev.2 sector	Active businesses/no. of employees	2013	2014	2015
61, 62, 63 Telecommunications; computer programming, consultants and related activities and information service activities	No. of active businesses	853	1,000	1,154
	<i>Participation in the total no. of active businesses</i>	1.40%	1.44%	1.46%
	No. of employees	2,934	3,414	4,016
	<i>Participation by the total no. of employees</i>	1.25%	1.42%	1.60%

Source: TAK, 2016

Although women have a higher level of education in this sector, they are underrepresented. Unique from other sectors, IT firms think that employees possess satisfactory professional skills but lack more general skills such as sales skills.

3.1. IT-BPO survey results

Basic firm data

Apart from PTK, the 70 interviewed firms are privately owned, half of which are micro, 39% are small, and medium and large firms make up a similar share of 6% each. The average number of workers employed by the surveyed firms is 67¹⁵. Firms sell their services mostly in Kosovo; 14% of firms' export services to European Union countries.

The following section provides information on the most frequent occupations reported by the firms operating in this sector.

¹² Proportion of the population from 0-27 years based on the Census conducted in 2011, KAS

¹³ Kosovo Electronic Communication Sector Strategy Digital Agenda 2013-2020.

¹⁴ Unless otherwise specified, information presented in the general overview is based mainly on Sector profile of ICT Business Process Outsourcing and Customer Support Centres Sector, MTI, 2014.

¹⁵ Excluding PTK, the average number is 30.

3.1.1 Computer network professionals

The 22 firms that reported computer network professionals as the prevailing occupation have been interviewed. The total number of employed persons is 496 from which 11% are women. The average number of employees per firm is 22.

Computer network professionals represent 18% of the total employed individuals in the surveyed firms. Around two-thirds of computer network professionals are younger than 30 years of age and the remaining one-third are between 30 to 49 years of age. Almost all computer network professionals are men; only 2% are women. On average, interviewed firms employ four computer network professionals.

University education is reported to be the most required level of education for half of IT-BPO firms, 41% stated that they require secondary vocational education and for the remaining 9%, only on-the-job training is considered necessary (Table 30). Many schools provide ICT courses (listed in Annex 2), 6 out of 9 VTCs provided trainings in the area of IC and for one of the training courses the occupational standards have been validated by the NQA.

The vast majority of firms (91%) reported regularly assessing the skills and training needs of their employees' whereas half of them reported that their employees have participated in trainings in 2015, out of which almost 60% participated in on-the-job trainings.

TABLE 30: Level of education required by firms for this job

Level of education	Share
Primary school	0%
Secondary general	0%
Secondary vocational	41%
University	50%
Only on-the-job training (educational level not relevant)	9%
<i>Total number of observations</i>	22

Among firms with vacancies for computer network professionals, only 14% reported to have difficulties finding skilled employees. Although recruiting skilled workers was not reported to be a problem, surveyed firms provide five months of on-the-job training for new hires.

i. Occupational-specific tasks and skills for computer network professionals

Table 31 shows the main tasks that computer network professionals are expected to perform according to the interviewed firms.

Table 31 also provides a comparison of tasks as reported by employers and those listed under the ISCO-08 classification for computer network professionals. Employers require that a computer network specialist working in Kosovo be able to perform very similar tasks as those described by

ISCO-08 classifications. The only task not required from computer network professionals in Kosovo is 'preparing and maintaining procedures and documentation for network inventory, and recording diagnosis and resolution of network faults, enhancements and modifications to networks, and maintenance instructions'.

It is noteworthy that Kosovo employers expect tasks to be performed by graduates of higher education institutes and not those coming from the VET system. Currently there are a large number of VET schools providing study programmes relevant for the IT-BPO sector but they are of a more general nature, which may explain the orientation of employers for higher education graduates. Currently, the following programmes are offered: 28 VET schools offer study programmes on 'Informatics', one on 'IT technician', one on 'IT services', 14 in 'telecommunications' and three in 'Post Telecom'. IT training courses are offered by six out of eight VTCs of the MLSW (in Ferizaj/Uroševac; Gjilan/Gnjilane; Gjakovë/Djakovica; Mitrovicë/Mitrovica; Pejë/Peč and Prishtinë/Priština)

TABLE 31: Gender Mainstreaming in European Integration

Tasks	Share	ISCO-08
Analysing, developing, interpreting and evaluating complex system design and architecture specifications, data models and diagrams in the development, configuration and integration of computer systems	44%	√
Researching, analysing, evaluating, monitoring network infrastructure to ensure networks are configured for optimal performance	17%	√
Providing specialist skills in supporting and troubleshooting network problems and emergencies	14%	√
Monitoring network traffic, and activity, capacity and usage to ensure continued integrity and optimal network performance	11%	√
Installing, configuring, testing, maintaining and administering new and upgraded networks, software database applications, servers and workstations	9%	√
Communicating with customers	6%	
Assessing and recommending improvements to network operations and integrated hardware, software, communications and operating systems	1%	√
Coordinating the work of other professionals	1%	
Preparing and maintaining procedures and documentation for network inventory, recording diagnosis and resolution of network faults, enhancements and modifications to networks, and maintenance instructions		√

Knowledge of computer systems and network specifications were the most reported skills necessary for computer network professionals to successfully perform the top three reported tasks, (Table 32).

In response to the question of where required skills for the top tasks are to be learned, surveyed firms replied that the first two tasks ought to be learned mainly through education and for the last task, a slightly greater share of firms stated that the necessary skills should be acquired through on-the-job training (Table 32).

TABLE 32: Most important skills/knowledge for the top three selected tasks

Task	Skills	Skills for this task to be learned:	
		At school	On-the-job
Analysing, developing, interpreting and evaluating complex system design and architecture specifications, data models and diagrams in the development, configuration and integration of computer systems	Knowledge of programming (languages)	79%	21%
	Knowledge of computer systems and network specifications		
	Ability to analyse client needs and propose and develop networks accordingly		
	Ability to conduct data modelling and design databases (ensuring data integrity)		
Researching, analysing, evaluating, monitoring network infrastructure to ensure networks are configured to operate at optimal performance	Ensure that applications are up to date and available 24/7	87%	13%
	Ensure data availability at all times by using non-disruptive administration tactics		
	Knowledge of computer systems and network specifications		
Providing specialist skills in supporting and troubleshooting network problems and emergencies	General IT and computer network skills	44%	56%

ii. Newly emerging skills

Around 75% of interviewed firms reported that computer network professionals' on going skills/technology training will be very important in the future (Table 33). According to a few firms, computer systems configuration and programming skills will become important in the future.

TABLE 33: Newly emerging skills

Newly emerging skills	Number of firms
Continuous skills/technology upgrade*	8
Configuration of computer systems	2
Programming skills	1
<i>Total number of observations</i>	<i>11</i>

* 2 of the firms mentioned transition to FTTH system specifically

Firms that reported emerging skills were asked about their approach to ensuring a skilled workforce for performing these skills. Eighty-six percent of firms claimed to achieve this by training, 9% through internal reorganisation and 5% by recruiting new staff. Almost 60% of firms stated difficulties finding courses or trainers for the emerging skills and nearly 80% of firms reporting emerging skills, encountered difficulties in recruiting staff capable of performing these skills.

iii. Drivers of change

All the interviewed firms claimed to have introduced innovative activities in the last two years, out of which, around one-third reported implementing new or significantly improved sales and marketing processes. Another one-third of firms referenced updating their product/service provision processes. Twenty-three percent stated innovations in work organisation and the remaining 9% launched new or improved products and services.

Almost half of firms reported that the innovations introduced in sales and marketing processes were the drivers of changing the tasks performed by computer network specialists (Table 34).

TABLE 34: Impact of changes/innovations on the tasks performed by computer network professionals

Impact of changes/innovations	Share
Work organisation	45%
Goods or services	32%
Sales and marketing methods	18%
Processes (for producing goods or supplying services)	5%
None	0%
<i>Total number of observations</i>	<i>22</i>

Forty-five percent of firms reported changing/adapting their practices, products or services in response to environmental awareness or regulations in the last two years and all of them declared that these adjustments affected the tasks performed by computer network specialists.

Thirty-two percent of surveyed firms stated that computer network specialist is the most affected by occupation/task and skill requirements changes, 23% of firms stated this was not the case and the

remaining 45% didn't know. Further, when asked to name the occupational group that is undergoing the greatest change, 30% of firms declared that all occupational groups within the sector are undergoing changes (Table 35).

TABLE 35: Occupations/tasks undergoing the greatest changes

Occupations/tasks	Share
All	30%
Manager	20%
Field team	10%
IT	10%
Network maintenance	10%
Technical support	10%
Sales person	10%
<i>Total number of observations</i>	<i>10</i>

iv. General skills

- *Reading, writing, numeracy and computer skills*

The interviewed firms were asked to determine the level of reading, writing, numeracy, and computer skills required for the role of computer network specialists. Data presented in Table 36 show that the majority of employers stated that computer network specialists are expected to have complex reading and writing skills (i.e. 59% declared that skills in reading with understanding complex texts is important for the work, 27% writing complex occupation specific texts and another 27% writing analyses and reports that assess the wider context of the business). Further, while firms expect that reading and writing skills will be increasingly more important in the future (59% and 43%, respectively), around 70% of them stated satisfaction with the level of workers' skills directly out of school/university.

Regarding numeracy and statistical skills, more than half of firms require that computer network specialists be able to perform simple calculations and around 30% require complex numeracy skills such as knowledge of advanced calculus, statistical methods, etc., and developing models, performance indicators and complex calculations. About 30% of the surveyed firms require skills in calculating averages, shares, percentages, etc. Slightly more than one-third of firms expect numeracy skills to become more important in the future (36%). Similar to reading and writing skills, the majority of firms (63%) indicated that the education system is adequately preparing employees for these skills.

As expected, the majority of firms (77%) stated that employees in this position need advanced computer skills such as software programming and managing computer networks. A similarly high share of firms (68%) expect that computer skills will be increasingly important in the future, and 80% of them think that workers coming directly from school/university are adequately prepared with these skills.

Table 36: Level of necessary reading, writing, numeracy and computer skills

		Number	Share	Increasing future importance	Very well prepared and adequately prepared workers coming directly from school/ university
Reading skills required of workers	No reading is required on this job	0	0%	59%	69%
	Reading simple instructions, guidelines, texts	1	5%		
	Reading occupation specific texts with some technical content	6	27%		
	Reading with understanding complex texts which are important for work	13	59%		
	Reading complex content from a wider context	2	9%		
Writing skills required of workers	No writing is required on this job	1	5%	43%	67%
	Writing simple texts, filling in forms, drafting short self-reports	1	5%		
	Writing texts which describe known occupation specific content	8	36%		
	Writing complex occupation specific texts	6	27%		
	Writing analyses, reports which assess the wider context of the business	6	27%		
Using and understanding numerical or statistical information	No need for this skill	0	41%	36%	63%
	Doing simple calculations (addition, division, multiplication)	9	27%		
	Calculation of averages, shares, percentages, etc.	6	9%		
	Knowing advanced calculus, statistical methods, etc.	2	23%		
	Developing models, performance indicators, complex calculations	5	41%		

Computer use	None	0	0%	68%	80%
	Elementary (e.g. data entry, sending and receiving e-mails, printing)	0	0%		
	Moderate (e.g. word processing or spread sheets)	2	9%		
	Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages)	3	14%		
	Advanced (e.g. software programming, managing computer networks)	17	77%		

- *Other general skills*

Table 37 presents numerous other employer cited general skills that computer network specialists should possess. Except for skills in allocating resources (considered important by around two-third of firms), the majority of firms regard all other skills as relevant. All firms reported complex problem solving skills, foreign language, communication, teamwork and innovative skills (creativity/innovation and adapting to new equipment or materials) to be important.

Firms had the same opinion concerning future importance of skills (Table 37). Skills in communicating in a foreign language are expected to have the same importance in the future. For other types of skills, the majority of firms declared that their importance will increase in the future.

TABLE 37: Level of importance of other general skills

Skill	Level of importance		
	Very or fairly important	Not important or does not apply	Increasing future importance
Solving complex problems	100%	0%	86%
Communicating in a foreign language	100%	0%	50%
Manual dexterity	77%	23%	74%
Communication	100%	0%	82%
Team work	100%	0%	95%
Sales	82%	18%	74%
Creativity/innovation	100%	0%	86%
Adapting to new equipment or materials	100%	0%	95%
Teaching/instructing	91%	9%	71%
Environment protection	77%	23%	88%
Autonomy	95%	5%	83%
Planning resources	64%	36%	88%

With regards to communicating in foreign languages, the vast majority of firms (82%) consider that employees coming directly from school/university are well or adequately prepared.

- *Working conditions and required physical preparedness of employees*

The majority of surveyed firms (73%) reported that computer network specialists usually work on premises, while the rest declared employees work both on and off premises. Environments with changing temperatures and artificial light are the usual working conditions of this job. Regarding required physical preparedness, 95% of firms reported that employees must be able to sit for long hours.

Recommendations

- Currently VET study programmes and training programmes are very general; these need to be more specialised to meet the demand of the labour market;
- Promote the computer network professions for girls;
- Findings reveal that firms do not seek VET graduates from the labour market. This may either reflect the lack of information among employers about what the VET offers or it may imply that firms are not satisfied with the quality of VET schools and VET student skill sets. Nonetheless, VET institutions should work closely with firms in the sector in order to harmonise their curricula to the labour market demand;
- If computer network professional schools are to prepare students for the occupation, then curricula should ensure that graduates gain skills listed in this report,. However, since services of computer

network professionals can easily be outsourced, curricula should at least ensure that tasks defined by the ISCO-08 classification can be performed by computer network professionals in Kosovo;

- Ensure that teachers can adequately and fully implement the curricula;
- General skills are important for this occupation. Specifically, computer network professionals should be able to read and understand complex texts that are important for work; write complex occupation specific texts and be able to perform a moderate level of numerical and statistical operations;
- For all firms in the sector, the following general skills also should to be included in professional curricula: complex problem-solving; foreign language; communication; teamwork skills; creativity/innovation and ability to adapt to new equipment and materials.;
- VET schools and VTCs should clearly determine for which occupations they are educating/training students and trainees respectively by highlighting the sector where graduates/trainees can be employed;

3.1.2 Software developers

Seventeen firms reported software developers as the main occupation. These companies employed a total of 2,975 workers, out of which 38% are women. The average number of employees per firm is 175, which was reduced to 23 when PTK employees are excluded.

Software developers comprise 22% of the total surveyed firms' workforce, with 26% participation by women. The majority of workers in this occupation are under 30 years of age (66%), slightly more than one-fourth are 30 to 49 years of age and the remaining 8% are 50 years of age or over. The average number of software developers employed by the surveyed firms is 38.

Table 38 shows that for 94% of firms, university education is the required level of education, while for the other 6%, education is not important.

When asked about the skill requirements of this occupation, almost two-thirds of employers reported to regularly assess the skills and training needs of their employees and the others declared performing this assessment for selected groups of employees. The majority of firms (82%) stated that their employees participated in trainings during 2015, from which 56% were on-the-job trainings, 43% were external trainings and the remaining 14%¹⁶ were other internal trainings.

TABLE 38: Level of education required by firms for this job

Level of education	Share
Primary school	0%
Secondary general	0%
Secondary vocational	0%
University	94%
Only on-the-job training (educational level not relevant)	6%
<i>Total number of observations</i>	<i>17</i>

¹⁶ Sum exceeds 100 because some companies provided more than one type of training.

Finding adequately skilled software developers does not seem to be a challenge for the firms, since only two out of 17 firms reported having difficulties. However, to properly prepare the new workers, surveyed firms reported to provide around three months of on-the-job training. Currently, in Kosovo there is a large number of VET schools, and the majority of VTCs, provide study and training programmes in the IT field, though they seem to be very general and inadequate for the demands of software development tasks.

i. Occupational-specific tasks and skills for software developers

Table 39 lists the tasks that software developers are expected to perform to achieve the anticipated results. This table also provides a comparison between the tasks reported by employers and those listed under the ISCO-08 classification for software developers. Data show that tasks for the software developers in Kosovo firms differ from 'typical' tasks described by the ISCO-08 classification. For example, in some firms in Kosovo, software developers are also required to design and develop websites and train other programmers. They are not expected to consult engineering staff to evaluate the interface between hardware and software and with customers on software system maintenance. It is possible that the latter tasks may be performed by software developers in Kosovo, but surveyed firms considered them as understandable so did not mention them.

TABLE 39: Tasks of software developers based on employers' responses and ISCO-08 classification

Tasks	Share	ISCO-08
Researching, designing, and developing computer software systems	94%	√
(Developing and directing) software testing and validation procedures	88%	√
Researching, analysing and evaluating requirements for software applications	53%	√
Modifying existing software to correct errors, to adapt it to new hardware or to upgrade interfaces and improve performance	41%	√
Assessing, developing, upgrading and documenting maintenance procedures for communications environments and application software	35%	√
Web design/development	12%	
Directing software programming	6%	√
Training other programmers	6%	
Consulting with engineering staff to evaluate the interface between hardware and software		√
Consulting with customers concerning maintenance of software system		√

Table 40 provides information on the most important skills/knowledge that software developers need to possess in order to adequately perform the top four selected tasks.

Moreover, in response to the question of where the required skills are to be learned, at school or on-the-job, over 80% firms consider that most of the skills (with the exception of the first one) are to be acquired through on-the-job training (Table 40). This may imply that the sector requires higher education graduates that will become specialised in software development through on-the-job training.

TABLE 40: Most important skills/knowledge for top four selected tasks

Task	Skills	Skills for this task to be learned:	
		At school	On-the-job
Researching, designing, and developing computer software systems	Knowledge of computer systems	58%	42%
	Knowledge of programming (languages)		
	Ability to analyse client needs and propose and develop software accordingly		
	General IT skills		
	Knowledge of data protection regulations		
(Developing and directing) software testing and validation procedures	Knowledge of computer systems	12%	88%
	Intermediate knowledge of programming (languages)		
	Ability to analyse and identify problems in software (and modify the product accordingly)		
Researching, analysing and evaluating requirements for software applications	Knowledge of system analysis	7%	93%
	Knowledge of programming (languages)		
	Ability to explain company services to the clients		
	Ability to analyse and interpret client requirements, and provide them with suggestions accordingly		
Modifying existing software to correct errors, to adapt it to new hardware or to upgrade interfaces and improve performance	Knowledge of programming (languages)	8%	92%
	General IT skills		

ii. Newly emerging skills

Firms were also asked about emerging software developers' skills considered important for the future development of their business. More than half of the firms reported on going skills/technology trainings, followed by one-third that cited knowledge of programming languages. Project management and general IT knowledge were each regarded as emerging skills by only one (Table 41).

TABLE 41: Newly emerging skills

Newly emerging skills	Number of firms
Continuous skills/technology upgrades	6
Knowledge of programming languages*	4
Project-management	1
General IT knowledge	1
<i>Total number of observations</i>	<i>11</i>

* 1 of the firms mentioned creating animations and multimedia content

Of the firms that reported emerging skills, 76% stated training their employees and the remaining 24% cited hiring new staff in response to emerging skills needs. Further, when questioned if it was difficult to find courses or trainers for emerging skills, firms gave equally positive and negative answers (47%). This is a surprising since there are several training providers that offer courses on cited emerging skills in Kosovo; finding training courses for the sector should not be a problem.

Only one-third of employers reported difficulties recruiting staff for emerging skills. This implies that the quality of higher education graduates is satisfactory according to employers.

iii. Drivers of change

Almost all the surveyed firms (94%) reported innovative activities in the last two years. Changes in work organisation and sales and marketing processes were the predominant innovative actions reported (41% and 35% of firms, respectively) whereas, the other 18% reported to have introduced innovations in their product/service provision processes.

Further, half of the firms that reported innovations/changes declared that innovations in goods or services drove the changes of the tasks performed by software developers (Table 42).

TABLE 42: Impact of changes/innovations on the tasks performed by software developers

Impact of changes/innovations	Share
Goods or services	50%
Processes (for producing goods or supplying services)	19%
Sales and marketing methods	19%
Work organisation	13%
None	0%
<i>Total number of observations</i>	16

When asked about the actions in response to environmental awareness or regulations, around one-third of firms reported changing/adapting their practices, products or services. Around 40% declared that these adjustments had an impact on the tasks performed by software developers¹⁷.

About half of employers declared that among all the occupations comprising their firms, software developers' tasks are currently the most affected by changes in working tasks and skill requirements. This can be confirmed also by the fact that one-third of firms named software developers as the occupational group that is undergoing the greatest changes (table 43). The other two occupations undergoing the greatest changes are business/developer salespersons reported by one-fourth of firms, and multimedia developers by 8% of the firms.

TABLE 43: Occupations/tasks undergoing the greatest changes

Occupations/tasks	Share
Software developers	33%
Business/developer salesperson	25%
Multimedia developer	8%
Website developer	8%
Software engineer in the card department	8%
Infrastructure team	8%
Manager	8%
<i>Total number of observations</i>	12

iv. General skills

- *Reading, writing, numeracy and computer skills*

Besides occupational specific skills, firms were asked to specify the level of reading, writing, numeracy and computer skills software developers need (Table 44). According to employers, software developers need to have advanced occupation-specific reading skills. Around two-thirds of firms indicated that reading skills and understanding complex texts are necessary and about one-third

¹⁷ Note that 12% of firms did not know if this is a problem.

stated that software developers need to be able to read complex content from a wider context. Findings were similar for writing skills: writing complex occupation specific texts was considered to be important for 76% of firms, followed by 12% of firms that indicated software developers must have advanced writing skills. When asked about the future importance of these skills, the majority of employers (76%) expect that reading skills will be increasingly more important in the future and almost 60% of firms share similar expectations for writing skills. In general, only half of the firms reported satisfaction with reading and writing skills transferred by the education system.

