OECD
BETTER POLICIES FOR BETTER LIVES

This project is co-financed by the European Union

SWEDEN

OECD Eurasia
Competitiveness Programme

SECTOR COMPETITIVENESS STRATEGY FOR UKRAINE – PHASE III

Identifying and Addressing Skills Gaps in Ukraine

Project Summary
Working Group on Skills Development for Agribusiness
December 2015

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies. The OECD member countries are: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The European Union takes part in the work of the OECD.

www.oecd.org

OECD EURASIA COMPETITIVENESS PROGRAMME

The OECD Eurasia Competitiveness Programme, launched in 2008, helps accelerate economic reforms and improve the business climate to achieve sustainable economic growth and employment in two regions: Central Asia (Afghanistan, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Turkmenistan and Uzbekistan), and Eastern Europe and South Caucasus (Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova and Ukraine). The Programme contributes to the OECD outreach strategy implemented by the Global Relations Secretariat.

www.oecd.org/globalrelations/eurasia.htm

UKRAINE SECTOR COMPETITIVENESS STRATEGY – PHASE III

The OECD project "Sector Competitiveness Strategy for Ukraine" was launched in 2009. During the initial phase, the project prioritised and defined sector-specific sources of competitiveness and policy barriers for improved investment promotion, particularly in the key sectors of agribusiness, machinery and transport equipment manufacturing, renewables and energy efficiency. The second phase of the project aimed to address specific policy barriers to focus on short-term results through practical and effective measures. The project is currently in Phase III, which aims to put in place the mechanisms for a sustainable reform process and support the Government of Ukraine in implementing them effectively. It does so by sharing OECD expertise and methodologies, identifying remaining policy challenges to private sector competitiveness in the target sectors, consulting closely with the private sector, and organising capacity-building events to strengthen government institutions. The project's Phase III will conclude in December 2015, and is **co-financed by the European Union and the Government of Sweden.**

www.oecd.org/countries/ukraine/ukrainesectorcompetitivenessstrategy.htm

TABLE OF CONTENTS

Tables

Figures

Boxes

ACRONYMS AND ABBREVIATIONS

AA	Association Agreement
CET	Continuing Education and Training
DCFTA	Deep and Comprehensive Free Trade Agreement
ETF	European Training Foundation
EC	European Commission
EU	European Union
Eurostat	Statistical office of the European Union
FAO	Food and Agriculture Organisation of the United Nations
GoU	Government of Ukraine
HRM	Human resources management
ICT	Information and Communication Technology
ILO	International Labour Organisation
ISIC	International Standard Industrial Classification of All Economic Activities
MAPF	Ministry of Agrarian Policy and Food of Ukraine
MES	Ministry of Education and Science of Ukraine
OECD	Organisation for Economic Co-operation and Development
R&D	Research and Development
SCS	Sector Competiveness Strategy
SGS	Skills Gap Survey
SSSU	State Statistical Service of Ukraine
STEP	Skills towards Employability and Productivity
VET	Vocational Education and Training
WB	World Bank
WfD	Workforce Development

SUMMARY OF KEY FINDINGS

The OECD-World Bank Skills Gap Survey (OECD-WB SGS) confirms that Ukrainian businesses experience significant skills gaps in the two target sectors of this survey, agribusiness and renewable energy. The skills gap is particularly high among agribusiness food processors.

The skills gap is especially acute in certain types of occupations depending on the sector: while agribusinesses experience the largest skills gap at the level of plant and machine operators, skilled agricultural workers as well as technicians; renewable energy companies experience mainly a deficit of high-skill occupation workers.

Evidence from the survey shows that skills gaps negatively affect the competitiveness of Ukrainian agribusinesses and renewable energy companies, namely by impacting their efficiency and quality, resulting in loss of sales opportunities.

Both agribusiness and renewable energy companies are not satisfied with the general educational system in Ukraine[1]. Businesses in these sectors consider that the educational system does not provide the adequate practical experience, and has weaknesses in supplying specific skills required by the industry. The vocational education and training (VET) system does not satisfy the needs of businesses in the focus sectors either, and training provided by the companies is very limited.

A large majority of surveyed agribusinesses and renewable energy firms report that they don't have regular contacts with educational and training institutions. This may partly explain the mismatch between the educational outcomes and the skills needs of businesses.

Surveyed companies expect government intervention to ease the existing skills gap by putting in place policies to improve education at both university and VET level and by enhancing communication between firms and governmental institutions on matters related to education, R&D and labour practices.

Specific policy actions can be put in place in order to address the skills gap and support private sector competitiveness in Ukraine. On the basis of the survey results, field work and OECD analysis, the OECD recommends six actions which are further described in the report. These are:

1. Develop a national skills strategy with a regional focus
2. Set-up Sectoral Skills Councils
3. Design tailored skills policies based on the sector's needs
4. Put in place a system of on-the-job training at University level
5. Establish networks for public-private dialogue
6. Introduce regular policy monitoring and evaluation to measure the effects of reform initiatives

[1] General educational system in Ukraine includes secondary and higher education, except for the VET.

INTRODUCTION

1. This report provides an overview of the findings of the OECD-WB Skills Gaps Survey (SGS) conducted in 2014 among 502 firms[2] across Ukraine to analyse the skills gaps in two focus sectors: agribusiness and renewable energy[3]. These sectors were identified in the course of the OECD *Sector Competitiveness Strategy for Ukraine* (SCS) project as demonstrating a high potential for growth and for attracting investments (OECD, 2012a).

2. Measuring skills gaps in the labour market assists policy makers in the development of informed responses for enhancing the quality of skills supplied, resulting in an improved business climate. A regular monitoring of the skills gaps allows to improve the educational system and to prepare a skilled and flexible workforce, which is one of the key components of competitiveness and helps to attract investment and foster economic growth.

3. In Ukraine, there is evidence of a skills gap, despite a high literacy rate and high enrolment in primary and secondary education (WB, 2009; OECD, 2012a; OECD, 2012b). For example, in the case of agribusiness, the skills gap results from a mismatch between available skills and the outcomes of the formal educational system (OECD, 2012b). Such a mismatch results from the lack of co-operation between the education system and the private sector, theoretical curricula that do not offer sufficient practical training and challenges related to integrity in education (OECD, 2012b; OECD, forthcoming).

4. Further analysis and consultations carried out in the framework of the SCS for Ukraine Project with different stakeholders supported these conclusions and their relevance for other sectors and the educational system overall. As a whole, the education system in Ukraine appears to be highly centralised, underfunded and obsolete. Recently, institutional and legal reforms have been designed to modernise the educational system and bring it closer to European standards[4].

5. The following sections of this report present: (i) the main findings of the survey and the analysis; (ii) some examples of OECD good practices in skills development policies; and (iii) the policy recommendations taking into account the results of the OECD-WB SGS and the wider analysis carried out as part of the *Sector Competitiveness Strategy for Ukraine – Phase III* project carried out by the OECD between March 2013 and December 2015.

[2] The sample comprises 260 agribusiness growers, 202 agribusiness food processors and 40 renewable energy companies. Further information on the sample and the methodology is available in Annex 1.

[3] The OECD – WB SGS covers agribusiness, renewable energy as well as information and communication technology (ICT) sectors. The latter is outside of the scope of the OECD SCS project and is not covered by the present study. The work stream related to transport equipment manufacturing with a focus on aircraft industry, originally a focus sector of the SCS project, was suspended in 2014 until the implementation of the OECD recommendations on the corporate governance of Ukraine's state-owned aviation sector (OECD, 2012c). It is therefore also outside of the scope of the present work.

[4] Law of Ukraine of 01.07.2014 № 1556-VII On Higher Education; Decree of the Cabinet of Ministers of Ukraine 04.02.2015 № 87-p On the Transfer of Property of Educational Institutions and of a State Agency under the Competency of the Ministry of Education and Science of Ukraine; Law on Vocational Education and Training is currently being developed.

CHAPTER 1. SURVEY ANALYSIS

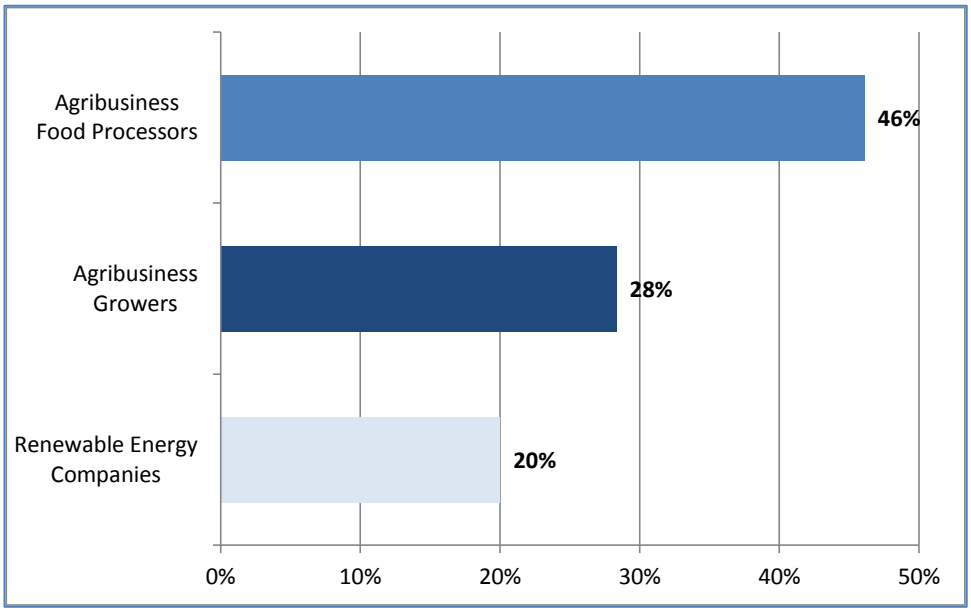
Identifying skills gaps profiles

Ukrainian businesses experience a significant but uneven skills gap

6. Almost half of surveyed agribusiness food processor companies, a third of agribusiness grower companies and one-fifth of renewable energy companies experience a significant gap between their employees' skills and the skills required to meet their business objectives (Figure 1). A "skills gap" indicates a disparity between the current skill level of the workforce and the skills required by employers to meet the organisations' objectives (Campbell, 2002).

Figure 1. Companies indicating a significant skills gap

Percentage of respondents indicating that there is a significant skills gap between the type of skills that their employees have now, and those they need to achieve current business objectives



Source: OECD-WB SGS, 2015

7. A closer profile analysis of respondents indicating a significant skills gap shows that most of them are young small and medium enterprises (SMEs)[5]. For instance, 71% of agribusiness growers

[5] For the purposes of this analysis and based on the available data, SMEs are defined as firms counting less than 200 employees. As a reminder, according to the Law of Ukraine Code of Commercial Procedure of Ukraine (16.01.2003 г. № 436-VI.), different categories of enterprises are defined based on the number of employees and annual total amount of sales during one reporting year: - micro-enterprises count less than 10 employees and the total amount of sales of less than 2 Million Euros; - small enterprises count less than 50 employees and an annual total amount of sales of less than 10 Million Euros; - large enterprises count more than 250 employees and an annual total amount of sales of more than 50 Million Euros. All other enterprises are defined as medium.

indicating a significant skills gap started their operations after 2000; 58% and 88% respectively for agribusiness food processors and renewable energy companies. Among respondents with skills gap, 89% of agribusiness growers count less than 200 employees; 79% and 100% respectively for agribusiness food processors and renewable energy companies.

8. The difficulties of young SMEs to access skills can be explained by their size, lack of experience and lack of well-established HR processes. While in larger companies a dedicated team is usually in charge of managing the company's skills, these structures are limited or inexistent in SMEs. Because SMEs do not have sufficient economies of scale, their HRM function often does not have sufficient capacity as the firms' workforce is mainly allocated to core business activities. Finally, young SMEs often lack business management and HR experience to manage their skills needs effectively.

Skills gaps among agribusiness growers

9. Figure 2 represents the needs for different types of workers based on the skills gap reported by agribusiness growers (represented on horizontal axis) and presence of these types of workers in respondents' firm (represented on vertical axis). This two-dimension representation allows identifying the most current occupations with the highest skills gap and to better prioritise targeted policy actions.

10. The survey results reveal that for agribusiness growers the most acute skills gap is at the level of plant and machine operators. A steady supply of **low-skilled workers** trained to use agricultural machinery such as tractors, cars, vans, grain processing machines and lift truck drivers appear to be the **first priority** in terms of needs for skills of agribusiness growers. Another identified need, although smaller in number, concern other low- and medium-skill occupations such as repairman, welder and flame cutters, motor vehicle mechanics and fitters to insure the repair and maintenance of agricultural machinery.

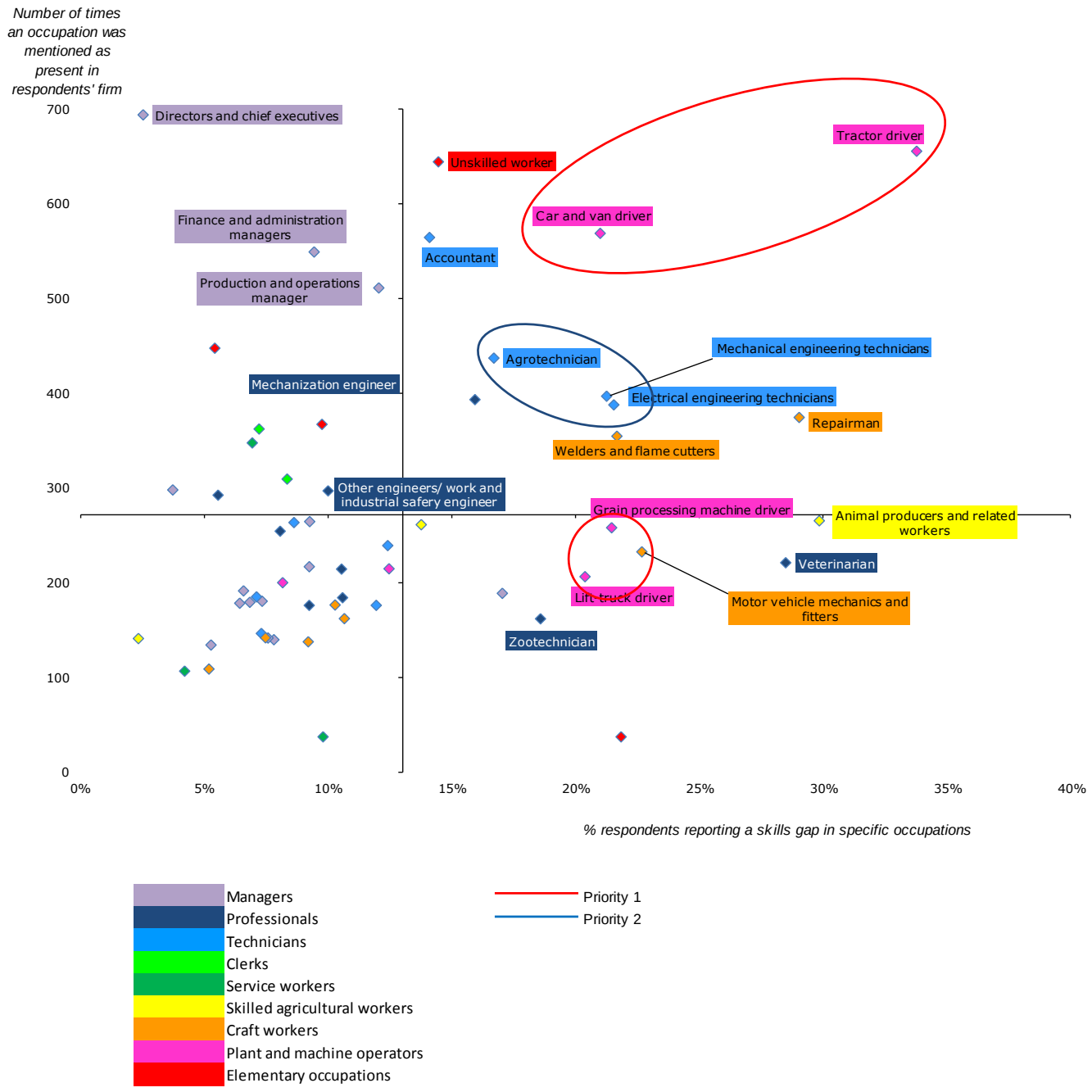
11. The second priority need relates to high-skilled occupations such as agrotechnicians, mechanical and electrical engineering technicians. The trend is similar to low- and medium-skill occupations as these occupations are linked to the management of complex agricultural processes involving the use of machinery and technology.

12. On the other hand, it appears that there is a sufficient supply of high-skilled workers such as directors, chief executives, finance and administration managers, accountants which are well-represented in respondents' firms but not subject to a significant skills gap.

13. The current skills needs of agribusiness growers for workers trained to use agricultural machinery and manage technological processes reflects the current transition of agribusiness growers (especially large firms) from a labour-intensive towards a machine-based technology-intensive agricultural production, which brings about productivity gains and higher returns on investment. The progressive automation of agricultural production reduces the number of people employed in the sector. This trend is confirmed by the statistical data, for instance, in 2000 almost 4.4 million Ukrainians were employed in agriculture, while there were less than 3.1 million Ukrainians employed in the sector in 2014 (SSSU, n.d.). This trend of decreasing labour force will most likely continue in the future.

Figure 2. Agribusiness growers: occupations with the highest skills gap

Percentage of respondents identifying skills gap in different types of occupations



Source: OECD-WB SGS, 2015.

Note: vertical and horizontal axes are situated at the calculated average point.

Skills gaps among food processors

14. For agribusiness food processors, the highest demand in terms of number of employees and existing skills gap is observed at the level of (i) skilled agricultural workers, such as machine-tool setters and setter-operators and bakery-pastry cooks and confectionary makers, and (ii) technicians

such as different types of associate professionals. This trend is similar to agribusiness growers: progressive automation of complex production processes requires a skilled labour force trained to use modern industrial machines.

15. The second-priority need is more diversified across different types of occupations. It covers commercial managers; transport clerks and baked-goods, cereal- and chocolate-products machine operators.

16. Similar to agribusiness growers, food processors do not experience a skills gap in different types of managers and finance specialists (*i.e.* finance and administration managers and bookkeepers). Finally, certain types of elementary occupations, such as transport labourers and store keepers, also appear to be in sufficient supply (Figure 3).

Skills gaps among renewable energy companies

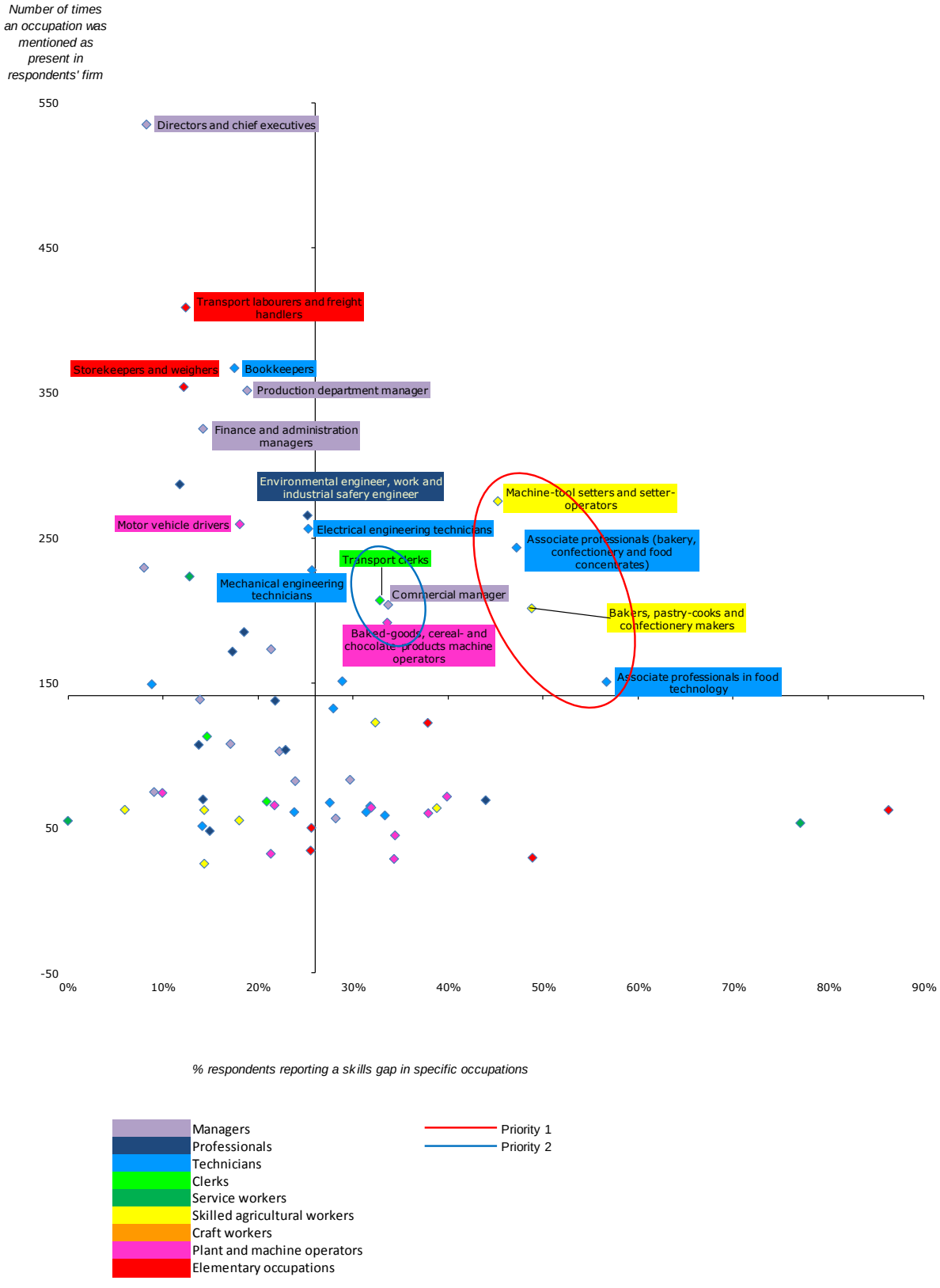
17. The skills needs of surveyed renewable energy companies are very different compared to agribusinesses. High-skill occupations are in demand, with the highest skills gap reported for different types of technicians such as technology guide bioenergy installations technicians, electrical engineering and mechanical engineering technicians. Attracting a sufficient number of adequately skilled technicians can be vital for a short-term development of operations for renewable energy firms.

