



The cover features a collage of images. The top-left is a square image of a cloudy sky. The top-right is a large blue rectangle containing the title and subtitle. Below these are four images of a modern glass skyscraper: one showing the top corner, one showing a side view, and two showing close-up details of the glass facade. A solid blue rectangle is on the bottom-left.

DEVELOPMENT OF UKRAINIAN IT INDUSTRY

Analytical report

The research was initiated by the IT Ukraine Association and the Better Regulation Delivery Office (BRDO).



The IT Ukraine Association—The IT Ukraine Association is the largest community of service IT companies operating in Ukraine. Founded in 2004, the Association is a platform for open dialogue between IT industry representatives and government authorities. Today, the Association includes 58 international companies that create over 30,000 jobs and provide over 50% of industry’s export revenues. Website: <https://itukraine.org.ua>



The Better Regulation Delivery Office is an independent expert-analytical center established at the initiative of the Ministry of Economic Development and Trade of Ukraine and Western partners. It is funded by the European Union as part of the FORBIZ project and the EU4Business Initiative. The BRDO’s IT and Telecom sector worked on Market Assessment, Human Capital and Regulatory Framework sections. Website: <http://brdo.com.ua>.

The research is based on:

- official data from government bodies and state owned enterprises (State Fiscal Service, State Statistics Service, National Bank of Ukraine, SE “Info Resource”);
- data from private companies (obtained through interviews and surveys under confidentiality agreements).

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In a relatively short period of time, information technologies have turned from an ordinary and sometimes secondary industry into one of the main drivers of the world economy, having become a catalyst for tectonic changes and transformations in many other industries.

According to Gartner's studies and forecasts,¹ in 2018, the global total spending on IT products and services will amount to \$3.7 trillion and rise by 6.2% compared to the previous year, which is even more than global GDP growth rates. Along with the overall market growth, the share of IT outsourcing (software development services, developing infrastructure solutions for customers, etc.) is also increasing – total revenues in this segment amounted to \$64.3 billion² in 2017. The further development of the segment is stimulated by continued strong demand, which will continue to grow due to the pervasive 'digital transformation' that becomes increasingly active both in private and public sectors.

Meanwhile, in Ukraine, the development of the IT industry mostly represented by service (outsourcing) IT companies has far outpaced the segment's average growth rates in the world.

Besides the direct economic effect, the industry, which is relatively new for our country (actually, its opening up almost coincided with the Ukraine's independence) has become an important element in creating our country's modern image: more than 100 representatives of the Fortune 500 list of the most successful companies in the world are loyal customers of domestic IT businesses, while the leading international Global Sourcing Association has recognized Ukraine as the best IT service provider to the UK and the reputed US Business Journal Inc. has included Ukrainian companies in the list of those developing the most dynamically.

All this is really a significant result, which has been achieved through years of hard work. But what will the Ukrainian information technology industry be when we look at current official government figures and confidential commercial information from market players? What is the real percentage of IT businesses in Ukrainian exports and what direct and indirect impact does this sector have on the country's economy?

The IT Ukraine Association aimed at answering these and other questions.

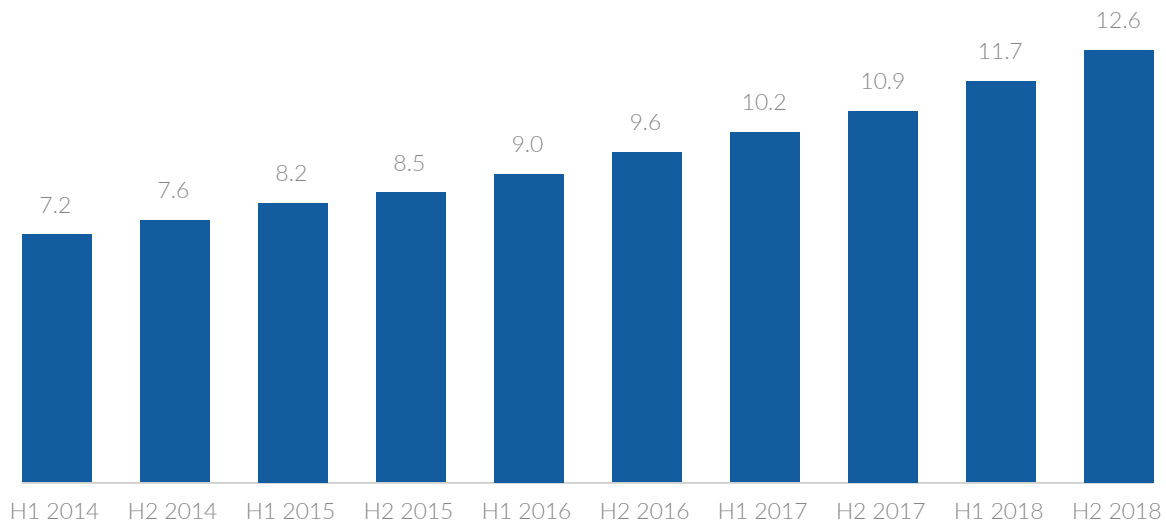
¹ <https://www.gartner.com/newsroom/id/3871063>