Firms reported that software developers need to have advanced and complex numerical and statistical skills (47% and 29% respectively). Approximately 60% of employers stated that numeracy skills are expected to become more important in the future; similarly, half of the firms consider that workers coming directly from school/university have adequate numerical and statistical skills.

As expected, almost all firms (94%) stated that employees must have advanced computer skills such as software programming and managing computer networks (Table 44). Likewise, a large proportion of firms (88%) expect that the computer skills will continue to gain importance in the future. The majority of firms (80%) consider workers directly out of school/university to be adequately prepared with these skills.

TABLE 44: Level of necessary reading, writing, numeracy and computer skills

		Number	Share	Increasing future importance	Very well prepared and adequately prepared workers coming directly from school/university
Reading skills required from workers	No reading is required on this job	0	0%	76%	46%
	Reading simple instructions, guidelines, texts	0	0%		
	Reading occupation specific texts with some technical content	1	6%		
	Reading with understanding complex texts which are important for work	11	65%		
	Reading complex content from a wider context	5	29%		

Writing skills required from workers	No writing is required on this job	0	0%	59%	50%
	Writing simple texts, filling in forms, drafting short self-reports	1	6%		
	Writing texts which describe known occupation specific content	1	6%		
	Writing complex occupation specific texts	13	76%		
	Writing analyses, reports which assess the wider context of the business	2	12%		
Using and understanding numerical or statistical information	No need for this skill	0	0%	59%	50%
	Doing simple calculations (addition, division, multiplication)	1	6%		
	Calculation of averages, shares, percentages, etc.	3	18%		
	Knowing advanced calculus, statistical methods, etc.	8	47%		
	Developing models, indicators of performance, complex calculations	5	29%		
Computer use	None	0	0%	88%	81%
	Elementary (e.g. data entry, sending and receiving e-mails, printing)	0	0%		
	Moderate (e.g. word processing or spread sheets)	0	0%		
	Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages)	1	6%		
	Advanced (e.g. software programming, managing computer networks)	16	94%		

- *Other general skills*

Table 45 shows that software developers should also be able to: communicate in a foreign language, be creative/innovative, be able to work in teams and adapt to new equipment or materials. Although not considered to be highly important by all the surveyed firms, data show that software developers should also have complex problem-solving skills, be independent workers, possess good communication skills, be able to teach/instruct others and have skills in allocating resource. The vast majority of firms (90%) expressed satisfaction with the foreign language skills of software developers coming directly from school/university.

When looking at the responses of future importance (Table 45), data show that with the exception of creativity/innovation and manual dexterity, other skills are not expected to become more important in the future.

TABLE 45: Level of importance of other general skills

Skill	Level of importance		
	Very or Fairly important	Not important or Does not apply	Increasing future importance
Solving complex problems	94%	6%	65%
Communicating in a foreign language	100%	0%	59%
Manual dexterity	18%	82%	40%
Communication	88%	12%	41%
Team work	100%	0%	65%
Sales	41%	59%	50%
Creativity/innovation	100%	0%	82%
Adapting to new equipment or materials	100%	0%	82%
Teaching/instructing	71%	29%	50%
Environment protection	29%	71%	25%
Autonomy	94%	6%	25%
Planning resources	71%	29%	40%

- *Working conditions and required physical preparedness of employees*

Surveyed firms predominantly reported that software developers' work takes place mostly on work premises. The rest declared working to be performed on and off premises. Artificially lit and hot environments are common working conditions.

Workers ability to sit for long periods of time was declared important by 96% of the surveyed firms, followed by good hand-eye coordination (12% of firms) and the ability to stand, walk, kneel or lie down (6% of firms).

Recommendations

- Given that the list of skills required for software developers seems quite extensive and advanced, VET schools and training providers can prepare students for some of these task by applying a modular approach and by specific training programs that VTCs could offer. For example, for tasks such as: modifying existing software to correct errors, to adapt it to new hardware or to upgrade interfaces and improve performance, employers stated that employees need knowledge on programming languages and general IT skills, which could be taught at VET schools;
- VET system should ensure that curriculum reflects the demand for potential exportable software development services since this sector has great opportunities for service outsourcing;

Reading, writing and numeracy skills are regarded as very important for software developers. Therefore, VET schools and software development training programmes should select the brightest students/trainees;

- Almost all interviewed firms - nearly one-fifth - introduced innovations in service provisions. The education system should be flexible and adjust to these changes in the sector;
- On-the-job training is very important for adequately preparing the workforce; hence placement of students in firms should be a prerequisite for preparing software developers.

3.1.3 Web and multimedia developers

Seventeen firms that reported web and multimedia development as the most prevalent occupation were interviewed. The total number of employees is 173 and there is an average of 10 workers employed by each surveyed firm. Women represent about one-fourth of the total workforce in this field.

Web and multimedia developers represent 36% of the total workers employed by the surveyed firms. The average number of multimedia developers per firm is 4 employees and around one in three employees is a woman. The sector is attractive for youth (under the age of 30) who account for 59% of the total workforce; the remaining 41% are 30 to 49 years of age.

Table 46 shows that a higher percentage of firms require a university level education and on-the-job training is important for only one-fourth of the firms. Although currently there are a large number of VET schools providing study programmes for the IT-BPO sector, data indicates that firms don't necessarily seek VTC graduates to fill vacancies. . Additionally, IT training courses are offered by six out of eight VTCs of the MLSW, but they were not mentioned as skills providers by any of the interviewed companies.

Nearly 60% of the surveyed firms regularly assess the skills and training needs of their employees, 29% assess skills and training needs only for selected groups of employees and the remaining 12% do not conduct such assessments at all. Slightly more than half of the surveyed firms declared that their employees have participated in trainings in 2015 from which 56% were on-the-job trainings, one-third were internal trainings and the remaining 11% were external trainings.

TABLE 46: Minimum level of education required by firms for this job

Level of education	Share
Primary school	0%
Secondary general	0%
Secondary vocational	6%
University	71%
Only on-the-job training (educational level not relevant)	24%
<i>Total number of observations</i>	17

About one-fifth of firms with vacancies for web and multimedia developers reported difficulties finding skilled employees. Firms claim to offer a three-month initial training for new hires.

i. Occupational-specific tasks and skills for web and multimedia developers

Table 47 shows the most frequently cited tasks for this field and a comparison between employer reported tasks and those listed by the ISCO-08. By comparison, a web and multimedia developer in Kosovo is required to perform fewer occupation specific tasks than the ISCO-08 description. However, Kosovo employees are expected to perform other general tasks including: meeting with clients, analysing their requirements, designing a concept and a work plan and managing the development and implementation of multimedia content.

TABLE 47: Tasks of a web and multimedia developer based on employers' responses and ISCO-08 classification

Tasks	Share	ISCO-08
Designing and developing digital animations, imaging, presentations, games, audio, video clips, and internet applications using multimedia software, tools, utilities, interactive graphics and programming languages	100%	√
Meeting with clients, analysing their requirements, designing a concept and a work plan	88%	
Testing, uploading and modifying internet sites or web applications	82%	√
Analysing, designing, developing internet sites applying a mixture of artistry and creativity with software programming, scripting languages and interfacing with operating environments	24%	√
Communicating with network specialists regarding web-related issues, such as security and hosting websites	12%	√
Manage the development and implementation of multimedia content	6%	
Designing, developing and integrating computer code with other specialised inputs, such as image files, audio files and scripting languages, to produce, maintain and support web sites		√
Assisting in analysing, specifying and developing internet strategies, web-based methodologies and development plans		√

Firms were also asked to specify the skills and knowledge that web and multimedia developers need to adequately perform the top three selected tasks (Table 48).

Table 48 also shows that firms indicated that on-the-job training is more relevant for developing the skills needed to perform the top selected tasks.

TABLE 48: Most important skills/knowledge for the top three selected tasks

Task	Knowledge/skills	Skills for this task to be learned:	
		At school	On-the-job
Designing and developing digital animations, imaging, presentations, games, audio, video clips and internet applications using multimedia software, tools, utilities, interactive graphics and programming languages	Ability to analyse client needs and propose and develop (concepts for) software	44%	56%
	Knowledge of web design and programming (design and develop digital graphics, animations, sound and videos, photographs, etc.)		
	Ability to design concepts for web applications		
	Knowledge of multimedia software, tools, utilities, interactive graphics and programming languages		
	Knowledge of different types of software and programming languages and the ability to choose the appropriate ones for specific products/projects		
	Knowledge of data protection regulations		
	Design skills		
	General IT skills		
Meeting with clients, analysing their requirements and designing a concept and work plan	Ability to analyse client needs and propose a (concept for) the product	27%	73%
	Knowledge of programming and design		
	Ability to analyse client requirements and propose and develop software		
	Knowledge of multimedia tools and utilities		
	Knowledge of different types of software and programming languages and the ability to choose the appropriate ones for specific products/projects		
	Ability to analyse the market		

Testing (and uploading) internet sites or web applications, and modifying them accordingly	Knowledge of web programming	15%	85%
	Knowledge of scripting languages		
	Ability to improve the Internet site/multimedia content when problems are identified		

ii. Newly emerging skills

The surveyed firms were also asked to name the skills that they believe will become very important for web and multimedia developers in the future. Continuous skills/technology upgrades were reported as the most important emerging skills, followed by web programming and camera installation (Table 49).

TABLE 49: Newly emerging skills

Newly emerging skills	Number of firms
Continuous skills/technology upgrades*	6
Web programming	3
Installation of cameras	2
Marketing, public relations and use of social media	1
IPTV systems	1
Creating animations	1
<i>Total number of observations</i>	<i>14</i>

* 1 of the firms mentioned Transition to FTTH system specifically.

When firms were asked how they intend to respond to emerging skills, almost 60% stated by employee trainings, 24% by recruiting new staff, and 12% by internal reorganisation. Further, when asked if firms had difficulties finding courses or trainers for emerging skills, firms replied equally yes and no (47%) and the others stated having no information on this. Recruiting staff to perform new skills was declared to be difficult by 41% of firms.

iii. Drivers of change

All the interviewed firms claimed to have engaged in innovative activities during the last two years. Innovations were realized by launching new services or improving existing ones and advancing sales and marketing techniques (35% each). The remaining firms changed/improved the work of the organisation and production/service provision processes (18% and 12%, respectively).

In addition, the surveyed firms were requested to indicate the changes and innovations that had an impact on employee tasks. Table 50 shows that innovations in goods and services and work organization were reported to have had the biggest impact.

TABLE 50: Impact of changes/innovations on the tasks performed by web and multimedia developers

Impact of changes/innovations	Share
Goods or services	47%
Work organisation	47%
Processes (for producing goods or supplying services)	6%
Sales and marketing methods	0%
<i>Total number of observations</i>	17

When asked about actions taken in response to environmental awareness or regulations in the last two years, only 12% reported to have engaged in changing/adapting their practices, products or services. All firms that reported responding to environmental awareness or regulations stated that adjustments impacted occupational tasks.

Firms responded that web and multimedia developer's occupational group is one of the most affected by changes in working tasks and skills requirements. Overall, web and multimedia developers together with sales were reported as occupational groups undergoing greatest changes (Table 51).

TABLE 51: Occupations/tasks undergoing the greatest changes

Occupations/tasks	Share
Web developers	22%
Multimedia developers	22%
Sales	22%
Designers	11%
Animation creators	11%
Project managers	11%
<i>Total number of observations</i>	9

iv. General skills

- *Reading, writing, numeracy and computer skills*

Surveyed firms were asked to determine the level of reading, writing and numeracy skills required from web and multimedia developers. Data in Table 52 show that for more than 80% of employers, web and multimedia developers are expected to have advanced occupation-specific reading and writing skills. In addition, while firms expect that reading and writing skills will have more importance in the future, more than half of them indicated that the education system is not adequately preparing employees with such skills.

Firms reported that web and multimedia developers should possess medium to advanced numerical and statistical skills. Specifically, these employees must be able to calculate averages, percentages; know advanced calculus, statistical methods; be able to develop models, performance indicators and perform complex calculations. More than half of the firms expect numerical skills to become more important in the future. Seventy percent of these firms are not satisfied with the workers' competences in these skills directly out of school/university.

Firms reported that complex and advanced computer skills are required (18% and 76%, respectively). The majority of firms (91%) also expect that computer skills will continue to gain importance in the future and 71% of them think that workers coming directly from school/university are adequately prepared with these skills.

TABLE 52: Level of necessary reading, writing, numeracy and computer skills

		Number	Share	Increasing future importance	Very well prepared and adequately prepared workers coming directly from school/university
Reading skills required of workers	No reading is required on this job	0	0%	76%	54%
	Reading simple instructions, guidelines, texts	3	18%		
	Reading occupation specific texts with some technical content	0	0%		
	Reading with understanding complex texts which are important for work	12	71%		
	Reading complex content from a wider context	2	12%		
Writing skills required of workers	No writing is required on this job	0	0%	76%	69%
	Writing simple texts, filling in forms, drafting short self-reports	1	6%		
	Writing texts which describe known occupation specific content	2	12%		
	Writing complex occupation specific texts	9	53%		
	Writing analyses, reports which assess the wider context of the business	5	29%		

Using and understanding numerical or statistical information	No need for this skill	0	0%	59%	30%
	Doing simple calculations (addition, division, multiplication)	3	18%		
	Calculation of averages, shares, percentages, etc	5	29%		
	Knowing advanced calculus, statistical methods, etc.	5	29%		
	Developing models, performance indicators, complex calculations	4	24%		
Computer use	None	0	0%	94%	71%
	Elementary (e.g. data entry, sending and receiving e-mails, printing)	0	0%		
	Moderate (e.g. word processing or spread sheets)	1	6%		
	Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages)	3	18%		
	Advanced (e.g. software programming, managing computer networks)	13	76%		

- *Other general skills*

Surveyed firms reported that foreign language competency, teamwork skills and creativity/innovation are the most relevant other general skills required for web and multimedia developers (Table 53). In addition, the majority of firms anticipate that these skills will have more importance in the future.

Autonomy, adapting to new equipment or materials and communication skills are also currently considered important and are expected to be increasingly more important in the future by more than half of the interviewed firms.

The surveyed firms share similar opinions regarding the current and future importance of allocating resources, teaching and instructing others, and sales skills. Firms also expect that manual dexterity and environment protection skills will become significantly more important in the future (Table 53).

TABLE 53: Level of importance of other general skills

Skill	Level of importance		
	Very or Fairly important	Not important or Does not apply	Increasing future importance
Solving complex problems	82%	18%	53%
Communicating in a foreign language	100%	0%	94%
Manual dexterity	29%	71%	57%
Communication	82%	18%	73%
Team work	94%	6%	71%
Sales	65%	35%	64%
Creativity/innovation	94%	6%	88%
Adapting to new equipment or materials	88%	12%	69%
Teaching/instructing	71%	29%	62%
Environment protection	18%	82%	56%
Autonomy	88%	12%	50%
Planning resources	59%	41%	60%

- *Working conditions and required physical preparedness of employees*

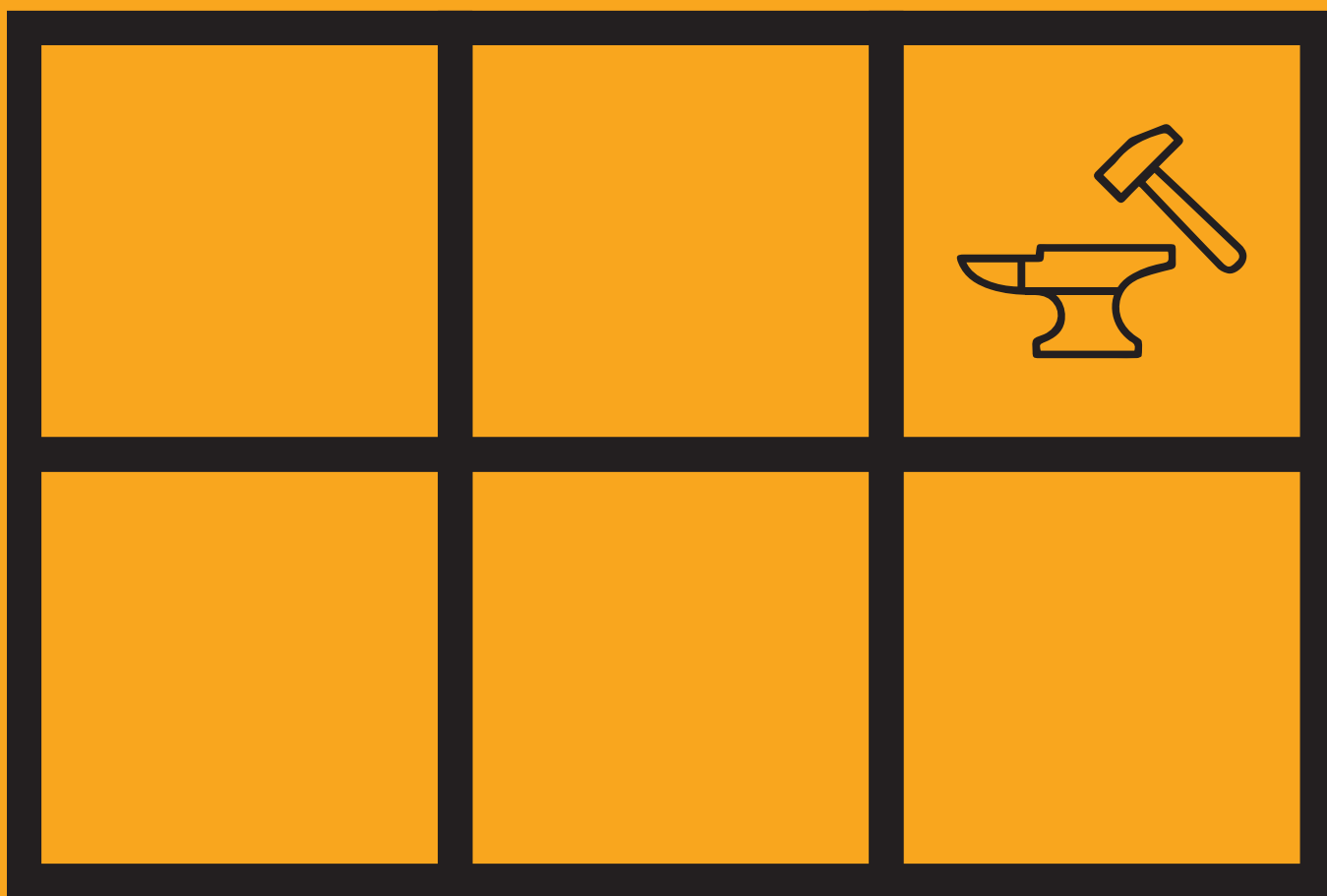
As reported by 94% of the surveyed firms, web and multimedia developers usually perform work duties on premises. Hot environments with artificial light are cited as the prevailing working conditions.

Required physical preparedness of workers to sit for long durations of time was cited as important by 82% of the surveyed firms, followed by coordinated movement (reported by 18% of firms).

Recommendations

- IT firms do not seem to be hiring VET graduates, which may explain the more general content of VET study programmes. MEST should evaluate and harmonise current programmes with employer demand;
- If VET schools are to offer study programmes for the web and media developers training, highly skilled teaching staff is a prerequisite to properly prepare graduates for the tasks required by local and international employers;
- MLSW should also revisit the current trainings offered in the IT field, should assess employability of trainees from the current training programmes and consider providing more advanced trainings, including one for web and media developers; Although currently Kosovo firms do not demand web and multimedia developers to be able to perform some specific skills listed by ISCO-08 for this occupation, the curricula should ensure that employees are capable of performing those tasks. This is of particular importance since IT services are in high demand by the international market;
- Youth seem to be quite interested in the ICT sector and given that ICT jobs are present in all sectors, providing qualitative education would facilitate youth employment in Kosovo and make them eligible to perform outsourcing services;
- General skills are required to perform this occupation. Thus, the VET system should recruit better prepared students and trainees;
- Foreign language skills, manual dexterity, teamwork skills, creativity/innovation, autonomy, adapting to new equipment or materials and communication skills are all important for the web and multimedia developers' and should be included in VET curricula;
- The IT sector is dynamic; therefore education and training systems should be flexible and adaptable to changes;
- On-the-job training is reportedly very important for web and media developers' occupation, therefore VET schools and employers should closely cooperate

META



L PROCESSING

4

The metal industry has had major transformations over the past years, especially with privatization of socially owned enterprises (SOEs) and development of medium, small, and even micro firms in response to the post-conflict construction boom.¹⁸

Although micro firms are the most common for this sector, there are a few large firms such as Newco Ferronikeli, NewCo Llamkos – Galvasteel, NewCo IMK Pipe Factory, NewCo Jugoterm and Trepça/Trepča, that capture the largest share of output, exports and employment.¹⁹ Micro firms sell their goods mainly in the domestic market. These larger firms export mainly ferronickel, iron and steel products, which are sold primarily to other companies for further processing.

According to TAK records, metal processing firms comprise 1.30% of total active businesses and 0.93% of total employment in Kosovo in 2015 (Table 54).

TABLE 54: Active businesses and employment in metal processing firms (2013-2015)

NACE Rev.2 sector	Active businesses/no. of employees	2013	2014	2015
24, 25 Manufacturer of basic metals and Manufacturer of fabricated metal products, except machinery and equipment	No. of active businesses	863	936	1,024
	<i>Participation in the total no. of active businesses</i>	1.41%	1.35%	1.30%
	No. of employees	2,672	2,278	2,333
	<i>Participation by the total no. of employees</i>	1.14%	0.94%	0.93%

Source: TAK, 2016

Notably, very few women work in this sector.