18. A second-priority need relates to different types of professionals and managers. Even though this is a marginal need, as the number of employed professionals and managers is overall quite low and the sector is small at present, access to these types of skills might be critical for the growth of the sector in a medium-term perspective.

19. Similar to surveyed agribusinesses, renewable energy companies do not experience a skills gap at the level of directors, chief executives, finance and administrative managers and professionals (accounting and audit). There is also an overall satisfactory supply of electrical engineers (Figure 4).

Figure 3. Agribusiness food processors: occupations with the highest skills gap

Percentage of respondents identifying skills gap in different types of occupations

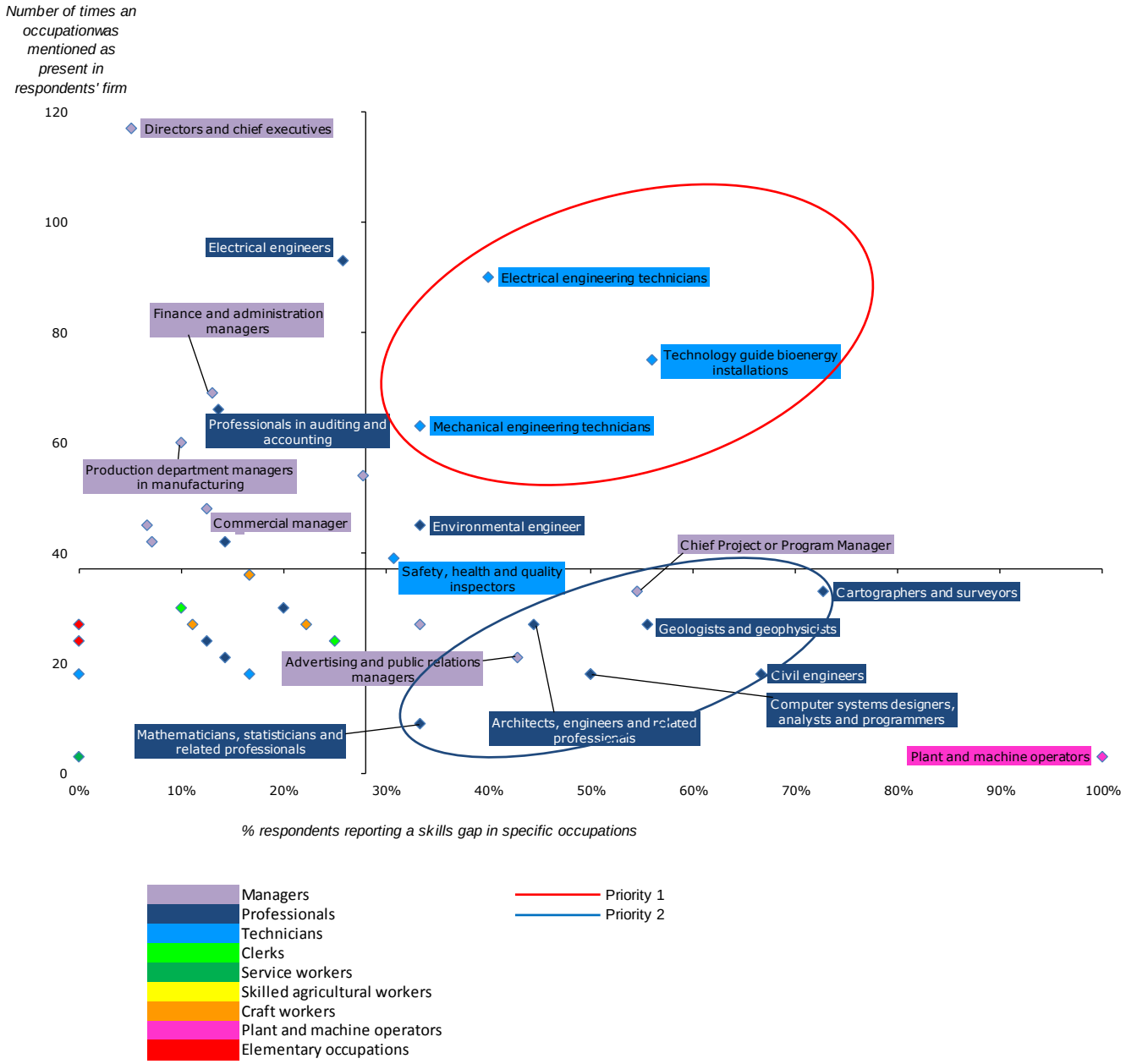


Source: OECD-WB SGS, 2015.

Note: vertical and horizontal axes are situated at the calculated average point.

Figure 4. Renewable energy companies: occupations with the highest skills gap

Percentage of respondents identifying skills gap in different types of occupations



Source: OECD-WB SGS, 2015.

Note: vertical and horizontal axes are situated at the calculated average point.

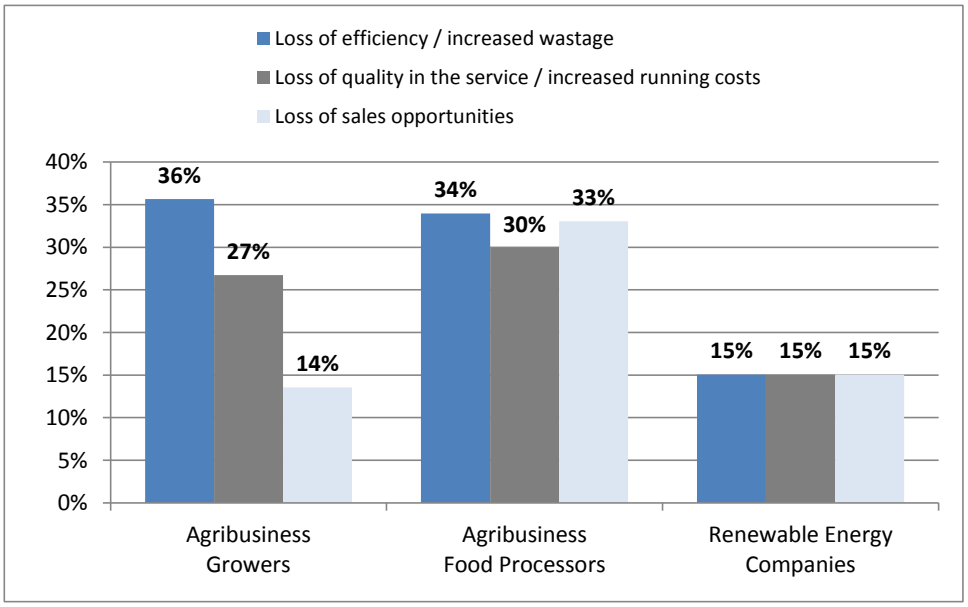
Measuring the impact of the skills gap

Skills gap affects the competitiveness of Ukrainian businesses

20. Employers in the agribusiness and renewable energy sectors perceive skills gaps as a substantial barrier to their business performance. In terms of impact, skills gaps seem to particularly affect companies' competitiveness, with companies reporting direct impact on their efficiency, quality in service and running costs, as well as a loss of sales. This is particularly significant for agribusiness growers and food processors (Figure 5).

Figure 5. Top 3 reported impacts of the skills gap

Aggregated percentage of respondents indicating skills gap impacts in all occupations for which they have mentioned having a skill gap



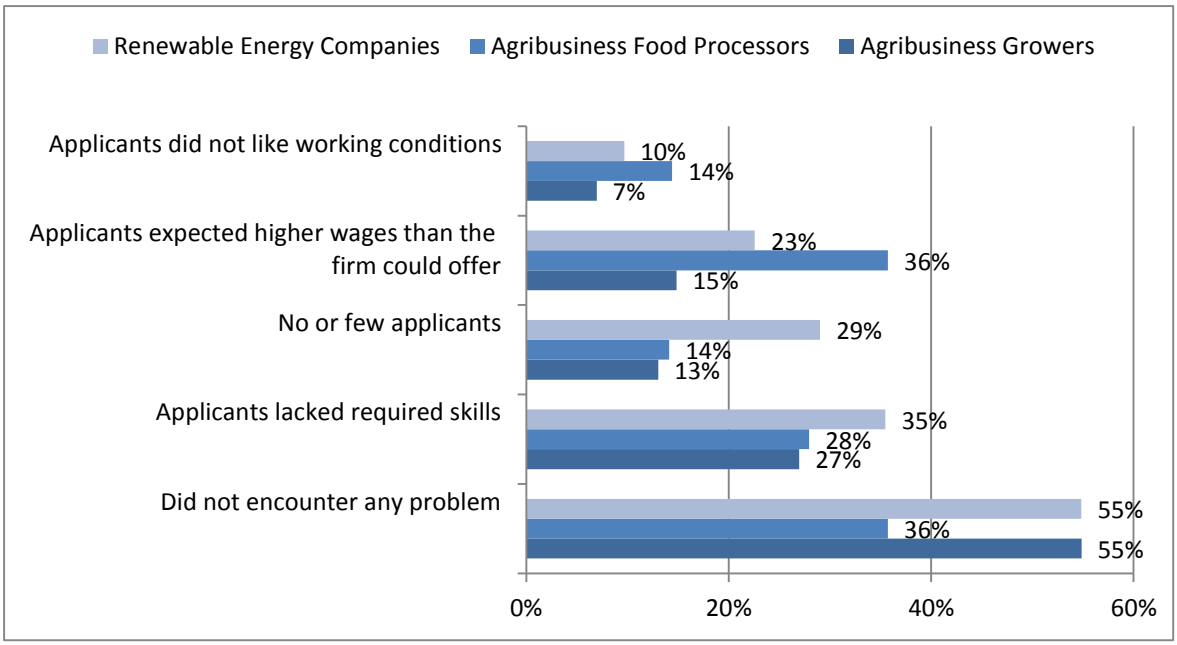
Source: OECD-WB SGS, 2015

Ukrainian businesses experience hiring difficulties because of skills mismatch

21. The lack of applicants with required skills is a major hiring difficulty experienced by firms in the agribusiness and renewable energy sectors (Figure 6), resulting in increased resources allocated to basic human resources management (HRM) processes. 35% of surveyed renewable energy firms, 28% of agribusiness food processors and 27% of agribusiness growers report having hiring difficulties due to applicants' lack of required skills. Other major constraints in hiring include the expectation of higher wages by applicants (36% of agribusiness food processors), and a limited number of applicants (23% of renewable energy firms). Finally, agribusiness food processors face more hiring challenges as there are only 36% of respondents who did not encounter any hiring difficulties, as compared to 55% reported by the agribusiness growers or renewable energy companies.

Figure 6. Hiring difficulties experienced by employers

Percentage of respondents indicating specific hiring difficulties



Source: OECD-WB SGS, 2015

Note: The respondents could choose more than one answer from the listed above.

Skills for competitiveness

22. The information on employers' perception of the tasks performed by their staff allows identifying key types of skills for different groups of occupations in the agribusiness and renewable energy sectors[6]. This information is valuable to guide policy-makers and educational institutions to better match the needs of businesses with educational outcomes in order to improve the business climate, attract further investments and boost economic competitiveness.

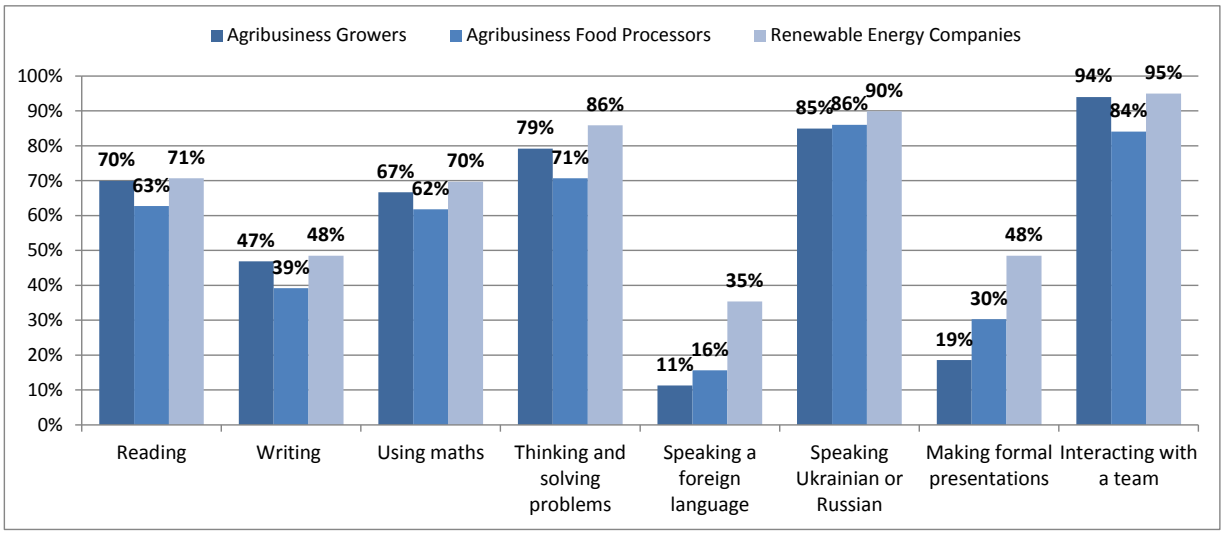
Use of socio-emotional and cognitive skills

23. Figure 7 shows that the day-to-day work of high-skill employees mainly involve socio-emotional and advanced cognitive-skills. For instance, the work of agribusiness grower and processor managers, professionals and technicians mainly involve interaction with a team (94% for agribusiness growers and 84% for food processors), speaking Ukrainian or Russian (85% and 86% respectively) and creative problem solving (79% and 71% respectively). Key skills for high-skill occupations in the renewable energy sector are similar, even though they are performed more regularly compared to agribusinesses: employers report that the work of 95% high-skill occupation workers involve interactions with a team, 90% speaking their native language and 86% creative problem solving.

[6] It is worth noting that the employer component of the STEP survey instrument does not measure the employers' perception of the current level of skills of the labour force in the surveyed firms or a perceived shortage of specific skills.

Figure 7. Share of employees regularly performing a particular task in their job

Percentages of employers indicating the skills used by their high-skill occupation employees

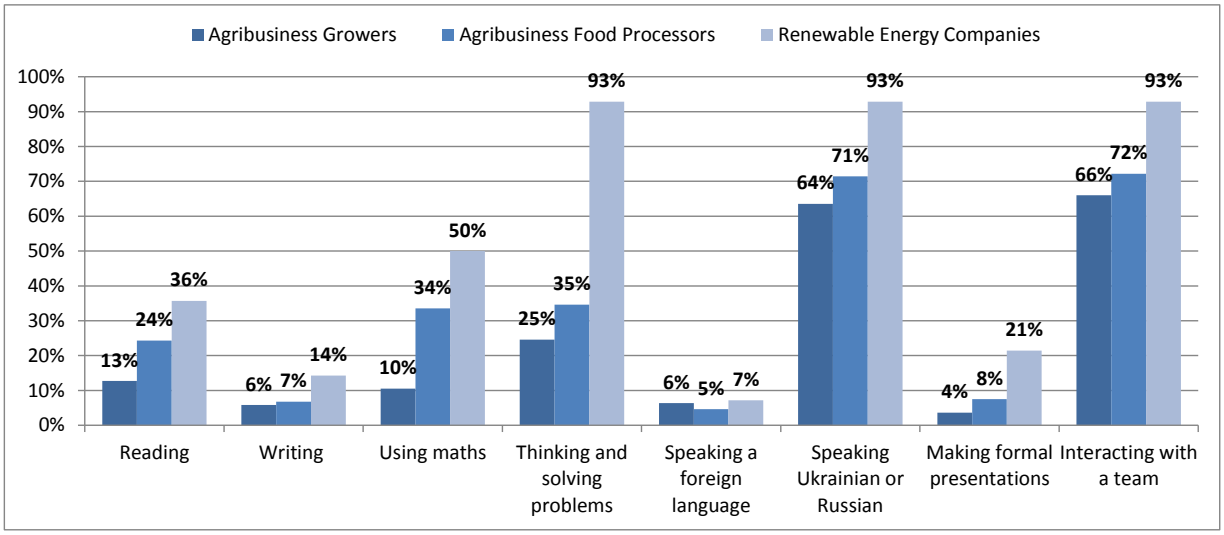


Source: OECD-WB SGS, 2015

24. Overall, in comparison to high-skill occupations, the tasks performed by low- and medium-skilled workers require mostly socio-emotional skills, and some lower level cognitive skills. In agribusiness, employers expect their low- and medium-skill occupation workers to interact with a team (66% for agribusiness growers and 72% for food processors), speak their native language (64% and 71% respectively) and solve problems (25% and 34% respectively). The three most widely used types of skills are the same for renewable energy companies, but they are used to a much larger extent (93% each).

Figure 8. Share of employees regularly performing a particular task in their job

Percentages of employers indicating the skills used by their low- and medium-skill occupation employees



Source: OECD-WB SGS, 2015

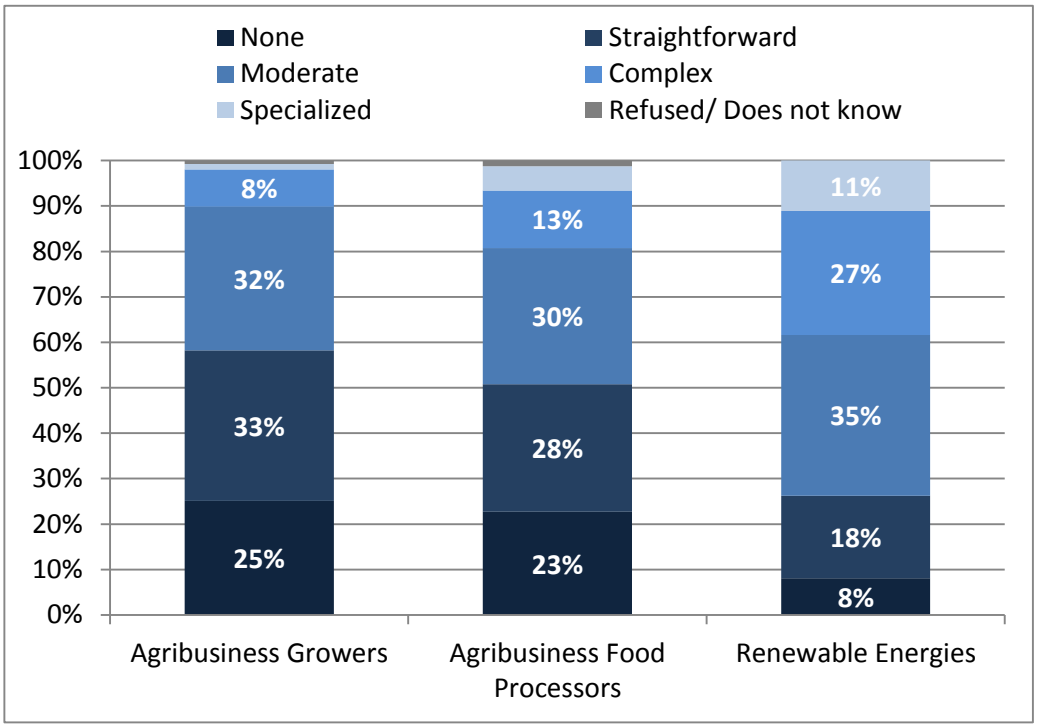
25. As it can be noted from Figures 7 and 8 above, the renewable energy workers (especially in low- and medium-skill occupations) have a higher use of socio-emotional and cognitive skills than agribusiness workers. This is mainly due to the innovative and technology-intensive nature of the sector, requiring a higher level of skills. This assumption is also supported by the results of the survey related to the use of information technologies, which appears much higher for renewable energy workers (Figures 9-10).

Use of information technologies

26. Across all sectors the tasks of high-skilled occupations include a higher use of computer than low- and middle-skilled occupations. The tasks of over three-quarters of high-skilled employees (Figure 9) involve computer use, ranging from straightforward to specialized levels. Renewable energy employees have a much higher propensity to use computers (18% straightforward, 35% moderate, 27% complex and 12% specialized), compared to agribusiness growers (respectively 25%, 33%, 32%, 8% and 2%) and agribusiness food processors (respectively 28%, 30%, 13% and 6%).

Figure 9. Level of computer use involved in the current workforce's job

Percentages for high-skill occupations

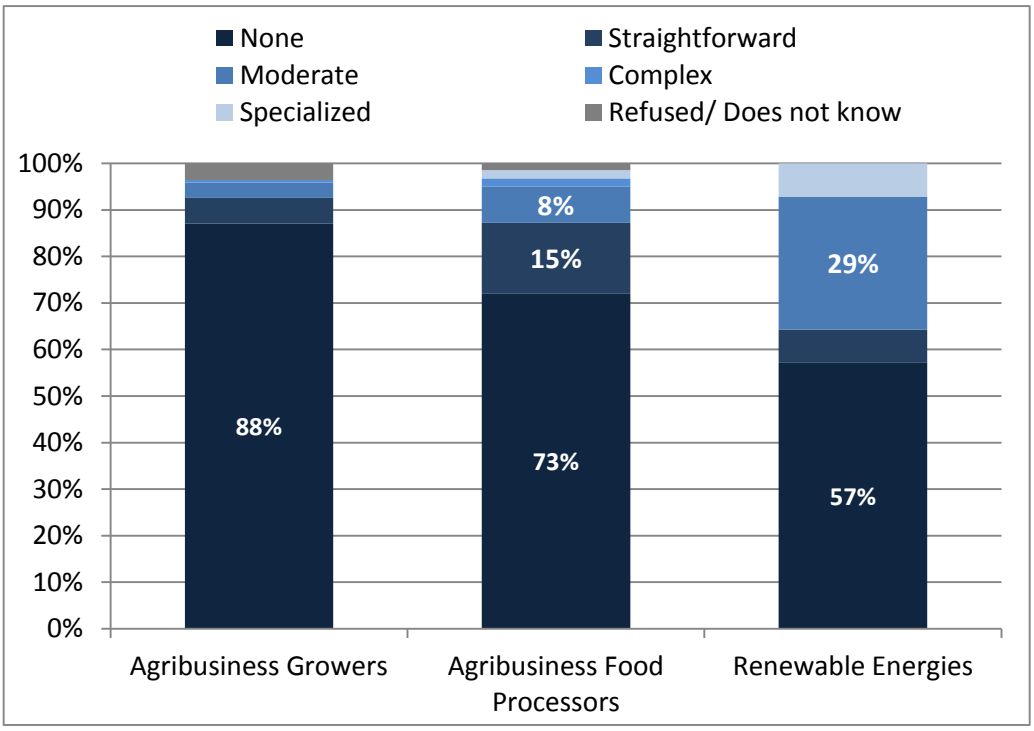


Source: OECD - World Bank Skills Gap Survey, 2015

27. In contrast, low- and medium-skilled occupations across all three sectors have a very limited use of information technologies in their tasks (Figure 10). Among agribusiness growers 88% of low- and middle-skilled employees do not use computers, and the rate falls to 73% for agribusiness food processors and 57% for renewable energy.