² <https://www.statista.com/statistics/189800/global-outsourcing-industry-revenue-by-service-type/>

MARKET ASSESSMENT

The estimated number of IT companies in Ukraine varies considerably depending on the data source. According to official data, there were 12,634 companies as of the end of the first half of 2018. It should be noted that the liquidated companies were also included in this list, so the number of really operating companies can be much smaller. At the same time, one company may have several legal entities, which also affects official statistics, since it shows the number of legal entities.

The number of registered legal entities with IT-KVEDs in Ukraine in 2014-2018, thous.¹



According to unofficial data, in Ukraine, there are about 4 thousand companies, most of which have up to 80 employees,² but many specialists work in organizations with more than 80 staff. This number includes 2,309 companies, which are active in the labor market. Based on the sample, it

¹ According to the State Statistics Service of Ukraine (Derzhstat). Hereinafter, we will consider the persons registered in the Unified State Register of Enterprises and Organizations with specified KVED codes (except for those located on the territory of the Autonomous Republic of Crimea and the city of Sevastopol):

58.21	Developing computer games
58.29	Developing other software
62.01	Computer programming
62.02	Informatization consulting services
62.03	Computer facilities management services
62.09	Other activities related to information technology and computer systems
63.11	Data processing, ICT hosting services and related activities

² dou.ua

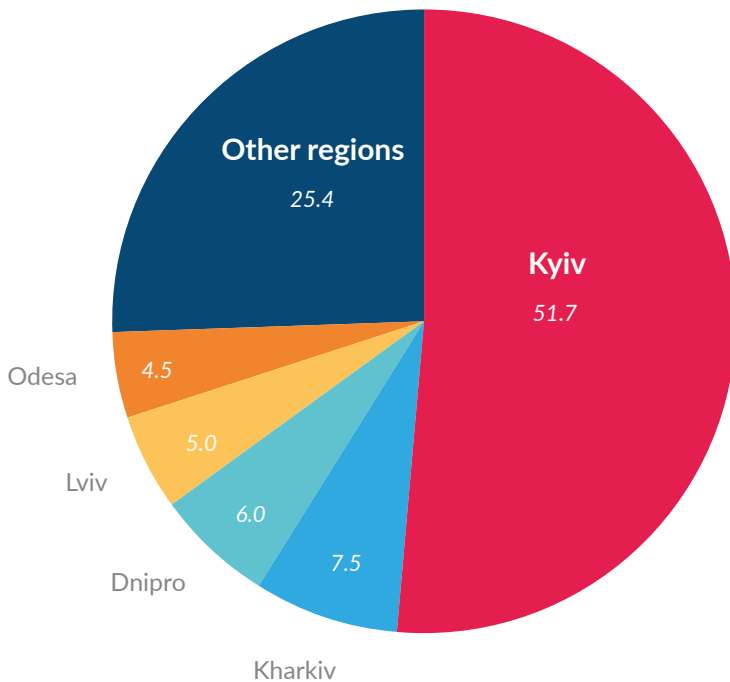
can be assumed that about 70% of companies provide IT services to a wide range of clients (EPAM, GlobalLogic, Netcracker and others), about 15% – work as Global In-house Center (GIC) for one parent company (Wargaming.net, Ring, Samsung R&D Institute Ukraine, Oracle) and another 15% of companies create their own product (Genesis, EVO, Terrasoft).