Most employees have a secondary education level. In general, firms operating in metal processing expressed being dissatisfied with the quality of the workforce. The majority of firms attribute this problem to the limited number of vocational school graduates in this field.

4.1 Metal processing survey results

Basic firm data

For this assessment, 104 firms operating in the metal processing sector were interviewed. All the interviewed firms are privately owned, out of which, around two-thirds are micro, one-third small and 5% medium. On average, these firms employ 12 workers.

Goods are mainly sold in local markets and in close vicinities (62% of firms) and 20% in other markets within Kosovo; 11% of firms claimed to export their products in European Union countries and 6% to other countries.

¹⁸ Industrial Policy, MTI, 2014

¹⁹ Information presented in the general overview is drawn based mainly on Sector profile of Metal Processing Industry, MTI, 2014, unless differently specified.

The most frequent occupation identified by firms in this sector is welders.

4.1.1 Welders

The total number interviewed firms that declared welders to be the predominant occupation employ a total of 666 workers, out of which only 4% are women. The average number of employees in these firms is 10.

Welders represent the majority of employees in this sector (58% of firms) and all of them are men. Around 45% of welders are younger than 30 years of age, 48% are aged between 30-50 years and only 7% are over 50 years of age.

A secondary general (gymnasium) education is the most demanded level and type of education reported by firms; only 16% require vocational educated graduates (Table 55). Almost 40% of firms stated that on-the-job training is the mechanism for preparing welders to perform their job. The low number of firms requiring vocational training suggests that either metal processors are not informed about VET study programmes in Kosovo (12 VET schools offer study programmes on welding; five for metal smiths, and one offers metal processing), or they are not content with the competences of graduates. Since these questions were not within the scope of this study, it is not certain which of the two statements explains the low relevance of the VET schools for the metal processing sector. However, nearly all studies measuring employer satisfaction of VET schools confirm there is a general dissatisfaction with the quality of VET schools²⁰.

When asked about assessment of employee skills and training needs, 44% of firms reported conducting skill needs assessments regularly, 7% for some groups of employees' and almost half of firms do not conduct assessments. Data show that the surveyed firms invest in workforce development: almost 40% reported that welders in their firm participated in trainings of which 88% were on-the-job and 15%²¹ were external trainings during 2015.

Also, it seems that metal processing firms are unaware that seven out of eight VTCs of MLSW provide trainings for welders. The evidence for this has been found by a recently conducted study whereby 80% of the 259 surveyed Kosovo enterprises stated they were unaware of any vocational training programs in Kosovo (INDEP, 2016). The welding training course is offered by VTCs located in Ferizaj/Uroševac, Mitrovicë/a, Dolan/Doljane, Gjilan/Gnjilane, Gjakovë/Đakovica, Prizren and Pejë/Peč. but there is no such training offered at the VTC located in Prishtinë/ Priština. The NQA has approved occupational standards for metal smiths and approved courses are offered at the seven above VTCs.

²⁰ Gashi, A. and Serhati, J., Mapping of VET educational policies and practices for social inclusion and social cohesion in the Western Balkans, Turkey and Israel: country report for Kosovo, research commissioned by European Training Foundation.

²¹ Note that the sum is above 100% because two firms provided more than one type of training.

TABLE 55: Level of education required by firms for this job

Level of education	Share
Primary school	1%
Secondary general	47%
Secondary vocational	16%
University	0%
Only on-the-job training (educational level not relevant)	36%
<i>Total number of observations</i>	70

One-fourth of the surveyed firms with vacancies for welders reported having difficulties finding adequately skilled workers. To overcome this problem, firms reported providing six months initial on-the-job training for new hires.

i. Occupational-specific tasks and skills for welders

The surveyed firms were asked to name the main tasks that welders need to accomplish (Table 56). This table compares employer reported tasks to the ISCO-08 classification for welders. Notably, welders' tasks in Kosovo differ from the typical tasks of welders described by the ISCO-08. Welders in Kosovo are not required to perform two tasks listed in the ISCO-08. Yet, welders in Kosovo also perform other tasks not cited in the ISCO-08 description. Welders in Kosovo are expected to operate and maintain CNC machines as well as other tasks that an assistant would be expected to perform. However, these additional required tasks may be attributed to the small size of the firms.

TABLE 56: Tasks of welders based on employers' responses and ISCO-08 classification

Tasks	Share	ISCO-08
Welding parts using gas flame, an electric arc, thermite compound or other methods*	100%	√
Measuring, marking and cutting metal parts/sheets using gas flame or an electric arc	100%	√
Examining work pieces for defects and measuring work pieces with straight edges or templates to ensure conformance with specifications	76%	√
Brazing metal parts together	17%	√
Setting up, operating and maintaining conventional and CNC machine tools to cut, turn, mill, plane, drill, bore, grind or otherwise shape work pieces to prescribed dimensions and finish;	17%	
Classification of raw materials to be used in production	13%	√
Fitting and assembling parts to make the final product	10%	√
Painting finished products	10%	
Operating and monitoring equipment which cleans metal articles	9%	
Reading and interpreting engineering drawings and specifications of products	9%	√

Operating and monitoring equipment used to spray molten metal or other substances on metal products to provide a protective or decorative coating or to build up worn or damaged surfaces	9%	
Cleaning final products	6%	
Organising the work of other welders**	4%	
Monitoring the fitting and welding process	3%	√
Operating resistance-welding machines		√
Using a blowtorch to make and repair lead linings, pipes, floors and other lead fixtures		√

*Typically includes layout of pieces.

** This task is typical for foremen/supervisors.

The surveyed firms were also asked to name the skills and knowledge necessary for welders to successfully perform the four most reported tasks (Table 57).

Further, as shown in the table, in general, firms' believe that the majority of the reported skills/knowledge are acquired on-the-job. This finding confirms the previously reported finding in which firms reported on-the-job training as a key mechanism for preparing welders.

TABLE 57: Most important skills/knowledge for top four selected tasks

Task	Skills	Skills for this task to be learned:	
		At school	On-the-job
Welding parts using gas flame, an electric arc, thermite compound or other methods	Selecting and laying out the metal pieces to be welded	17%	83%
	Knowledge of the properties of base metals		
	Ability to operate equipment and tools (e.g. arc welder)		
	Knowledge about the appropriate temperature of gas flame or electrode to be used in the process		
	Knowledge of welding techniques (in the flat, horizontal, vertical, overhead positions, and in different angles)		
	Knowledge of the cooling process after welding		
	Knowledge of the grinding process of the final product		
	Cleaning of equipment before use		
	Knowledge of welding safety procedures (use of protective gear)		

Measuring, marking and cutting metal parts/sheets using a gas flame or an electric arc	Ability to operate equipment and tools (arc welding and flame cutting)	27%	73%
	Knowledge of welding safety procedures (use of protective gear)		
Examining work pieces for defects and measuring work pieces with straight edges or templates to ensure conformance with specifications	Ability to use micrometres, callipers or other measuring devices	39%	61%
	Ability to inspect and analyse the characteristics of the final product to ensure they match the specifications		
	Ability to correct any defects		
	Ability to write production logs		

ii. Newly emerging skills

Steel welding and operating new technology were the top skills selected by firms as future skills necessary for welders (Table 58). Operating CNC machines was again mentioned as a future in-demand skill. Some firms also expect that skills related to product innovation and optimisation of raw materials will become very important for the future development of their business.

TABLE 58: Newly emerging skills

Newly emerging skills	Number of firms
Welding of steel	19*
Operating new technology	14
Introduction of new innovative products (product lines, designs, decorations, etc.)	9
Optimisation of raw material use	7
New welding techniques/methods	4
Welding of other materials (e.g. inox, argon, cobalt)	3
Organisation/team management	2
Safety management	1
Examination of products (intermediate and final) for defects	1
<i>Total number of observations</i>	<i>60</i>

* Of this number, five firms specifically cited operating CNC machinery/automatic welding or metal cutting.

Firms that reported emerging skills were asked about the professional development of their employees: almost three-fourths claimed to provide training for the staff, 14% by internal reorganisation and the remaining 11% by recruiting new staff. Still, over half of firms (53%) stated having difficulties finding courses or trainers. This finding also supports the assumption that metal processing firms are not informed about available VTC training courses offered in seven regions of Kosovo. Finding adequately skilled employees to perform the emerging skills (shown in Table 4.1.4) was perceived as a challenge for 57% of firms.

iii. Drivers of change

With the exception of only one firm that claimed to have no innovation during the last two years, all other metal processing firms reported innovations. New or significantly improved goods and services and changes in work organisation were reported equally as the main means of innovation (27%). Changes in sales and marketing processes occurred in almost one-fourth of firms and innovation of production/service provision processes in the remaining one-fifth.

Table 59 shows that changes/innovations in work organisation were cited as the main cause for changing welders' tasks.

TABLE 59: Impact of changes/innovations on the tasks performed by welders

Impact of changes/innovations	Share
Work organisation	35%
Goods or services	25%
Processes (for producing goods or supplying services)	22%
Sales and marketing methods	19%
None	0%
<i>Total number of observations</i>	<i>69</i>

When asked about actions in response to environmental awareness or regulations, around 40% of firms reported changing or adapting their practices, products or services, and almost all of them (93%) declared that these adjustments had an impact on the welders' tasks.

About 70% of the interviewed firms declared that of all the occupations employed, welders' work is currently the occupation most affected by changes in working tasks and skill requirements. Table 60 also show that half of all firms identified welders and flame cutters as the occupational group undergoing the most change, followed by sales/marketing (21%) and machinery/computer operators (13%).

TABLE 60: Occupations/tasks undergoing the greatest changes

Occupations/tasks	Share
Welders and flame cutters	50%
Sales/marketing	21%
Machinery/computer operators	13%
Toolmakers	4%
Mechanical engineers	4%
Sheet metal workers	4%
Hot dip galvanisation	4%
<i>Total number of observations</i>	<i>24</i>

iv. General skills

- *Reading, writing, numeracy and computer skills*

Besides occupational specific skills, firms were asked to specify the level of reading, writing, numeracy and computer skills welders need (Table 61). Around three-fourths of employers indicated that no reading and writing skills are necessary for this job (71% and 75%, respectively). However, close to one-third of firms stated that welders need to be able to read occupation specific texts with some technical content and two-thirds declared that employees should have modest writing skills.

Concerning future skills necessary for this occupation, slightly more than half of firms expect reading and writing skills to have increased future importance. In general, firms reported that the education system is adequately preparing employees reading and writing skills.

Regarding numerical and statistical skills, 84% of firms stated that welders should be able to perform simple calculations. The rest of firms cited the need for welders to have the skills to calculate averages, shares, percentages, etc. For around two-fifths of employers, numerical skills are expected to become more important in the future and a similarly small share also reported satisfaction with the skills acquired in the education system.

Currently, computer skills are considered irrelevant by half of firms and the other half stated that elementary computer skills are necessary. One-third of firms expect the importance of computer skills to increase in the future. Concerning current competence in computer skills, one quarter of firms stated that workers directly out of school/university are adequately skilled.

TABLE 61: Level of necessary reading, writing, numeracy and computer skills

		Number	Share	Increasing future importance	Very well prepared and adequately prepared workers coming directly from school/university
Reading skills required of workers	No reading is required on this job	29	41%	54%	59%
	Reading simple instructions, guidelines, texts	16	23%		
	Reading occupation specific texts with some technical content	24	34%		
	Reading with understanding complex texts which are important for work	1	1%		
	Reading complex content from a wider context	0	0%		

Writing skills required of workers	No writing is required on this job	30	43%	56%	70%
	Writing simple texts, filling in forms, drafting short self-reports	28	40%		
	Writing texts which describe known occupation specific content	11	16%		
	Writing complex occupation specific texts	0	0%		
	Writing analyses, reports which assess the wider context of the business	1	1%		
Using and understanding numerical or statistical information	No need for this skill	0	0%	41%	38%
	Doing simple calculations (addition, division, multiplication)	59	84%		
	Calculation of averages, shares, percentages, etc.	11	16%		
	Knowing advanced calculus, statistical methods, etc.	0	0%		
	Developing models, performance indicators, complex calculations	0	0%		
Computer use	None	34	49%	33%	25%
	Elementary (e.g. data entry, sending and receiving e-mails, printing)	35	50%		
	Moderate (e.g. word processing or spread sheets)	1	1%		
	Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages)	0	0%		
	Advanced (e.g. software programming, managing computer networks)	0	0%		

- *Other general skills*

As reported by the surveyed firms, teamwork skills, environment protection, manual dexterity and independence (autonomy) are the most important other general skills that welders need (Table 62). Additionally, the majority of firms anticipate that these skills will have increasing future importance. Skills promoting innovation (creativity/innovation and adapting to new equipment or materials), teaching and instructing skills and complex problem solving skills are also considered to be important and are expected to be more important in the future.

Further, though currently not deemed very relevant, firms indicated that foreign language conversation skills, manual dexterity, communication, sales, and allocating resources will be more importance in the future (Table 62). Concerning foreign languages, half of the surveyed firms reported that employees coming directly from school/university are well or adequately prepared.

TABLE 62: Level of importance of other general skills

Skill	Level of importance		
	Very or Fairly important	Not important or Does not apply	Increasing future importance
Solving complex problems	96%	4%	78%
Communicating in a foreign language	20%	80%	63%
Manual dexterity	100%	0%	79%
Communication	31%	69%	54%
Team work	100%	0%	89%
Sales	49%	51%	73%
Creativity/innovation	99%	1%	83%
Adapting to new equipment or materials	99%	1%	87%
Teaching/instructing	96%	4%	85%
Environment protection	100%	0%	93%
Autonomy	100%	0%	64%
Planning resources	50%	50%	69%

- *Working conditions and required physical preparedness of employees*

Almost 80% of surveyed firms reported that welders work both indoors and outdoors. The working environment is characterized by changing temperatures, noise and artificial light; hot, cold or windy working environments are less common.

Workers ability to stand, walk, kneel or lie down was cited as important by all the surveyed firms, followed by considerable physical strength (84% of firms) and good hand-eye coordination (13% of firms).

Recommendations

- The list of skills in Table 56 should serve as a guide for developing occupational standards for welding by the MEST and be offered at VET schools;
- Since VTCs are also for employee professional development of skills, metal processing firms should be informed about training content and current trainings offered. VTCs are mostly used for training of jobseekers and not for professional development. VTC should keep employers informed about available trainings;
- Currently VET schools offer four professional programmes for the metal processing sector. Since this study found that the welding occupation is the most in-demand, MEST should consider providing trainings for this occupation only and incorporate tasks and skills of other study programmes. This should inform the occupational standard for welding for VET schools;
- VET study and training programs should ensure that welders be competent in reading occupation specific texts with some technical content; in writing simple texts, filling in forms, drafting short self-reports; texts that describe known occupation specific matters; performing simple calculations and have elementary computer skills;
- Communication, teamwork skills foreign languages, sales and allocating resources should be integrated in the education and training curricula for welders. Welders should also be prepared to work independently, be informed of and have environmental protection skills. Finally, given the relevance of on-the-job training for the sector, welders should be trained to become trainers and instructors;
- Access to machinery is necessary for equipping students with practical skills. Since the machinery is very expensive and the VET budget is low, engaging students to work with machinery during internship placement is necessary. Therefore, proper implementation of internship programmes is important;
- VET schools should closely cooperate with metal processing firms and inform them about the availability of VET graduates prepared for the sector. Internship placement of VET students in metal processing firms is an important mechanism to adequately align school curricula with employer demand.

TEXTILE



AND APPAREL

5

Textiles was the second largest industry (after mining) with the biggest factories located in the city of Gjakovë/Đakovica Kosovo²². Now, this sector is much smaller accounting for only 0.82% of total businesses and 0.85% of the total employment in 2015 (Table 63).

TABLE 63: Active businesses and employment of textile and apparel firms (2013-2015)

NACE Rev.2 sector	Active businesses/no. of employees	2013	2014	2015
13, 14, 15 Manufacturer of textiles; Manufacturer of apparel and Manufacturer of leather and related products	No. of active businesses	508	579	650
	<i>Participation in the total no. of active businesses</i>	0.83%	0.83%	0.82%
	No. of employees	1,801	2,248	2,123
	<i>Participation by the total no. of employees</i>	0.77%	0.93%	0.85%

Source: TAK, 2016

The majority of active businesses operating in the textile industry are micro sized, which poses challenges for the industry to scale-up and expand. Apparel are the most common textile products. A very small proportion of firms (around 10%) export some of their goods²³. The most exported products are leather and leather footwear, wool materials and other fibres, and apparel.

Unlike the majority of other sectors, textiles and apparel is characterized by a balanced gender participation in the workforce. Secondary schooling is the highest level of education for the majority of employees. Lack of skilled workers is reported to be an obstacle for around two-fifths of firms that identify the lack of vocationally educated graduates as a problem.

5.1 Textile

Basic firm data

Of the total 112 surveyed firms, micro firms represent 76%, small sized firms (21%), medium (3%) and only one firm is large sized. The average number of employees per firm is 14. Two-third of firms sell their products in local and nearby regional markets, 30% Kosovo wide, while only four companies reported to export their products (3 in European countries and 1 firm in other countries).

The most common occupations identified by firms in the textile sector are: a) Sewing machine operators; b) Tailors, dressmakers, furriers and hatters; and, c) Garment and related patternmakers and cutters.

²² Industrial Policy, MTI, 2014

²³ Unless otherwise specified, information presented in the general overview is based mainly on the sector profile of textile Industry, MTI, 2014.

5.1.1 Sewing machine operators

The 42 interviewed firms that reported sewing machine operators as the dominant occupation employ 728 workers, 67% of which are women. The average number of employed workers per firm is 17.

Sewing machine operators represent 57% of the total employed individuals in the surveyed firms; almost 80% of these employees are women. Young people represent slightly more than one-third of employees, 60% are 30 to 49 years and 8% are above 50 years. On average, interviewed firms employ ten sewing machine operators.

Nearly 40% of firms stated secondary general schooling as the required level of education and 21% cited secondary vocational schooling as relevant (Table 64). Notably, a significant share of firms (40%) stated that the education level of employees is not relevant since firms prepare sewing machine operators through on-the-job training, which on average lasts for 6 months.

Regarding skills requirements, 45% of textile firms declared to assess skills and training needs of their employees regularly, 14% assess some groups of employees, while 40% do not conduct any employee assessments. Although almost half of the firms' review training and skills needs and 40% stated that on-the-job training is the key instrument to prepare sewing machine operators, only 17% reported to have employees that received internal trainings, from which 86% went through on-the-job training and 14% through other internal trainings during 2015. Currently there are no providers offering study programmes or training curricula for sewing machine operators.

TABLE 64: Level of education required by firms for this job

Level of education	Share
Primary school	0%
Secondary general	38%
Secondary vocational	21%
University	2%
Only on-the-job training (educational level not relevant)	38%
<i>Total number of observations</i>	42

Almost 30% of the interviewed firms with vacancies for sewing machine operators expressed difficulties recruiting adequately skilled employees.

i. Occupational-specific tasks and skills for sewing machine operators

According to employers, the top four tasks that sewing machine operators are expected to perform are: a) operating sewing machines for garment sewing, such as joining, reinforcing, seaming or decorating garments or garment parts; b) performing equipment maintenance tasks such as replacing needles; c) preparing parts of the garment for sewing (measuring, cutting, laying out for sewing) and d) inspecting sewn products (Table 65).

Additionally, Table 65 provides a comparison of tasks as reported by employers and those listed under the ISCO-08 classification for sewing machine operators. A comparative analysis of sewing machine operator tasks in Kosovo to those described by ISCO-08 shows that the Kosovar operators are also engaged in production, the sewing process of goods. Additionally, in the majority of companies, sewing machine operators are also engaged in preparing parts of the garment for sewing (measuring, cutting, laying out for sewing) and inspecting final products. A potential explanation for this may be that firms in the textile sector are predominantly micro and small sized, and it is expensive to employ individuals that would only perform the tasks of the machine operators.

Conversely, sewing machine operators in Kosovo do not perform the last two tasks listed under the ISCO-08 classification. This may be explained by both the kind of textiles produced in Kosovo and the level and type of technology employed in Kosovo firms.

TABLE 65: Tasks of sewing machine operators based on employers' responses and ISCO-08 classification

Tasks	Share	ISCO-08
Operating or tending sewing machines to perform garment sewing operations, such as joining, reinforcing, seaming or decorating garments or garment parts	98%	√
Performing equipment maintenance tasks such as replacing needles	76%	√
Preparing parts of the garment for sewing (measuring, cutting, laying out for sewing)	64%	
Inspecting sewn products	55%	
Monitoring machine operation to detect problems such as defective stitching, breaks in thread, or machine malfunctions	14%	√
Attaching buttons, hooks, zippers, fasteners, or other accessories to fabric	12%	√
Operating fur sewing machines to join fur pelt strips to required size and shape and join pelts into garment sections or shells	7%	√
Performing decorations or sewing by hand	7%	
Tending semiautomatic sewing machines with multiple-sewing heads controlled by pattern chain that embroiders various designs on garments	2%	√
Ironing final products	2%	
Packaging final products	2%	
Operating machines, such as single or double needle sergers and flat-bed felling machines, to automatically join, reinforce, or decorate material or articles		√
Operating stitching machines to sew leather parts together for leather garments, handbags, gloves		√

Moreover, the surveyed firms were asked to specify the skills and knowledge that sewing machine operators need to adequately perform the top four most frequently noted tasks. In general, Table 66 shows that sewing machine operators are required to possess specific occupation related skills.

Further, the majority of firms stated that these skills are to be acquired through on-the-job training (Table 66).