Figure 10. Level of computer use of involved in the current workforce's job

Percentages for low- and middle-skill occupations



Source: OECD-WB SGS, 2015

Causes of the skills gap

28. Skills gaps generally emerge and proliferate due to information asymmetries between government, educators, employers and workers. Specifically in Ukraine, the education system gives the employers few possibilities to influence programme offerings and curricula in order to maximise the match between the skills of graduates and the needs of the private sector. Employers struggle to give feedback to education providers and therefore are reluctant to invest time and resources in skills development (OECD, 2012b). Current reforms to the educational system at the level of higher education and VET are needed to address this situation.

29. In this section the findings of the OECD-WB SGS provide a broad overview of (i) employers' perceptions of the efficiency of initial training at different levels within the formal educational system and (ii) information on the workplace training offered by surveyed companies. The results of the survey highlight the misalignment of the educational system with the skills needs of businesses, which result from poor coordination between government, businesses and education providers. Despite the dissatisfaction with educational outcomes, businesses mainly rely on formal education to train the workforce, as formal workplace trainings remain scarce.

30. The survey results indicate that the provision of workplace training is low across both the agribusiness and renewable energy sectors. This might be partially accounted for by most employers' expectations of government investment in training. These expectations are largely due to perceptions of the crucial role of the state that have remained important since socialist times, and that very few employers invest in skills that can easily be transferrable to a different workplace.

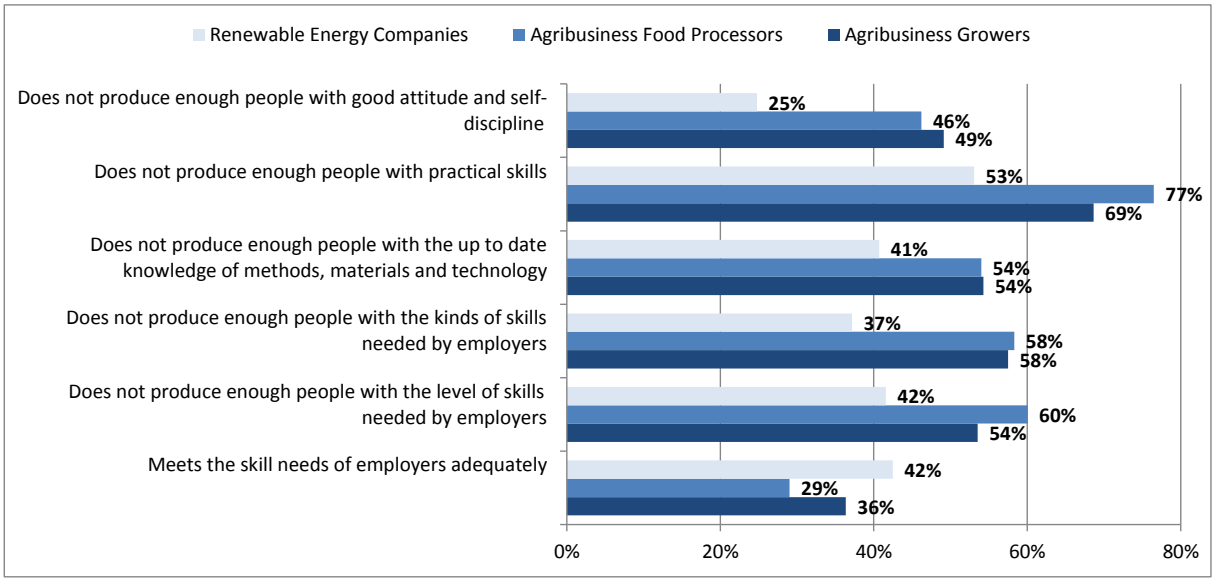
Formal education system does not meet the needs of businesses

31. The surveyed employers largely consider that the educational system in Ukraine, including VET institutions, does not adequately meet their needs. The survey results show that the educational system is perceived to undersupply graduates with practical and other types of skills, as well as up to date knowledge.

32. Overall, only 29% of food processing firms are satisfied with outcomes of the VET system (Figure 11). The rate is slightly higher for agribusiness growers and renewable energy firms, showing satisfaction rates of 36% and 42%, respectively. In Ukraine, most high-skill occupation workers have a higher education degree, while the VET system provides training mainly to the workers of low- and medium-skill occupations (Figures 22-24).

Figure 11. Employers' Opinion about the Vocational Training Education System in Ukraine

Percentage of respondents who agree with one or more of the following statements describing the technical and vocational training education system in Ukraine

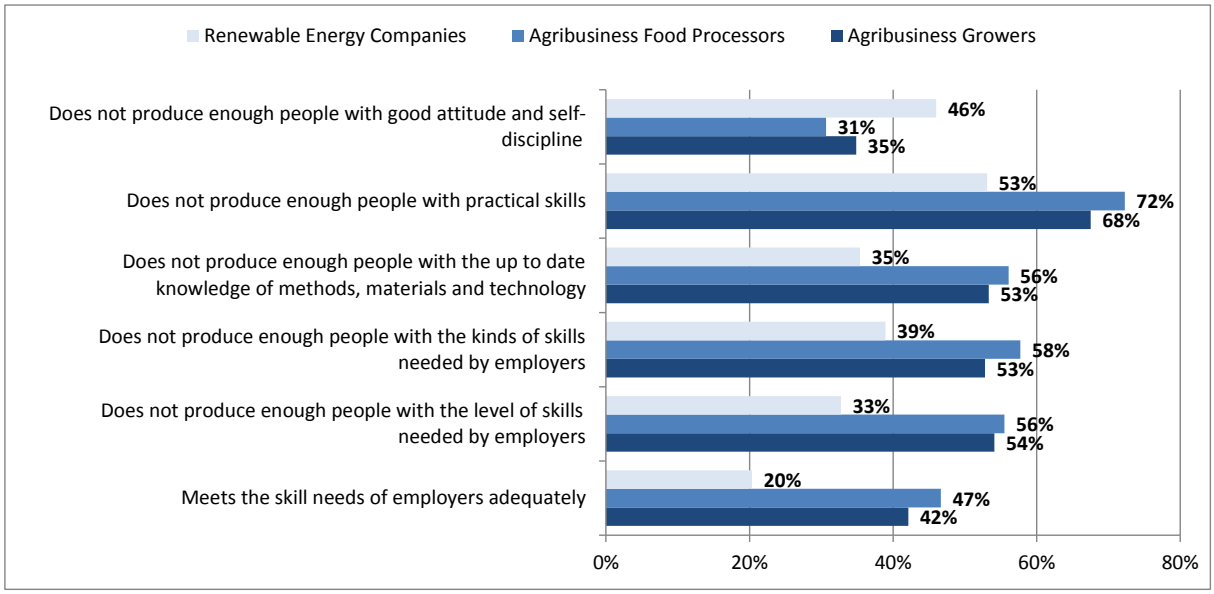


Source: OECD-WB SGS, 2015

33. The trend is similar for the general education system (Figure 12). Only 47% of food processing firms and 42% of agribusiness growing firms are satisfied with its outcomes. Renewable energy companies report the lowest satisfaction rate of 20%.

Figure 12. Employers' Opinion about the General Educational System in Ukraine

Percentage of respondents who agree with one or more of the following statements describing the general educational system in Ukraine (secondary education, higher education, except for the technical and vocational education)



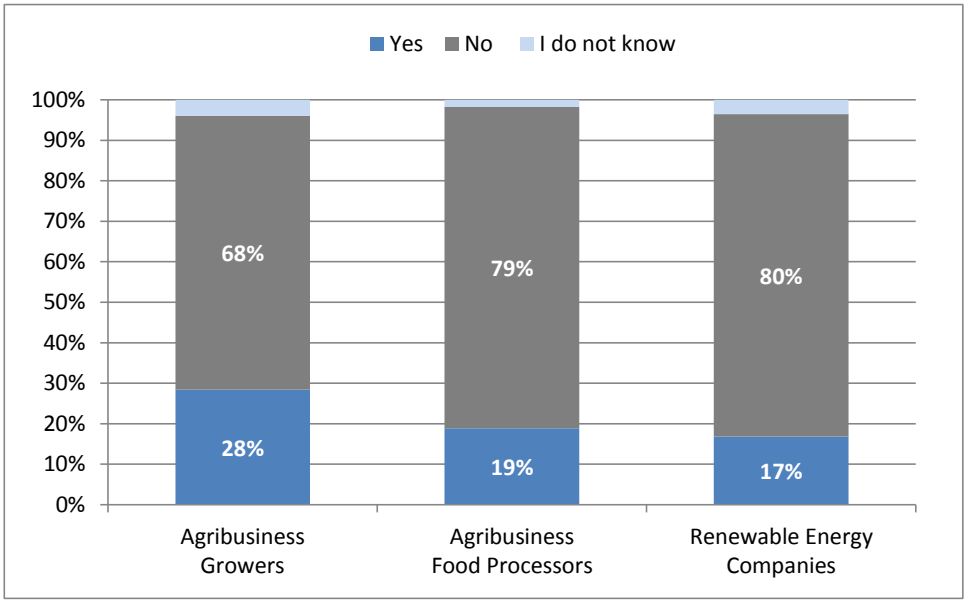
Source: OECD-WB SGS, 2015

Limited contacts between businesses and educational institutions

34. Educational institutions do not satisfy the needs of Ukrainian businesses as currently few opportunities exist to involve the private sector in educational process. Indeed, the survey results show that agribusiness and renewable energy employers have very limited interactions with educational and training institutions. Only 28% of agribusiness growers, 19% of food processors and 17% of renewable energy companies have regular contacts with academia (Figure 13).

Figure 13. Employers' contacts with educational or training institutions

Percentage of respondents reporting having regular contacts with educational or training institutions for recruitment, training, work placement or another reason

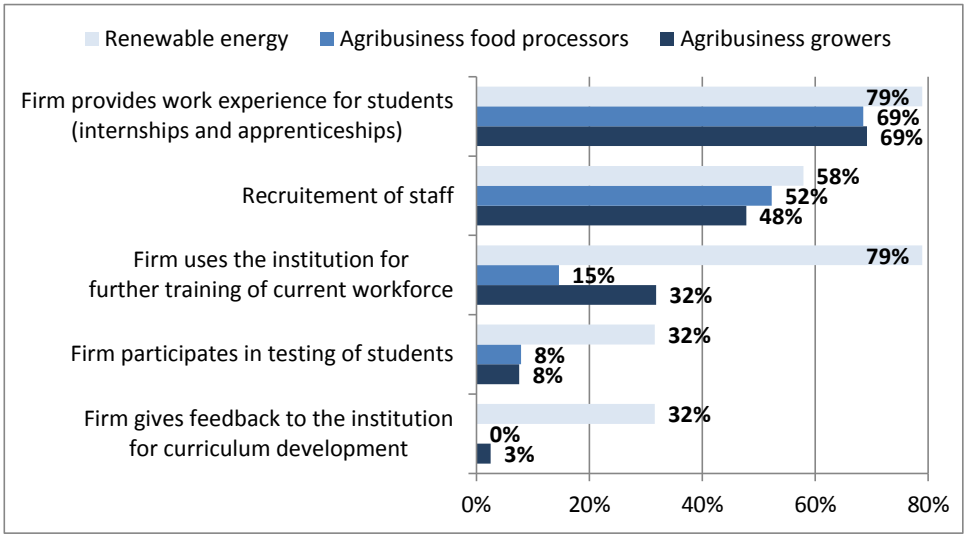


Source: OECD-WB SGS, 2015

35. The most common reason to interact with academia across all three sectors was to provide work experience for students, to recruit staff, and to provide training for their current workforce (Figure 14). It is worth noting that renewable energy companies report having more frequent contacts with educational institutions than those in the agribusiness sector. As stated above, this can be explained by the technology and innovation intensive nature of their operations, an activity which requires a high share of university-trained graduates. Due to the relative novelty of the sector in Ukraine, renewable energy companies have a particular need to communicate their skills requirements to educational institutions in order to ensure a steady supply of adequately-trained workers.

Figure 14. Purpose of employers' contacts with training institutions

Percentage of respondents who have previously reported having regular contacts with educational or training institutions and indicating one or more purposes for such contacts



Source: OECD-WB SGS, 2015

Firms provide limited training to their employees

36. The survey results show that training beyond formal education is poorly developed in Ukraine, both in terms of workplace training and formal training outside the firm. Respondents in both sectors mainly use workplace training to upskill their workforce, even if the numbers are low. Surveyed firms report that their employees undergo **workplace training** in 23% (agribusiness growers), 27% (food processors), and 36% (renewable energy) of cases.

37. Renewable energy companies provide more **formal training of employees outside the workplace** than agribusiness firms: while 32% of renewable energy workers receive such training, only 11% of agribusiness growers and 6% of food processors did.

38. Across both sectors, the most widely-used form of workplace training is training of new employees by their peers. Among the employees who received training, 23% of agribusiness growers, 28% of agribusiness food processors and 48% of renewable energy workers received training from fellow colleagues and employees. Renewable energy companies also provide training on the firm's premises with external trainers (30%) and training with the firm's own trainers (26%). On the contrary, the latter two types of workplace training are rarely used by agribusiness growers (respectively 3% and 3%) and agribusiness food processors (respectively 3% and 4%).

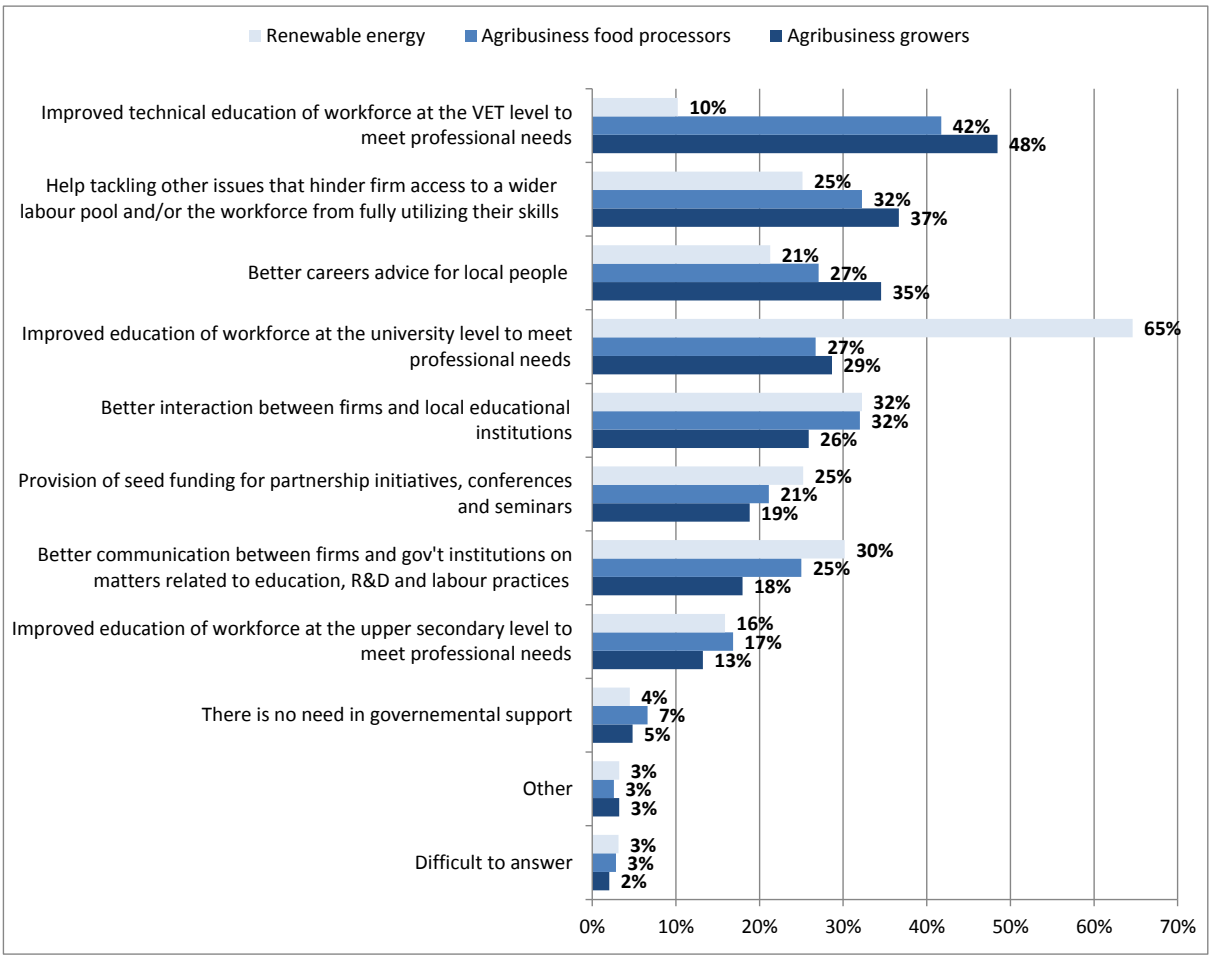
39. Regarding formal training organised by the firm outside of its premises, agribusiness companies mainly make use of technical or VET public schools to train their employees (35% for both growers and food processors); and to a lesser extent equipment suppliers (respectively 16% and 15%). Renewable energy companies train their employees mainly through NGOs or international organizations (53%), and equipment suppliers (50%).

The government could do more to enhance the skills provision

40. The educational system in Ukraine is currently dependent upon the state both in terms of funding and curricula design (even though recent reforms grant more powers to educational institutions). Hence, most companies in Ukraine, including in the agribusiness and renewable energy sectors, expect the government to remedy the existing skills gap. Only 4% of renewable energy firms, 7% of agribusiness food processors and 5% of agribusiness growers consider that there is no need for governmental support (Figure 15). Priority areas for governmental intervention are different for the agribusiness and renewable energy sectors, but all converge towards improving the University and VET systems.

Figure 15. Priority Areas for Government Intervention to overcome Skills Gap

Percentage of respondents indicating one or more fields for substantial government support to overcome the skills gap



Source: OECD-WB SGS, 2015

CHAPTER 2. OECD GOOD PRACTICES: SKILLS DEVELOPMENT POLICIES

41. Good practices from OECD countries can be useful for Ukraine in defining tailor-made policies in the field of skills development and matching the skills needs of the industry. Three examples of such good practices will be reviewed in this section to show some approaches that have been effectively implemented in OECD countries, and which may be helpful in overcoming Ukraine-specific challenges. These policy instruments include sectoral workforce development strategies with an example from the United States, Sectoral Skills Councils with case studies from Australia and Ireland, and internship schemes featuring an example from France. These examples have been further presented and discussed with the Government of Ukraine and key stakeholders at the meetings of the Working Groups established as part of the OECD Sector Competitiveness Strategy Phase III project.

Sectoral workforce development strategy for a comprehensive approach to skills development

42. A comprehensive workforce development strategy is a policy instrument which may help to build educational and labour policies aligned with economic and social development goals. The example of the United States (Box 1) features a sectoral approach bridging national and local initiatives. This example might be useful for Ukraine in terms of the development of a sectoral approach and coordinating skills development efforts at central and regional levels.

43. Providing an adequately skilled labour force to businesses and keeping unemployment under control are among the main objectives of national skills development policies in the OECD. Training is the cornerstone of these policies as it allows workers to acquire new knowledge and skills and to upgrade existing ones (OECD, 2011). It includes early education to build strong cognitive and socio-emotional skills, as well as lifelong learning – either in the workplace or outside – to boost the provision of relevant job-specific technical skills in the context of rapid and constant technological change.

Box 1. Sectoral workforce development strategy approaches in the United States

In the United States, local and regional government agencies have increasingly adopted sectoral strategy approaches to economic development and a similar approach is surfacing in the workforce-development field. As partnerships between workforce and economic-development agencies become more common in regions and communities, the role of education and workforce agencies in mapping and building skills pipelines for key industries becomes more critical to economic-development practitioners. Public education and workforce systems organise their work through pathways and cluster models. For high schools and community colleges, establishing career-pathway models helps to connect them to the economy, and to produce workers with the appropriate skills for jobs in the region.

Maryland started working on a sectoral strategy approach in 1995 under the School-to-Work Opportunities Act. Some 350 business executives in ten different sectors were brought together to inform education policy makers about their bottom line: how they made money and what they needed to be successful. The original project was funded with USD 25 million of federal School-to-Work funds, and the approach was bottom-up: mapping required knowledge and skills and developing programmes around clusters of skills. Within each county, a Cluster Advisory Board (CAB) focused on different industry clusters. Administrators, counsellors, and faculty members use the career-cluster system to develop programmes that extend from high school to two- and four-year colleges/universities, graduate schools, apprenticeship programmes and the workplace. Although the cluster framework was originally developed for high schools and young people, it is now being adopted by workforce investment boards and other programmes serving adults.

Source: Hamilton, 2012.

Sectoral Skills Councils for a coordinated multi-stakeholder cooperation

44. Examples of OECD countries show that Sectoral Skills Councils (SSC) can give an impetus to a coordinated approach and provide a platform for multi-stakeholder co-operation. Sectoral Skills Councils gather representatives of employers, students, industry experts, trade unions and the government, in order to provide feedback on the current skills mismatch and to advice on improvements and training needs. SSC can also conduct an analysis of skills supply and demand, and can help developing professional standards. Sectoral Skills Councils may also support the review and update of curricula to ensure the relevance of acquired competences, knowledge and skills to the business needs. The examples of Australia and Ireland are two successful SSC that illustrate the approach.

Box 2. Sectoral Skills Councils in Australia and Ireland

National coordinated approaches towards workforce development can include the establishment of skills councils, to foster the dialogue between government, education providers and the private sector.

In April 2014, the Council of Australian Governments Industry and Skills Council agreed to provide industry with a formal role in relation to policy directions and decision making in the national training system. As an outcome, an Industry and Skills Council Committee was established in May 2015. This initiative, in collaboration with the Australian Government Department of Industry, set up 11 independent not-for-profit Industry Skills Councils (ISCs). Among these, Agrifood skills Australia was established. AgriFood skills Australia is an agriculture-specific ISC led by industry and funded by the government. Its mission is to develop and implement workforce development strategies and industry's nationally endorsed qualifications to meet the current and emerging needs of agrifood enterprises, employees and students throughout regional and urban Australia.