Specialization of large IT companies, by the number of specialists

	80-200	200-800	800+
Services	70	43	14
Products	15	10	4
GIC	14	16	0
Total	99	69	18

According to official statistics,³ about half of the companies were registered in Kyiv. A considerable number of such companies are also represented in Kharkiv, Dnipro, Lviv and Odesa.

Geography of registered IT companies, expressed as percentage

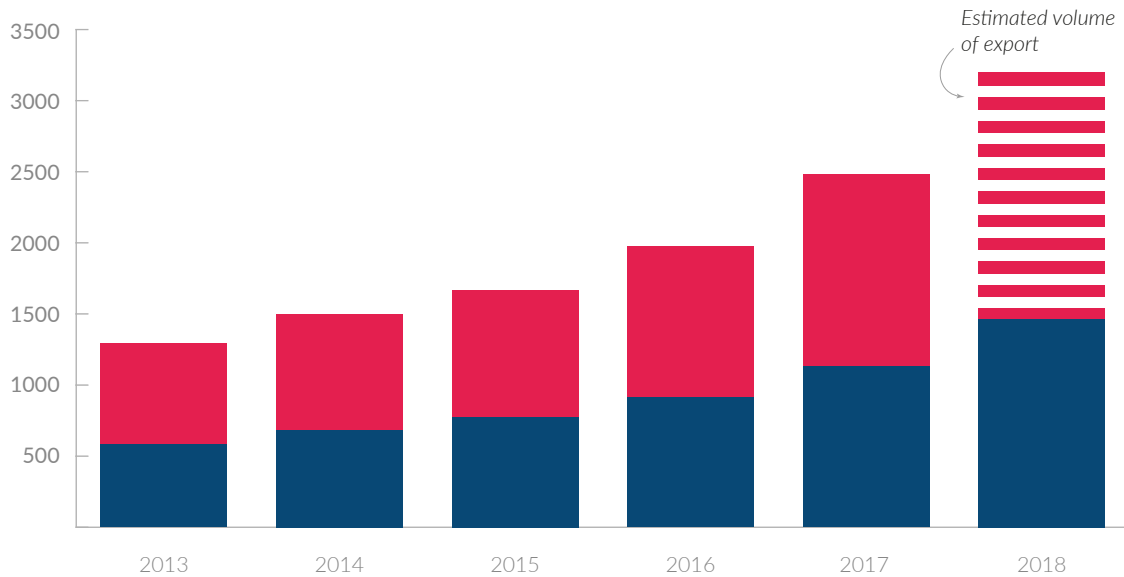


The Ukrainian IT industry is now successfully competing in the global market while being a reliable source of foreign exchange earnings, which contributes to maintain the stable hryvnia exchange rate.

For example, despite the decline in exports and the economy as a whole, the industry demonstrated a steady growth by 11-26% annually.

³ Derzhstat

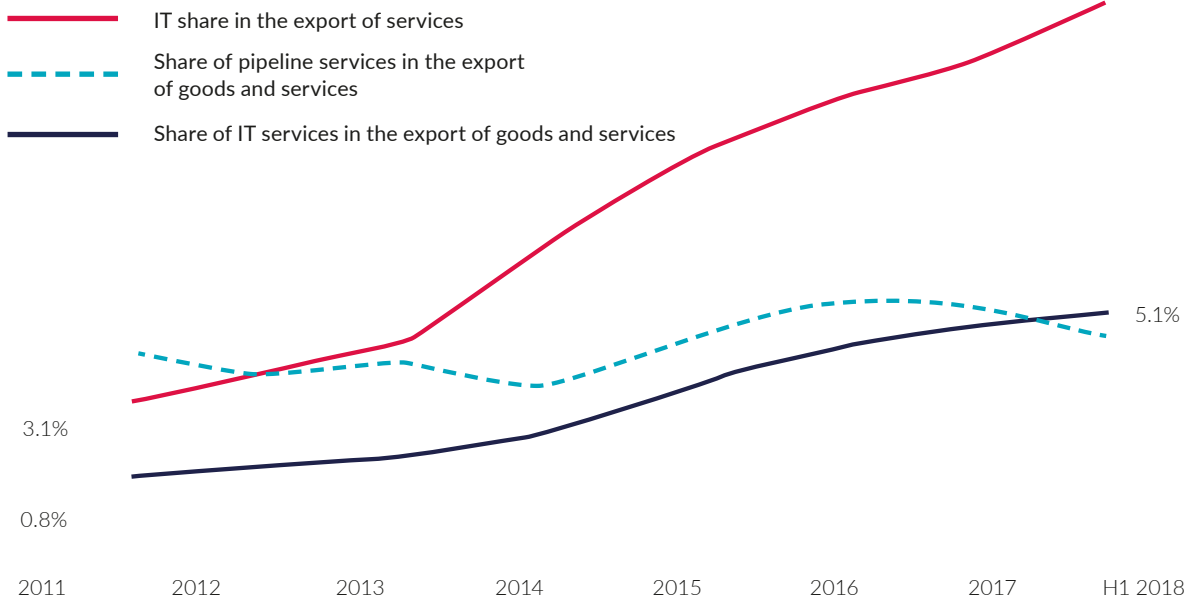
Export of computer services, with a share for the first half of the year, USD mln.⁴