TABLE 66: Most important skills/knowledge for top four selected tasks

Task	Skills	Skills for this task to be learned:	
		At school	On-the-job
Operating or tending sewing machines to perform sewing operations, such as joining, reinforcing, seaming or decorating garments or garment parts	Knowledge of operating the sewing machine (laying out the parts and appropriately holding them during the sewing process, ensuring balanced seams, changing needles, setting the length of straight stitches, setting the length and width of zigzag stitches, using the seam guide, etc.)	9%	91%
	Knowledge of the characteristics of different types of fabrics (and ability to choose appropriate ones for specific garments)		
	Ability to read garment patterns and drawings		
	Ability to optimise fabric use (i.e. minimise waste)		
	Mechanical knowledge of the sewing machine		
	Ability to perform sewing or related tasks by hand		
Performing equipment maintenance tasks such as replacing needles	Knowledge of how to clean equipment	16%	84%
	Knowledge of how to change needles, fill and insert bobbins, thread the sewing machine		
	Ability to determine if - and what type of - maintenance is needed		
	Ability to repair machines		
Preparing parts of the garment for sewing (measuring, cutting, laying out for sewing)	Knowledge of the characteristics of different types of fabrics (and ability to choose appropriate ones for specific garments)	15%	85%
	Ability to read garment patterns and drawings		
	Knowledge of measuring and cutting fabric or fur pelts to make parts for garments and other fur articles		
	Ability to optimise fabric use (i.e. minimise waste)		
Inspecting sewn products	Ability to perform alternations	0%	100%
	Ability to evaluate the quality of the final product and to suggest or conduct alterations when needed		

ii. Newly emerging skills

The surveyed firms were asked about the new skills expected to become very important for this occupation. As reported in Table 67, the top four listed emerging skills are related to creativity and innovation, which might imply that firms foresee a more active engagement of their businesses in innovative practices in future. Customer services, multi-tasking, management skills, pattern making and sewing garment linings are foreseen to become important in the future by fewer firms.

TABLE 67: Newly emerging skills

Newly emerging skills	Number of firms
Adopting new machinery or methods	8
Introducing new models/designs	7
Being updated with current fashion trends and consumer demands	6
Introducing new fabrics	5
Customer services	3
Multi-tasking	3
Management skills	1
Pattern-making	1
Making garment linings	1
<i>Total number of observations</i>	35

Firms that expect skills emerging to be important were asked to state how they intend to respond to these skills. Around three-fourths of firms said they will use training to prepare employees for emerging skills, 21% will do so by employing new staff and the remaining 5% by internal reorganization. In addition, firms were asked to indicate if they have met difficulties in finding courses or trainers to teach emerging skills. According to responses, 45% of firms claimed to have such difficulties while this was not the case for almost half of the other firms²⁴. Similar findings are obtained in relation to recruiting staff to perform new skills.

iii. Drivers of change

Almost all of the surveyed textile firms (98%) indicated beginning innovative activities over the last two years. One-third of the firms reported to have changed their sales and marketing processes; 29% launched new or improved products and services; 21% improved their product/service provision processes and 14% introduced changes in the work organisation.

The interviewed firms reported that innovations in current products and services and processes for producing goods or supplying services were the drivers of changing the tasks performed by sewing machine operators (Table 68).

²⁴ Note that 7% of firms did not know if this is a problem.

TABLE 68: Impact of changes/innovations on the tasks performed by sewing machine operators

Impact of changes/innovations	Share
Goods or services	49%
Processes (for producing goods or supplying services)	44%
Work organisation	7%
Sales and marketing methods	0%
None	0%
<i>Total number of observations</i>	68

Only 7% of the firms reported to have engaged in changing/adapting their practices, products or services as a response to environmental awareness or regulations in the last two years, out of which almost 70% declared that the adjustments made had an impact on the tasks performed by sewing machine operators.

Eighty-one percent of surveyed firms stated that sewing machine operators are the most affected by changes in work tasks and skill requirements. Table 69 shows the occupations and tasks that firms perceive as undergoing the greatest changes in the sector.

TABLE 69: Occupations/tasks undergoing the greatest changes

Occupations/tasks	Share
Sewing machine operators	73%
Designers	17%
Sales/marketing specialists	10%
<i>Total number of observations</i>	30

General skills

- *Reading, writing, numeracy and computer use skills*

Employers were asked to identify the level of reading, writing, numeracy and computer skills that sewing machine operators should possess. Table 70 shows that the majority of firms reported that employees should have moderate reading, writing and numeracy skills. Further, whilst complex, occupations-specific reading and numeracy skills are reported to be important by around one-third of firms, such level was reported to be necessary for writing skills by only 16% of the surveyed firms.

Although firms share quite similar opinions on the current importance of reading, writing and numeracy skills, their perceptions on their future importance are different. Reading skills are expected to be increasingly more important in the future by slightly more than one-third of employers; writing skills by around one-fourth and 60% of firms have such expectation for numeracy skills. Firms have different opinions of the level of workers' preparedness acquired from the education system as well. While employers are quite satisfied with reading and writing skills from the education system (57% and 67%, respectively), only 21% of firms have same opinion about numeracy skills.

Almost 60% of firms stated that sewing machine operators do not need to be skilled in using computers and 31% stated that elementary skills are needed. Computer use is expected to increase in the future and notably, only 13% of employers are content with the graduates' computer skills.

TABLE 70: Level of necessary reading, writing, numeracy and computer skills

		Number	Share	Increasing future importance	Very well prepared and adequately prepared workers coming directly from school/university
Reading skills required of workers	No reading is required on this job	2	5%	35%	57%
	Reading simple instructions, guidelines, texts	26	62%		
	Reading occupation specific texts with some technical content	13	31%		
	Reading with understanding complex texts which are important for work	1	2%		
	Reading complex content from a wider context	0	0%		
Writing skills required of workers	No writing is required on this job	1	2%	22%	67%
	Writing simple texts, filling in forms, drafting short self-reports	34	81%		
	Writing texts which describe known occupation specific content	6	14%		
	Writing complex occupation specific texts	1	2%		
	Writing analyses, reports which assess the wider context of the business	0	0%		

Using and understanding numerical or statistical information	No need for this skill	2	5%	60%	21%
	Doing simple calculations (addition, division, multiplication)	26	62%		
	Calculation of averages, shares, percentages, etc.	13	31%		
	Knowing advanced calculus, statistical methods, etc.	1	2%		
	Developing models, performance indicators, complex calculations	0	0%		
Computer use	None	24	57%	44%	13%
	Elementary (e.g. data entry, sending and receiving e-mails, printing)	13	31%		
	Moderate (e.g. word processing or spread sheets)	4	10%		
	Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages)	1	2%		
	Advanced (e.g. software programming, managing computer networks)	0	0%		

- *Other general skills*

Teamwork skills, adapting to new equipment or materials, and skills to teach and instruct others are the most important competences for sewing machine operators, other than occupational specific skills (Table 71). For the majority of firms, these skills are expected to have increasingly more importance in the future.

Further, according to almost all employers, sewing machine operators should also be skilled in complex problem solving, able to perform their tasks independently (i.e. autonomy), able to ensure environmental protection, creative/innovative, and have manual dexterity skills. In terms of expectations of relevance of skills for the future, except autonomy, the majority of firms expect that these skills will be relevant in future.

Lastly, foreign language skills, communication, sales skills and skills to budget resources are also expected to become more important in the future. Concerning the ability to communicate in a foreign language, 43% of the surveyed firms reported that employees coming directly from school/university are adequately prepared, while the remaining 57% consider them unprepared.

TABLE 71: Level of importance of other general skills

Skill	Level of importance		
	Very or Fairly important	Not important or Does not apply	Increasing future importance
Solving complex problems	98%	2%	76%
Communicating in a foreign language	31%	69%	54%
Manual dexterity	95%	5%	100%
Communication	43%	57%	50%
Team work	100%	0%	98%
Sales	10%	90%	75%
Creativity/innovation	95%	5%	90%
Adapting to new equipment or materials	100%	0%	98%
Teaching/instructing	100%	0%	83%
Environment protection	95%	5%	90%
Autonomy	98%	2%	52%
Planning resources	36%	64%	56%

- *Working conditions and required physical preparedness of employees*

Sewing machine operators typically work in artificially lit and noisy indoor environments. According to the vast majority of employers, these workers need to be able to sit for long periods of the time and have coordinated hand-eye movement.

Recommendations

- In addition to the tasks listed under the ISCO-O8 classification, sewing machine operators in Kosovo also perform tasks directly related to the production of goods. This is important information, and taking into account the size of the sector, for this occupation it is probably better to invest in the provision of training programs rather than VET study programmes. Currently there are no study programmes or training programmes preparing sewing machine operators. The policy makers need to consider that this sector is growing and employs a large percentage of women;
- It is advisable for study programmes in the textile industry to incorporate modules and/or professional practices in enterprises for students to learn basic knowledge and attain some level of skills to operate sewing machines;
- Although some tasks envisaged by the ISCO 08 are not currently demanded by Kosovo firms, education and training curricula should incorporate components of those as well, or at least provide basic knowledge on their application;
- Sewing machine operators should be equipped with moderate reading, writing and numeracy skills. Currently, computer skills seem to be less relevant, but given that a large share of firms expect the sector will require new machinery and methods to follow fashion trends, it implies that computer skills will most likely become more important in the future, hence students/trainees need to have moderate computer skills;
- Sewing machine operators need to be creative, innovative and adaptable since the sector is very innovative, which has been reflected by types of goods and services provided and processes for

producing goods and services. Additionally, manual dexterity, communication, foreign language, sales and budgeting resources are relevant for sewing machine operators and need to be incorporated into curricula.

5.2.1 Tailors, dressmakers, furriers and hatters ²⁵

Forty-one interviewed firms that reported the occupation of tailors, dressmakers, furriers and hatters to be the predominant employ 213 workers', out of which 77% are women. The majority of firms are micro sized employing on average five employees.

Tailors, dressmakers, furriers and hatters represent 73% of the total employed workforce in the surveyed firms. Eighty-five percent of employees are women. Middle aged employees (30 to 49 years) and youth (under age of 30) account for the majority of the total workforce (nearly half and 44% respectively).

General schooling is the minimum required level of education for the occupation of tailors, dressmakers, furriers and hatters (Table 72). Vocational education is considered relevant by 22% of firms. Only 7% of firms indicated university level education to be important. One-fifth of firms stated that education level is not relevant; on-the-job training is important and on average is provided for the first six months of employment.

Almost 60% of the surveyed firms declared to regularly assess the skills and training needs of their employees; 2% perform this assessment only for selected groups of employees and the remaining 39% do not conduct such reviews at all. Although a significant share of firms stated that on-the-job training is the best method to prepare tailors, dressmakers, furriers and hatters, only 15% of firms reported employee trainings during 2015, from which 83% were on-the-job and 17% were other internal trainings.

Currently, four VET schools offer study programmes in tailoring and dressmaking, two in 'textile and clothing design' and two schools offer study programmes in confectionery. Two VTCs provide training courses for tailoring (which also include dressmaking). However, given that only 22% of firms responded that vocational education is relevant, it may be that they are not informed about what is offered, that there is low mobility of graduates and trainees (workers who prefer to work at their nearest location), or that graduates/trainees are not adequately prepared to meet the demands of firms in the sector.

TABLE 72: Level of education required by firms for this job

Level of education	Share
Primary school	0%
Secondary general	51%
Secondary vocational	22%
University	7%
Only on-the-job training (educational level not relevant)	20%
<i>Total number of observations</i>	41

²⁵ The interviewed firms offer tailoring and dressmaking services.

Finding adequately skilled employees for this occupation seems to be problematic; around one-third of firms with vacancies reported difficulties finding appropriately skilled employees.

i. Occupational-specific tasks and skills for tailors, dressmakers, furriers and hatters

Table 73 shows the most frequent tasks that employees need to accomplish.

This table compares employer reported tasks to those listed by the ISCO-08 classification. Interviewed firms indicated that employees perform tasks fitting for tailors and dressmakers but not yet those of furriers and hatters. Tailors and dressmakers in Kosovo also take client measurements, communicate with clients, iron and maintain sewing equipment. These additional tasks may be linked to the small size of firms in the sector, whereby firms cannot engage specialised workers for different tasks.

TABLE 73: Tasks of tailors, dressmakers, furriers and hatters based on employers' responses and ISCO-08 classification

Tasks	Share	ISCO-08
Selecting textile fabrics, leather or fur pelts matching the desired size, colour, texture, and quality of the garment; cutting to shape them to garment pattern	100%	√
Making overcoats, suits, skirts, shirts, blouses, corsetry and similar garments, often to clients' individual needs	100%	√
Taking client measurements	63%	
Communication with clients: understanding their requests and proposing styling ideas	17%	
Maintaining sewing machines	17%	
Ironing finished garments	17%	
Inspecting finished garments and ensuring they fit, and altering them if needed	12%	
Fitting, altering and repairing tailored clothing, dresses coats and other made-to-measure garments according to customers' requests	7%	√
Developing garment patterns	7%	√
Making garment style changes, such as tapering trouser legs, narrowing lapels, and adding or removing padding	5%	√

For the top three selected tasks, firms were also asked to specify the skills and knowledge that tailors, dressmakers, furriers and hatters need and where these skills are to be learned (at school or on-the-job) (Table 74). According to the majority of surveyed firms, skills are to be learned on-the-job.

TABLE 74: Most important skills/knowledge for top three selected tasks

Task	Knowledge/skills	Skills for this task to be learned:	
		At school	On-the-job
Selecting textile fabrics, leather or fur pelts matching the desired size, colour, texture, and quality of the garment; cutting to shape them to garment pattern	Knowledge of the characteristics of different types of fabrics and ability to choose appropriate ones for specific garments	27%	73%
	Ability to read garment patterns and drawings		
	Fashion design skills (e.g. combining colours)		
	Ability to draw garment sketches		
Making overcoats, suits, skirts, shirts, blouses, corsetry and similar garments, often to clients' individual needs	Knowledge of operating the sewing machine (laying out the parts and appropriately holding them during the sewing process, ensuring balanced seams, changing needles, setting the length of straight stitches, setting the length and width of zigzag stitches, using the seam guide, etc.)	14%	86%
	Ability to sew or perform related tasks by hand		
	Knowledge of the characteristics of different types of fabrics		
	Ability to read garment patterns and drawings		
Taking client measurements	Knowledge of taking measurements (considering also the client's body shape)	34%	66%
	Ability to draw sketches		
	Ability to calculate the amount of fabric needed for garments		
	Ability to provide styling suggestions to clients		

ii. Newly emerging skills

The surveyed firms were also asked to name the skills that they expect to become important for this job in future. Besides innovative skills such as fashion design/innovation in styles, and adopting new machinery and technology, the interviewed employers expect that knowledge of current fashion trends, consumer demands, increased professionalism and quality of work, will also become important in the future (Table 75). Skills in adopting new fabrics and other raw materials, pattern making, draping and decorating, are considered to be important skills for the future by a smaller number of firms.

TABLE 75: Newly emerging skills

Newly emerging skills	Number of firms
Fashion design/innovation in styles (dresses and wedding dresses mentioned in some instances)	25
Adopting new machinery and equipment	10
Being updated with current fashion trends and consumer demands	7
Increasing professionalism and quality of work	6
Adopting new fabrics and other raw materials	2
Pattern-making	2
Draping	2
Decorating	1

Concerning the methods of acquiring important skills for the future, 90% of firms stated that employee training was the preferred method for professional development, 7% by recruiting new staff and only 3% by internal firm reorganisation. This finding confirms that firms do not rely on education and training systems to prepare their workforce for business needs. For some of the cited emerging skills, like 'fashion design/innovation in styles', it seems that firms are either not aware of the existing VET schools that provide a specific study programme for fashion design or that the study programmes are not harmonised with the needs of firms for this emerging skill. Sixty-three percent of firms have difficulties finding courses or trainers for emerging skills and almost 60% of firms declared difficulties in recruiting staff to perform emerging skills. It would seem that on-the-job training remains the most important mechanism for professional development of new skills.

iii. Drivers of change

All interviewed firms reported innovative activities during the last two years. The majority of firms implemented innovations in launching new or considerably improving the existing products (37%) and advancing product/service provision processes (24%). The remaining firms stated to have changed/improved their sales and marketing methods and the work of the organisation (22% and 17%, respectively).

Firms that reported innovations/changes declared that changes introduced in product/service provision processes had the greatest impact on this occupation's tasks (Table 76).

TABLE 76: Impact of changes/innovations on the tasks performed by tailors, dressmakers, furriers and hatters

Impact of changes/innovations	Share
Processes (for producing goods or supplying services)	34%
Goods or services	27%
Work organisation	22%
Sales and marketing methods	17%
<i>Total number of observations</i>	<i>41</i>

More than half of the surveyed firms (54%) reported to have responded to environmental awareness or regulations by adapting their working practices, products or services, in the last two years and almost all of them (95%) stated that these adjustments impacted the tasks performed by tailors, dressmakers, furriers and hatters.

Additionally, 85% of firms reported that the occupation of tailors, dressmakers, furriers and hatters are currently the most affected by changes in working tasks and skill requirements, among all the occupations employed by their firms.

Finally, when asked to name the occupational group that is undergoing the greatest changes, two-fifths of the surveyed firms reported tailors (Table 77).

TABLE 77: Occupations/tasks undergoing the greatest changes

Occupations/tasks	Share
Tailors	40%
Sales/marketing specialists	30%
Designers	20%
Sewing machine operators	10%
<i>Total number of observations</i>	40

iv. General skills

- *Reading, writing, numeracy and computer skills*

Tailors, dressmakers, furriers and hatters are expected to have occupation-specific reading skills as reported by 44% of employers; others (37%) consider the ability to read simple instructions, guidelines and texts sufficient (Table 78). About 40% of firms require that employees in this occupation be able to write texts that describe occupation specific content. Additionally, the majority of firms foresee that reading and writing skills will have increasing future importance and many firms find that workers coming directly from school/university are well prepared.

There are similar findings for perceptions of the importance of numeracy and statistical skills; the ability to do simple calculations was considered important by 73% of firms. When asked about the future importance of these skills, Table 78 shows three-fourths of firms expect that numeracy and writing skills will be important. More than half of the firms (60%) consider that workers coming directly from school/university have satisfactory numerical and statistical skills.

According to nearly 70% of employers, tailors, dressmakers, furriers and hatters are not expected to be skilled in using computers, while elementary computer skills are reported to be necessary by 17% of them. Still, 69% of firms expect that computer skills will gain more importance in the future. Almost two-thirds of firms' consider workers coming directly from school/university to be adequately equipped with computer skills.

TABLE 78: Level of necessary reading, writing, numeracy and computer skills

		Number	Share	Increasing future importance	Very well prepared and adequately prepared workers coming directly from school/university
Reading skills required of workers	No reading is required on this job	5	12%	67%	54%
	Reading simple instructions, guidelines, texts	15	37%		
	Reading occupation specific texts with some technical content	18	44%		
	Reading with understanding complex texts which are important for work	3	7%		
	Reading complex content from a wider context	0	0%		
Writing skills required of workers	No writing is required on this job	5	12%	58%	48%
	Writing simple texts, filling in forms, drafting short self-reports	18	44%		
	Writing texts which describe known occupation specific content	16	39%		
	Writing complex occupation specific texts	2	5%		
	Writing analyses, reports which assess the wider context of the business	0	0%		
Using and understanding numerical or statistical information	No need for this skill	8	20%	73%	58%
	Doing simple calculations (addition, division, multiplication)	30	73%		
	Calculation of averages, shares, percentages, etc.	2	5%		
	Knowing advanced calculus, statistical methods, etc.	1	2%		
	Developing models, performance indicators, complex calculations	0	0%		

Computer use	None	28	68%	69%	63%
	Elementary (e.g. data entry, sending and receiving e-mails, printing)	7	17%		
	Moderate (e.g. word processing or spread sheets)	2	5%		
	Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages)	4	10%		
	Advanced (e.g. software programming, managing computer networks)	0	0%		

- *Other general skills*

According to the surveyed employers, there is a wide range of other general skills that tailors, dressmakers, furriers and hatters should possess. Currently, the most demanded skills are: problem-solving, creativity/innovation, adapting to new equipment or materials, environment protection, teamwork skills, manual dexterity, autonomy and teaching/instructing skills (Table 79). Further, the majority of firms consider that these skills will gain more importance in the future.

The ability to communicate in foreign languages, communication, sales skills and skills to allocate resources, although not considered currently relevant, are envisaged by a large share of interviewed firms to gain importance. With regards to foreign language skills, almost 60% of firms reported satisfaction with the employees' knowledge acquired in schools.

TABLE 79: Level of importance of other general skills

Skill	Level of importance		
	Very or Fairly important	Not important or Does not apply	Increasing future importance
Solving complex problems	100%	0%	76%
Communicating in a foreign language	37%	63%	65%
Manual dexterity	95%	5%	85%
Communication	46%	54%	90%
Team work	98%	2%	100%
Sales	51%	49%	90%
Creativity/innovation	100%	0%	98%
Adapting to new equipment or materials	100%	0%	98%
Teaching/instructing	78%	22%	91%
Environment protection	100%	0%	95%
Autonomy	90%	10%	73%
Planning resources	51%	49%	78%

- *Working conditions and required physical preparedness of employees*

Tailors dressmakers, furriers and hatters mostly work in noisy, artificially lit, internal environments characterized with changing temperatures.

Employees are expected to be able to sit for long durations and have good hand-eye coordination. The ability to stand, walk, kneel or lie down is deemed less necessary.