The Expert Group on Future Skills Needs (EGFSN) in Ireland advises the Irish Government on current and future skills needs of the economy. Composed of experts from industry, education and training, and unions, it has a central role in ensuring that labour market needs for skilled workers are anticipated and met. Established in 1997, the EGFSN reports to the Minister for Jobs, Enterprise and Innovation and the Minister for Education and Skills. Forfás, Ireland's policy advisory board for enterprise, trade, science, technology and innovation in conjunction with FÁS, the National Training Authority, provides the EGFSN with research and analysis support. The FÁS Skills and Labour Market Research Unit provides the Group with data, analysis and research and manages the National Skills Database. The Expert Group on Future Skills Needs provides advice to the government on skills issues that affect enterprise through skills foresight and benchmarking, strategic advice on building skills through education and training, and data collection and analysis on the demand and supply of skilled labour.

Source : OECD (2012b), Agrifood Skills Australia (n.d.) and ongoing OECD analysis.

Internship schemes for practical skills development

45. The development of an education system that combines time spent in the classroom on theoretical learning, with on-the-job training putting in practice the knowledge, can be an efficient mechanism to provide students with more work experience to apply theoretical knowledge, offer an affordable workforce in the firms that could be further trained to the needs of the company at a less expense, and an opportunity for universities to assess the relevance of their curricula and the quality of their teaching. Internship schemes are a useful and practical tool to upskill the workforce, widely used among OECD countries.

46. Internship schemes allow students who are still completing their degree to work for firms operating in their field of expertise for a short period of time at limited cost to the company. Practical experience combined with study improves labour market outcomes, particularly if work is limited in

duration and related to the field of study. Businesses can profit from less-expensive labour while evaluating potential employees, an element that reduces transaction costs in the recruitment process. Furthermore, universities receive feedback on educational outcomes and can establish closer relationships with the private sector.

Box 3. Internship convention in French universities

In France, the national law prescribes that students enrolled at university can be employed as interns and specifies that students need to have an appropriate insurance for any damage caused to a third party in the workplace in addition to social security (*e.g.* illness or work accident).While the law governs the general framework, the internship convention regulates specific aspects such as the duration, remuneration, labour protection, termination of the contract and the code of conduct. Internship schemes are a mandatory part of the curricula in French agricultural universities. For example the AgroParis Tech university requires three mandatory internships during the first, second and third years respectively, and two voluntary internships during the first and second years of a degree. As another example, the ENS Agronomique Toulouse university requires the completion of three internship schemes, during the first, second and third years of study.

Source : OECD (2012b).

47. These good practice policy examples can be used for the development of specific policy actions that are detailed in the following section of this paper.

CHAPTER 3. THE WAY FORWARD

Develop a national skills strategy with a regional focus

48. Ukraine should develop a national skills strategy with a regional focus in order to make the best use of the assets, capabilities and endowments in the regions and maximise positive outcomes. For key sectors such as renewable energies and agribusiness, the strategies could be further tailored with the support of the Sectoral Skills Councils.

Set-up Sectoral Skills Councils

49. OECD analysis, confirmed by the results of the survey, demonstrates that there is an urgent need for enhanced co-operation between government, businesses and academia to bring educational processes and outcomes in line with market needs. Skills policies are linked to many different policy areas. A wide array of stakeholders should work together to achieve tangible results in skills development, including different levels of government, civil society, academia and business stakeholders (Table 1). Sectoral Skills Councils can be instrumental to bring together different stakeholders in order to identify and respond to the skills development and labour force planning needs in different sectors.

Table 1. Stakeholders involved in skills policies

	Policies	National government	Sub-national government	Social partners	Other
Skills formation	Initial education	Education Ministry (schools), Labour Ministry (VET), Science, Technology, and Innovation Ministry (HE)	Municipalities, Local government	Employer organisations, Trade Unions, Firms (VET)	Schools, Universities, Providers
	Further education	Education Ministry, Labour Ministry, Finance Ministry	Municipalities, Local government	Firms, Employer organisations, Trade Unions	Providers, Universities
	Migration	Immigration Ministry, Labour Ministry	Municipalities	Firms, Chambers of Commerce	Communities, NGOs, Charities
Skills use	Activation	Social Policy Ministry, Family Ministry	Local labour market office		Career guidance service
	Matching	Education Ministry, Labour Ministry	Local labour market office	Sector Skills Councils	Career guidance service
	Demand-side	Economics Ministry, Industry Ministry		Firms, Employer organisations	

Source: OECD, 2011 and ongoing OECD analysis

46. Sectoral Skills Councils for agribusiness and renewable energy can be created based on the examples of existing Sectoral Skills Councils in the sectors of metallurgy, energy generation, coal mining and chemistry. The OECD has provided specific policy recommendations for the main steps in the establishment of a pilot Agricultural Skills Council (Annex 4).

Design tailored skills policies based on the sector's needs

47. The supply of graduates should be reviewed based on a more targeted analysis of the needs of business. The government can certainly play a role in improving the provision of demand-driven skills by its education providers. When considering specifically the **renewable energy sector**, there is a clear need for **high-skilled university-trained specialists** to satisfy the demand for technicians, professionals and managers. Regarding the **agribusiness sector**, government efforts should be targeted in **priority towards VET training**, since the greatest perceived skill gaps are at the level of certain low- and middle-skill occupations but also at the level of high-skill occupations such as technicians.

Put in place a system of on-the-job training at University level

48. In terms of the quality of formal education, both agribusinesses and renewable energy companies consider the general educational system to undersupply graduates with practical skills and up-to-date knowledge. In the short-term, the implementation of an internship scheme in Ukraine requires an enabling legal framework establishing a contract or internship convention, defining the right incentives, the duration and cost modalities of the internship for the private player, as well as its goals (Annex 3).

Establish networks for public-private dialogue

49. To better meet the skills needs of employers, Universities could establish a network with the private sector, through company databases, alumni networks and regular company presentations. In the medium-term, successful implementation relies on the matching of students with available internships. This requires designing a selection process through universities' career services as well as the establishment of recruitment portals. The networks would allow for monitoring and feedback of skills supply and demand into the local labour market, which would allow for better policies for supporting private sector competitiveness.

50. The government of Ukraine certainly plays a key role in improving the supply of demand-driven skills. Currently, Universities and education providers rely mostly on public financing that do not encourage them to improve efficiency or enter a dialogue with the private sector. For instance, institutions receive funding in proportion to the number of students rather than according to the quality of their research or education outcomes. Hence, universities tend to recruit a high number of students, notwithstanding their inability to offer high-quality training (OECD, 2012b). The government could therefore play a key role in improving the ability of Ukraine's education system to provide demand-driven skills by tying funding to performance measures and linking education providers more closely to the labour market.

Introduce regular policy monitoring and evaluation to measure the effects of reform initiatives

51. A co-ordinated approach to the design and implementation of skills policies requires an embedded monitoring and measurement mechanism to evaluate policy outcomes. A definition of key performance indicators, regular data collection and analysis are essential elements for policy making. Moreover, regular consultations with key stakeholders (notably employers, but also students and education providers) are a useful means to measure the impact of the policy interventions put in place. The public sector should systematically consult and update policies to meet the demands of businesses. The survey conducted as part of this work could be updated and conducted again among a similar target group if policies have been put in place, or even extended to other business activities in order to identify needs and support the competitiveness of targeted economic sectors.

BIBLIOGRAPHY

Campbell, M. (2002), *Learn to Succeed: the Case of a Skill Revolution*, Policy Press, Bristol.

CEDEFOP (2009), *Terminology of European education and training policy: A selection of 100 key terms. European Centre for the Development of Vocational Training,*. Office for Official Publications of the European Communities, Luxembourg, http://www.cedefop.europa.eu/node/11256 (accessed 6 August 2015).

Gill, Indermit S., Ivailo Izvorski, Willem van Eeghen, and Donato De Rosa. 2014. *Diversified Development: Making the Most of Natural Resources in Eurasia*. Washington, DC: World Bank.

GTAI (2015), "Wirtschaftstrends Ukraine: Jahresmitte 2015" [Economic Trends Ukraine: Mid-year 2015], Germany Trade and Invest, Kyiv/Bonn, https://www.gtai.de/GTAI/Content/DE/Trade/Fachdaten/PUB/2015/07/pub201507098000_20146_wirtschaftstrends---ukraine--jahresmitte-2015.pdf (accessed 11 August 2015).

ETF (2011), *Flexicurity and the Role of Lifelong Learning in Ukraine*, European Training Foundation, Turin, http://www.etf.europa.eu/webatt.nsf/0/00708A0EEE6118ADC12578EF00523724/$file/Flexicurity%20and%20lifelong%20learning_Ukraine.pdf (accessed 7August 2015).

EC (2007), Key Competencies for Lifelong Learning: European Reference Framework, Office for Official Publications of the European Communities, Luxembourg.

EUROSTAT (2008), *NACE Rev. 2: Statistical classification of economic activities in the European Community*, Methodologies and Working Papers, Office for Official Publications of the European Communities, Luxembourg, http://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF/dd5443f5-b886-40e4-920d-9df03590ff91?version=1.0 (accessed 6 August 2015).

FAO (n.d.), "Agribusiness Development", webpage, http://www.fao.org/ag/ags/agribusiness-development/en/ (accessed 6 August 2015).

Hamilton, V. (2012), *Career Pathway and Cluster Skill Development: Promising Models from the United States*, OECD Local Economic and Employment Development Working Papers, 2012/14, OECD Publishing.

ILO (1990), *International Standard Classification of Occupations: ISCO-88*, International Labour Organisation, Geneva.

ILO (2012), *International Standard Classification of Occupations: ISCO-08*, International Labour Organisation, Geneva.

IRENA (2015), *REmap 2030 Renewable Energy Prospects for Ukraine*, , Abu Dhabi, www.irena.org/remap (accessed 6 August 2015).

OECD (forthcoming), *Policy Framework for Investment, 2015 Edition*, OECD Publishing, Paris.

OECD (2015), *OECD Economic Outlook*, Issue 1, OECD Publishing, Paris

OECD (2014), *Policy Framework for Investment in Agriculture*, OECD Publishing, Paris.

OECD (2013a), "Apprenticeships and Workplace Learning", OECD Skills Strategy Spotlight Series, http://skills.oecd.org/developskills/documents/Apprenticeships_and_Workplace_Learning.pdf (accessed 11 August 2015).

OECD (2013b), *The Survey of Adult Skills: Reader's Companion*, OECD Publishing, Paris.

OECD (2012a), *Competitiveness and Private Sector Development: Ukraine Sector Competitiveness Strategy*, OECD Publishing, Paris.

OECD (2012b), *Enhancing Skills through Public-Private Partnerships in Education in Ukraine: the Case of Agribusiness*, OECD Publishing, Paris.

OECD (2012c), *A Corporate Governance Assessment of Ukraine's State-Owned Aviation Sector: the Case of Antonov*, OECD Publishing, Paris.

OECD (2011), *Towards an OECD Skills Strategy*, OECD Publishing, Paris.

OECD (2007), *Bridges to Lifelong Learning*, OECD Publishing, Paris.

OECD (2002), *Education at a Glance 2002*, OECD Publishing, Paris.

OECD (1998), *Education at a Glance 1998*, OECD Publishing, Paris.

State Statistical Service of Ukraine (n.d.), "Employment of the population by economic activity in 2000-2014", webpage, https://ukrstat.org/uk/operativ/operativ2014/rp/zn_ed/zn_ed_u/zn_ed_2013_u.htm (14 October 2015).

Ukrainian Club of Agribusiness, UCAB (2014), *Labour Market in agribusiness sector in Ukraine - 2014*, UCAB, Kyiv.

WB (2015), "World Development Indicators" (database), http://data.worldbank.org/country/ukraine (accessed 11 August 2015).

WB (2014a), *STEP Skills Measurement Surveys: Innovative Tools for Assessing Skills*, Social Protection and Labour Discussion Paper, No. 1421, World Bank Group, Washington, DC, http://documents.worldbank.org/curated/en/2014/07/19894104/step-skills-measurement-surveys-innovative-tools-assessing-skills (accessed 11 August 2014)

WB (2014b), *STEP Skills Measurement Program – Snapshot 2014*, World Bank Group, Washington, DC,

http://www.worldbank.org/content/dam/Worldbank/Feature%20Story/Education/STEP%20Snapshot%202014_Revised_June%2020%202014%20(final).pdf (accessed 4 August 2015)

WB (2009), *Ukraine Labour Demand Study*, World Bank Group, Washington, DC,. http://siteresources.worldbank.org/UKRAINEEXTN/Resources/WB_Book_Report_labour_demand_EN_prew.indd.pdf (accessed 11 August 2015)

WEF (2014), *The Global Competitiveness Report 2014–2015: Full Data Edition*, World Economic Forum, Geneva, http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf (accessed 11 August 2015).

ANNEX 1: SURVEY METHODOLOGY

The OECD-WB Skills Gaps Survey (SGS) was prepared in collaboration between the OECD Eurasia Competitiveness Programme and the World Bank. The WB *Skills Towards Employment and Productivity* (STEP) survey methodology was completed and adjusted by the OECD to better take into account sectoral specificities, and adding a stronger focus on the identification of skills shortages and needs in the industry, including the skills demand and skills mismatches by sector, type of employer and occupation. The STEP has a broader approach, and comprises both, a household and an employers' survey. The OECD-WB SGS is based on the results of the employer survey questionnaire only. The OECD-WB SGS was conducted by GfK Ukraine on behalf of the OECD and the WB between October and December 2014.

The survey instrument allows gathering information on (i) skill gaps profiles and skills used by the current workforce, (ii) information on new hires, and (iii) training and compensation (Figure 16). Basic information related to the workforce and background of the firm allows refining the data analysis. The employer survey features an original approach to data collection. Specifically, data on skills usage, employers' satisfaction with job related skills and personality traits, hiring practices, training and compensation is collected with respect to three occupations with highest skills gap.

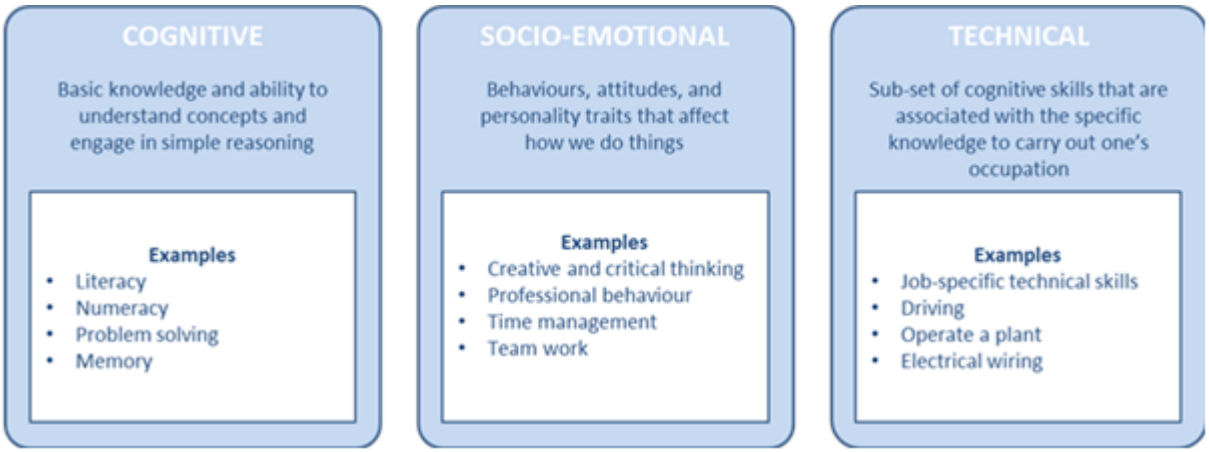
Figure 16. STEP Employer Survey Structure

Source: adapted from WB, 2014a.

The instrument assesses each respective employer's skills needs, considering cognitive, socio-emotional, and technical skills (Figure 17). *Cognitive skills* such as reading, writing, numeracy, and problem solving are considered "foundational" cognitive skills that are critical outputs of the school

system (WB, 2014). *Socio-emotional skills* include dealing with co-workers, in terms of leadership, cooperation, teamwork skills, and mentoring skills. *Technical skills* refer to job-specific hard skills.

Figure 17. Workforce's skills set: a simplified framework



Source: adapted from WB, 2014a.

Sample description

General description of the sample

The total sample size of this survey was 502 firms (Table 2), comprising 260 agribusiness growers, 202 agribusiness food processors and 40 renewable energy companies. The designed sample over-represents renewable energy companies and under-represents agribusiness sector compared to the estimated universe (Table 2). The rationale behind this is that the sample size for each sector should be sufficient to ensure statistically representative results for each sector in order to conduct sectoral analysis.

Table 2. General description of the OECD-WB survey sample

Sector	Estimated Universe[4)]	Sample Size	Sample by Firm Size: % of firms of 10-200 employees	Sample by Firm Age: % of firms created after 2000
Agribusiness Growers[1)]	29 637 firms	260	182 firms *(70% of the sub-sample)*	175 firms operational since 2000 *(67% of the sub-sample)*
Agribusiness Food Processors[2)]	3 830 firms	202	131 firms *(65% of the sub-sample)*	119 firms operational since 2000 *(59% of the sub-sample)*
Renewable Energy Companies[3)]	73 firms	40	22 firms *(55% of the sub-sample)*	31 firms operational since 2000 *(78% of the sub-sample)*
TOTAL	33 540 firms	502	335 firms *(67% of the total sample)*	325 firms operational since 2000 *(65% of the total sample)*

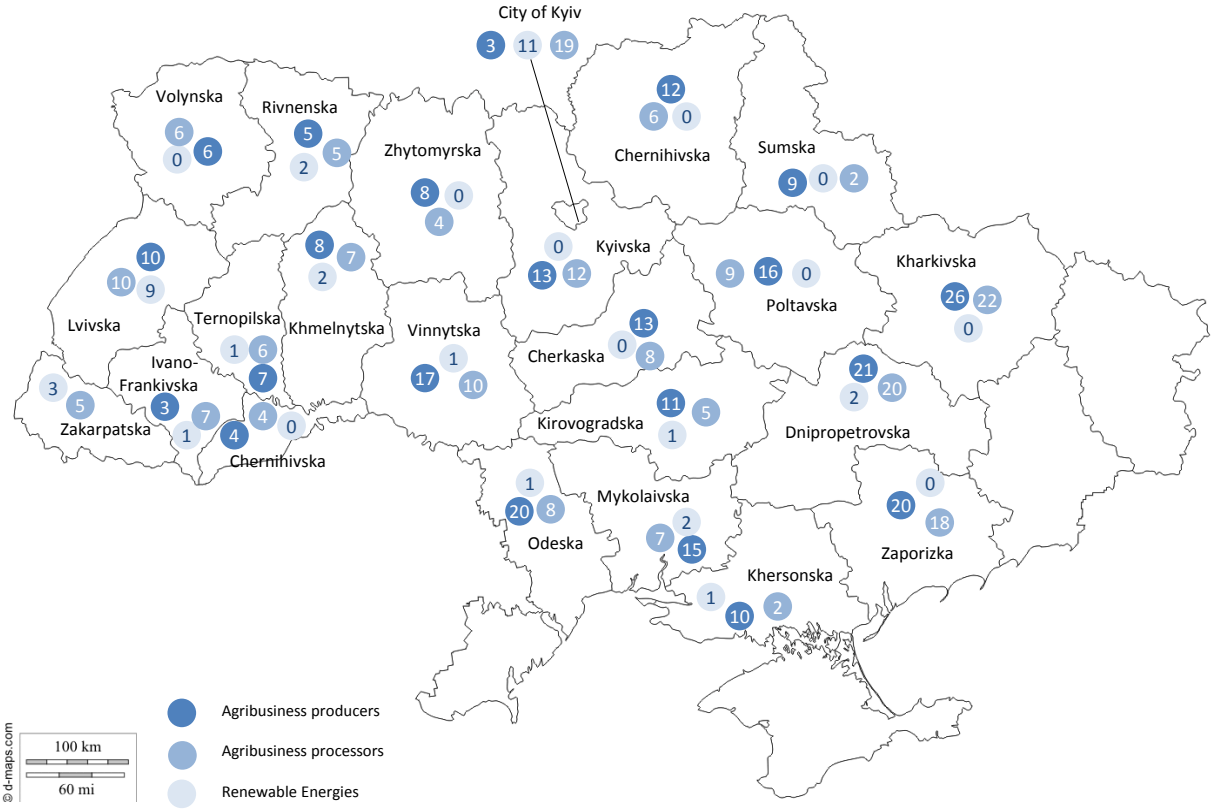
Note: 1) Agriculture, forestry, and fishing (ISIC 01)
2) Manufacture of food and beverages (ISIC 10 & 11)
3) Production of electricity (ISIC 35.11) including only production from renewable sources
4) The estimated universe for each sector excludes companies from the regions of Donetsk, Luhansk, and Crimea.

Source: OECD-WB SGS, 2015.

The sample was selected from a total universe of 33,540 firms, which include 29,637 agribusiness growers, 3,830 agribusiness food processors and 73 renewable energy companies. The large size of the agribusiness universe compared to renewable energy companies is mainly explained the fact that agriculture is one of traditional sectors of Ukrainian economy, whereas renewable energy sector is relatively young. The survey results confirm this assumption as 78% renewable energy firms report having started their operations after 2000.

The survey covers agribusiness and renewable energy companies from 22 regions of Ukraine and the city of Kyiv; it excludes companies from the regions of Donetsk, Luhansk, and Crimea (Figure 18). The analysis by region is not part of the present study because of insufficient statistical sample of respondents by regions.

Figure 18. Sample companies by oblast and sector



Source: OECD-WB SGS, 2015.

Note: The survey excludes companies from the regions of Donetsk, Luhansk, and Crimea. This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.

Structure by occupation

The survey instrument assesses the skills needs of employers based on a categorisation of occupations, ranging from low- and middle-skill occupations to high-skill occupations. In order to build these categories, the OECD and GfK Ukraine consulted with in-country experts to adapt the workforce classification to the Ukrainian context, as well as to the specificities of agribusiness and

renewable energy sectors. The detail of the workforce classification for sectors under review is presented in Tables 3-5.