Accordingly, IT services are gaining importance in the export structure. For example, in 2017, computer services were the third largest item of the export of Ukrainian services after goods processing services in the country and pipeline services,

and according to the results of the first half of 2018, they outranked pipeline services and became the second largest sector in the export of services

The share of computer services in exports⁵



⁴ Statistics of the Ukrainian external sector. NBU <https://goo.gl/K4jjiq>

⁵ Statistics of the Ukrainian external sector. NBU <https://goo.gl/K4jjiq>

According to the survey conducted among companies,⁶ the vast majority of revenues come from abroad. More than half of them come from the United States, and the United Kingdom is next. Ukrainian companies have also been cooperating with representatives of Germany, Canada, Israel, Sweden and Switzerland for a long time. In spite of the positive dynamics, the Ukrainian market still can not claim it has a large share of orders.

Countries, which are sources of revenues for the Ukrainian IT sector

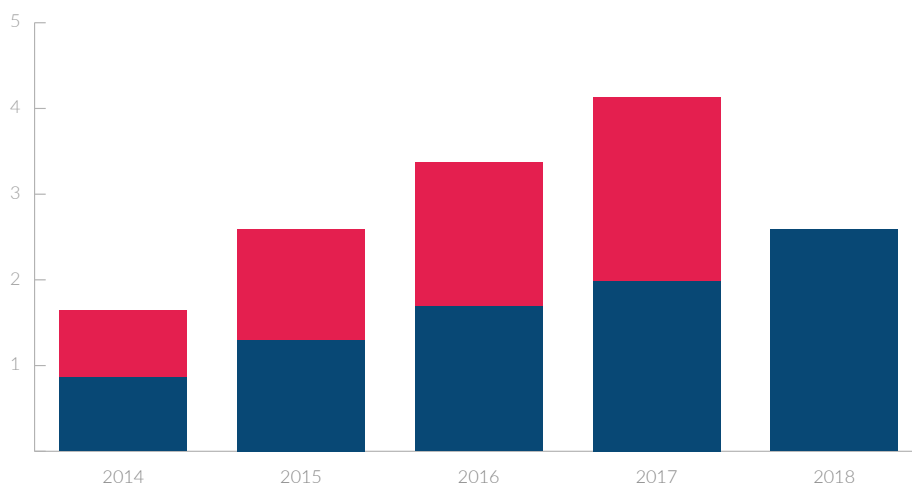


This development is accompanied by increased budget revenues.

On average, the amount of taxes paid by IT companies in 2014-2017 was growing by 27% each year

and reached 4.1 billion hryvnias.⁷ This positive trend continued in 2018: revenues grew by 30.1% in six months.