Recommendations

- The list of skills provided in Table 74 should serve as a framework for developing occupational standards for the occupation of tailors and dressmakers;
- The textile sector is dominated by small sized firms and tailors and dressmakers are required to perform more tasks than those described by the ISCO-08. VET institutions should consider these additional required tasks when designing curricula and training programs;
- Although currently employees in Kosovo are not performing tasks required of furriers and hatters, the curricula should include these tasks as well, since the demand may increase in the near future;
- MEST and MLSW should inform employers about educational programmes and reassess if these training sites need to be in more strategic locations i.e. closer to the biggest and greatest number of firms;
- Findings suggest that short training courses are needed for professional development of tailors and dressmakers; some areas of professional development include teaching new fashion trends, new fabrics, adaptation to new machinery, etc.;
- Tailors and dressmakers should become skilled in reading occupation-specific text, write text that describes their own occupation specific content, should be able to perform simple numerical calculations and possess basic computer skills;
- Curricula for this occupation should also ensure that graduates/trainees are equipped with a range of other general skills including: problem solving, creativity/innovation, adapting to new equipment or materials, environmental protection, teamwork skills, manual dexterity, autonomy and teaching/instructing skills. Given that tailors and dressmakers are expected to be knowledgeable of new styles, designs and materials, communication in foreign languages is very important and needs to be incorporated in VET study programmes.

5.3.1 Garment and related patternmakers and cutters

Twenty-two firms reported garment and related patternmakers and cutters to be a major occupation. Firms with this occupation employ 445 workers, half of which are women. Almost 70% of the firms are micro sized, 23% are small and only 9% are medium sized. The average number of employees per firm is 20.

Garment and related patternmakers and cutters represent almost one-third of the total surveyed firms' workforce. Around one-fourth of them are women. Nearly two-thirds of the workers in this occupation are middle aged (30 to 49 years), 31% are young (under 30) and the remaining 6% are aged 50 or over. Surveyed firms employ on average six garment or related patternmakers and cutters.

Almost two-thirds of employers stated that education is not relevant for this occupation; on-the-job training is used for teaching employees needed skills (Table 80). Secondary general schooling is thought to be relevant for 23% of firms, while university level education is required by 14% of firms. None of the interviewed firms, reported vocational education as relevant for this occupation, which is most likely due to the lack of VET study and training programmes designed specifically for this occupation. As noted in Section 5.2, two schools offer study programmes for confectionery, though it is unclear if these programmes specialize in the garment and related patternmakers and cutters industry.

The majority of firms (64%) reported to regularly assess the skills and training needs of their employees, 5% claimed to assess the training needs for selected groups and the remaining 32% stated performing no assessments. However, even though the majority of firms declared to assess skills and training needs of their employees, only two firms stated that employees have participated in training programs.

TABLE 80: Level of education required by firms for this job

Level of education	Share
Primary school	0%
Secondary general	23%
Secondary vocational	0%
University	14%
Only on-the-job training (educational level not relevant)	64%
<i>Total number of observations</i>	22

Almost three-fourths of the interviewed firms, with vacancies for garment and related patternmakers and cutters positions, reported difficulties in finding adequately skilled employees. To adequately prepare new hires, surveyed firms reported to provide around eight months of initial on-the-job training.

i. Occupational-specific tasks and skills for garment and related patternmakers and cutters

Table 81 provides information about the firms' required tasks of garment and related patternmakers and cutters.

The last two columns compare employer reported tasks to the ISCO-08 classification for garment and related patternmakers and cutters. The expected tasks of garment and related patternmakers and cutters in Kosovo and those foreseen by the ISCO-08 classification are quite different, which may reflect the type of products and services provided by Kosovo firms. For example, in a large share of interviewed firms, these employees are also engaged in sewing/assembling parts of leather or fabric to make garments or leather products, which is not considered a task for garment and related patternmakers and cutters by the ISCO-08. Additional tasks also include classifying raw materials and finishing leather products. On the other hand, some specific tasks listed by the ISCO-08, such as creating a "blueprint" or pattern pieces for particular apparel designs with the aid of a computer, are not identified as required tasks by these Kosovo firms.

TABLE 81: Tasks of garment and related patternmakers and cutters based on employers' responses and ISCO-08 classification

Tasks	Share	ISCO-08
Cutting fabric or leather based on a pattern to make parts for garments or leather products	68%	√
Sewing/assembling the parts of leather or fabric to make garments or leather products	68%	
Creating a master pattern for the product (but not specified with what equipment, tools, etc.)	50%	√
Classifying raw materials*	32%	
Finalizing leather products (includes dyeing, polishing, attaching zippers)	23%	
Embroidery	23%	
Calculating dimensions of patterns according to sizes, considering stretching of material	18%	√
Selecting the appropriate fabric for specific garments	18%	
Drawing details on outlined parts to indicate where parts are to be joined, as well as the position of pleats, pockets, buttonholes on garments, decorative stitching on shoe parts	9%	
Maintaining sewing machines (e.g. cleaning, changing needles, filling and inserting bobbins, threading)	9%	
Packing final products	5%	
Conducting quality control of the final products	5%	
Testing patterns by making and fitting sample garments	5%	√
Creating the "blueprint" or pattern pieces for particular apparel designs with the aid of a computer		√
Drawing details on outlined parts to indicate where parts are to be joined, as well as the positions of pleats, pockets, buttonholes on garments, decorative stitching on shoe parts or eyelets on canvas products, using computers or drafting instruments		√
Positioning templates or measuring materials to locate specified points of cuts or to obtain maximum yields and mark fabric accordingly		√
Laying out master patterns on fabric and cutting sample pattern		√
Placing patterns on top of layers of fabric and cutting fabric following patterns, using electric or manual knives, cutters or computer numerically controlled cutting devices		√
Trimming excess material or cutting threads off finished products, such as cutting loose ends of a finished products		√
Positioning leather on cutting bed of machine, maximizing usage according to skin grain, skin flaws and skin stretch		√
Performing pattern-making, marking and cutting tasks in the manufacture of other products such as soft furnishings and canvas goods		√

*Typically refers to quality and other characteristics of leather (e.g. colour)

Employers were also asked to identify necessary skills needed to adequately perform the top three reported tasks. Data in Table 82 show that employees need to have knowledge of operating leather/fabric cutting machines, possess manual cutting skills and be able to operate sewing machines. Concerning where the skills required to complete the top selected tasks are to be learned, at school or on-the-job, in line with the findings presented in Table 82, results indicate on-the-job training is the most common mechanism for teaching required skills. Notably, all firms stated that the skills needed to sew/assemble the parts of leather or fabric to make garments or leather products are expected to be learned on-the-job only, which again may indicate a lack of programmes teaching the skills necessary for this occupation.

TABLE 82: Most important skills/knowledge for top three selected tasks

Task	Skills	Skills for this task to be learned:	
		At school	On-the-job
Cutting fabric or leather based on a pattern to make parts for garments or leather products	Knowledge of operating leather/fabric cutting machines	8%	92%
	Manual cutting skills (using scissors)		
Sewing/assembling the parts of leather or fabric to make garments or leather products	Knowledge of operating the sewing machine (laying out the parts and appropriately holding them during the sewing process, ensuring balanced seams, changing needles, setting the length of straight stitches, setting the length and width of zigzag stitches, using the seam guide, etc.)	0%	100%
	Knowledge of operating leather sewing machines (e.g. types of stitches, choice of needle and thread based on leather thickness, machine settings, changing needles)		
	Knowledge of types and amounts of glue needed for leather products		
	Hand sewing skills		
Creating a master pattern for the product	Knowledge of the characteristics of different types of fabrics and ability to choose appropriate ones for specific garments	13%	87%
	Ability to interpret designer's concept/drawings		
	Drawing skills		
	Fashion design skills and ability to generate new models		

ii. Newly emerging skills

Surveyed firms regarded innovation as the emerging skill to be very important for the future of the occupation of garment and related patternmakers and cutters. More specifically, the majority of firms

expect that adopting new machinery and techniques, fashion design/innovation in styles (explicitly referring to shoes in some cases) and up-to-date knowledge of fashion trends and consumer demands will become important skills in the future (Table 83).

TABLE 83: Newly emerging skills

Newly emerging skills	Number of firms
Adopting new machinery and techniques	13
Fashion design/innovation in styles (shoes mentioned specifically in some cases)	11
Being up-to-date with fashion trends and consumer demands	8
Adopting new fabrics and other raw materials	2
Optimising raw material use	1
<i>Total number of observations</i>	35

Concerning attainment of new skills, almost 70% of firms train employees, 18% internally reorganise, and the remaining 14% hire new staff in response to emerging skills needs. Further, 86% of firms reported difficulties finding courses or trainers to teach the new skills and similarly, 82% reported difficulties recruiting staff able to perform these emerging skills. These findings are very relevant in terms of policy since they suggest that education and training systems are not supporting growth of the sector.

iii. Drivers of change

All the surveyed firms reported innovative activities in the last two years. Changes in goods or services were the predominant innovations reported by 82% of firms, followed by innovations in product/service provision processes (9%) and sales and marketing methods (9%).

Table 84 shows almost 60% of firms that reported innovations/changes declared that innovations in product/service provision processes changed the tasks performed by employees in this occupation.

TABLE 84: Impact of changes/innovations on the tasks performed by garment and related patternmakers and cutters

Impact of changes/innovations	Share
Processes (for producing goods or supplying services)	59%
Work organisation	23%
Goods or services	14%
Sales and marketing methods	5%
<i>Total number of observations</i>	22

When asked about actions in response to environmental awareness or regulations, 77% of firms reported to have changed/adapted their practices, products or services, and all of them claimed that these adjustments impacted the tasks performed by garment and related patternmakers and cutters.

Employers declared that among all the occupations employed by their firms, the work of garment and related patternmakers and cutters occupations/tasks are currently the most affected by changes in working tasks and skill requirements. Finally, the position of sales/marketing specialists is reported as the occupation undergoing the greatest changes (Table 85).

TABLE 85: Occupations/tasks undergoing the greatest changes

Occupations/tasks	Share
Sales/marketing specialists	48%
Designers/Stylists	26%
Garment and related patternmakers and cutters	17%
Sewing machine operators	4%
Raw material technologist	4%
<i>Total number of observations</i>	23

iv. General skills

- *Reading, writing, numeracy and computer skills*

Employers think that garment and related patternmakers and cutters need to have occupation-specific reading and writing skills (Table 86). Around three-fourths of firms indicated that skills to read occupation specific texts with some technical content are necessary and 82% stated that employees must be able to write texts that describe known occupation specific content.

When asked about the future importance of skills, almost all employers expect that reading and writing skills will have more importance in the future. Data reveal that a significant share of firms (75-80%) believe that the education system is not adequately preparing the workforce with reading and writing skills, hence the quality of education needs to improve further.

The majority of firms state that garment and related patternmakers and cutters should be able to do simple calculations (addition, division, multiplication). For almost all firms, numeracy and statistical skills are expected to become more important in the future, whereas only 20% of firms consider that workers coming directly from school/university have adequate numeracy and statistical skills.

Seventy-three percent of employers think that computer skills are not necessary to perform this job, followed by 14% that stated that employees should have some elementary computer skills. The perceived low relevance of employee computer skills reflect the types of tasks required whilst for the tasks foreseen under the ISCO-08 classification, computer skills are relevant. That more than half of the firms (67%) expect computer skills to become increasingly more important in the future may indicate that firms anticipate that employees in this occupation will be engaged in more advanced tasks. Data also show that half of the firms consider workers coming directly from school/university to be adequately prepared with these skills (Table 86).

TABLE 86: Level of necessary reading, writing, numeracy and computer skills

		Number	Share	Increasing future importance	Very well prepared and adequately prepared workers coming directly from school/university
Reading skills required of workers	No reading is required on this job	1	5%	95%	25%
	Reading simple instructions, guidelines, texts	3	14%		
	Reading occupation specific texts with some technical content	17	77%		
	Reading with understanding complex texts which are important for work	1	5%		
	Reading complex content from a wider context	0	0%		
Writing skills required of workers	No writing is required on this job	1	5%	90%	21%
	Writing simple texts, filling in forms, drafting short self-reports	2	9%		
	Writing texts which describe known occupation specific content	18	82%		
	Writing complex occupation specific texts	1	5%		
	Writing analyses, reports which assess the wider context of the business	0	0%		
Using and understanding numerical or statistical information	No need for this skill	1	5%	95%	20%
	Doing simple calculations (addition, division, multiplication)	18	86%		
	Calculation of averages, shares, percentages, etc.	2	10%		
	Knowing advanced calculus, statistical methods, etc.	0	0%		
	Developing models, performance indicators, complex calculations	1	5%		

Computer use	None	16	73%	67%	50%
	Elementary (e.g. data entry, sending and receiving e-mails, printing)	3	14%		
	Moderate (e.g. word processing or spread sheets)	1	5%		
	Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages)	2	9%		
	Advanced (e.g. software programming, managing computer networks)	0	0%		

- *Other general skills*

According to employers, Table 87 shows the other most important general skills that garment and related patternmakers and cutters should have: teamwork skills, creativity/innovation, adapting to new equipment or materials, autonomy, allocating resources, complex problem-solving and manual dexterity skills. These skills are all considered relevant and are expected to have more importance in the future by almost all firms.

Although currently not considered to have high importance, data show that garment and related patternmakers and cutters should also possess skills for teaching/instructing, sales, allocating resources, communication and communicating in a foreign language. Three-fourths of employers were satisfied with the foreign language skills of garment and related patternmakers and cutters coming directly from school/university.

When looking at the responses concerning future importance of skills (Table 87), data show that all these skills are expected to become more important in the future.

TABLE 87: Level of importance of other general skills

Skill	Level of importance		
	Very or Fairly important	Not important or Does not apply	Increasing future importance
Solving complex problems	95%	5%	95%
Communicating in a foreign language	27%	73%	57%
Manual dexterity	95%	5%	100%
Communication	27%	73%	100%
Team work	100%	0%	100%
Sales	32%	68%	88%
Creativity/innovation	100%	0%	100%
Adapting to new equipment or materials	100%	0%	95%
Teaching/instructing	36%	64	88%
Environment protection	100%	0%	95%
Autonomy	100%	0%	95%
Planning resources	32%	68%	100%

- *Working conditions and required physical preparedness of employees*

Noisy and artificially lit environments are the common working conditions for garment and related patternmakers and cutters. The two most required physical requirements, as reported by the surveyed firms, are coordinated hand-eye movement followed by the ability to sit for long durations of time.

Recommendations

- Occupational standards should be developed for the occupation of garment and related patternmakers and cutters and should ensure that the occupation specific skills demanded by employers listed in Table 83 are included in curricula;
- Findings from this survey show that garment and related patternmakers and cutters in Kosovo perform fewer tasks compared to a typical worker as outlined under the ISCO-08 classification. Therefore, findings from this survey should be discussed with employers and experts to clearly define tasks that employees in this occupation are expected to perform;
- Following further analysis and drafting of a study or training programme for the garment and related patternmakers and cutters occupation, if needed, occupational standards should be developed, which would not only limit tasks performed currently by employees in Kosovo but should also include tasks from the ISCO-08 classification which employers expect to be relevant for the future;
- Surveyed firms are quite innovative and expect that new machinery, new fashion and new styles will characterise their business development. However, training is a challenge as there are no training courses and no training experts. Therefore, education and training systems should provide programs that prepare the workforce to respond to and benefit from these changes;

- Garment and related patternmakers and cutters should possess occupation specific reading and writing skills, be able to perform basic numerical calculations and also possess computer skills. All these components should be incorporated in study and training programmes;
- These employees should also possess other general skills including: teamwork skills, creativity/innovation, the ability to adapt to new equipment or materials, autonomy, have the ability to allocate resources, have complex problem-solving and manual dexterity skills;
- Given the relevance of on-the-job training, garment and related patternmakers and cutters should also be equipped with knowledge and skills for training others and sharing knowledge with their peers;
- Finally, sales and marketing skills should be enhanced since firms reported these to have been subject to the greatest changes, amongst all occupations employed. An important related occupation to the sector is that of designers/stylists which is undergoing changes as well.





TOURISM

6

Continental climate, favourable geographical position and abundant natural and cultural resources give Kosovo potential for tourism development. Yet, driven primarily by imported models lacking contextualization with local conditions and capacities, tourism is still in its developmental phase with room to grow.²⁶ Cultural tourism, one of the core areas for tourism development, remains modestly utilized. The majority of businesses in this industry are micro businesses that offer accommodations and food services.

In 2015, the tourism sector accounted for 7.27% of the total businesses sector and 4.47% of total employment. Further, as Table 88 shows, the sector was characterized by an expanding trend during the period 2013 to 2015.

TABLE 88: Active businesses and employment of tourism firms (2013-2015)

NACE Rev.2 sector	Active businesses/no. of employees	2013	2014	2015
55, 56, 79, 91 Accommodation; Food and beverage service activities; Travel agency, tour operator reservation service and related activities; Libraries, archives, museums and other cultural activities	No. of active businessse	4,487	5,120	5,750
	<i>Participation in the total no. of active businesses</i>	7.35%	7.36%	7.27%
	No. of employees	9,185	10,117	11,220
	<i>Participation in the total no. of employees</i>	3.91%	4.20%	4.47%

Source: TAK, 2016

Women represent a small share of employees in the sector. Most of the workforce has a secondary education. The majority of businesses find that employees in this sector are mostly unqualified and skilled workers are costly to hire. A significantly high proportion of firms operating in this sector claim that there is a lack of vocational high school graduates available in this sector.

²⁶ Information presented in the general overview is based mainly on the sector profile for tourism, MTI, 2014.

6.1 Tourism survey findings

Basic firm data

The 114 firms interviewed in this sector are privately owned from which half are small sized, 44% are micro businesses and only 7 are medium sized. The average number of workers employed by the interviewed firms is 18.

Information about the most common occupations identified by the surveyed firms is included in the sub-sections.

6.1.1 Waiters

The occupation of waiter was reported to be the most common by 51 surveyed firms that employ 18 workers on average. Total employment in the interviewed firms is 930, out of which 18% are women.

Waiters represent 37% of the total individuals employed by the surveyed firms. The majority of waiters (80%) are young- under 30 years of age, and the remaining 20% are 30 to 49 years of age. Mostly men perform this occupation; only 5% of waiters are women. On average, interviewed firms employ seven waiters.

Secondary general schooling is reported to be the minimum required level of education for half of the surveyed firms whereas, secondary vocational schooling is considered to be not very relevant; only 8% of firms stated vocational schooling as the desired level of education for waiters (Table 89). Nearly 40% of firms stated that education is not relevant for waiters, but on-the-job training is the mechanism used for teaching waiters required skills. Currently there are two VET schools offering what seems to be a general study programme titled 'gastronomy assistant' and two VTCs providing a training programme specifically for waiters. It seems that the current programmes are not sufficient for training the employees in the sector and moreover firms are not even aware of the existing programmes (since very few noted VET education as required).

Almost 30% of employers declared to regularly assess skills and training needs of all their employees, while one-fourth stated to perform this assessment for some groups of employees. Further, around 30% reported to have employees that participated in internal trainings during 2015 from which around two-thirds were on-the-job trainings.

TABLE 89: Level of education required by firms for this job

Level of education	Share
Primary school	2%
Secondary general	51%
Secondary vocational	8%
University	2%
Only on-the-job training (educational level not relevant)	37%
<i>Total number of observations</i>	51

Finding adequately skilled waiters does not seem difficult since only 16% of the surveyed firms with vacancies for this position, reported difficulties. This is expected since the majority of firms require only secondary education and a two-month initial on-the-job training.

i. Occupational-specific tasks and skills for waiters

Taking orders, serving food, greeting customers, accepting payments and setting tables are the most frequent tasks that waiters are expected to perform according to surveyed firms (Table 90).

Table 90 also provides a comparison of tasks reported by employers and those listed under the ISCO-08 classification for waiters. A waiter in Kosovo is expected to undertake similar tasks as those defined under the ISCO-08 classification.

TABLE 90: Tasks of waiters based on employers' responses and ISCO-08 classification

Tasks	Share	ISCO-08
Taking orders for food and drinks and passing the order to kitchen or bar staff	78%	√
Serving food and beverages to clients at tables	78%	√
Greeting customers and presenting them with menus and beverage lists	75%	√
Presenting bills, accepting payment (and operating point of sales machines and cash registers)	61%	√
Setting tables with clean linen, cutlery, crockery and glassware	47%	√
Cleaning the tables, bar, etc.	10%	√
Clearing tables and returning dishes and cutlery to the kitchen	6%	√

Further, firms were asked to indicate required skills and knowledge for waiters to adequately perform the top five most frequently noted tasks (Table 91). To perform the first three tasks, the same skills are needed since these tasks are very common and typically performed by the same person. Hence, the skills identified by employers, and opinions about where they should be learned (formal schooling/training vs. on-the-job) are similar for all tasks.

Surveyed firms stated that besides basic mathematics skills for which education and on-the-job training are almost equally important, other skills are to be acquired on-the-job (Table 91).

TABLE 91: Most important skills/knowledge for top five selected tasks

Task	Knowledge/skills	Skills for this task to be learned:	
		At school	On-the-job
Taking orders for food and drinks and passing the order to kitchen or bar staff	Knowledge of the menu and ability to advise clients on food and beverage choices	11%	89%
	Ability to memorise orders		
Serving food and beverages to clients at tables	Knowledge of the menu and ability to advise clients on food and beverage choices		
	Ability to memorise orders		
Greeting customers and presenting them with menus and beverage lists	Knowledge of the menu and ability to advise clients on food and beverage choices		
	Ability to memorise orders		
Presenting bills, accepting payment (and operating point of sales machines and cash registers)	Basic mathematics	47%	53%
Setting tables with clean linen, cutlery, crockery and glassware	Knowledge of the proper arrangement of cutlery, crockery and glassware	13%	87%
	Decoration skills		

ii. Newly emerging skills

Nearly half the firms surveyed believe that skills for improving customer service and communication skills will become very important for waiters in the future (Table 92). Some firms also expect that in the future waiters should be able to communicate in foreign languages, especially in English, and should also have managerial and organisational skills. Other skills such as: guest housing, sales skills, ability to train others, event planning and skills in memorising the orders are regarded as emerging skills by a lower share of firms.