Table 3. Classification of occupations for agribusiness growers

High-skill occupations	Low- and middle-skill occupations
Managers	**Clerks**
Corporate managers	Secretaries and clerks
Directors and chief executives	Secretary
Production and operations department managers	Bookkeepers
Production and operations managers in agriculture, hunting, forestry and fishing, including Manager of grain storage facility, Manager of mill, Manager of drying and cleaning tower	
Production line (shift) supervisor	**Service workers and shop and market sales workers**
Chief stockman, distribution manager, transport column supervisor	Superintendents and guardians
Other department managers	Superintendent
Finance and administration managers	Guardian
Personnel and industrial relations managers	Others
Supply and distribution managers	
Computing services managers	**Skilled agricultural and fishery workers**
Chief melioration specialist, Chief livestock expert (zootechnician)	Animal producers and related workers
Security officer	Beekeeper
Other specialist managers	Cattlemen
Managers of small enterprises	
Managers of small enterprises in agriculture, hunting, forestry and fishing	**Craft and related trade workers**
Administrative and commercial managers	Welders and flame cutters
	Slingsman
Professionals	Instrument mechanic
Engineers	Repairman
Power engineer in agriculture	Motor vehicle mechanics and fitters
Mechanization engineer in agriculture, Engineer on usage of machines and tractors	Ovenman
Land surveyor engineer	Electronics mechanics and servicers
Other engineers (work and industrial safery engineer)	Carpenter
Zootechnicians and veterinarians	
Zootechnician	**Plant and machine operators and assemblers**
Veterinarian	Mechanical machinery assemblers
Economists and lawyers	Car, taxi and van driver
Labour economist	Crane driver
Lawyer	Tractor driver
Security supervisor	Lift-truck driver
Financial economist	
	Elementary occupations
Technicians and associate professionals	Unskilled worker
Mechanical technicians	Transport labourers and freight handlers
Laboratory specialist, technologist	Storekeepers and weighers
Electrical engineering technicians	Other
Mechanical engineering technicians	
Physical and engineering science technicians not elsewhere classified	
Agrotechnicians and technicians in veterinary	
Agrotechnician	
Technician in veterinary medicine	
Technician in land surveying	
Finance and sales associate professionals	
Human resources representative	
Accountant	

Source: OECD-WB SGS, 2015; ILO, 2012.

Table 4. Classification of occupations for agribusiness food processors

High-skill occupations	Low- and middle-skill occupations
Managers	**Clerks**
Directors and chief executives	Office clerks
Directors and chief executives	Transport clerks
Production and operations department managers	Customer service clerks
Production department managers in manufacturing	
Other department managers	**Service workers and shop and market sales workers**
Finance and administration managers	Superintendents and guardians
Personnel and industrial relations managers	Superintendent
Sales and marketing managers	Guardian
Advertising and public relations managers	Others
Supply and distribution managers	
Computing services managers	**Craft and related trade workers**
Research and development managers including Chief technologist	Machine-tool setters and setter-operators in food processsing industry
Chief Project or Program Manager	Industrial-machinery mechanics and fitters (food processing)
Other specialist managers	Food processing and related trades workers
Managers of small enterprises	Butchers, fishmongers and related food preparers
Managers of small enterprises in manufacturing	Bakers, pastry-cooks and confectionery makers
Commercial manager	Dairy-products workers
	Fruit, vegetable and related preservers
Professionals	Food and beverage tasters and graders
Physical, mathematical and engineering science professionals	Tobacco preparers and tobacco products makers
Engineers of manufacturing automation systems	
Power engineers, experts in energy saving and efficiency	**Plant and machine operators and assemblers**
Environmental engineer, Work and industrial safery engineer	Food and related products machine operators
Engineer-technologist on production and processing of livestock products	Meat- and fish-processing-machine operators
Veterinarian (doctor of veterinary medicine)	Dairy-products machine operators
24 Other professionals	Grain- and spice-milling-machine operators
Business professionals	Baked-goods, cereal- and chocolate-products machine operators
Professionals in auditing and accounting	Fruit-, vegetable- and nut-processing-machine operators
Professionals in the field of HR and employment	Sugar production machine operators
Business professionals not elsewhere classified	Tea-, coffee- and cocoa-processing-machine operators
Lawyers	Brewers, wine and other beverage machine operators
Economists, Analysts	Tobacco production machine operators
	Motor vehicle drivers
Technicians and associated professionals	
Electrical engineering technicians (including dispatchers)	**Elementary occupations**
Mechanical engineering technicians	Manufacturing labourers
Quality inspector	Transport labourers and freight handlers
Finance and sales associate professionals	Storekeepers and weighers
Administrative associate professionals	Other
Administrative secretaries and related associate professionals	
Bookkeepers	
35 Associate professionals in food processing industry	
Associate professionals in processing of fruits and vegetables	
Associate professionals in in the production of fermentation and winemaking	
Associate professionals in the production of dairy products	
Associate professionals in the production of meat products	
Associate professionals in the production of bakery, confectionery and food concentrates	
Associate professionals in storage and processing of grain	
Associate professionals in food technology	
Other associate professionals in food processing industry	

Source: OECD-WB SGS, 2015; ILO, 2012.

Table 5. Classification of occupations for renewable energy companies

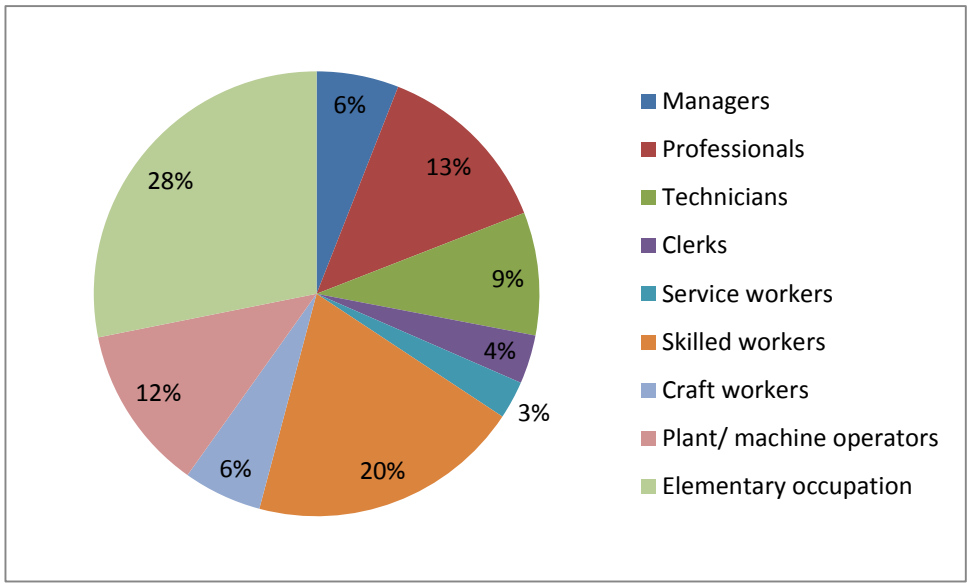
High-skill occupations	Low- and middle-skill occupations
Managers	**Clerks**
Directors and chief executives	Office clerks
Directors and chief executives	Transport clerks
Production and operations department managers	Customer service clerks
Production department managers in manufacturing	
Other department managers	**Service workers and shop and market sales workers**
Finance and administration managers	Others
Personnel and industrial relations managers	
Sales and marketing managers	**Craft and related trade workers**
Advertising and public relations managers	Building and similar electrical
Supply and distribution managers	Builders
Computing services managers	Other
Research and development managers	
Chief structural engineer	**Plant and machine operators and assemblers**
Chief engineer	Other
Chief Project or Program Manager	
Other specialist managers	**Elementary occupations**
Managers of small enterprises	Freight handlers
Managers of small enterprises in manufacturing	Other
Commercial manager	
Professionals	
Physical, mathematical and engineering science professionals	
Geologists and geophysicists	
Mathematicians, statisticians and related professionals	
Computing professionals	
Computer systems designers, analysts and programmers	
Architects, engineers and related professionals	
Civil engineers	
Electrical engineers	
Cartographers and surveyors	
Architects, engineers and related professionals not elsewhere classified	
Environmental engineer	
Other professionals	
Business professionals	
Professionals in auditing and accounting	
Professionals in the field of HR and employment	
Legal professionals	
Professional, not included in other groups	
Technicians and associated professionals	
Physical and engineering science associate professionals	
Electrical engineering technicians	
Technology guide bioenergy installations	
Technician operating wind turbines	
Technician operating hydropower plants	
Technician operating solar power plants	
Mechanical engineering technicians	
Safety, health and quality inspectors	
Other associate professionals	
Appraisers, valuers and auctioneers	
Administrative secretaries and related associate professionals	

Source: OECD-WB SGS, 2015; ILO, 2012.

Among the surveyed agribusiness growers (Figure 19), low- and medium-skill occupations represent 72% of the total. Elementary occupations account for 28% of the total workforce, and represent the largest share in the sample of surveyed firms. Skilled agricultural workers represent one fifth of the workforce, and plant and machine operators represent 12%. High-skill occupations represent 28% of the total workforce in the sector, which include professionals and technicians accounting respectively for 13% and 9%.

Figure 19. Structure of the workforce

Surveyed agribusiness growers

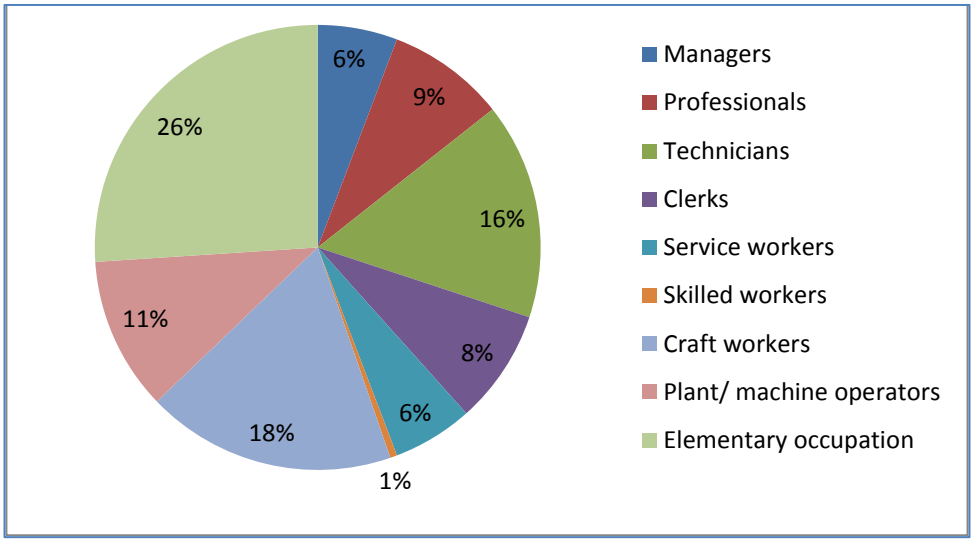


Source: OECD - World Bank Skills Gap Survey, 2015.

Similar to the agribusiness growers sector, low- and medium-skill occupations account for 69% and represent the largest share of agribusiness food processors' workforce (Figure 20). Inside this large category, elementary occupations and craft workers are the most widely spread occupations accounting for 26% and 18% respectively. Among high-skill occupations, technicians hold the largest share accounting for 16%, 7 percentage points more than for agribusiness growers.

Figure 20. Structure of the workforce

Surveyed agribusiness food processors



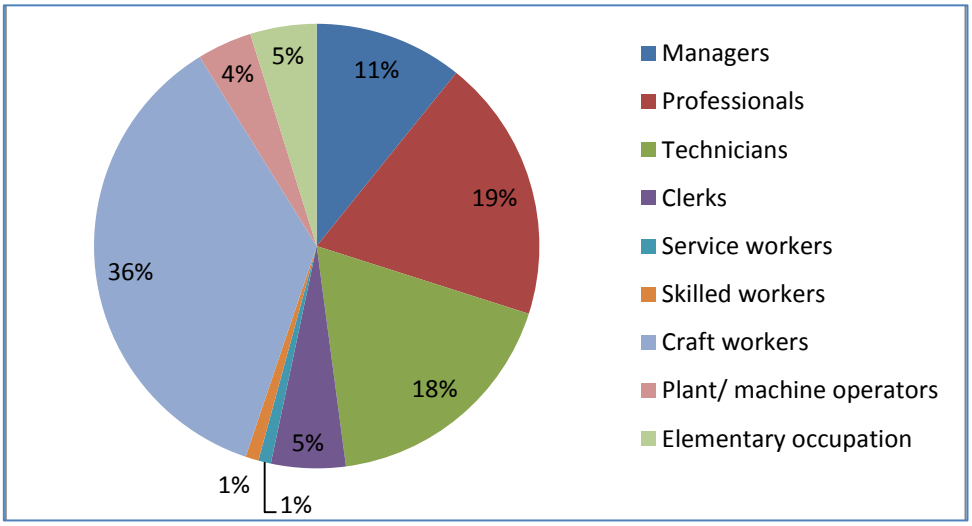
Source: OECD - World Bank Skills Gap Survey, 2015.

Overall, the share of high-skill occupations is higher for agribusiness food processors than for agribusiness growers. This is mainly explained by a more intensive use of technology in this segment of the value chain which requires a higher level of skills.

Among the surveyed renewable energy companies (Figure 21), high-skill occupations account for almost a half of the total workforce including 19% of managers, 18% of technicians and 11% of managers. Craft workers accounting for 36% are the largest group in the category of low- and medium-skill occupations.

Figure 21. Structure of the workforce

Surveyed renewable energy companies



Source: OECD - World Bank Skills Gap Survey, 2015.

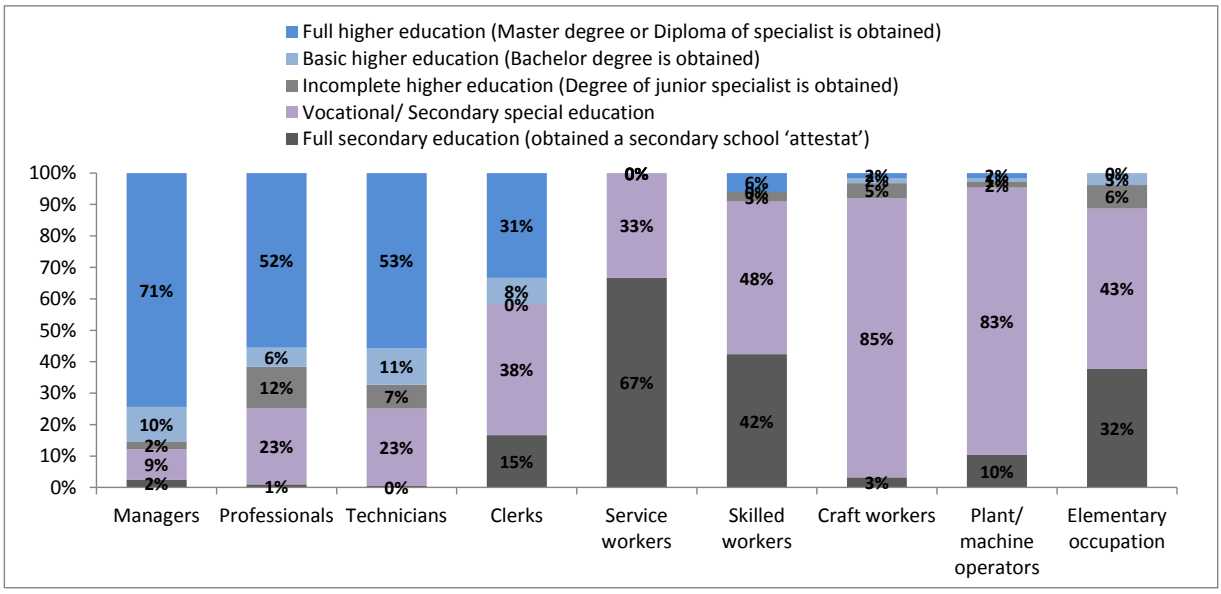
The differences in the labour force structure of surveyed firms between agribusinesses and renewable energy companies reflect the general trend in both sectors. Overall, Ukrainian agricultural production remains labour-intensive, with a large share of low- and middle-skill occupations. The agricultural sector exhibits a low labour productivity level as it accounts for 17% of employment (WB, 2015) while contributing to only 9% of GDP value added in 2012 (ibid.). However, within the sector disparities exist between large agribusinesses having access to capital, technology and innovation allowing them to make productivity gains and smaller agricultural growers restrained in their access to finance and skills. Comparatively, the large share of highly-skill occupations in renewable energy firms is mainly due to the innovative and technology-intensive nature of the sector, which requires a highly skilled workforce.

Structure by educational attainment

In terms of the educational level of the workforce of surveyed agribusiness growers (Figure 22), 71% of managers, 52% of professionals and 53% of technicians hold a full higher education degree. Most workers of low- and middle-skill occupations have a VET- or secondary-level education.

Figure 22. Educational level of the workforce

Surveyed agribusiness growers

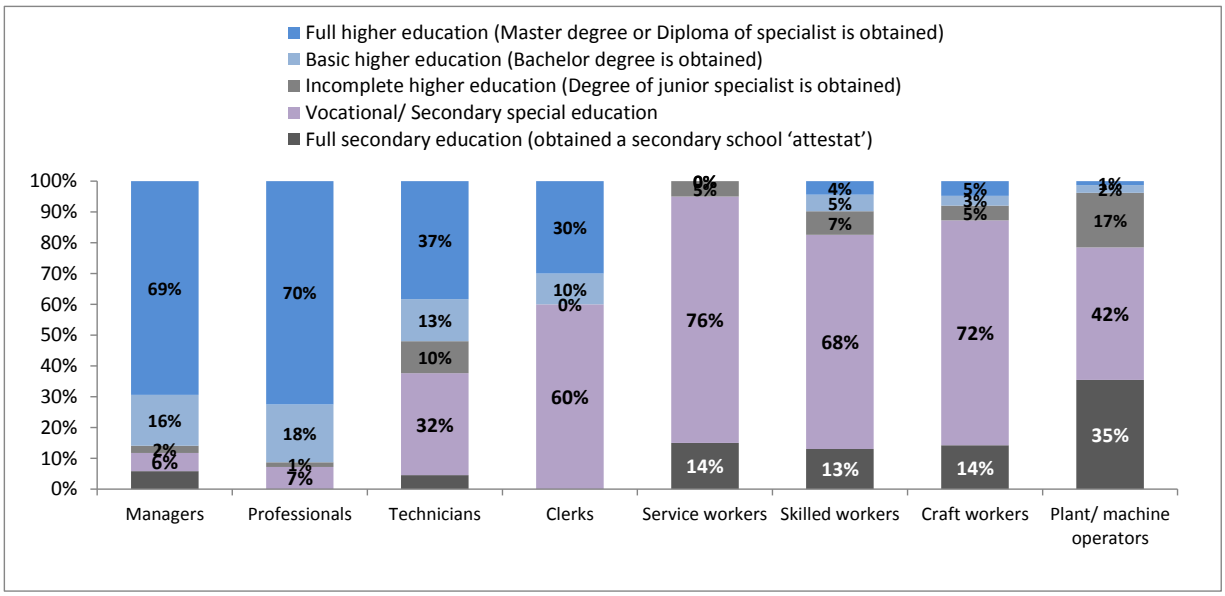


Source: OECD-WB SGS, 2015.

The distribution of agribusiness food processors by workforce education level (Figure 23) is similar to agribusiness growers. Highly-skilled occupations such as managers (85%) and professionals (88%) tend to hold a university degree, whilst the majority of workers of low- and medium-skill occupation are VET and secondary–school graduates. In comparison to agribusiness growers, less agribusiness food processor technicians are university graduates, namely 64% for growers vs. 50% for food processors.

Figure 23. Educational level of the workforce

Surveyed agribusiness food processors

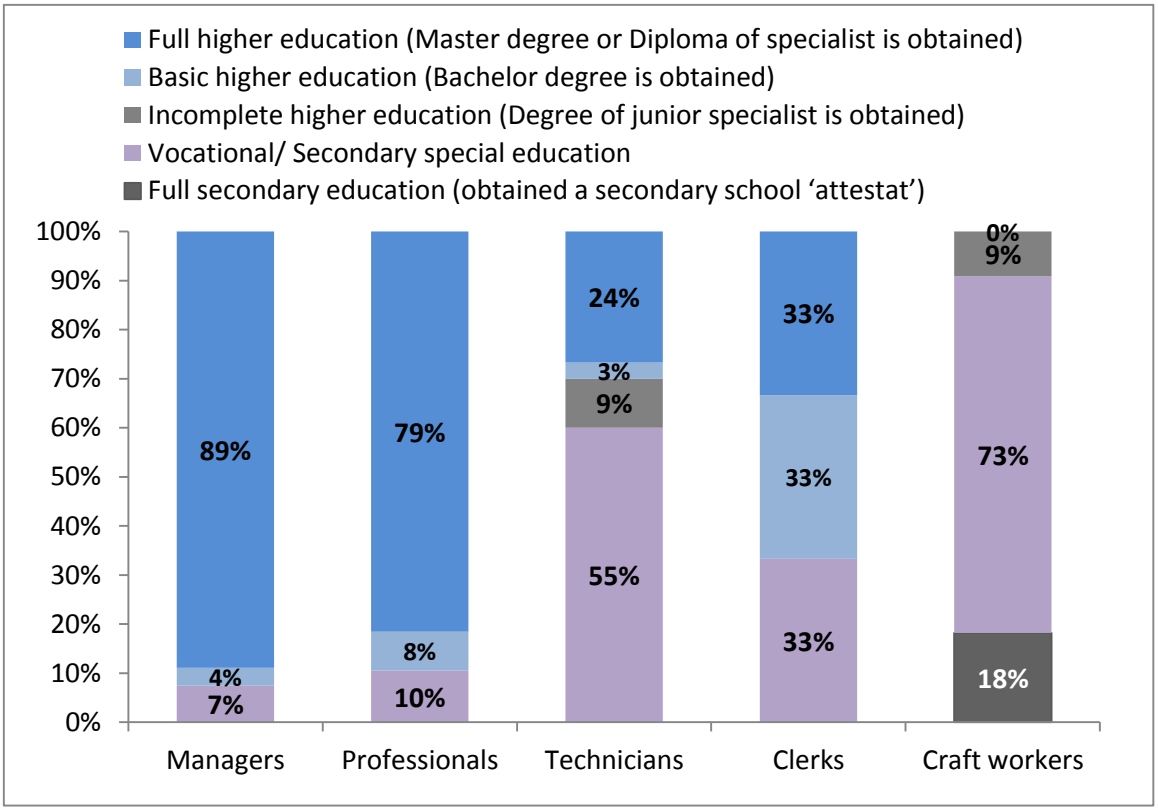


Source: OECD-WB SGS, 2015.