Taxes paid by legal entities to the unified budget (I and II half of the year), in billion UAH

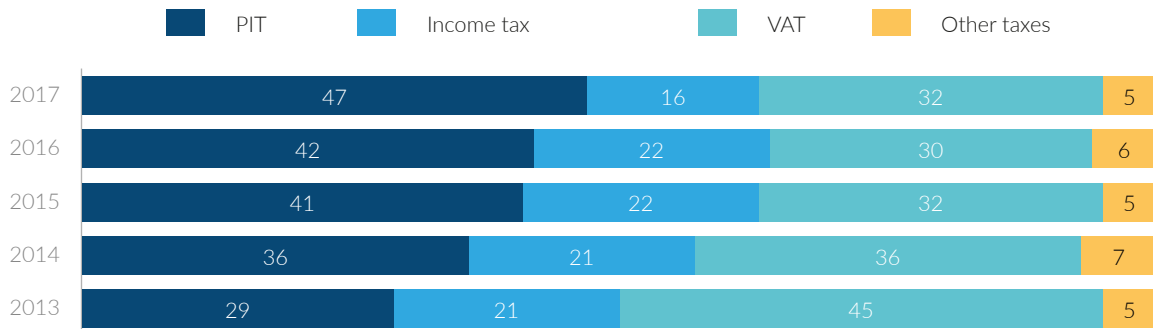


⁶ Hereinafter: the survey conducted by IT Ukraine and BRDO in August-September 2018.

⁷ Data of the State Fiscal Service

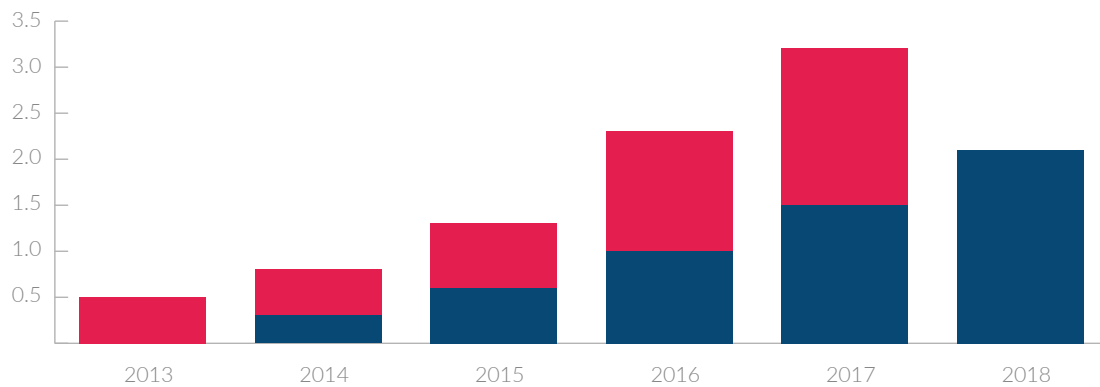
A personal income tax is the largest one in the structure of taxes paid by companies, and its share is increasing every year. This demonstrates the crucial importance of wage taxation for the industry.

The structure of taxes paid by IT companies, expressed in percentage



In addition, a significant number of IT specialists work with companies as individual entrepreneurs and pay taxes on their own. The vast majority of them use a simplified tax system and pay a single tax. The volume of these revenues grew by an average of 58.8% during 2013-2017 and amounted to 3.2 billion UAH in 2017.

Dynamics of single tax revenues (I and II half of the year), in billion UAH



It should also be noted that 100% of single tax revenues paid by IEs stays in the local budgets at the place of registration, while 75% of personal income tax revenues are distributed among local budgets of various levels and 90% of income tax revenues go to the central budget. In such a way, we can say that IT workers contribute to the filling of local budgets and the development of regions. For example, the single tax revenues paid by IT industry representatives in Kyiv amounted to only 28% of the total in 2017, and another 10 regions surpassed the 2% mark,⁸ demonstrating a more equitable distribution than, for example, the income tax has.