TABLE 92: Newly emerging skills

Newly emerging skills	Number of firms
Better customer service and communication	16
Knowledge of foreign languages (particularly English)	4
Management/organisational skills	4
Technology advancement and computer skills	3
Knowledge of food serving (e.g. placement of cutlery and glasses, etc.)	2
Guest hosting	1
Sales skills	1
Ability to train others	1
Conference and event planning	1
Memorising orders	1
<i>Total number of observations</i>	34

Firms that reported emerging skills were asked about their actions to improve their employees' skill sets. In line with findings on previously reported responses, 80% of firms reported staff training to be the method used, 12% reported internal reorganization, 6% by hiring new staff and the remaining firms stated using other methods. With regards to training, almost 40% of firms stated having difficulties finding courses or trainers for emerging skills and recruiting staff to perform these skills was reported to be problematic for 30% of firms. This could be because firms are less likely to require vocational education; the majority of firms stated that gymnasium graduates are desired. This could be because gymnasium graduates might be more easily trained than VET graduates of tourism related programmes.

iii. Drivers of change

Almost all surveyed firms (96%) declared to have introduced innovative activities in the last two years. Around 40% reported to have launched new or improved products and services and 30% changed/modified the work of the organisation. Changes in sales and marketing processes took place in 20% of firms, followed by 8% with innovations in product/service provision processes. The remaining 4% claimed to have no innovative activity.

When asked to identify which innovations had an impact on the tasks performed by waiters, half of firms reported that the innovations introduced in current products and services were the drivers of changing the waiters' tasks (Table 93).

TABLE 93: Impact of changes/innovations on the tasks performed by waiters

Impact of changes/innovations	Share
Goods or services	51%
Processes (for producing goods or supplying services)	14%
Sales and marketing methods	16%
Work organisation	18%
<i>Total number of observations</i>	49

Only two-fifths of firms employing waiters reported responding to environmental awareness of regulations in the last two years. Of those that reported to have adjusted their practices, products or services, 82% declared that these adjustments affected waiters' tasks.

Seventy-five percent of firms stated that of all the occupations employed, the occupation of waiter is currently the most affected by changes in working tasks and skill requirements. Further, when asked to name the occupational group that is undergoing the greatest changes, over half of firms identified cooks and a little less than half of firms reported waiters (Table 94).

TABLE 94: Occupations/tasks undergoing the greatest changes

Occupations/tasks	Share
Cooks	52%
Waiters	45%
Receptionist	2%
<i>Total number of observations</i>	44

iv. General skills

- *Reading, writing, numeracy and computer skills*

Surveyed firms were also asked to state the level of reading, writing, numeracy and computer skills that waiters should possess. Table 95 shows that more than 90% of employers stated that they require waiters to have modest reading and writing skills. More specifically, waiters are expected to be able to read simple instructions and write simple texts. When asked the future relevance of reading and writing skills, around one-fourth of firms expect reading and writing skills have increased importance in the future. Employers seem to be quite satisfied with the reading skills being taught in the education system (reported by almost 70% of firms) while only 45% had the same satisfaction with writing skills.

With regard to numerical and statistical skills, as reported in Table 95, the majority of firms require waiters to have basic mathematics skills, i.e. be able to conduct simple calculations such as: addition, division and multiplication (Table 95). According to the data, firms do not foresee that numerical and statistical skills will become more important in future. Similar to reading skills, the majority of firms

(75%) indicated that the education system is adequately preparing employees with these skills. Similarly, approximately the same proportion of firms (80%) stated that waiters should have elementary computer skills while only 20% require moderate knowledge of computers. Around one-third of firms expect that computer skills will become more relevant in the future and almost 80% of them were satisfied with the graduates' skills.

TABLE 95: Level of necessary reading, writing, numeracy and computer skills^v

		Number	Share	Increasing future importance	Very well prepared and adequately prepared workers coming directly from school/university
Reading skills required of workers	No reading is required on this job	0	0%	25%	69%
	Reading simple instructions, guidelines, texts	47	92%		
	Reading occupation specific texts with some technical content	4	8%		
	Reading with understanding complex texts which are important for work	0	0%		
	Reading complex content from a wider context	0	0%		
Writing skills required of workers	No writing is required on this job	0	0%	22%	45%
	Writing simple texts, filling in forms, drafting short self-reports	48	94%		
	Writing texts which describe known occupation specific content	2	4%		
	Writing complex occupation specific texts	1	2%		
	Writing analyses, reports which assess the wider context of the business	0	0%		

Using and understanding numerical or statistical information	No need for this skill	3	6%	33%	75%
	Doing simple calculations (addition, division, multiplication)	42	82%		
	Calculation of averages, shares, percentages, etc.	6	12%		
	Knowing advanced calculus, statistical methods, etc.	0	0%		
	Developing models, performance indicators, complex calculations	0	0%		
Computer use	None	1	2%	32%	78%
	Elementary (e.g. data entry, sending and receiving e-mails, printing)	40	78%		
	Moderate (e.g. word processing or spread sheets)	10	20%		
	Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages)	0	0%		
	Advanced (e.g. software programming, managing computer networks)	0	0%		

- *Other general skills*

According to all employers, waiters should also be able to teach and instruct others, have creative/innovative skills and contribute to environmental protection. These skills are also expected to have increasing future importance by the majority of firms (Table 96).

Complex problem solving skills, working in teams, adapting to new equipment or materials and performing tasks independently (i.e. autonomy) are also considered to be important currently and in the future by a significant share of the surveyed firms.

Besides manual dexterity, the skills considered to have equal and future relevance by almost all surveyed firms are skills to communicate in a foreign language, communication, sales and budgeting (Table 96).

TABLE 96: Level of importance of other general skills

Skill	Level of importance		
	Very or Fairly important	Not important or Does not apply	Increasing future importance
Solving complex problems	96%	4%	84%
Communicating in a foreign language	52%	48%	92%
Manual dexterity	53%	47%	53%
Communication	60%	40%	100%
Team work	96%	4%	96%
Sales	76%	24%	100%
Creativity/innovation	100%	0%	96%
Adapting to new equipment or materials	96%	4%	92%
Teaching/instructing	100%	0%	88%
Environment protection	100%	0%	100%
Autonomy	92%	8%	87%
Planning resources	72%	28%	95%

Regarding skills to communicate in foreign languages, almost one-third of the surveyed firms reported that employees coming directly from school/university are very or adequately prepared.

- *Working conditions and required physical preparedness of employees*

Two-third of firms reported that waiters usually work inside premises. They mainly work in artificially lit environments and are exposed to changing temperatures.

All firms reported that waiters must to be able to stand, walk, kneel or lie down. Good hand-eye coordination and physical strength are considered less necessary.

Recommendations

- The tourism sector in Kosovo is large but there are only a limited number of VET providers, both formal and informal. This implies that both MEST and the MLSW should reconsider the training programmes currently offered. It may be that training programs would suffice for training skilled waiters rather than offering 3 years VET study programmes;
- Occupational standards should be developed for the waiter occupation and should include occupation specific skills demanded by employers (listed in Table 91) are covered within curricula;
- Lacking occupation specific study and training programmes for waiters, firms claim that nearly all skills are to be learned on-the-job. The development of adequate curricula for waiters would save employers initial training costs;
- Given that waiters are predominantly men, the promotion of this occupation as relevant for women also seems necessary;

- Any curricula and training program should ensure that waiters become skilled in reading simple instructions, guidelines and texts; be able to write simple texts, complete forms and draft short self-reports; be able to conduct simple calculations (additions, division, multiplication), be able to calculate averages, shares, percentages, etc. and ideally possess moderate computer skills (WORD and spread sheet);
- A wide range of general skills are considered as relevant for waiters, the most important being communication skills, knowledge of foreign languages; ability to train and instruct; sales skills, etc. Curricula should to include training modules for enhancing these skills.

6.2.1 Cooks

The 46 interviewed firms reported cooks as the prevailing occupation. The total number of employees in the surveyed firms is 818, of which 22% are women. On average, firms employ 18 workers.

Cooks represent one-fourth of the total workforce employed by the surveyed firms, of which 14% are women. More than half of the cooks are between 30 to 49 years of age, 43% are under 30 year of age and the remaining 2% are 50 years of age or above. The average number of cooks employed by the surveyed firms is 5.

Almost half of the surveyed firms report that secondary general schooling (gymnasium) is the most common level of required education for cooks. About one third of the firms stated that secondary vocational education is required and about 25% of firms responded that education is not necessary for cooks but on-the-job training prepares cooks for the job (Table 97). Currently there are three VET schools (one with a study programme for 'cooks' and two titled 'kitchen personnel' with only a few enrolled students) and five VTCs that offer study/training programmes for cooks. Although this survey does not indicate whether interviewed firms employ graduates or trainees from these providers, it may be assumed that this is the case since they have reported vocational education as a required level of education.

Concerning skills requirements, almost three-fourths of employers reported to assess employee skills and training needs. Around half of the firms assess all employees regularly and 28% for selected groups of employees. Almost 30% of the employers stated that their employees have participated in trainings during 2015, of which about 80% were on-the-job trainings and the rest were other trainings.

TABLE 97: Level of education required by firms for this job

Level of education	Share
Primary school	0%
Secondary general	46%
Secondary vocational	30%
University	0%
Only on-the-job training (educational level not relevant)	24%
<i>Total number of observations</i>	46

Of those firms that have vacancies for cooks, 22% reported finding adequately skilled cooks was difficult. According to the surveyed firms, cooks undergo on average, an initial four months on-the-job training.

i. Occupational-specific tasks and skills for cooks

The main tasks that cooks are expected to perform, according to employers, are: a) planning meals, preparing and cooking foodstuffs; b) regulating the temperature of ovens, grills, roasters and other cooking equipment; inspecting and cleaning the kitchen, kitchen equipment, serving areas, etc. to ensure safe and sanitary food handling practices; and c) checking the quality of food and modifying accordingly (Table 98).

Table 98 compares tasks as reported by employers in Kosovo and those listed under the ISCO-08 classification for cooks. A cook in Kosovo performs all the tasks as a cook described by the ISCO-08 classification. Additionally, 24% of firms responded that a cook should also serve the clients, which actually is usually the waiter's task.

TABLE 98: Tasks of cooks based on employers' responses and ISCO-08 classification

Tasks	Share	ISCO-08
Planning meals, preparing and cooking foodstuffs	100%	√
Regulating the temperature of ovens, grills, roasters and other cooking equipment; inspecting and cleaning the kitchen, kitchen equipment, serving areas, etc. to ensure safe and sanitary food handling practices	61%	√
Checking the quality of food and modifying accordingly as needed	48%	√
Weighing, measuring and mixing ingredients according to recipes and personal judgement; creating/introducing new recipes	26%	√
Serving food	24%	
Planning, supervising and coordinating the work of kitchen helpers	17%	√
Operating large-volume cooking equipment such as grills, deep fryers, or griddles	4%	√

Table 99 shows the skills firms report are needed to perform the most common tasks. Knowledge of using kitchen equipment (e.g. knives, grills, ovens, roasters, deep fryers etc.) and knowledge of safe and sanitary food handling practices are thought to be important for accomplishing more than one task.

In addition, when asked if the required skills to perform the top selected tasks are to be learned at school or on-the-job, the data indicate employers consider the skills to be acquired predominantly through on-the-job training.

TABLE 99: Most important skills/knowledge for top three selected tasks

Task	Skills	Skills for this task to be learned:	
		At school	On-the-job
Planning meals, preparing and cooking foodstuffs	Ability to prepare food that is listed on the menu	6%	94%
	Ability to generate new recipes		
	Knowledge of cooking, roasting, grilling, baking (appropriate techniques, time and temperature)		
	Knowledge of meal preparation (e.g. cleaning and chopping ingredients, dough preparation, etc.)		
	Ability to serve/decorate food creatively		
	Knowledge of ingredient mixing		
	Knowledge of safe and sanitary food handling practices		
	Managing stocks of ingredients		
Regulating the temperature of ovens, grills, roasters and other cooking equipment; inspecting and cleaning the kitchen, kitchen equipment, serving areas, etc. to ensure safe and sanitary food handling practices	Knowledge of using kitchen equipment (e.g. knives, grills, ovens, roasters, deep fryers etc.)	13%	87%
	Knowledge of safe and sanitary food handling practices		
Checking the quality of food and modifying accordingly when needed	Knowledge of the quantity and quality of food that is served	9%	91%
	Ability to modify the prepared food if problems are identified		

ii. Newly emerging skills

Firms were also asked to list emerging skills for cooks that they consider important for the future development of their business. Almost two-thirds of firms reported testing, developing and introducing new recipes/products, followed by 18% that identified the ability to use new equipment or techniques as important. The other skills listed in Table 100 were regarded as emerging skills by fewer firms.

TABLE 100: Newly emerging skills

Newly emerging skills	Number of firms
Testing, developing and introducing new recipes/products*	35
Ability to use new equipment or techniques	10
Developing new food serving/decoration ideas	4
Computer skills	2
Application of hygiene and food safety standards	1
Developing new recipes on demand	1
Foreign languages	1
Management skills	1
<i>Total number of observations</i>	55

* Some firms mentioned traditional foods, international specialities, barbeque, appetizers and pizza making as emerging skills.

Of the firms that reported emerging skills, 83% claimed to respond to emerging skills needs by training their employees, 11% by internal reorganisation and 7% by hiring new staff. Almost two-thirds of the interviewed firms reported to have difficulties finding courses or trainers, which may explain the dominant application of on-the-job training. When asked if firms faced difficulties in recruiting staff for emerging skills, 41% stated that they did.

iii. Drivers of change

Almost all the surveyed firms (98%) reported innovative activities in the last two years. Launching of new or significant improvement of current products or services (39% of firms), innovations in product/service provision and changes in sales and marketing processes (each reported by 22% of firms) were the predominant innovations reported. The remaining 15% reported reorganisation of work and only 2% of firms stated no innovation.

Further, almost two-thirds of the firms that reported innovations/changes, declared that innovations in product/service provision and launching of new or significant improvement of current products or services, were the drivers of change for the tasks performed by cooks (Table 101).

TABLE 101: Impact of changes/innovations on the tasks performed by cooks

Impact of changes/innovations	Share
Processes (for producing goods or supplying services)	33%
Goods or services	31%
Work organisation	20%
Sales and marketing methods	16%
None	0%
<i>Total number of observations</i>	45

When asked about actions in response to environmental awareness or regulations, nearly half of the firms reported to have changed/adapted their practices, products or services, and almost 90% declared that these adjustments had an impact on the tasks performed by cooks.

Further, 76% of employers declared that of all the occupations employed by their firms, the work of cooks is the currently the most affected by changes in working tasks and skill requirements. This can be confirmed also by the fact that the occupation of waiters was the second most reported occupational group that is undergoing the greatest changes (Table 102).

TABLE 102: Occupations/tasks undergoing the greatest changes

Occupations/tasks	Share
Waiters	57%
Cooks	33%
Receptionists	5%
Marketing specialists	2%
Managers	2%
<i>Total number of observations</i>	42

iv. General skills

- *Reading, writing, numeracy and computer skills*

Firms were also asked to determine the level of reading, writing, numeracy and computer skills that cooks need to possess. Table 103 shows, according to almost 70% of employers, cooks need to have modest reading and writing skills. Further, when asked about the future relevance of these skills, around half of firms expect that reading skills will become more important in the future and those expecting the same for writing skills is 60%. Around half of employers reported satisfaction with reading and writing skills learned in school.

There are similar findings for numeracy and statistical skills in which the ability to do simple calculations was considered to be important for 76% of firms, followed by 13% of firms that consider knowledge on calculating averages, shares, percentages, etc., necessary. Table 103 shows skills that firms think will have future importance. One-third of employers expect that numeracy and writing skills will have more importance in the future importance and one-fourth of firms think that workers directly out of school/university have adequate numeracy and statistical skills.

Almost 60% of firms stated that cooks are not expected to have computer skills yet elementary knowledge of computers is reported as necessary by 37% of the firms. One-third of firms expect that computer skills will gain importance in the future and 67% of firms regard workers coming directly out of school/university as equipped with adequate computer use skills.

TABLE 103: Level of necessary reading, writing, numeracy and computer skills

		Number	Share	Increasing future importance	Very well prepared and adequately prepared workers coming directly from school/university
Reading skills required of workers	No reading is required on this job	3	7%	47%	55%
	Reading simple instructions, guidelines, texts	29	63%		
	Reading occupation specific texts with some technical content	13	28%		
	Reading with understanding complex texts which are important for work	1	2%		
	Reading complex content from a wider context	0	0%		
Writing skills required of workers	No writing is required on this job	11	24%	60%	43%
	Writing simple texts, filling in forms, drafting short self-reports	31	67%		
	Writing texts which describe known occupation specific content	4	9%		
	Writing complex occupation specific texts	0	0%		
	Writing analyses, reports which assess the wider context of the business	0	0%		

Using and understanding numerical or statistical information	No need for this skill	5	11%	33%	25%
	Doing simple calculations (addition, division, multiplication)	35	76%		
	Calculation of averages, shares, percentages, etc.	6	13%		
	Knowing advanced calculus, statistical methods, etc.	0	0%		
	Developing models, performance indicators, complex calculations	0	0%		
Computer use	None	27	59%	32%	67%
	Elementary (e.g. data entry, sending and receiving e-mails, printing)	17	37%		
	Moderate (e.g. word processing or spread sheets)	2	4%		
	Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages)	0	0%		
	Advanced (e.g. software programming, managing computer networks)	0	0%		

- *Other general skills*

According to the majority of surveyed employers, teamwork skills, adapting to new equipment or materials, autonomy and creativity/innovation are the additional general skills that cooks need (Table 104). A small proportion of firms expect that these skills will have more importance in the future. Additionally, cooks should be able to teach and instruct others, have environmental protection skills, manual dexterity and complex-problem solving skills. Except manual dexterity skills, which are considered to have similar future importance, the other skills, though currently considered important by many firms, are expected to become more important in the future by a smaller percentage of firms.

Interestingly, allocating resources is currently not considered to be an important skill, though an increased importance is foreseen for the future. A similar observation may be noted for sales skills. Almost 30% of firms were satisfied with the foreign language skills of cooks coming directly from school/university.

TABLE 104: Level of importance of other general skills

Skill	Level of importance		
	Very or Fairly important	Not important or Does not apply	Increasing future importance
Solving complex problems	78%	22%	59%
Communicating in a foreign language	57%	43%	55%
Manual dexterity	76%	24%	73%
Communication	15%	85%	15%
Team work	98%	87%	65%
Sales	43%	57%	67%
Creativity/innovation	98%	2%	78%
Adapting to new equipment or materials	96%	4%	78%
Teaching/instructing	89%	11%	64%
Environment protection	87%	13%	71%
Autonomy	98%	2%	67%
Planning resources	37%	63%	50%

- *Working conditions and required physical preparedness of employees*

Almost all the surveyed firms (98%) reported that cooks usually work inside premises while, the remaining 2% declared a combination of on and off premises. Artificially lit and hot environments are the prevalent working conditions for this job.

The ability of cooks to stand, walk, kneel or lie down was cited as important by 96% of the surveyed firms, followed by coordinated hand-eye movement (35% of firms) and physical strength (7% of firms).

Recommendations

- Occupational standards should be developed for the occupation of cooks, which should ensure that the occupation specific skills listed in Table 99 are covered within curricula;
- On average, newly hired employees undergo a four-month training, which is costly for companies. Conversely, MEST administrative data show there are a limited number of students enrolled in cooking related study programmes. Therefore, MEST should analyse course offerings; proximity to main tourism destinations; reasons for low enrolment; revise curricula and locate programmes in the most demanded locations;
- Given the limited number of schools providing relevant VET study programmes, the most demanded level of education by firms was secondary general level of education. This may be linked to the limited VET providers for the sector or firms' dissatisfaction with the quality of graduates. Whichever it true, it suggests a need for MEST and MLSW to evaluate the demand, their course offerings for the sector and harmonise their curricula with firms' demands;

- The tourism sector is undergoing changes, it is a sector that needs to meet the needs of different nationalities and adjust to changing consumer tastes. Hence, cooks become flexible and become skilled in testing, developing and introducing new recipes/products to meet the diverse demand from consumers. Of great relevance is also for cooks to be skilled in learning and applying new processes for producing goods and offering services;
- A cook in Kosovo performs nearly identical tasks as a cook working in other countries; therefore, when developing curricula good examples from well-known VET providers could be easily adopted;
- Besides occupation specific skills, cooks should be skilled in reading occupation specific texts with technical components; be able to write simple texts, fill in forms, drafting short self-reports; perform simple to moderate numerical calculations and possess elementary computer skills;
- Any curricula and training should also prepare cooks with a large range of other general skills such as: team working skills; creativity and innovation; adapting to new equipment or materials; autonomy; teaching/instructing, etc. Moreover, in the future, cooks should also become competent in allocating resources and foreign languages.

WOOD



D PROCESSING

7

Wood processing represents a promising sector that experienced increasing trends in both the number of active businesses and employed workforce during the period 2013-2015 (Table 105).