In the renewable energy sector (Figure 24), the share of university graduates among managers and professionals is higher than in the agribusiness sector. University graduates among technicians however account only for 27%.

Figure 24. Educational level of the workforce

Surveyed renewable energy companies[7]



Source: OECD-WB SGS, 2015.

Across both sectors, managers and professionals are mainly university graduates, as well as a third of clerks. Technicians tend to have a higher level of education in agribusiness sector (where more than a half of the labour force has a university degree) than in renewable energy sector (only a quarter). Different types of low- and medium-skill occupations predominantly hold VET and secondary school diplomas. The agribusiness sector is characterized by a larger share of VET graduates, compared to the renewable energy sector which has the highest share of university graduates. This reflects the fact that renewable energy is a more innovative and skill-intensive sector, as explained above.

[7] The data on the level of education was collected only for three occupations with a skills gap for each respondent firm. For renewable energy companies, service workers, skilled workers and plant/ machine operators are not identified by respondents as occupations with a skills gap, therefore the data on the educational level has not been collected for these occupations.

ANNEX 2: GLOSSARY

Agribusiness	Denotes the collective business activities that are performed from farm to fork, covering the supply of agricultural inputs, the production and transformation of agricultural products and their distribution to final consumers (FAO, n.d.). Particularly, in this study, the term "Agribusiness" encompasses both, "Agribusiness growers" as well as "Agribusiness food processors".
Agribusiness growers	Comprises crop and animal producers, hunters and related service activities, i.e. NACE Rev. 2, Division 01 (cf. Eurostat, 2008).
Agribusiness processors	Manufacturers of food products and beverages, i.e. NACE Rev. 2, Division 10 and 11, respectively (cf. EUROSTAT, 2008).
Continuing education and training	Refers to organised, systematic education and training in which people take part in order to obtain knowledge and/or learn new skills for a current or a future job, to thereby increase earnings, to improve job and/or career opportunities in a current or another field (OECD, 2002). It is an essential component in the maintenance of human capital that meets the needs of the labour market. In the life-long learning system, CET is the learning that lasts the longest – from initial education and training onward.
Competences	Synonym of "skills". Please refer to the definition of skills below.
Competitiveness	Defines the set of institutions, policies, and factors that determine the level of a country's productivity, which, in turn, sets the level of prosperity that can be reached by an economy (WEF, 2014). For instance, competitiveness can measure a country's advantage or disadvantage in selling its products in international markets (OECD, 2015).
Life-long Learning	Life-long learning is a process that goes from "cradle to grave" (OECD, 2010). In the life-long learning system, CET is the learning that lasts the longest – from initial education and training onward. Its economic rationale comes from two principal sources: first, the threshold of skills demanded by employers constantly increases as countries transition towards knowledge-based economies; second, career jobs are fewer and individuals experience more frequent changes in jobs over the working life as firms face more volatile markets and shorter product cycles (OECD, 2007).
Skills Council	Denotes a national body providing labour-market intelligence and advice on the design and implementation of skills policies to reduce skills shortages and mismatches, which involves relevant stakeholders such as ministerial representatives, agencies, employers, labour unions and the civil society (OECD, 2011). Skills Councils typically work at a sectoral level (ETF, 2011), although they can also be instituted at national and regional levels.

Skills	Refer to the ability or capacity of an agent to act appropriately in a given situation, which does not only involve the application of knowledge (explicit and/or tacit), the use of tools, as well as cognitive and practical strategies, but also typically implies certain values (e.g. attitudes), beliefs and dispositions (OECD, 2013b). Although a distinction is sometimes made between "competency" and "skill" in the literature on education and training (cf. EC, 2007), the terms are used interchangeably in this report; amongst others, this approach is aligned with the OECD methodology employed in the Survey of Adult Skills, PIAAC (OECD, 2013b).
Skills gap	Indicates a mismatch between the skill level of the workforce and the skills needed by employers to meet the organisations' objectives (Campbell, 2002).
Occupation	Comprises a set of jobs, whose main tasks and duties are characterised by a high degree of similarity, and where the term job is defined as a set of tasks and duties executed, or meant to be executed, by one person (ILO, 1990).
On-the-job training	Denotes the practical, workplace-based part of education and training programmes, where theoretical, classroom-based learning is the other (OECD, 2013a).
Renewable energy companies	In the context of this study, this notion includes companies generating electricity, i.e. NACE Rev. 2 Class 35.11 (Eurostat, 2008), but recognizes solely those which generate from renewable sources such as biogas, biomass, solar, water, and wind. Companies must be registered by the National Commission of Electricity and Gas Market Regulation of Ukraine.
Upskilling	Short-term targeted training typically provided following initial education or training, and aimed at supplementing, improving or updating knowledge, skills and/ or competences acquired during previous training (CEDEFOP, 2008).
Vocational education and training	Comprises education and training which aims to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labour market (CEDEFOP, 2008). Distinguishing it from general and academic education, VET comprises educational programmes generally offered by countries at the secondary and non-university tertiary level of education, that prepare participants for a specific trade or occupation or a range of trades and occupations within an industry or group of industries (OECD, 1998). VET graduates can either enter the labour force or attend further educational programmes at the same or a higher level

ANNEX 3: OECD ACTION PLAN TO SET UP AN INTERNSHIP SCHEME IN AGRICULTURAL UNIVERSITIES IN UKRAINE

Policy area	Recommendations	Institution in charge	Timing (short[8], medium[9])	Priority (1,2)
Curriculum development	• **Capacity building** of Agrarian Universities: to provide initial guidance to Agrarian Universities for curriculum development and introduction of well-functioning internship scheme. • To **involve businesses** in curriculum development	• MES and MAPF • Agrarian Universities	• S • S	• 1 • 1
Legislative framework	• To introduce a **compulsory internship agreement** and to update its **template** in order to define the roles, rights and responsibilities of intern, company and University. • To define the **legal status of intern** in the labour legislation.	• MES • MES and Ministry of Social Policy of Ukraine	• S • S	• 1 • 1
Cooperation between the government, businesses and academia	• At the national level: to establish a **Sectoral Skills Council.** • At the regional level: to foster **regional networks** involving Agrarian Universities and businesses. • At the University level: - To **create** career centres or **redefine the mandate** of the existing **career centre** making it the main focal point for relations with the private sector, - To organise **regular networking events** involving local businesses.	• MES and MAPF • Regional State Administrations • Agrarian Universities	• S • M • S	• 1 • 2 • 1 • 2
Fight against corruption in higher education	• To develop a **strategy for Integrity in Higher Education** covering the following policy areas: access to education, quality of education, resource and staff management, capacity for prevention and detection. This strategy should be part of the overall national strategy of fight against corruption.	• MES	• M	• 1

The Action Plan was approved at the Fifth OECD Working Group meeting on Skills Development for Agribusiness on 11 February 2015.

[8] Less than a year

[9] One to two years

ANNEX 4: OECD ACTION PLAN ON THE ESTABLISHMENT OF AGRICULTURAL SKILLS COUNCIL IN UKRAINE

Recommendations	Institution in charge	Timing (short[10], medium[11])	Priority (1,2)
• To **finalise the law** on the establishment of Agricultural Skills Council	• MES and MAPF	• S	• 1
• To **identify key stakeholders** to participate in the Skills Council	• MES and MAPF	• S	• 1
• To agree on the **objectives, mission, mandate and funding**	• MES, MAPF and identified key stakeholders	• M	• 2
• To agree and formalise the **statutes** of the Skills Council and **governance structure**	• MES, MAPF and identified key stakeholders	• M	• 2

The Action Plan was approved at the Fifth OECD Working Group meeting on Skills Development for Agribusiness on 11 February 2015.

[10] Less than a year

[11] One to two years

ANNEX 5: THE SURVEY

INTRODUCTION

Hello, my name is _____ I am collecting data for a World Bank and OECD Study. The study is trying to understand the skills that are being used by employers, what they look for when hiring and how skills affect training and compensation. This research will let us identify and better understand the discrepancies between skills of the employees and requirements of the employers in Ukraine and will help to revise the policy of the workforce development in Ukraine.

Your workplace has been chosen randomly, along with several hundred others, to provide a representative sample of all employers. The information you provide is strictly confidential and will be used only in aggregated form for research. The World Bank and OECD hopes to use the findings to provide recommendations to policymakers on ways to improve firms' access to skills.

I would like to begin by asking a few background questions.

I WOULD LIKE TO BEGIN BY ASKING A FEW BACKGROUND QUESTIONS.

1.01 WHAT IS YOUR JOB TITLE (MAIN RESPONSIBILITY)?

Choose one answer that corresponds to higher level positions

Human Resource (HR) Manager 1
Owner/Proprietor 2
Director/Chief Executive Officer (CEO) 3
Deputy Director 4
Finance Director 5
Chief Agronomist 6
Other Please specify_____ 7

1.02 IS YOUR WORKPLACE A PART OF A LARGER COMPANY/ HOLDING?

Yes 1
No 2
Don't know 3

1.02.1 WHAT IS THE NAME OF THIS COMPANY/HOLDING?

Write down

_____

1.02.2 IN WHAT CITY AND COUNTRY IS HOLDING'S HEAD OFFICE IS LOCATED?

Write down

*City:*_____ *Country:*_____

1.02.3 IN WHAT YEAR DID THE PARENT COMPANY/HOLDING BEGIN OPERATIONS IN THIS COUNTRY?

Write down, use the code 9999 in the case of non-response.

/____/_____/_____/_____/

1.03.1 IN TOTAL, HOW MANY EMPLOYEES WORK IN THE HOLDING, PART OF WHICH IS YOUR COMPANY?

(Use the code 9999 for "I do not know, no answer")

		(A) TOTAL
1	In total, how many employees work in the HOLDING	

1.04 WHAT FUNCTIONS DOES YOUR COMPANY PERFORM?

Headquarters 1
Warehouse/Logistics 2
Sales 3
Factory/Production 4
Other Please specify_____ 5

1.05 IN WHAT YEAR DID YOUR COMPANY BEGIN OPERATIONS IN UKRAINE??

Please specify_____ 1
Don't know 99

MODULE 1: BASIC INFORMATION & WORK FORCE

1.06 WHAT IS THE LEGAL STATUS OF THIS WORKPLACE?

Read. One answer.

Limited liability company 1
Private enterprise 2
Foreign enterprise 3
Farm enterprise 4
Public joint stock company 5
Private joint stock company 6
State enterprise 7
Communal (utility) enterprise 8
Other Please specify 9

1.07 WHO IS THE OWNER OR THE BIGGEST SHAREHOLDER OF YOUR COMPANY?

Read. One answer (the biggest shareholder)

Manager or managers of your company 1
Ukrainian individual or family members, who are not involved in direct management 2
Foreign individual or family members, who are not involved in direct management 3
Ukrainian company 4
Foreign company 5
Employees 6
Central government body 7
Local government body 8
Bank 9
Investment fund 10
Other please specify_____ 11
Don't know 12

Now I would like to ask questions about the workforce at this workplace. Please think about all the workers currently working here even if not formally employed by your firm (i.e. include independent contractors, unpaid workers, etc). Exclude workers employed by another enterprise (outsourced from another firm) who are assigned to work at your workplace.

1.10 HOW MANY WORKERS DOES YOUR WORKPLACE CURRENTLY EMPLOY?

(Use the code 9999 for "I do not know, no answer")

Interviewer: *The number of men and women can be written in numbers (number of people), as well as in percentage. Column "Total" should be filled only by the numbers (number of people).*

		(B) TOTAL	(C) Men	(D) Women
1	Permanent Full time with social security			
2	Permanent Full time without social security			
3	Permanent Part time with social security			
4	Permanent Part time without social security			
5	Temporary (workers who are employed regularly but during the season or certain period of the year)			
6	Casual/Daily (workers who are attracted on demand, to perform certain task)			
	TOTAL			

In order for us to measure the use of skills, we would like to ask questions about the breakdown of total employment at this workplace by primary occupation. SHOW CARD #1 TO THE RESPONDENT AND ASK RESPONDENT TO LOOK AT GROUPS.

	POSITION:	1 CORPORATE MANAGERS	2 PROFESSIONALS	3 TECHNICIANS AND ASSOCIATE PROFESSIONALS	4 CLERKS	5 SERVICE WORKERS AND SHOP AND MARKET SALES WORKERS	6 SKILLED AGRICULTURAL WORKERS	7 CRAFT AND RELATED TRADE WORKERS	8 PLANT AND MACHINE OPERATORS AND ASSEMBLERS	9 ELEMENTARY OCCUPATIONS					
1.11	Do you have any [POSITION] working in your firm permanently? Yes - 1, No - 2	1	1	1	1	1	1	1	1	1					
		2	2	2	2	2	2	2	2	2					

	FILL ALL COLUMNS IN THIS ROW THEN FOR THE 'YESES' ASK QUESTIONS 1.12 - 1.17									
1.12	How many current [POSITION] working in your firm permanently?									

……

1.14 HOW MANY CURRENT EMPLOYEES HAVE WORKED ON A PERMANENT BASIS FOR LESS THAN ONE YEAR AT THE WORKPLACE?

Write down

1.15 HOW MANY CURRENT PERMANENT EMPLOYEES ARE FOREIGNERS?

Write down

1.16 HOW MANY PERMANENT EMPLOYEES DID THE WORKPLACE HAVE 12 MONTHS AGO?

Write down

1.17 HOW MANY PERMANENT EMPLOYEES DO YOU EXPECT TO HAVE IN 12 MONTHS (INCLUDING PRESENT EMPLOYEES)

Write down

Now we would like to ask questions about any hiring that your firm has attempted over the past 12 or 24 months.

1.18.1 DID YOU HIRE NEW EMPLOYEES FOR YOUR COMPANY? WHEN WAS THE LAST TIME THAT YOU WERE HIRING NEW EMPLOYEES?

Read. One answer that is the closest to the present time

Hired employees during the last 12 months 1

Hired employees during the last 24 months 2
Did not hire employees during the last 24 months.....3 → **go to 2.01**

If respondent answered 1 (during the last 12 months) in 1.18.1 then questions 1.18 and 1.19 should be asked about the last 12 months, if respondent answered 2 (during the last 24 months) in 1.18.1 then questions 1.18 and 1.19 should be asked about the last 24 months

	POSITION:	1 CORPORATE MANAGERS	2 PROFESSIONALS	3 TECHNICIANS AND ASSOCIATE PROFESSIONALS	4 CLERKS	5 SERVICE WORKERS AND SHOP AND MARKET SALES WORKERS	6 SKILLED AGRICULTURAL WORKERS	7 CRAFT AND RELATED TRADE WORKERS	8 PLANT AND MACHINE OPERATORS AND ASSEMBLERS	9 ELEMENTARY OCCUPATIONS
1.18	In the past 12 months, have you tried to hire any [POSITION]? Yes - 1, No – 2	1	1	1	1	1	1	1	1	1
		2	2	2	2	2	2	2	2	2
	FILL ALL COLUMNS IN THIS ROW THEN FOR THE 'YESES' ASK QUESTIONS 1.12 - 1.17									
1.19	Did you encounter any problems when trying to hire staff, such as: *Multiple response*									
	1) THERE WERE NO OR FEW APPLICANTS									
	2) APPLICANTS LACKED REQUIRED SKILLS									
	3) APPLICANTS EXPECTED WAGES HIGHER THAN WE CAN OFFER									
	4) APPLICANTS DID NOT LIKE WORKING CONDITIONS									

	5)	OTHER (SPECIFY_____)									
	6)	DID NOT ENCOUNTER ANY PROBLEMS									

MODULE 2: IDENTIFYING SKILL GAPS PROFILES

2.01 WOULD YOU SAY THERE IS A SIGNIFICANT GAP BETWEEN THE TYPE OF SKILLS THAT YOUR EMPLOYEES HAVE NOW, AND THOSE THEY NEED TO ACHIEVE YOUR CURRENT BUSINESS OBJECTIVES?

Yes..... 1
No..... 2

2.02.1 PLEASE, LOOK AT THIS CARD *(CARD 1)* AND ANSWER, WHAT OCCUPATIONS ARE PRESENTED IN YOUR COMPANY?

2.02 FOR THESE OCCUPATIONS EVALUATE, IN WHICH FIELDS THERE IS A MAJOR, MINOR OR NO SKILLS GAP. A SKILLS GAP DESCRIBES A DISPARITY BETWEEN THE CURRENT SKILL LEVEL OF THE WORKFORCE AND THE SKILLS REQUIRED BY EMPLOYERS TO MEET THE ORGANIZATION'S OBJECTIVES. MAJOR SKILL GAP MEANS SKILLS SET MAKES IT DIFFICULT TO DELIVER WORK OBJECTIVES, MINOR SKILL GAP MEANS SKILLS SET CAUSES SMALL DIFFICULTIES TO DELIVER WORK OBJECTIVES, NO SKILLS GAP MEANS SKILLS SET ALLOWS TO DELIVER WORK OBJECTIVES WITHOUT ANY DIFFICULTY.

Interviewer : *Ask about skills gap for all occupations that are presented in the company.*

1) *Look at the column "major skills gap". If there are exactly THREE occupations, please, ask about these occupations.*
2) *If the number of occupations with major skills gap in more than three, ask respondent to choose three of them, which are the most important for the company.*
3) *If there are no occupations with major skills gap or they are less than three, look at the column "minor skills gap" and ask respondent to choose the missing number among the most important occupations in order to determine three points.*
4) *If three occupations were not chosen from the list of major and minor skills gap, please, move to the column "no skills gap". Use the same approach to select the missing number of important for the company occupations in order to determine three occupations.*

MODULE 2: SKILLS USED BY THE CURRENT WORKFORCE

Interviewer: *write below the THREE workers (occupations) that you have identified and refer to them when needed to remind the respondent.*

Next, we would like to ask you about the skills that your employees may be using in their jobs. There are the three types of workers:

Worker type 1: _____
Worker type 2: _____
Worker type 3: _____

For each [WORKER TYPE NUMBER _], please think of one particular person who is typical of that type when answering the following questions.

INTERVIEWER: *GIVE THE TABLE WITH THE QUESTIONS 2.04-2.14 FOR SELF-FILLING*

		Worker Type 1:	**Worker Type 2:**	**Worker Type 3:**
2.04	Does their job regularly involve reading?	Yes..... 1 No.....2	Yes.....1 No.....2	Yes ..... 1 No.....2
2.05	Does their job regularly involve writing using correct spelling and grammar?	Yes..... 1 No.....2	Yes.....1 No.....2	Yes ..... 1 No.....2
2.06	Does their job regularly involve math that is, adding, subtracting, multiplying or dividing numbers - using a calculator or computer if necessary?	Yes..... 1 No.....2	Yes.....1 No.....2	Yes ..... 1 No.....2
2.07	Does their job regularly involve solving problems that take 30 minutes or more of thinking time to find a good solution?	Yes..... 1 No.....2	Yes.....1 No.....2	Yes ..... 1 No.....2
2.08	Does their job regularly involve speaking a language other than Ukrainian or Russian?	Yes..... 1 No.....2	Yes.....1 No.....2	Yes ..... 1 No.....2
2.09	Does their job regularly involve speaking	Yes..... 1	Yes.....1	Yes 1

	Ukrainian or Russian?	No.....2	No.....2	No.....2
2.10	Does their job regularly require making formal presentations to clients or colleagues to persuade them of a point of view?	Yes..... 1 No.....2	Yes.....1 No.....2	Yes ..... 1 No.....2
2.11	Does their job regularly involve interacting with a team of co-workers?	Yes..... 1 No.....2	Yes.....1 No.....2	Yes ..... 1 No.....2
2.12	**What is the highest level of computer use involved in their job?**			
	NONE..... 1	1	1	1
	STRAIGHTFORWARD (Examples: data entry; sending and receiving emails; printing out an invoice in a shop, posting items in accounting software)	2	2	2
	MODERATE (Examples: using Word or other word processing, or Excel or other spreadsheet, making Powerporint presentations)	3	3	3
	COMPLEX (Examples :analysing information or design, including aided design, or analysis with accounting software; using statistical analysis package, writing macros in Excel, etc)	4	4	4
	SPECIALIZED Examples: software programming; managing computer networks)	5	5	5
	REFUSED, DON'T KNOW (do not read)	6	6	6
2.13	Thinking of the last month, what percentage of the days in the month did the worker arrive at work on time (within 15 minutes)?	%	%	%

2.14	What is the average monthly gross compensation over the last 12 months for this worker? (or since hiring, if less than 12 months). The answer can be given in intervals with 1000 UAH. For example, 1000-2000 UAH., 3000-4000 UAH. etc.	uah	uah	uah
2.16	**What is the highest education level of this worker?**			
	1 Incomplete secondary education (not finished secondary school)	1	1	1
	2 Full secondary education (obtained a secondary school 'attestat')	2	2	2
	3 Vocational/ Secondary special education	3	3	3
	4 Incomplete higher education (Degree of junior specialist is obtained)	4	4	4
	5 Basic higher education (Bachelor degree is obtained)	5	5	5
	6 Full higher education (Master degree or Diploma of specialist is obtained)	6	6	6
	Difficult to answer(97)	7	7	7
	Refusal(99)	8	8	8

2.15 AMONG THE EMPLOYEES OF EACH OF THESE OCCUPATIONS WERE THERE ANY CASES OF PROMOTION AND WHEN DID THE LAST PROMOTION HAPPEN?

		Employee1:	**Employee2:**	**Employee3:**

2.15.1.	**Were there cases of promotion?**			
	Yes	1	1	1
	No	2	2	2
	I don't know	3	3	3
2.15.2.	**When did the last promotion happen (if «yes» in 2.15.1):** *One answer*			
	12 months ago or earlier	1	1	1
	More than 12, but less than 24 months ago	2	2	2
	More than 24 months ago	3	3	3
	No answer	4	4	4

2.18 AMONG THESE JOB RELATED SKILLS, WITH WHICH OF THEM ARE YOU MOST SATISFIED AMONG YOUR EMPLOYEES? AND WHICH IS THE SECOND MOST SATISFACTORY? AND THIRD? AND THE 4TH? AND THE 5TH? [RANK THE TOP FIVE]

Show CARD 2 or give for the self-filling. Write ranks from 1 to 5 in each column.

		Employee 1:	**Employee 2:**	**Employee 3:**
1	Ability to read and write in the (an) official language (literacy)			
2	Ability with calculations and numbers (numeracy)			
3	Ability to read and write in English?			
4	Ability to read and write in (another) foreign language (specify)			
5	Job-specific technical skills			
6	Communication skills			
7	Leadership skills			
8	Team work skills			
9	Creative and critical thinking			
10	Problem solving skills			
11	Ability to work independently			
12	Green Skills (environmental awareness)			

13	Professional behaviour			
14	Time management skills			

2.19 PLEASE LOOK AT THIS CARD AND TELL ME WITH WHICH OF THESE PERSONALITY TRAITS ARE YOU MOST SATISFIED WITH AMONG YOUR EMPLOYEES. AND WHICH IS THE SECOND MOST SATISFACTORY? AND THE THIRD MOST SATISFACTORY? AND THE FOURTH? AND THE FIFTH?

Show CARD 3 or give for the self-filling. Write ranks from 1 to 5 in each column.

		Employee 1:	**Employee 2:**	**Employee 3:**
1	Conscientiousness (Does a thorough job, is hard working, does things efficiently)			
2	Emotional stability (Is relaxed and handles stress well, doesn't worry or get nervous easily)			
3	Agreeableness (Forgives other people easily, is considerate and kind, is polite)			
4	Extraversion (Is talkative, assertive, outgoing and sociable)			
5	Openness to experience (Is original and comes up with new ideas, has an active imagination)			

2.20 WE WOULD LIKE YOU TO LOOK AT THIS CARD OF THE TWO GROUPS OF EMPLOYEES' CHARACTERISTICS AND TELL ME WHICH OF THESE GROUPS YOU FEEL MOST SATISFIED WITH? AND THE SECOND?

Show CARD 4 or give for the self-filling. Write ranks from 1 to 2 in each column.

		Employee 1:	**Employee 2:**	**Employee 3:**
1	GROUP 1: Personal characteristics (age, appearance, gender, family relations or personal ties)			
2	GROUP 2: Job-related skills (literacy, numeracy, job -specific skills, communication, leadership, teamwork, creative thinking, problem solving, work			

	independently, time management)			

MODULE 2: CONSEQUENCES AND MITIGATION IMPACTS OF SKILL GAPS

2.21 HOW HAS YOUR BUSINESS BEEN IMPACTED BY SKILLS GAPS IN ALL THE OCCUPATIONS YOU MENTIONED WHERE YOUR FIRM HAS SKILL GAPS?

Ask for all worker types of employees/ occupations
One answer in each row

	Yes	No	I do not know
Loss of sales opportunities (existing clients/markets)	1	2	3
Loss of new commercialization opportunities (new clients/markets)	1	2	3
Loss of innovation opportunities	1	2	3
Loss of quality in the service Increased running costs (e.g. overtime, subcontracting or temporary staff)	1	2	3
Increased recruitment costs (advertising, use of recruitment agencies)	1	2	3
Loss of efficiency /increased wastage	1	2	3
Other (please specify)_____	1	2	3

2.22 IN WHAT FIELDS, IN YOUR OPINION, THERE IS A NEED IN SUBSTANTIAL GOVERNMENT SUPPORT TO OVERCOME THE SKILLS GAP?

Show CARD 5
Not more than 3 answers

	Please tick
Improved education of workforce at the university level to meet professional needs	1

Improved education of workforce at the upper secondary level to meet professional needs	2
Improved technical education of workforce at the VET level to meet professional needs	3
Better interaction between firms and local educational institutions	4
Better careers advice for local people	5
Better communication between firms and governmental institutions on matters related to education, R&D and labour practices	6
Help in tackling other issues (lack of housing, transport, other infrastructure needs of employees, etc), which prevent the firm from accessing a wider labour pool and/or the workforce from fully utilizing their skills	7
Provision of seed (initial) funding for partnership initiatives, conferences and seminars	8
Other (please specify…)	9
There is no need in governmental support, none of the listed above (do not read)	10
Difficult to answer (do not read)	11

MODULE 3: INFORMATION ON NEW HIRES

Next, we would like to ask some questions about the importance to your firm of certain worker characteristics. Again, we would like to know for each position group, separately. ***Please this time think of the type of workers, not a particular worker****:*

WRITE THE OCCUPATION OF WORKER 1: _____
WRITE THE OCCUPATION OF WORKER 2: _____
WRITE THE OCCUPATION OF WORKER 3: _____

The following questions ask about the importance of certain characteristics, skills or attitudes of new hires.

3.01 WHAT IS THE MOST IMPORTANT OF THESE JOB RELATED SKILLS WHEN DECIDING WHICH NEW EMPLOYEES SHOULD BE RETAINED AFTER A PROBATION PERIOD. AND THE SECOND MOST IMPORTANT? AND THE3RD? AND THE 4TH? AND THE 5TH? [RANK THE TOP FIVE]

Show CARD 2 or give for self-filling. Mark ranks from 1 to 5 in each column.

		Employee 1:	Employee 2:	Employee 3:
1	Ability to read and write in Ukrainian or Russian (literacy)			
2	Ability with calculations and numbers (numeracy)			
3	Ability to read and write in English?			
4	Ability to read and write in (another) foreign language (specify_____)			
5	Job-specific technical skills			
6	Communication skills			
7	Leadership skills			
8	Team work skills			
9	Creative and critical thinking			
10	Problem solving skills			
11	Ability to work independently			
12	Green Skills (environmental awareness)			
13	Professional behaviour			
14	Time management skills			

3.02 PLEASE LOOK AT THIS CARD AND TELL ME WHAT IS THE MOST IMPORTANT OF THESE PERSONALITY TRAITS WHEN DECIDING WHICH NEW EMPLOYEES SHOULD BE RETAINED? AND THE SECOND MOST IMPORTANT? AND THE THIRD MOST IMPORTANT? AND THE FOURTH? AND THE 5TH?

Show CARD 3 or give for self-filling. Mark ranks from 1 to 5 in each column.

		Employee 1:	Employee 2:	Employee 3:
1	Conscientiousness (Does a thorough job, is			

	hard working, does things efficiently)			
2	Emotional stability (Is relaxed and handles stress well, doesn't worry or get nervous easily)			
3	Agreeableness (Forgives other people easily, is considerate and kind, is polite)			
4	Extraversion (Is talkative, assertive, outgoing and sociable)			
5	Openness to experience (Is original and comes up with new ideas, has an active imagination)			

3.03 YOU HAVE JUST RANKED THE IMPORTANCE OF PARTICULAR CHARACTERISTICS, SKILLS OR TRAITS WITHIN GROUPS. NOW WE WOULD LIKE YOU TO LOOK AT THIS CARD OF THE THREE GROUPS AND TELL US WHICH OF THESE GROUPS YOU FEEL IS THE MOST IMPORTANT WHEN DECIDING WHICH EMPLOYEE SHOULD BE RETAINED? AND THE SECOND? AND THE THIRD?

Show CARD 6 or give for self-filling. Mark ranks from 1 to 3 in each column.

		Employee 1:	**Employee 2:**	**Employee 3:**
1	GROUP 1: Personal characteristics (age, appearance, gender, family relations or personal ties)			
2	GROUP 2: Job-related skills (literacy, numeracy, job -specific skills, communication, leadership, teamwork, creative thinking, problem solving, work independently, time management)			
3	GROUP 3: personality traits (conscientiousness, emotional stability, agreeableness, extraversion, openness to experience)			

The next questions are about hiring new workers, by worker types

3.04 DO YOU RECRUIT [WORKER TYPE _] FROM THE FOLLOWING SOURCES…?

Multiple response. Several answers in a column

		Employee 1:	Employee 2:	Employee 3:
1	Public Employment Services	1	1	1
2	Private Employment Services	2	2	2
3	Job Fairs	3	3	3
4	Offers to experienced people in other firms	4	4	4
5	Direct contact with educational institutions, schools, training centers, universities, etc.	5	5	5
6	Media advertisements/postings	6	6	6
7	Internet	7	7	7
8	Informal channels (personal contacts, people recommended by others)	8	8	8
9	Other (please, specify_____)	9	9	9
10	None of the listed above, we are not recruiting employees (do not read)	10	10	10
11	Do not know (Do not read)	11	11	11

3.05.1 WHEN WAS THE LAST TIME THAT YOU HIRED A NEW WORKER FOR EACH OF THESE OCCUPATIONS?

Read. Mark the closest period to the present time. One answer in a column

		Employee 1:	Employee 2:	Employee 3:
1	During the last 12 months	1	1	1
2	During the last 24 months	2	2	2
3	Earlier than 24 months ago	3	3	3
4	I don't know, a long time ago (do not read)	4	4	4

If there were no vacancies of some type of employees during the last 12 months or 24 months, skip questions 3.05-3.11 for this type of employees. If there were no vacancies of all types of employees during the last 12 months or 24 months, go to 4.01

3.05 OVER THE PAST 12 MONTHS/24 MONTHS, ON AVERAGE FOR [WORKER TYPE _] HOW MANY DAYS DOES IT TAKE TO FILL A POSITION FROM THE TIME THE POSITION BECOMES OPEN OR IS CREATED?

Write number of days

Employee 1, days	Employee 2, days	Employee 3, days

3.06 OVER THE PAST 12 MONTHS/24 MONTHS, HOW MANY PERSONS HAVE APPLIED FOR ONE OPEN VACANCY POSITION OF [WORKER TYPE _]?

Write number of candidates

Employee 1, persons	Employee 2, persons	Employee 3, persons

3.07 WHAT IS THE EDUCATION LEVEL OF THE MOST RECENT PERSON HIRED AS A [WORKER TYPE _]?

		Employee 1:	Employee 2:	Employee 3:
1	1 Incomplete secondary education (not finished secondary school)			
2	2 Full secondary education (obtained a secondary school 'attestat')			
3	3 Vocational/ Secondary special education			
4	4 Incomplete higher education (Degree of junior specialist is obtained)			
5	5 Basic higher education (Bachelor degree is obtained)			
6	6 Full higher education (Master degree or Diploma of specialist is obtained)			
7	Difficult to answer(97)			

	Type 1:	Type 2:	Type 3:
Everage monthly			

3.09 WHAT IS THE AVERAGE MONTHLY GROSS COMPENSATION OVER THE PAST 6 MONTHS (OR THE MONTHS SINCE HIRING) OF THE MOST RECENT PERSON YOUR FIRM HIRED AS A [WORKER TYPE _]?

If respondent is reluctant to answer, please show ranges in UAH.

If respondent refuses to answer, please write 9999.

gross, UAH			

3.10 IS THE SALARY FOR A [WORKER TYPE _] NEGOTIABLE AT THE MOMENT OF HIRING?

	Type 1:	Type 2:	Type 3:
Yes	1	1	1
No	2	2	2
I do not know	3	3	3

3.11 OVER THE PAST 12 MONTHS/24 MONTHS, HAVE YOU USED CONTRACTORS (FREELANCERS, CONSULTANTS, WORKERS HIRED BY SHORT-TERM CONTRACT OR TO PERFORM CERTAIN TASK) FOR SKILLS SHORTAGES OF [WORKER TYPE _]?

	Type 1:	Type 2:	Type 3:
Yes	1	1	1
No	2	2	2
I do not know	3	3	3

MODULE 4: TRAINING AND COMPENSATION

INTERVIEWER: *ASK EACH QUESTION FOR ALL WORKER TYPE, WHEN FINISHING WITH ONE QUESTION FOR ALL WORKER TYPE, GO TO THE NEXT QUESTION.*

4.01 DOES YOUR WORKPLACE HAVE REGULAR CONTACTS WITH EDUCATIONAL OR TRAINING INSTITUTIONS REGARDING [WORKER TYPE _] POSITIONS, FOR RECRUITMENT, TRAINING, WORK PLACEMENT, OR ANOTHER REASON?

	Type 1:	Type 2:	Type 3:
Yes	1	1	1

No	2	2	2
I do not know	3	3	3

If in 4.01 "no" or "I do not know" is marked for some type of employees, skip the question for this type of worker. If "no" or "I do not know" is marked for all types of employees, go to 4.03.

4.02 FOR WHAT PURPOSE DOES YOUR WORKPLACE HAVE THESE CONTACTS, FOR [WORKER TYPE _] POSITIONS ?

Several answers in a column

	Type 1:	**Type 2:**	**Type 3:**
You use for Recruitment of staff	1	1	1
Your firm participates in testing of students	2	2	2
Your firm gives feedback to the institution for their Curriculum development	3	3	3
Your firm uses the institution for further training of your firm's existing employees	4	4	4
Your firm provides work experience for students (internships and apprenticeships)	5	5	5
Other (Specify_____)	6	6	6
None of the listed above	7	7	7
I do not know, no answer	8	8	8

4.03 IF WE TAKE ALL EMPLOYEES OF EACH OF THESE OCCUPATIONS THAT WORK AT YOUR COMPANY AS 100%, WHAT SHARE OF THEM IS FULLY QUALIFIED FOR THE JOB? PARTIALLY QUALIFIED FOR THE JOB? FULLY UNQUALIFIED FOR THE JOB?

	Employee 1, %	**Employee 2, %**	**Employee 3, %**
Fully qualified	_____%	_____%	_____%
Partially qualified	_____%	_____%	_____%

Fully unqualified	_____%	_____%	_____%
Total 100%	**100%**	**100%**	**100%**

4.04 DID THE [WORKER TYPE _] EMPLOYEES IN YOUR WORKPLACE RECEIVE ANY TRAINING LAST YEAR ON THE PREMISES OF THE WORKPLACE, SUCH AS ON THE JOB TRAINING, WORKING WITH OR MENTORED BY AN EXPERIENCED EMPLOYEE, OR TRAINING IN SPECIAL TRAINING FACILITIES AT THE WORKPLACE?

	Employee 1	**Employee 2**	**Employee 3**
Yes	1	1	1
No	2	2	2
I do not know	3	3	3

4.05 WHAT SHARE OF THE [WORKER TYPE _] EMPLOYEES IN YOUR WORKPLACE RECEIVED TRAINING ON THE PREMISES OF THE WORKPLACE OF EACH OF THE FOLLOWING TYPES IN THE LAST 12 MONTHS: (%)

		Type 1, %	**Type 2, %**	**Type 3, %**
1	Formal training in the workplace (mentoring programs, trainings conducted by employees of the company to other employees)			
2	Training by the firm's dedicated trainers			
3	Training on the firm's premises with external trainers (consultants, private training companies, government institutions, etc.)			
4	Other (specify_____)			

if all zero >>4.07

4.06 OF THE EMPLOYEES WHO RECEIVED SUCH TRAINING ON THE WORKPLACE PREMISES IN THE PAST YEAR, WHAT IS THE AVERAGE DAYS PER YEAR [WORKER TYPE] RECEIVED FOR EACH OF THESE TRAINING METHODS ?

		Type 1, days	**Type 2, days**	**Type 3, days**

2	Formal training in the workplace (mentoring programs, trainings conducted by employees of the company to other employees)			
3	Training by the firm's dedicated trainers			
4	Training on the firm's premises with external trainers (consultants, private training companies, government institutions, etc.)			
5	Other (specify_____)			

4.07 DID THE [WORKER TYPE _] EMPLOYEES IN YOUR WORKPLACE RECEIVE ANY FORMAL TRAINING ORGANIZED BY THE FIRM, OUTSIDE THE WORKPLACE LAST YEAR?

	Employee 1	**Employee 2**	**Employee 3**
Yes	1	1	1
No	2	2	2
I do not know	3	3	3

IF FOR ANY TYPE OF EMPLOYEES "NO" OR "I DO NOT KNOW" IS MARKED, DO NOT ASK 4.08 AND 4.09 FOR THIS TYPE OF EMPLOYEE. IF "NO" OR "I DO NOT KNOW" IS MARKED FOR ALL TYPES OF EMPLOYEES, GO TO 4.10.

4.08 WHAT SHARE OF THE [WORKER TYPE _] EMPLOYEES IN YOUR WORKPLACE RECEIVED OUTSIDE TRAINING OF EACH OF THE FOLLOWING TYPES IN THE LAST 12 MONTHS:

Write down the percentage of the total number of employees of each occupation. Mark "zero", if nobody received training.

		Employee 1, %	**Employee 2, %**	**Employee 3, %**
1	At a technical or vocational education and training public school			
2	Through private training providers			
3	Through equipment suppliers (for example, a company selling computers providing training on software)			

4	NGO's or international organizations			
5	Other (specify_____)			

4.09 HOW MUCH DID YOUR WORKPLACE SPEND PAYING OUTSIDE PROVIDERS FOR TRAINING LAST YEAR FOR [WORKER TYPE _] EMPLOYEES? (I.E. TRAINING OUTSIDE THE FIRM OR TRAINING BY AN OUTSIDE PROVIDER IN THE FIRM'S WORKPLACE).

IF DID NOT SPEND ANYTHING, WRITE '0'

Type 1, UAH	Type 2, UAH	Type 3, UAH

4.10 IN YOUR OPINION, DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS DESCRIBING THE TECHNICAL AND VOCATIONAL TRAINING EDUCATION SYSTEM IN UKRAINE?

		Agree	Disagree	Don't know
1	Meets the skill needs of employers adequately	1	2	3
2	Does not produce enough people with the LEVEL of skills needed by employers	1	2	3
3	Does not produce enough people with the KINDS of skills needed by employers	1	2	3
4	Does not produce enough people with the UP TO DATE knowledge of methods, materials, and technology	1	2	3
5	Does not produce enough people with PRACTICAL SKILLS	1	2	3
6	Does not produce enough people with GOOD ATTITUDE AND SELF-DISCIPLINE	1	2	3

4.11 IN YOUR OPINION, DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS DESCRIBING THE GENERAL EDUCATIONAL SYSTEM IN UKRAINE (SECONDARY EDUCATION, HIGHER EDUCATION, EXCEPT FOR THE TECHNICAL AND VOCATIONAL EDUCATION)?

		Agree	Disagree	Don't know
1	Meets the skill needs of employers adequately			

2	Does not produce enough people with the LEVEL of skills needed by employers			
3	Does not produce enough people with the KINDS of skills needed by employers			
4	Does not produce enough people with the UP TO DATE knowledge of methods, materials, and technology			
5	Does not produce enough people with PRACTICAL SKILLS			
6	Does not produce enough people with GOOD ATTITUDE AND SELF-DISCIPLINE			

4.12 HOW DO YOU REMUNERATE YOUR [WORKER TYPE _] WORKERS?

Several answers are possible

	Type 1:	**Type 2:**	**Type 3:**
Fixed salary			
Variable salary			
Bonus			

MODULE 5: FIRM BACKGROUND

5.01 HOW WOULD YOU DESCRIBE THE FINANCIAL PERFORMANCE OF YOUR COMPANY IN THE LAST FISCAL YEAR?

Very poor (large losses over the last year) 1
Poor (some losses over the last year) 2
Stable (breaking even last year) 3
Good (some profits over the last year) 4
Very good (large profits over the last year) 5
Refuse to answer 8
Don't know 9

5.02 HOW WOULD YOU DESCRIBE THE PROSPECTS FOR YOUR COMPANY IN THE COMING THREE YEARS?

Very poor (strong contraction expected) 1
Poor (mild contraction expected) 2
Stable 3
Good (mild expansion expected) 4
Very good (strong expansion expected) 5
Refuse to answer 8
Don't know 9

5.03 WHO IS THE MAIN BUYER OF YOUR PRODUCTS OR SERVICES?

Individuals/end users/end consumers 1
Other companies 2
Government 3
NGO's or international organizations 4
Other (specify_____) 5
Don't know 9

5.04 DOES YOUR COMPANY HAVE INTERNATIONAL BUSINESS CONTACTS WITH ENTITIES IN OTHER COUNTRIES?

Yes 1
No 2
Don't know 9

MODULE 5: BACKGROUND CHARACTERISTICS

5.05 IN THE PAST 3 YEARS, HAS YOUR FIRM INTRODUCED ANY…

Several answers are possible
One answer in each line

NEW TECHNOLOGIES within the firm	1
NEW PROCESSES within the firm	2
NEW PRODUCTS on the market	3
NEW SERVICES on the market	4
NEW PATENTS on the market	5

None of the listed above	6
Do not know, difficult to answer	7

5.06 CAN YOU PLEASE INDICATE HOW PROBLEMATIC EACH OF THE FOLLOWING LABOR FACTORS IS FOR THE OPERATION AND GROWTH OF YOUR BUSINESS?

Please answer on a scale of 1 to 5, where 1 means 'no problem' and 5 means ' severe problem'

Not applicable - 8, Don't know – 9

Show CARD 7

One answer in each line

	1 – no problem	2	3	4	5 – severe problem	Difficult to answer
Employment protection legislation/ labor code laws	1	2	3	4	5	6
Labor availability	1	2	3	4	5	6
General education of workers	1	2	3	4	5	6
Technical and vocational education and training of workers	1	2	3	4	5	6
Finding workers with previous experience	1	2	3	4	5	6
High job turnover	1	2	3	4	5	6
Payroll taxes and social security contributions	1	2	3	4	5	6
Overall wage level	1	2	3	4	5	6
MINIMUM WAGE (if exists in [country])	1	2	3	4	5	6

5.07 COMPARED TO THESE LABOR ISSUES, ARE THE FOLLOWING MUCH MORE, MORE, SIMILAR, LESS OR MUCH LESS CONSTRAINT TO DOING BUSINESS?

	Much less constraint	Less constraint	Similar	More constraint	Much more constraint	Difficult to answer
Unstable and low quality electricity supply	1	2	3	4	5	6
Lack of appropriate telecommunication	1	2	3	4	5	6

infrastructure						
Lack of appropriate road and transportation infrastructure	1	2	3	4	5	6
Limited and/or difficult access to land	1	2	3	4	5	6
Tax rates and tax administration costs	1	2	3	4	5	6
Customs and trade regulations	1	2	3	4	5	6
Business licensing and operating permits	1	2	3	4	5	6
Limited or difficult access to financing, cost of financing	1	2	3	4	5	6
Political uncertainty	1	2	3	4	5	6
Economic and financial instability	1	2	3	4	5	6
Corruption	1	2	3	4	5	6
Crime, theft and disorder	1	2	3	4	5	6
Anti-competitive or informal practices	1	2	3	4	5	6
Legal system, conflict resolution system	1	2	3	4	5	6

5.08 DOES YOUR WORKPLACE HAVE A PERSONNEL DEPARTMENT (H/R DEPARTMENT)?

Yes.....1→5.10
No.....2
Don't know 9

5.09 WHO IS RESPONSIBLE FOR PERSONNEL MATTERS, IF THERE IS NO PERSONNEL DEPARTMENT?

Please specify_____

5.10 FINALLY, WE HAVE A FEW QUESTIONS ABOUT THE RECENT RESULTS AT YOUR FIRM. ALL INFORMATION THAT YOU GIVE IN THIS SURVEY IS COMPLETELY CONFIDENTIAL. THIS INFORMATION CAN BE OBTAINED FROM THE STATUTORY ACCOUNTS THAT YOUR ENTERPRISE GIVES TO STATISTICAL AUTHORITIES. PLEASE, TELL ME TO WHO CAN I SPEAK IN ORDER TO GET THIS INFORMATION (ACCOUNTING DEPARTMENT)?