TABLE 105: Active businesses and employment of wood processing firms (2013-2015)

NACE Rev.2 sector	Active businesses/no. of employees	2013	2014	2015
16, 31 Manufacturer of wood and of products of wood and cork, except furniture; manufacturer of articles of straw and plaiting material and Manufacturer of wood products	No. of active businesses	1,010	1,103	1,242
	<i>Participation in the total no. of active businesses</i>	1.65%	1.59%	1.57%
	No. of employees	2,567	2,688	3,021
	<i>Participation in the total no. of employees</i>	1.09%	1.11%	1.20%

Source: TAK, 2016

This sector is dominated by individually owned micro enterprises that mostly sell their products in the domestic market. Exports in this sector are low and the primary exported products are windows and doors, kitchens and furniture.²⁷

Compared to men, women are less represented in the workforce. Additionally, secondary education is the highest level of education for the majority of employees. Firms consider lack of a skilled workforce, shortage of university graduates, and lack of employees with professional, sector related education as significant obstacles for business development.

7.1 Wood processing survey results

Basic firm data

The average number of workers employed by the 99 surveyed firms is 15. All the firms are privately owned from which slightly more than half (52%) are micro enterprises, 44% are small and four are medium sized. Almost 70% of firms sell their products within the region, 19% Kosovo wide, 9% export to European Union countries and 3% to other countries.

The following section provides information about cabinet-makers and related workers, which is the most frequent occupation reported by the surveyed wood processing firms.

7.1.1 Cabinet-makers and related workers

Seventy-six firms with an average number of 16 workers were interviewed. Although 80% of firms stated to regularly assess the skills and training needs of their employees', only 9% of them reported providing training for employees during 2015.

²⁷ Information presented in the general overview is drafted based mainly on the sector profile of wood processing industry, MTI, 2014.

Cabinet-makers and related workers represent 53% of the total employed individuals in the surveyed firms. Around 60% of employees are under 30 years of age, 38% are 30 to 49 years of age and only 5% are over 50 years of age. The majority of employees in this sub-sector are men; only 6% of the workers are women. On average interviewed firms employ eight workers.

Vocational education is reported as the required level and type of education for 45% of firms whereas 26% stated that they require gymnasium level of education (Table 106). On-the-job training was reported to be useful in preparing the workforce for 25% of interviewed firms whilst university education is less relevant since only 4% of firms stated this as the desired level of education for the cabinet-makers and related workers (Table 106).

TABLE 106: Level of education required by firms for this job

Level of education	Share
Primary school	0%
Secondary general	26%
Secondary vocational	45%
University	4%
Only on-the-job training (educational level not relevant)	25%
<i>Total number of observations</i>	76

Currently, in Kosovo, there are two vocational schools, five vocational training centres (VTC) and one faculty offering studies and trainings in wood related subjects. According to a recent commissioned study (SD&C, 2016) the existing skill providers do not prepare a sufficient labour supply for the sector and are not located in regions where wood processing firms are located. The study also concluded that VET schools are of poor quality, which also hinders sector development. Data also showed that a limited number of students and trainees enrol in VET schools and VTCs run by the MLSW. Notably, there is no verified occupational standard for any of the wood related occupations.

Finding skilled cabinet-makers and related workers was considered to be a problem for almost three-fifths of firms with current vacancies for this position. As a measure to overcome this problem, surveyed firms provide a six-month on-the-job training for new employees.

i. Occupational-specific tasks and skills for cabinet-makers and related workers

All the interviewed firms declared that cabinet-makers and related workers are expected to be able to operate machines such as power saws, ply-wood presses, veneer cutting and drilling, edge-banding etc. Other required tasks and a comparison of tasks as reported by employers in Kosovo to those listed under the ISCO-08 classification are presented in Table 107.

With regards to the latter, cabinet-makers and related workers in Kosovo firms perform a wider range of tasks compared to those prescribed by the ISCO-08. This may be a result of the smaller size of firms in Kosovo, which might require their employees to perform more tasks than the occupation specific ones. For example, cabinet-makers and related workers in Kosovo firms are also required to be skilled in calibrating, inspecting and maintaining machinery. These workers are also expected to design

products. This requires VET schools and training centres providing programs for cabinet-makers to also have processing machinery and offer design modules to ensure that graduates and trainees meet the demands of the sector.

TABLE 107: Tasks of cabinet makers and related workers based on employers' responses and ISCO-08 classification

Tasks	Share	ISCO-08
Operating machines (such as power saws, ply-wood presses, veneer cutting and drilling, edge-banding etc.)	100%	√
Fitting parts and subassemblies together to form complete units using glue and clamps, and reinforcing joins using nails, screws or other fasteners	58%	√
Selecting the proper wood/raw material for different purposes and preparing it (e.g. cleaning, transporting)	49%	
Calibrating, inspecting and maintaining machinery	22%	
Designing products	21%	
Preparing specifications of articles to be made	21%	√
Finishing surfaces of wooden articles or furniture	13%	√
Managing and monitoring quality of projects (studying plans, checking dimensions, quality and fit of pieces to ensure adherence to specification, etc.)	12%	√
Decorating furniture and fixtures by inlaying wood, applying veneer and carving designs	4%	√
Repairing various wooden articles	1%	√

In addition, firms were asked to name the necessary skills and knowledge that employees need to have to successfully perform the top four reported tasks (Table 108). As data show, reading, analysing and drawing project and product designs are the most important skills in accomplishing the first, second and fourth task. For the task of selecting the proper wood/raw material for different purposes and preparing it (e.g. cleaning, transporting), firms reported knowledge of different types of wood and raw materials and their properties (e.g. colour, shape, moisture, etc.) as the leading required skill. Concerning where the required skills to perform the top selected tasks are to be learned, at school or on-the-job, surveyed firms reported that education and on-the-job training are almost equally important for preparing employees for the first and second task. However, for the last two tasks, the majority of firms (85% and 91% respectively) reported that skills are to be learned mainly through on-the-job training (Table 108).

TABLE 108: Most important skills/knowledge for top four selected tasks

Task	Skills	Skills for this task to be learned:	
		At school	On-the-job
Operating machines (such as power saws, ply-wood presses, veneer cutting and drilling, edge-banding etc.)	Ability to read and analyse project designs	42%	58%
	Calibrating, adjusting and using machinery (particularly CNC machinery)		
	Ability to optimise raw material		
	Ability to choose the appropriate machinery/equipment for each task		
	Knowledge of properties of different types of wood		
	Ability to choose the appropriate raw material for each product		
Basic inspection and machinery maintenance skills (e.g. changing and sharpening blades)			
Fitting parts and subassemblies together to form complete units using glue and clamps, and reinforcing joints using nails, screws or other fasteners	Ability to read product designs/specifications/plans	44%	56%
	Knowledge of assembly techniques and ability to choose the appropriate one (e.g. whether to use nails or adhesives; the amount of adhesive to use, etc.)		
Selecting the proper wood/raw material for different purposes and preparing it (e.g. cleaning, transporting)	Knowledge of different types of wood and raw materials and their properties (e.g. colour, shape, moisture, etc.)	15%	85%
	Ability to choose the appropriate type of wood/raw materials for specific products/purposes		
	Preparation of the raw material (e.g. cleaning, transferring using a forklift)		
	Ability to generate new ideas for raw materials		
Calibrating, inspecting and maintaining machinery	Ability to draw product designs/specifications (including for customised products, e.g. fitted kitchens)	9%	91%
	Knowledge of design		
	Ability to draw product designs/specifications (including for customised products, e.g. fitted kitchens)		
	Knowledge of design		

ii. Newly emerging skills

Almost half of the surveyed firms reported that skills for adapting to new technology/operating new advanced machinery or equipment and programming machinery will become very important in the future for cabinet-makers and related workers (Table 109). Along with skills related to machinery

operation, firms consider that skills related to innovation and design will also become important for the future work of cabinet-makers and related workers. A lower proportion of firms consider skills for examining wood and raw material, fitting (assembly) and machinery maintenance to be emerging skills.

TABLE 109: Newly emerging skills

Newly emerging skills	Number of firms
Adapting to new technology/operating new advanced machinery or equipment	31
Programming machinery	18
Designing product (using program such as AutoCAD, Kitchen draw, 3ds max)	9
Information technology skills, operating computerised machinery	5
Developing new products/product ideas	10
Wood painting/finishing (e.g. mixing ingredients to get the right shade)	6
Adapting to new materials	4
Proposing new techniques/working processes to increase efficiency	5
Following market trends and bringing new ideas	5
Examining wood and raw material	4
Fitting (assembly)	1
Machinery maintenance	1
<i>Total number of observations</i>	99

Firms that reported emerging skills were surveyed about actions taken to enhance employees' skills. Almost three-fourths of firms declared achieving this by training their employees, 14% through recruiting new staff, and only 8% through internal reorganisation. Off-the-job training does not seem to be an option since the majority of firms (84%) reported difficulties finding courses or trainers to teach the emerging skills²⁸. Another major difficulty declared by almost 90% of the firms that reported emerging skills is the recruitment of staff to perform these new skills.

iii. Drivers of change

Almost all wood processing firms (92%) declared to have been engaged in innovative activities in the last two years. Two-fifths reported to have innovations in product/service provision processes and one-fourth launched new or improved products and services. Changes in sales and marketing processes took place in 21% of firms followed by 7% that made innovations in the work organisation. The remaining 8% declared to not have engaged in any innovative activity.

Half of the interviewed firms reported that the innovations introduced in processes for producing goods or supplying services were the drivers of changing the tasks performed by cabinet-makers and related workers (Table 110).

²⁸ The remaining 4% reported that they do not know if this is a problem.

TABLE 110: Impact of changes/innovations on the tasks performed by cabinet makers and related workers

Impact of changes/innovations	Share
Processes (for producing goods or supplying services)	51%
Work organisation	31%
Sales and marketing methods	10%
Goods or services	7%
None	0%
<i>Total number of observations</i>	68

Almost 80% of the firms reported to have engaged in changing/adapting their practices, products or services in response to environmental awareness or regulations in the last two years, and almost all of them (98%) declared that the adjustments had an impact on the tasks performed by cabinet-makers and related workers.

Seventy-five percent of surveyed firms stated changes in tasks affect the occupation of cabinet-makers the most. Further, when asked to name the occupational group that is undergoing the greatest changes, 26% of firms reported production without providing any additional specification about which production was referenced (Table 111). Sales/marketing (18%), interior designer (14%) and designer occupations (12%) were reported as the occupations/tasks undergoing the next greatest amount of changes.

TABLE 111: Occupations/tasks undergoing the greatest changes

Occupations/tasks	Share
"Production" (not specified)	26%
Sales/marketing	18%
Interior designer	14%
Designer	12%
Coating	4%
R&D	4%
Machine operators	4%
Carpenters	4%
Cabinet-makers	4%
Assemblers	4%
Administration/management	4%
Architect	2%
<i>Total number of observations</i>	57

iv. General skills

- *Reading, writing, numeracy and computer skills*

Surveyed firms were asked to determine the level of reading, writing, numeracy and computer skills required of cabinet-makers and related workers. Data presented in Table 112 show that nearly 70% of employers stated that cabinet-makers and related workers are expected to have occupation specific reading and writing skills (i.e. reading occupation specific texts with some technical content and writing texts which describe known occupation specific content). Additionally, although firms expect that reading and writing skills will have more future importance, over 60% of them indicated that the education system is not adequately preparing employees for these skills.

Regarding numerical and statistical skills, more than half of the firms require cabinet makers and related workers be able to perform simple calculations and about one-third require slightly more advanced numeracy skills such as calculating averages, shares, percentages, etc. Similar to reading and writing skills, the majority of firms expect numeracy skills to become more important in the future (69%), yet two-thirds of them are not satisfied with the level of these skills that workers coming directly out of school/university possess.

Firms share different opinions about required computer skills (Table 112). Nearly 40% of them stated that employees must have complex computer skills (e.g. analysing information or design, including computer aided design; using statistical analysis packages). Elementary and moderate skills were reported as relevant for 34% of firms and advanced computer skills are demanded by only 1%. About 20% of the firms stated that computer skills are unnecessary for cabinet-makers. The importance of computer skills is expected to increase in the future. Yet, only two-fifths of firms believe that the education system is adequately preparing employees with these skills.

TABLE 112: Level of necessary reading, writing, numeracy and computer skills

		Number	Share	Increasing future importance	Very well prepared and adequately prepared workers coming directly from school/university
Reading skills required of workers	No reading is required on this job	14	18%	76%	38%
	Reading simple instructions, guidelines, texts	7	9%		
	Reading occupation specific texts with some technical content	49	64%		
	Reading with understanding complex texts which are important for work	6	8%		
	Reading complex content from a wider context	0	0%		
Writing skills required of workers	No writing is required on this job	18	24%	69%	35%
	Writing simple texts, filling in forms, drafting short self-reports	8	11%		
	Writing texts which describe known occupation specific content	45	59%		
	Writing complex occupation specific texts	5	7%		
	Writing analyses, reports which assess the wider context of the business	0	0%		
Using and understanding numerical or statistical information	No need for this skill	6	8%	69%	33%
	Doing simple calculations (addition, division, multiplication)	39	51%		
	Calculation of averages, shares, percentages, etc.	24	32%		
	Knowing advanced calculus, statistical methods, etc.	6	8%		
	Developing models, performance indicators, complex calculations	1	1%		

Computer use	None	18	24%	74%	41%
	Elementary (e.g. data entry, sending and receiving e-mails, printing)	18	24%		
	Moderate (e.g. word processing or spread sheets)	8	11%		
	Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages)	31	41%		
	Advanced (e.g. software programming, managing computer networks)	1	1%		

- *Other general skills*

For the majority of the surveyed employers, cabinet-makers and related workers should also have problem-solving skills, the ability to adapt to new equipment or materials, manual dexterity, creativity/innovation, environmental protection skills, be able to work in a team and perform their tasks independently (i.e. autonomy) (Table 113). All these skills, besides autonomy, are expected to have increasing future importance.

Cabinet-makers and related workers are also required to possess teaching and instructing skills, which is practical given that workforce development in this sector mainly takes place on-the-job.

Further, although communicating in a foreign language, manual dexterity, communication and sales skills are not considered currently to be important or are not applicable for nearly half of the firms; expectations are that they will gain more importance in future (Table 113).

TABLE 113: Level of importance of other general skills

Skill	Level of importance		
	Very or Fairly important	Not important or Does not apply	Increasing future importance
Solving complex problems	100%	0%	91%
Communicating in a foreign language	45%	55%	76%
Manual dexterity	100%	0%	88%
Communication	55%	45%	83%
Team work	97%	3%	97%
Sales	64%	36%	88%
Creativity/innovation	99%	1%	95%
Adapting to new equipment or materials	100%	0%	93%
Teaching/instructing	83%	17%	75%
Environment protection	99%	1%	91%
Autonomy	97%	3%	78%
Planning resources	70%	30%	84%

With regards to communicating in foreign languages, only around one-third of the surveyed firms consider that employees coming directly out of school/university are well or adequately prepared.

- *Working conditions and required physical preparedness of employees*

As reported by 72% of the surveyed firms, the work of cabinet-makers and related workers usually takes place on working premises. The other firms declared that work happens both on and off working premises. Noisy working environments with artificial light and changing temperatures are the prevailing working conditions.

Concerning requirements of physical preparedness, the majority of firms (82%) reported that employees need to be able to stand, walk, kneel or lie down, 68% identified good hand and eye coordination, and 53% stated that considerable physical strength is required.

Recommendations

- Occupational standards should be developed for the occupation of cabinet makers and related workers, which should ensure that the occupation specific skills demanded by Kosovo wood processors (in Table 107) are included in curricula;
- Skills and knowledge for adapting to new technology and operating advanced machinery and equipment should be taken into consideration when designing curricula since this is expected to be the dominant emerging needed skill in the future;
- Since cabinet-makers and related workers are expected to be able to operate, calibrate, inspect and maintain machinery, access to machinery is important in schools. However, given the limited financial resources allocated to VET schools (23 Euros a year for goods and services) it is impossible for schools to acquire up-to-date machinery. Thus, opportunities for professional practice should be ensured for all students. Placement will provide an opportunity for all students to become skilled in operating, calibrating and maintaining machinery. Another possibility is to cooperate with VTCs of MLSW, assuming they will properly equip their workshops (which currently is not the case);
- Curricula and training programmes should ensure that cabinet-makers and related workers are prepared to read occupation specific texts with some technical content; to write texts which describe known occupation specific content; to undertake moderate numerical and statistical operations and be able to undertake complex computer tasks including: analysing information or design, including computer aided design; using statistical analysis packages;
- Given the relevance of the on-the-job training for firms in this sector, education and training providers should also incorporate modules/topics that develop the training skills of students, which in the future could act as trainers of their peers;
- For future emerging skills, cabinet-makers should also have complex problem solving skills, have strong communication, team working skills and be able to budget resources. Creativity and innovation, and awareness of environmental protection requirements are important and need to be included in curricula for the occupation;
- Finally, cabinet-makers should be able to adapt to continuous changes in innovations introduced in processes for producing goods or supplying services.

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Annex 1. Questionnaire

Data to be entered by the enumerator before the interview:

The name of the enterprise: _____

Address: _____

City, region (code of 38 municipalities on Kosovo): _____

Economic sector (NACE code) _____

Alternative NACE code based on descriptions and activities _____ (to be filled in after Q1)

Chosen occupation from list _____

Name of enumerator _____

Time of interview _____

Understanding skill needs of employers (October, 2015)

Introduction to the interview

Mr. X, thank you very much for agreeing to be interviewed. The main purpose of the interview is to understand better what your enterprise, you as director/owner need in terms of skills to be competitive in the market. We want to improve the education system so that students are ready for tasks required by their jobs. This will save time and money for the employer and also make young people more employable.

We can only change training programmes if we know what your workers are required to do in the workplace. We will ask large, medium and small firms who employ individuals in these occupations and change programmes according to their real, everyday needs and to prepare for the challenges of the future.



*Empowered lives.
Resilient nations.*

ABOUT THE INTERVIEWEE**A. Position of the interviewed person in the enterprise:**

- 1 - Director
- 2 – Owner
- 3 – Human resource manager
- 4 – Production/line manager
- 5 – Something else, _____

B. Contact details (e-mail or telephone)**CHOICE OF OCCUPATION/JOB**

B. Could you tell me which of the following occupations you employ? (Enumerator reads the occupations from list which are related to the economic sector in which the enterprise is active (for ALLED interviews please read instructions below in Annex 1)

Name of occupation _____

(Enter the name of the job in the enterprise even though it may be different from the chosen occupation from the list)

MODULE 1: BACKGROUND QUESTIONS**ABOUT THE ENTERPRISE**

Q1. What products or services does your company provide? (Processes wooden furniture, makes metal products, provides accommodation and catering for tourists, etc.)

Please describe your main activity in one sentence. If you have more than one activity (for example, production and trade) name both.

1 _____

2 _____

Q2. Is the enterprise at this address a single independent enterprise or is it one of a number of enterprises belonging to a larger enterprise?

- 1. A single independent enterprise
- 2. One of a number of enterprises belonging to a larger enterprise or enterprise

Q3. About how many employees do you currently have in this enterprise?

Number of employees _____

Q4. What is the number of female employees?

Number of female employees _____

Q5. Type of ownership

1. Private
2. Public
3. Mixed

Q6. In which geographic market did your enterprise sell the largest share of goods and/or services during the past two years?

1. Local or regional
2. National
3. EU countries
4. Other countries

TRAINING AND EDUCATION

Q7. Thinking about skill requirements in your enterprise: does your enterprise regularly review the skill and training needs on individual employees?

1. Yes, all employees
2. Yes, but only some employee groups
3. No

Q8. In 2015, did your employees participate in any external or internal training courses that were wholly or partly paid for by your enterprise, except any training obliged by law? (Training obliged by law would for example be obligatory health and safety trainings)

1. Yes
2. No GO TO Q10

Q9. In 2015, did employees participate in any of the following forms of training?

Enter more than one response if required

1. On-the-job training: planned periods of training, instruction or practical experience in the workplace
2. Internal Training: groups of persons employed who come together on a regular basis with the primary aim of learning more about the requirements of the work organisation, work procedures and workplaces
3. Working groups that have the objective of solving production and workplace problems through discussion.
4. External trainings

ABOUT THE CHOSEN OCCUPATION

The next questions refer only to the occupational group of [group_select] working in your enterprise.

Q10. Approximately how many employees of this occupational group are currently working in this enterprise?

Number of employees _____

Q11. How many female employees in this occupational group do you currently have in this enterprise?

Number of female employees _____

Q12. How many employees in this occupational group are under 30 years?

Number of employees under 30 years _____

Q13. How many employees in this occupational group are 50 years or older?

Number of employees 50 years or older _____

Q14. Do you currently have vacancies for [group_select] proving hard to fill for the lack of adequate skills of applicants?

- _1 Yes
- _2 No

Q15. What level of education do you require for workers on this job?

- 1. Primary school
- 2. Secondary general
- 3. Secondary vocational (VET)
- 4. University
- 5. Only on-the-job-training is necessary (education level is not relevant)

Q16. How long is initial on-the-job-training for new workers on this job?

Months _____

MODULE 2: OCCUPATIONAL SKILLS

We would like to ask you now about the tasks that workers are expected to undertake on their job. A task is a set of activities that are undertaken every day or are regularly repeated and are important to achieve the expected results on-the-job. Some tasks are operational and are usually the main activity on-the-job such as: assembling elements of wooden furniture or monitoring food-processing machines; others are administrative (filling in requests for production inputs, materials, reporting). In the course of the interview, if the interviewee can only remember a few tasks he should be prompted to remember some of the tasks the enumerators have on a separate sheet of paper – (Document 2).