Name of the respondent (if different):_____
Position:_____

Phone number and email address:_____

5.11. PLEASE TELL ME ABOUT THE AVERAGE NUMBER OF EMPLOYEES IN 2012 AND IN 2013?

Please write 9999 if refuse to answer

	2012	2013
Average number of employees in the year		

5.12. WHAT WAS THE FINANCIAL RESULT OF YOUR FIRM IN 2012 AND IN 2013?

The next two questions are very important please remind respondents that this is confidential, that the results will be generalized, respondent round the figure, total revenue from sales and data on wages - is the information that is transmitted to the statistical authorities. It this does not work, let them do not answer the question.

PLEASE, WRITE 999 IN THE CASE OF REFUSAL

	2012	2013
The firm made profit		
The firm made losses		
Refuse to answer		

5.13. HOW THE PROFIT SIZE CHANGED IN 2013 COMPARED TO 2012?

Profit increased 1
Profit did not change 2
Profit decreased 3
Refuse to answer 4

5.14 PLEASE TELL US THE FOLLOWING FOR THE TWO MOST RECENT YEAR-END REPORTS FOR THIS FIRM (THAT IS: THE ANNUAL FINANCIAL REPORT FOR AN ENTERPRISE):

IF DON'T KNOW, ASK WHO ELSE YOU CAN SPEAK WITH TO GET THIS INFORMATION
IF REFUSE TO ANSWER, WRITE 999

	Year end report from 2012	Year end report from 2013
Date of the year ending: day/mo/year	31/12/2012	31/12/2013
	currency: UAH	currency: UAH
Revenue from product sales		
Cost of goods sold		

Labor costs		

5.15 PLEASE TELL US THE FOLLOWING FOR LAST MONTH, AND ONE YEAR AGO FOR THE SAME MONTH?:

IF DON'T KNOW, ASK WHO ELSE YOU CAN SPEAK WITH TO GET THIS INFORMATION
IF REFUSE TO ANSWER, WRITE 999

	Last month	This month one year ago
Average number of employees in the month		
	currency: UAH	currency: UAH
Revenue from product sales		
Cost of goods sold		
Labor costs		

ANNEX 3: LIST OF OCCUPATIONS

Украина, 01133, Киев, бульвар Леси Украинки 34, 6-й этаж
Украина, 01001, Киев-1, А/я В526
тел: (044)230-0260
факс: (044)230-0262

Project № 150.234

Card for MODULE 2: IDENTIFYING SKILL GAPS PROFILES

A. Agribusiness growers

Interview number: /___/___/___/___/ **Must be the same as a number of the questionnaire**	**Number from the database: /___/___/___/___/**
Name of the company: _____ _____	

Interviewer : *Ask about skills gap for all occupations that are presented in the company.*

5) *Look at the column "major skills gap". If there are exactly THREE occupations, please, ask about these occupations.*
6) *If the number of occupations with major skills gap in more than three, ask respondent to choose three of them, which are the most important for the company.*
7) *If there are no occupations with major skills gap or they are less than three, look at the column "minor skills gap" and ask respondent to choose the missing number among the most important occupations in order to determine three points.*

8) *If three occupations were not chosen from the list of major and minor skills gap, please, move to the column "no skills gap". Use the same approach to select the missing number of important for the company occupations in order to determine three occupations.*

Worker type 1: _____
Worker type 2: _____
Worker type 3: _____

	CLASSIFICATION OF OCCUPATIONS		Major Skills Gap	Minor Skills Gap	No Skills Gap
1	**1 Managers**				
	121 Corporate managers*				
	1210 Directors and chief executives	**1**	**1**	**2**	**3**
	122 Production and operations department managers				
	1221 Production and operations managers in agriculture, hunting, forestry and fishing, including	**2**	**1**	**2**	**3**
	1222.2 Manager of grain storage facility, Manager of mill, Manager of drying and cleaning tower	**3**	**1**	**2**	**3**
	1222.2 Production line (shift) supervisor	**4**	**1**	**2**	**3**
	1226 Chief stockman, distribution manager, transport column supervisor	**5**	**1**	**2**	**3**
	123 Other department managers				
	1231 Finance and administration managers	**6**	**1**	**2**	**3**
	1232 Personnel and industrial relations managers	**7**	**1**	**2**	**3**
	1235 Supply and distribution managers	**8**	**1**	**2**	**3**
	1236 Computing services managers	**9**	**1**	**2**	**3**
	1237 Chief melioration specialist, Chief livestock expert (zootechnician)	**10**	**1**	**2**	**3**
	1239 Security officer	**11**	**1**	**2**	**3**
	1239 Other specialist managers	**12**	**1**	**2**	**3**
	13 Managers of small enterprises**				
	1311 Managers of small enterprises in agriculture, hunting, forestry and fishing	**13**	**1**	**2**	**3**
	1475.4 Administrative and commercial managers	**14**	**1**	**2**	**3**
2	**2 Professionals**				
	21 Engineers				
	2143 Power engineer in agriculture	**15**	**1**	**2**	**3**
	2145 Mechanization engineer in agriculture, Engineer on usage of machines and tractors, diagnosing technical condition of machines and	**16**	**1**	**2**	**3**

	tractors				
	2148 Land surveyor engineer	**17**	**1**	**2**	**3**
	2149 Other engineers (work and industrial safery engineer)	**18**	**1**	**2**	**3**
	22 Zootechnicians and veterinarians				
	2213 Zootechnician	**19**			
	2223 Veterinarian	**20**	**1**	**2**	**3**
	24 Economists and lawyers				
	2412 Labour economist	**21**	**1**	**2**	**3**
	2421 Lawyer	**22**	**1**	**2**	**3**
	2423 Security supervisor	**23**	**1**	**2**	**3**
	2441 Financial economist	**24**	**1**	**2**	**3**
3	**<u>3 Technicians and associate professionals</u>**				
	31 Mechanical technicians				
	3111 Laboratory specialist, technologist	**25**	**1**	**2**	**3**
	3113 Electrical engineering technicians	**26**	**1**	**2**	**3**
	3115 Mechanical engineering technicians	**27**	**1**	**2**	**3**
	3119 Physical and engineering science technicians not elsewhere classified	**28**	**1**	**2**	**3**
	32 Agrotechnicians and technicians in veterinary				
	3212 Agrotechnician	**29**	**1**	**2**	**3**
	3212 Technician in veterinary medicine	**30**	**1**	**2**	**3**
	3212 Technician in land surveying	**31**	**1**	**2**	**3**
	34 Finance and sales associate professionals				
	3423 Human resources representative	**32**	**1**	**2**	**3**
	3433 Accountant	**33**	**1**	**2**	**3**
4	**<u>4 Clerks</u>**				
	41 Secretaries and clerks				
	4115 Secretary	**34**	**1**	**2**	**3**
	4190 Bookkeepers	**35**	**1**	**2**	**3**

5	**5 Service workers and shop and market sales workers**				
	51 Superintendents and guardians				
	5121 Superintendent	**36**	**1**	**2**	**3**
	5169 Guardian	**37**	**1**	**2**	**3**
	5 Others _____	**38**	**1**	**2**	**3**
6	**6 Skilled agricultural and fishery workers**				
	6121 Animal producers and related workers	**39**	**1**	**2**	**3**
	6123 Beekeeper	**40**	**1**	**2**	**3**
	6129 Cattlemen	**41**	**1**	**2**	**3**
7	**7 Craft and related trade workers**				
	7212 Welders and flame cutters	**42**	**1**	**2**	**3**
	7215 Slingsman	**43**	**1**	**2**	**3**
	7222 Instrument mechanic	**44**	**1**	**2**	**3**
	7233 Repairman	**45**	**1**	**2**	**3**
	7241 Motor vehicle mechanics and fitters	**46**	**1**	**2**	**3**
	7412 Ovenman	**47**	**1**	**2**	**3**
	7421 Electronics mechanics and servicers	**48**	**1**	**2**	**3**
	7422 Carpenter	**49**	**1**	**2**	**3**
8	**8 Plant and machine operators and assemblers**				
	8211 Mechanical machinery assemblers	**50**	**1**	**2**	**3**
	8273 Аппаратчик обработки зерна, машинист зерновых погрузочно-разгрузочных машин, машинист очистительных машин	**51**	**1**	**2**	**3**
	8322 Car, taxi and van driver	**52**	**1**	**2**	**3**
	8322 Crane driver	**53**	**1**	**2**	**3**
	8331 Tractor driver	**54**	**1**	**2**	**3**

	8333 Lift-truck driver	**55**	**1**	**2**	**3**
9	**<u>9 Elementary occupations</u>**				
	9211 Unskilled worker	**56**	**1**	**2**	**3**
	9333 Transport labourers and freight handlers	**57**	**1**	**2**	**3**
	9411 Storekeepers and weighers	**58**	**1**	**2**	**3**
	9 Other (SPECIFY) _____	**59**			

Украина, 01133, Киев, бульвар Леси Украинки 34, 6-й этаж
Украина, 01001, Киев-1, А/я В526
тел: (044)230-0260
факс: (044)230-0262

Project № 150.234

Card for MODULE 2: IDENTIFYING SKILL GAPS PROFILES

C. Agribusiness_food processors

Interview number: /___/___/___/___/ **Must be the same as a number of the questionnaire**	**Number from the database: /___/___/___/___/**

Name of the company:

_____

_____

Interviewer : *Ask about skills gap for all occupations that are presented in the company.*

9) *Look at the column "major skills gap". If there are exactly THREE occupations, please, ask about these occupations.*
10) *If the number of occupations with major skills gap in more than three, ask respondent to choose three of them, which are the most important for the company.*
11) *If there are no occupations with major skills gap or they are less than three, look at the column "minor skills gap" and ask respondent to choose the missing number among the most important occupations in order to determine three points.*
12) *If three occupations were not chosen from the list of major and minor skills gap, please, move to the column "no skills gap". Use the same approach to select the missing number of important for the company occupations in order to determine three occupations.*

Worker type 1: _____

Worker type 2: ______________________________________
Worker type 3: ______________________________________

	CLASSIFICATION OF OCCUPATIONS		Major Skills Gap	Minor Skills Gap	No Skills Gap
1	**1 Managers**				
	121 Directors and chief executives				
	1210 Directors and chief executives	**1**	**1**	**2**	**3**
	122 Production and operations department managers				
	1222 Production department managers in manufacturing, including Chief engineer, Production manager, Master of manufacturing, Master of manufacturing laboratory, Master of usage and repair of machines and mechanisms, Master of automation and telemechanics, Head of division on technical control, manufacturing control, Head of laboratory of control and measurement devices and automation devices	**2**	**1**	**2**	**3**
	123 Other department managers				
	1231 Finance and administration managers	**3**	**1**	**2**	**3**
	1232 Personnel and industrial relations managers	**4**	**1**	**2**	**3**
	1233 Sales and marketing managers	**5**	**1**	**2**	**3**
	1234 Advertising and public relations managers	**6**	**1**	**2**	**3**
	1235 Supply and distribution managers	**7**	**1**	**2**	**3**
	1236 Computing services managers	**8**	**1**	**2**	**3**
	1237 Research and development managers including Chief technologist	**9**	**1**	**2**	**3**
	1238 Chief Project or Program Manager	**10**	**1**	**2**	**3**
	1239 Other specialist managers	**11**	**1**	**2**	**3**
	13 Managers of small enterprises**				
	1311 Managers of small enterprises in manufacturing	**12**	**1**	**2**	**3**
	1475.4 Commercial manager	**13**	**1**	**2**	**3**
2	**2 PROFESSIONALS**				
	21 Physical, mathematical and engineering science professionals				
	2131 Engineers of manufacturing automation systems	**14**	**1**	**2**	**3**
	2143 Power engineers, experts in energy saving and efficiency	**15**	**1**	**2**	**3**
	2149 Environmental engineer, Work and industrial safery engineer, Engineer on implementation of new machines and technology,	**16**	**1**	**2**	**3**

	Standartization and quality engineer, Engineer-technologist				
	2213 Engineer-technologist on production and processing of livestock products	**17**	**1**	**2**	**3**
	2223 Veterinarian (doctor of veterinary medicine)	**18**	**1**	**2**	**3**
	24 Other professionals	**19**	**1**	**2**	**3**
	241 Business professionals				
	2411 Professionals in auditing and accounting	**20**	**1**	**2**	**3**
	2412 Professionals in the field of HR and employment	**21**	**1**	**2**	**3**
	2419 Business professionals not elsewhere classified including Marketing specialist, PR specialist, Specialist in standatization, certification and quality	**22**	**1**	**2**	**3**
	2421 Lawyers	**23**	**1**	**2**	**3**
	2441 Economists, Analysts	**24**	**1**	**2**	**3**
3	**3 TECHNICIANS AND ASSOCIATE PROFESSIONALS**				
	3113 Electrical engineering technicians (including dispatchers)	**25**	**1**	**2**	**3**
	3115 Mechanical engineering technicians	**26**	**1**	**2**	**3**
	3152 Quality inspector	**27**	**1**	**2**	**3**
	341 Finance and sales associate professionals	**28**	**1**	**2**	**3**
	343 Administrative associate professionals				
	3431 Administrative secretaries and related associate professionals	**29**	**1**	**2**	**3**
	3433 Bookkeepers	**30**	**1**	**2**	**3**
	35 Associate professionals in food processing industry				
	351 Associate professionals in processing of fruits and vegetables	**31**	**1**	**2**	**3**
	352 Associate professionals in in the production of fermentation and winemaking	**32**	**1**	**2**	**3**
	353 Associate professionals in the production of dairy products	**33**	**1**	**2**	**3**
	354 Associate professionals in the production of meat products	**34**	**1**	**2**	**3**
	355 Associate professionals in the production of bakery, confectionery and food concentrates	**35**	**1**	**2**	**3**
	356 Associate professionals in storage and processing of grain	**36**	**1**	**2**	**3**
	357 Associate professionals in food technology	**37**	**1**	**2**	**3**

	359 Other associate professionals in food processing industry	**38**	**1**	**2**	**3**	
4	**4 CLERKS**					
	41 Office clerks	**39**	**1**	**2**	**3**	
	4133 Transport clerks	**40**	**1**	**2**	**3**	
	42 Customer service clerks	**41**	**1**	**2**	**3**	
5	**5 SERVICE WORKERS AND SHOP AND MARKET SALES WORKERS**					
	51 Superintendents and guardians					
	5121 Superintendent	**42**	**1**	**2**	**3**	
	5169 Guardian	**43**	**1**	**2**	**3**	
	5 Others _____	**44**	**1**	**2**	**3**	
6	**7 CRAFT AND RELATED TRADE WORKERS**					
	7223 Machine-tool setters and setter-operators in food processsing industry	**45**	**1**	**2**	**3**	
	7233 Industrial-machinery mechanics and fitters (food processing)	**46**	**1**	**2**	**3**	
	741 Food processing and related trades workers					
	7411 Butchers, fishmongers and related food preparers	**47**	**1**	**2**	**3**	
	7412 Bakers, pastry-cooks and confectionery makers	**48**	**1**	**2**	**3**	
	7413 Dairy-products workers	**49**	**1**	**2**	**3**	
	7414 Fruit, vegetable and related preservers	**50**	**1**	**2**	**3**	
	7415 Food and beverage tasters and graders	**51**	**1**	**2**	**3**	
	7416 Tobacco preparers and tobacco products makers	**52**	**1**	**2**	**3**	
7	**8 PLANT AND MACHINE OPERATORS AND ASSEMBLERS**					
	827 Food and related products machine operators					
	8271 Meat- and fish-processing-machine operators	**53**	**1**	**2**	**3**	
	8272 Dairy-products machine operators	**54**	**1**	**2**	**3**	
	8273 Grain- and spice-milling-machine operators	**55**	**1**	**2**	**3**	
	8274 Baked-goods, cereal- and chocolate-products machine operators	**56**	**1**	**2**	**3**	
	8275 Fruit-, vegetable- and nut-processing-machine operators	**57**	**1**	**2**	**3**	
	8276 Sugar production machine operators	**58**	**1**	**2**	**3**	

	8277 Tea-, coffee- and cocoa-processing-machine operators	**59**	**1**	**2**	**3**
	8278 Brewers, wine and other beverage machine operators	**60**	**1**	**2**	**3**
	8279 Tobacco production machine operators	**61**	**1**	**2**	**3**
	832 Motor vehicle drivers	**62**	**1**	**2**	**3**
8	**9 ELEMENTARY OCCUPATIONS**				
	932 Manufacturing labourers	**63**			
	9333 Transport labourers and freight handlers	**64**	**1**	**2**	**3**
	9411 Storekeepers and weighers	**65**	**1**	**2**	**3**
	9 Other (SPECIFY) _____	**66**	**1**	**2**	**3**

Украина, 01133, Киев, бульвар Леси Украинки 34, 6-й этаж
Украина, 01001, Киев-1, А/я В526
тел: (044)230-0260
факс: (044)230-0262

Project № 150.234

Card for MODULE 2: IDENTIFYING SKILL GAPS PROFILES

D. RE

Interview number: /___/___/___/___/ **Must be the same as a number of the questionnaire**	**Number from the database: /___/___/___/___/**

Name of the company:

_____

_____

Interviewer : *Ask about skills gap for all occupations that are presented in the company.*

13) Look at the column "major skills gap". If there are exactly THREE occupations, please, ask about these occupations.

14) If the number of occupations with major skills gap in more than three, ask respondent to choose three of them, which are the most important for the company.

15) If there are no occupations with major skills gap or they are less than three, look at the column "minor skills gap" and ask respondent to choose the missing number among the most important occupations in order to determine three points.

16) If three occupations were not chosen from the list of major and minor skills gap, please, move to the column "no skills gap". Use the same approach to select the missing number of important for the company occupations in order to determine three occupations.

Worker type 1: _____

Worker type 2: ______________________________________
Worker type 3: ______________________________________

	CLASSIFICATION OF OCCUPATIONS		Major Skills Gap	Minor Skills Gap	No Skills Gap
1	**1 Managers**				
	121 Directors and chief executives				
	1210 Directors and chief executives	**1**	**1**	**2**	**3**
	122 Production and operations department managers				
	1222 Production department managers in manufacturing	**2**	**1**	**2**	**3**
	123 Other department managers				
	1231 Finance and administration managers	**3**	**1**	**2**	**3**
	1232 Personnel and industrial relations managers	**4**	**1**	**2**	**3**
	1233 Sales and marketing managers	**5**	**1**	**2**	**3**
	1234 Advertising and public relations managers	**6**	**1**	**2**	**3**
	1235 Supply and distribution managers	**7**	**1**	**2**	**3**
	1236 Computing services managers	**8**	**1**	**2**	**3**
	1237 Research and development managers	**9**	**1**	**2**	**3**
	1237.1 Chief structural engineer Chief engineer	**10**	**1**	**2**	**3**
	1238 Chief Project or Program Manager	**11**	**1**	**2**	**3**
	1239 Other specialist managers	**12**	**1**	**2**	**3**

	13 Managers of small enterprises**				
	1312 Managers of small enterprises in manufacturing	**13**	**1**	**2**	**3**
	1475.4 Commercial manager	**14**	**1**	**2**	**3**
	2 PROFESSIONALS				
	21 Physical, mathematical and engineering science professionals				
	2114 Geologists and geophysicists	**15**	**1**	**2**	**3**
	212 Mathematicians, statisticians and related professionals	**16**	**1**	**2**	**3**
	213 Computing professionals				
	2131 Computer systems designers, analysts and programmers	**17**	**1**	**2**	**3**
	214 Architects, engineers and related professionals				
2	2142 Civil engineers	**18**	**1**	**2**	**3**
	2143 Electrical engineers	**19**	**1**	**2**	**3**
	2148 Cartographers and surveyors	**20**	**1**	**2**	**3**
	2149 Architects, engineers and related professionals not elsewhere classified	**21**	**1**	**2**	**3**
	2149 Environmental engineer	**22**	**1**	**2**	**3**
	24 Other professionals	**23**			
	241 Business professionals				

	2411 Professionals in auditing and accounting	**24**	**1**	**2**	**3**
	2412 Professionals in the field of HR and employment	**25**	**1**	**2**	**3**
	242 Legal professionals	**26**	**1**	**2**	**3**
	249 Professional, not included in other groups	**27**	**1**	**2**	**3**
3	**<u>3 TECHNICIANS AND ASSOCIATE PROFESSIONALS</u>**				
	31 Physical and engineering science associate professionals				
	3113 Electrical engineering technicians	**28**	**1**	**2**	**3**
	3113 Technology guide bioenergy installations Technician operating wind turbines Technician operating hydropower plants Technician operating solar power plants (4)	**39**	**1**	**2**	**3**
	3115 Mechanical engineering technicians	**30**	**1**	**2**	**3**
	3152 Safety, health and quality inspectors	**31**	**1**	**2**	**3**
	34 Other associate professionals				
	3417 Appraisers, valuers and auctioneers	**32**	**1**	**2**	**3**
	3431 Administrative secretaries and related associate professionals	**33**	**1**	**2**	**3**
4	**<u>4 CLERKS</u>**				
	41 Office clerks	**34**	**1**	**2**	**3**

	4133 Transport clerks	**35**	**1**	**2**	**3**
	42 Customer service clerks	**36**	**1**	**2**	**3**
5	**5 SERVICE WORKERS AND SHOP AND MARKET SALES WORKERS**				
	5 Others _____	**37**	**1**	**2**	**3**
6	**7 CRAFT AND RELATED TRADE WORKERS**				
	7137 Building and similar electrical	**38**	**1**	**2**	**3**
	7121 Builders	**39**	**1**	**2**	**3**
	7 Other (SPECIFY) _____	**40**	**1**	**2**	**3**
7	**8 PLANT AND MACHINE OPERATORS AND ASSEMBLERS**				
	8 Other (SPECIFY) _____	**41**	**1**	**2**	**3**
8	**9 ELEMENTARY OCCUPATIONS**				
	9330 Freight handlers	**42**	**1**	**2**	**3**
	9 9 Other (SPECIFY) _____	**43**	**1**	**2**	**3**

www.oecd.org/globalrelations/eurasia.htm

This project is co-financed
by the European Union