Q17. Could you name the main tasks on this job and indicate which OCCUPATION RELATED skills/knowledge the worker needs to have in order meet expected job performance?

Q17.1 TASK 1: _____	Skill to be learned: At school = 1 On-the-job= 2	Will THE SKILL become more important in the future? Yes =1, No = 2
Q17.1.1 Skill 1		
Q17.1.2 Skill 2		
Q17.1.3 Skill 3		
Q17.1.4 Skill 4		
Q17.2 TASK 2: _____		
Q17.2.1 Skill 1		
Q17.2.2 Skill 2		
Q17.2.3 Skill 3		
Q17.2.4 Skill 4		
Q17.3 TASK 3: _____		
Q17.3.1 Skill 1		
Q17.3.2 Skill 2		
Q17.3.3 Skill 3		

Q17.3.4 Skill 4		
Q17.4 TASK 4 _____		
Q17.4.1 Skill 1		
Q17.4.2 Skill 2		
Q17.4.3 Skill 3		
Q17.4.4 Skill 4		
Q17.5 TASK 5 _____		
Q17.5.1 Skill 1		
Q17.5.2 Skill 2		
Q17.5.3 Skill 3		
Q17.5.4 Skill 4		

Q18. When thinking about the future of your business do you think some new skills will become very important in this occupation? (Open answers to maximum 3 newly emerging tasks)

1. 1st new emerging skill _____
2. 2nd new emerging skill _____
3. 3rd new emerging skill _____

Q19. How does your firm respond to emerging skill needs? (Enumerator should read out the possible answers)

1. Training of available staff
2. Internal re-organisation to better use the existing skills and competences
3. Recruitment of new staff
4. Other measures, namely: _____

Q20. Has the enterprise met any difficulties finding courses or trainers for the newly emerging skills?

1. Yes
2. No
3. Don't know

Q21. Has the enterprise met any difficulties recruiting staff to carry out the newly emerging tasks?

1. Yes
2. No
3. Don't know

MODULE 3: GENERAL SKILL USE

Many employers are frequently dissatisfied with some general competences of the workers not related to the occupational skills. Could we now determine which of the following general skills you are looking for in your workers?

READING SKILLS

Q22. For their job, which level of reading skill do workers require: *(Read out the possible answers)*

1. Reading simple instructions, guidelines, texts
2. Reading occupation specific texts with some technical content
3. Reading with understanding complex texts which are important for work
4. Reading complex content from a wider context
5. No reading is required on this job GO TO 25

Q23. Is the importance of that skill about the same, increasing or decreasing?

1. Increasing
2. Staying about the same GO TO Q25
3. Decreasing GO TO Q25

Q24. For the skills that are increasing in importance, please tell me whether or not [group_ select] workers coming directly from school/university are well prepared for this job?

1. Very well prepared
2. Adequately prepared
3. Not well prepared
4. Not prepared at all

WRITING SKILLS

Q25. For their job, which level of writing skills do you require? *(Read out the offered items)*

1. They have to write simple texts, fill in forms, draft short reports on own activity
2. They have to write texts which describe known occupation specific content
3. They have to write complex occupation specific texts
4. They have to write analyses, reports which assess the wider context of the business
5. There are no requirements to write on this job GO TO Q28

Q26. Is the importance of that skill about the same, increasing or decreasing?

1. Increasing
2. Staying about the same GO TO Q28
3. Decreasing GO TO Q28

Q27. For the tasks that are increasing in importance, please tell me whether or not [group_ select] workers coming directly from school/university are well prepared for this job?

1. Very well prepared
2. Adequately prepared
3. Not well prepared
4. Not prepared at all

NUMERACY SKILLS

Q28. How important is using and understanding numerical or statistical information? *(Read out the offered items)*

1. There is no need for this skill GO TO Q31
2. The worker must know how to do simple calculations (addition, division, multiplication)
3. The worker must know how to calculate averages, shares, percentages, etc.
4. The worker must know advanced calculus, statistical methods, etc.
5. The worker must develop models, indicators of performance, complex calculations

Q29. Is the importance of that skill about the same, increasing or decreasing?

1. Increasing
2. Staying about the same **GO TO Q31**
3. Decreasing **GO TO Q31**

Q30. For the tasks that are increasing in importance, please tell me whether or not [group_select] workers coming directly from school/university are well prepared for this job?

1. Very well prepared
2. Adequately prepared
3. Not well prepared
4. Not prepared at all

PROBLEM SOLVING SKILLS

A complex problem could be defined to be a problem that takes employees at least 30 minutes of thinking time to find a good solution. The 30 minutes only refers to the time needed to THINK of a solution, not the time needed to carry it out.

Q31. In the jobs of [group_select], how important is solving complex problems?

1. Very important
2. Fairly important
3. Not important
4. Does not apply GO TO 33

Q32. Is the importance of that skill about the same, increasing or decreasing?

1. Increasing
2. Staying about the same
3. Decreasing

FOREIGN LANGUAGES

Q33. And how important is communicating in a foreign language?

1. Very important
2. Fairly important
3. Not important
4. Does not apply GO TO Q36

Q34. Is the importance of that skill about the same, increasing or decreasing?

1. Increasing
2. Staying about the same GO TO Q36
3. Decreasing GO TO Q36

Q35. For the tasks that are increasing in importance, please tell me whether or not [group_select] workers coming directly from school are well prepared for this job?

1. Very well prepared
2. Adequately prepared
3. Not well prepared
4. Not prepared at all

MANUAL DEXTERITY

Q36. How important is manual dexterity (for example, to mend, repair, assemble, construct or adjust things)?

1. Very important
2. Fairly important
3. Not important
4. Does not apply GO TO 38

Q37. Is the importance of manual dexterity about the same, increasing or decreasing?

1. Increasing
2. Staying about the same
3. Decreasing

COMMUNICATION SKILLS

Q38. For their job, how important is making speeches or presentations to internal or external audiences?

1. Very important
2. Fairly important
3. Not important
4. Does not apply GO TO 40

Q39. Is the importance of the skill the same, increasing or decreasing?

1. Increasing
2. Staying about the same
3. Decreasing

TEAM WORK

Q40. In their job, how important is working as a member of a group or team?

1. Very important
2. Fairly important
3. Not important
4. Does not apply GO TO Q42

Q41. Is the importance of working in a group or team about the same, increasing or decreasing?

1. Increasing
2. Staying about the same
3. Decreasing

SALES SKILLS

Q42. How important is persuading or influencing others, whether colleagues, clients or customers?

1. Very important
2. Fairly important
3. Not important
4. Does not apply GO TO 44

Q43. Is the importance of that skill about the same, increasing or decreasing?

1. Increasing
2. Staying about the same
3. Decreasing

CREATIVE, INNOVATIVE SKILLS

Q44. For their job, how important is generating new ideas, products, services, developing methods and techniques?

1. Very important
2. Fairly important
3. Not important
4. Does not apply GO TO 46

Q45. Is the importance of learning new ideas, methods or techniques about the same, increasing or decreasing?

1. Increasing
2. Staying about the same
3. Decreasing

TECHNICAL SKILLS

Q46. For their job how important is adapting to new equipment or materials?

1. Very important
2. Fairly important
3. Not important
4. Does not apply GO TO 48

Q47. Is the importance of that task about the same, increasing or decreasing?

1. Increasing
2. Staying about the same
3. Decreasing

TEACHING, INSTRUCTING SKILLS

Q48. How important is instructing, training or teaching people, individually or in groups?

1. Very important
2. Fairly important
3. Not important
4. Does not apply GO TO 50

Q49. Is the importance of that task about the same, increasing or decreasing?

1. Increasing
2. Staying about the same
3. Decreasing

ENVIRONMENT PROTECTION SKILLS

Q50. How important is the implementation of practices to reduce the use of raw materials, energy and water?

1. Very important
2. Fairly important
3. Not important
4. Does not apply GO TO Q52

Q51. Is the importance of that task about the same, increasing or decreasing?

1. Increasing
2. Staying about the same
3. Decreasing

Q52. Still thinking about your [group_select], how important is determining their own tasks, working methods and speed of work without consulting managers or supervisors?

1. Very important
2. Fairly important
3. Not important
4. Does not apply GO TO 54

Q53. Is the importance of determining their own tasks, working methods and speed of work about the same, increasing or decreasing?

1. Increasing
2. Staying about the same
3. Decreasing

PLANNING RESOURCES SKILLS

Q54. How important is setting objectives and planning human, financial and other resources?

1. Very important
2. Fairly important
3. Not important
4. Does not apply GO TO Q56

Q55. Is the importance of that task about the same, increasing or decreasing?

1. Increasing
2. Staying about the same
3. Decreasing

COMPUTER SKILLS**Q56. What level of computer use is needed in this job?** *(Read out the offered items)*

1. None GO TO Q59
2. Elementary (, e.g. data entry, sending and receiving e-mails or printing?)
3. Moderate (e.g. word processing or spread sheets?)
4. Complex (e.g. analysing information or design, including computer aided design; using statistical analysis packages?)
5. Advanced (e.g. software programming; managing computer networks?)

Q57. Is the level of the computer use about the same, increasing or decreasing?

1. Increasing
2. Staying about the same GO TO Q59
3. Decreasing GO TO Q59

Q58. For the tasks that are increasing in importance, please tell me whether or not [group_ select] workers coming directly from school are well prepared for this job?

1. Very well prepared
2. Adequately prepared
3. Not well prepared
4. Not prepared at all

WORKING CONDITIONS**Q59. Place of work predominantly takes place:**

1. Inside
2. In the open
3. Both

Q60. Working environment (choose one or more items)

1. Hot7. Damp
2. Cold8. Radiation
3. Windy9. Artificial light
4. Noise10. Toxic environment
5. Changes of temperature11. Other
6. Vibrations

Q61. Physical preparedness for the work place (choose one of more items)

1. Considerable physical strength required
2. Standing, walking, kneeling or lying down most of the working time
3. Sitting most of the time
4. Coordinated movement: eyes and limbs

MODULE 4: DRIVERS OF CHANGING THE TASKS: INNOVATION IN THE ENTERPRISE

Q62. If you think of the last two years: did your enterprise introduce anything new or significantly improved...

1. Goods or services
2. Processes, either for producing goods or supplying services
3. Sales and marketing methods
4. Work organisation
5. No GO TO Q64

Q63. Which of these changes or innovations made in the last two years had an impact on the tasks to be performed by the occupation described above?

1. Goods or services
2. Processes, either for producing goods or supplying services
3. Sales and marketing methods
4. Work organisation improvement

Q64. In the last two years, did your enterprise adapt its practices, products or services due to environmental awareness or regulations?

1. Yes
2. No GO TO Q66
3. Don't know GO TO Q66

Q65. Have these adjustments had an impact on the tasks to be performed by the above occupation?

1. Yes
2. No
3. Don't know

Q66. Among all occupations in your enterprise, would you say that the above occupations belong to the groups currently most affected by changes in working tasks and skill requirements?

1. Yes
2. No
3. Don't know

Q67. Which occupational group within your enterprise is undergoing the greatest changes?

1. Occupation _____
2. Don't know

THANK YOU FOR YOUR TIME AND COOPERATION!

Would you like to receive the descriptions of similar jobs from other employers when we finish the survey? YES = 1 NO = 2

Annex of the questionnaire.

How to choose occupations for ALLED project (Agriculture, Food-processing, Mechanical engineering)
If you show the list of occupations from the above sectors to the employer, you first mention the occupations Agronomist, Mechanical engineer or Food-processing technician (occupations requiring higher education) you choose them first.

If the employer does not employ these occupations you ask whether he employs agricultural technicians, mechanical technicians or food-processing technicians. If yes, you choose one of these occupations and interview them for this job.

If the employer only employs occupations such as: fruit, vegetable and related preservers, food and beverage tasters and graders, food and related products machine operators, choose them.
These are the occupations for ALLED project:

Jobs where higher education is needed:

1. Agronomist
2. Mechanical engineer
3. Food technician

Jobs where secondary education is needed:

1. Agricultural technician
2. Mechanical technician
3. Food-processing technician

Other occupations that are common to UNDP and ALLED projects:

1. Fruit vegetable and related preservers
2. Dairy product makers
3. Fruit, vegetables and related preservers
4. Butchers, fish mongers.

As you know, the jobs have different names in different firms so it is important to establish that a food-processing technician, for example, is someone with required VET school level training and that his tasks are related to industrial or non-industrial food-processing. Make sure that you enter the actual name of the occupation in the questionnaire in question A on the first page.

Annex 2: List of programmes offered by VET schools in six economic sectors

1. Food processing

Municipality	School name
Food technician	
Gjakovë/Djakovica	Kadri Kusari
Glllogoc/Glllogovac	Fehmi Lladrocvci
Gjilan/Gnjilane	Arbëria
Klinë/Klina	Fehmi Agani
Mitrovicë/Mirovica	Arkitekt Sinani
Rahovec/Orahovac	Selajdin Mullaabazi-Mici
Pejë/Peç	Ali Hadri
Podujevë/Podujevo	Isa Boletini
Prizren	Ymer Prizren/Prizreni
Skënderaj/Srbica	Anton Çetta
Shtime/Štimlje	Naim Frashëri
Suharekë/Suva Reka	SHMP Shirokë
Ferizaj/ Uroševac	Zenel Hajdini
Viti/Vitina	Jonuz Zejnullahu
Vushtrri/Vučitrn	Bahri Haxha
Milk/dairy processing	
Prishtinë/Priština	Abdyl Frashëri
Meat processing	
Prishtinë/Priština	Abdyl Frashëri
Fruit and vegetable processing	
Prishtinë/Priština	Abdyl Frashëri

2. IT – Business Process Outsourcing and Customer Support Centres (BPO and CSC)

Municipality	School name
Informatics	
Deçan/Deçane	Tafil Kasumaj
Gjakovë/Djakovica	Nexhmedin Nixha
Gjakovë/Djakovica	Gjon Nikollë Kazazi
Glllogoc/Glllogovac	Fehmi Lladrocvci
Gjilan/Gnjilane	Mehmet Isai
Istog/Istok	Mithat Frashëri
Kaçanik/Kaçanik	Feriz Guri dhe Vëllezërit Çaka
Klinë/Klina	Fehmi Agani
Fushë Kosovë/ Kosovo Polje	Minatori
Kamenicë/a	Andrea Durrsaku
Kamenicë/a	Andrea Durrsaku 1
Mitrovicë/a	Arkitekt Sinani
Mitrovicë/a	Nëna Terezë
Lipjan	Adem Gllavica
Obiliq/Obiliç	Ismail Dumoshi
Pejë/Peç	Shaban Spahija
Pejë/Peç	Xheladin Deda
Podujevë/o	Fan S Noli
Prishtinë/Priština	Don Bosko
Prishtinë/Priština	Gjin Gazulli
Prizren	11 Marsi
Skënderaj/Srbica	Anton Çetta
Shtime/Štimlje	Naim Frasheri
Suhareka/Suva Reka	Skender Luarasi
Ferizaj/ Uroševac	Pjetër Bogdani
Viti/Vitina	Jonuz Zejnullahu
Viti/Vitina	Jonuz Zejnullahu 1

Vushtrri/Vučitrn	Lutfi Musiqi
Telecommunications	
Glllogoc/Glllogovac	Fehmi Lladrovci
Gjilan/Gnjilane	Mehmet Isai
Kaçanik/Kaçanik	Feriz Guri dhe Vëllezërit Çaka
Mitrovicë/a	Arkitekt Sinani
Obiliq/ Obiliç	Ismail Dumoshi
Pejë/Peç	Shaban Spahija
Podujevë/o	Fan S Noli
Prishtinë/Priština	Don Bosko
Prishtinë/Priština	Gjin Gazulli
Prizren	11 Marsi
Skënderaj/Srbica	Anton Çetta
Suhareka/Suva Reka	Skender Luarasi
Viti/Vitina	Jonuz Zejnullahu
Vushtrri/Vučitrn	Lutfi Musiqi
Post Telephone Communication	
Lipjan/Lipjan	Adem Gllavica
Podujevë/o	Fan S Noli
Prishtinë/Priština	28 Nëntori
IT assistant	
Rahovec/Orahovac	Selajdin Mullaabazi-Mici
IT services	
Malishevë/ Mališevo	Qendra e Kompetencës

3. Metal processing

Municipality	School name
Metal maker	
Glllogoc/Glllogovac	Fehmi Lladrocvci
Mitrovicë/a	Arkitekt Sinani
Vushtrri/Vuçitrn	Bahri Haxha
Metal processing	
Ferizaj/Uroševac	Pjetër Bogdani
Welder	
Gjilan/Gnjilane	Mehmet Isai
Istog/Istok	Mithat Frashëri 1
Kaçanik/Kaçanik	Feriz Guri dhe Vëllezërit Çaka
Mitrovicë/a	Arkitekt Sinani
Lipjan/Lipjan	Adem Gllavica
Podujevë/o	Fan S Noli
Prishtinë/Priština	Shtjefën Gjeqovi
Prizren	Nënë Tereze
Suhareka/Suva Reka	Skender Luarasi
Ferizaj/Uroševac	Pjetër Bogdani
Viti/Vitina	Jonuz Zejnullahu
Vushtrri/Vuçitrn	Lutfi Musiqi
Metal processing	
Istog/Istok	Mithat Frashëri
Klinë/a	Fehmi Agani
Prishtinë/Priština	Shtjefën Gjeqovi
Prizren	11 Marsi
Ferizaj/Uroševac	Pjetër Bogdani
Tinsmith and metal processing	
Skënderaj/Srbica	Qendra e Kompetences

4. Textile

Municipality	School name
Spinning	
Gjilan/Gnjilane	Arbëria
Garment maker	
Gjilan/Gnjilane	Arbëria
Prishtinë/Priština	Shtjefën Gjeqovi
Skënderaj/Srbica	Anton Çetta
Viti/Vitina	Jonuz Zejnullahu
Vushtrri/Vučitrn	Bahri Haxha
Tailor	
Gjakovë/Djakovica	Nexhmedin Nixha
Mitrovicë/Mitrovica	Nëna Terezë
Pejë/Peç	Shaban Spahija
Prishtinë/Priština	Shtjefën Gjeqovi
Prizren	Nënë Tereze
Suharekë/Suva Reka	Skender Luarasi
Textile and garment design	
Gjakovë/Djakovica	Nexhmedin Nixha
Gjilan/Gnjilane	Arti Pamor
Pejë/Peç	Odhise Paskali
Prizren	11 Marsi

5. Tourism

Municipality	School name
Gastronomy assistant	
Deçan/Deçane	Tafil Kasumaj
Gjakovë/Djakovica	Kadri Kusari
Gjilan/Gnjilane	Marin Barleti
Mitrovicë/a	Hasan Prishtinë/Priština
Lipjan/Lipjan	Adem Gllavica
Pejë/Peç	Ali Hadri
Ferizaj/Uroševac	Faik Konica
Restaurant assistant	
Rahovec/Orahovac	Selajdin Mullaabazi-Mici
Prishtinë/Priština	7 Shtatori
Prizren	Ymer Prizren/Prizreni
Cook	
Prishtinë/Priština	7 Shtatori
Gjilan/Gnjilane	Arbëria
Vushtrri/Vuçitrn	Bahri Haxha
Tourism assistant	
Prishtinë/Priština	7 Shtatori
Gastronomy and tourism services	
Malishevë/Mališevo	Qendra e Kompetencës
Travel guide	
Prizren	Qendra e Kompetencës Prizren/Prizren
Assistant in Information points/offices and travel agencies	
Prizren	Qendra e Kompetencës Prizren/Prizren
Assistant event organizer	
Prizren	Qendra e Kompetencës Prizren/Prizren

6. Wood processing

Municipality	School name
Wood processing	
Ferizaj/Uroševac	Zenel Hajdini
Carpenter	
Mitrovicë/Mitrovica	Nëna Terezë
Pejë/Peç	Shaban Spahija
Prizren	Nënë Tereze

Supporting profiles

Machinery mechanic	
Deçan/Deçane	Tafil Kasumaj
Glllogoc/Glllogovac	Fehmi Lladrocvci
Lipjan/Lipjan	SHML Mikste
Rahovec/Orahovac	Selajdin Mullaabazi-Mici
Pejë/Peç	Shaban Spahija
Suhareka/Suva Reka	Skender Luarasi
Ferizaj/Uroševac	Pjetër Bogdani
Production/processing operator	
Gjakovë/Djakovica	Nexhmedin Nixha
Glllogoc/Glllogovac	Fehmi Lladrocvci
Gjilan/Gnjilane	Mehmet Isai
Istog/Istok	Mithat Frashëri
Istog/Istok	Mithat Frashëri 1
Klinë/Klina	Fehmi Agani
Mitrovicë/a	Arkitekt Sinani
Lipjan/Lipjan	Adem Gllavica
Obiliq/Obiliç	Ismail Dumoshi
Skënderaj/Srbica	Anton Çetta
Shtime/Štimlje	Naim Frasheri
Suhareka/Suva Reka	Skender Luarasi
Ferizaj/Uroševac	Pjetër Bogdani

Viti/Vitina	Jonuz Zejnullahu
Vushtrri/Vučitrn	Lutfi Musiqi
Tool maker	
Istog/k	Mithat Frashëri 1
Suhareka/Suva Reka	Skender Luarasi
Interior design (relevant for wood sector)	
Pejë/Peč	Odhise Paskali
Prizren	11 Marsi
Graphic design	
Gjilan/Gnjilane	Arti Pamor
Pejë/Peč	Odhise Paskali
Industry clerk	
Prizren	Qendra e Kom- petencës Prizren/ Prizren
Computerised machine operator	
Pejë/Peč	Shaban Spahija
Prishtinë/Priština	Shtjefën Gjeqovi

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