⁸ Data of the SFS

Single tax distribution by regions, in billion UAH

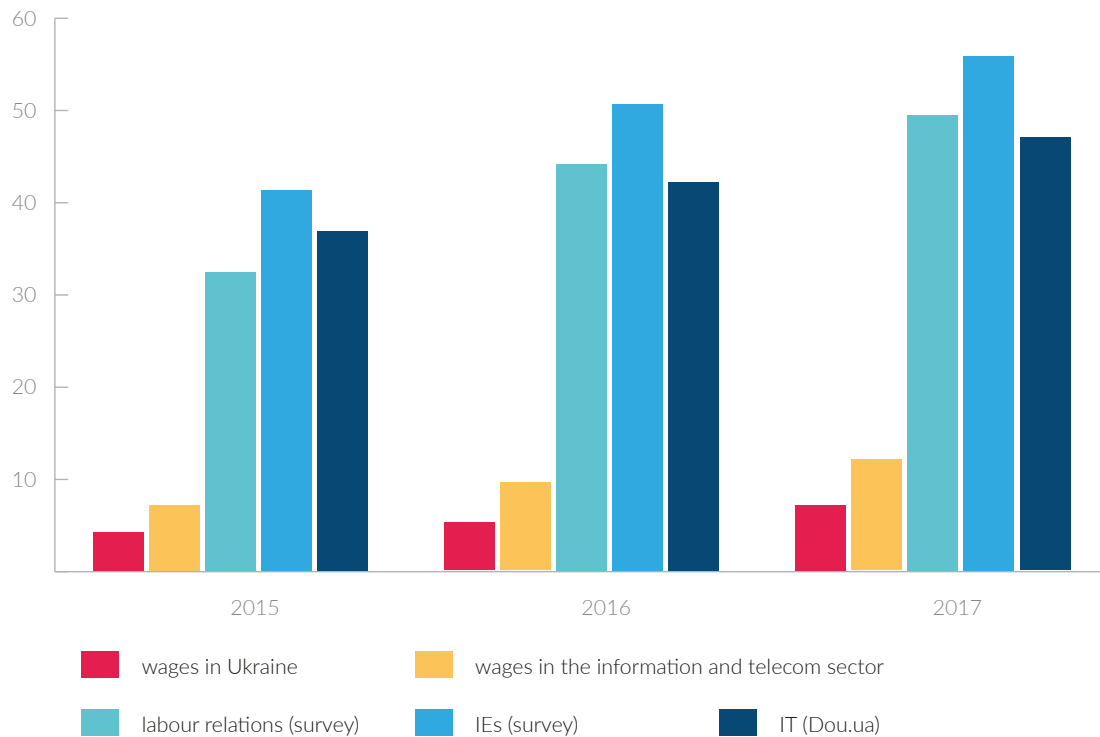
	2013	2014	2015	2016	2017
AR of Crimea	16.1	4.6	0	0	0
Vinnitsia region	14.9	23.5	38.0	68.2	93.3
Volyn region	4.0	6.1	10.9	18.7	29.2
Dnipropetrovsk region	33.8	57.7	104.5	198.3	264.0
Donetsk region	22.0	31.2	41.6	62.5	68.5
Zhytomyr region	8.9	13.3	20.9	36.5	54.0
Zakarpattia region	3.9	5.5	9.1	16.7	25.8
Zaporizhia region	14.2	20.6	34.4	59.5	87.8
Ivano-Frankivsk region	5.5	9.1	16.3	29.7	43.8
Kyiv region	21.5	34.7	63.3	116.1	167.0
Kirovohrad region	4.6	6.6	10.8	17.9	28.0
Luhansk region	9.9	12.7	19.0	26.2	26.6
Lviv region	45.0	74.7	133.9	244.6	354.9
Mykolaiv region	11.1	17.3	30.0	51.6	71.3
Odesa region	23.7	38.3	68.0	115.4	153.8
Poltava region	8.4	12.4	19.7	35.2	53.0
Rivne region	4.9	7.5	13.4	23.6	35.5
Sumy region	5.9	9.3	15.1	27.9	38.9
Ternopil region	3.2	5.1	9.3	17.8	26.7
Kharkiv region	69.1	111.4	187.0	319.1	432.0
Kherson region	5.8	9.4	16.6	27.4	39.5
Khmelnitsky region	5.2	8.5	14.1	26.4	39.9
Cherkasy region	9.5	14.0	25.7	48.0	67.8
Chernivtsi region	4.4	6.8	10.5	18.1	27.8
Chernihiv region	8.0	12.4	21.5	37.9	52.1
Kyiv	131.0	216.8	357.4	632.0	897.8
Sevastopol	5.2	1.5	0	0	0

Most of taxes related to wages are justified by higher incomes of industry representatives compared to other sectors. For example, in 2017, official wages in the information and telecommunications sector were 69% higher than average wages in the country.

If we consider the data from a specialized portal,⁹ developer's incomes were 6.6 times higher than average wages in Ukraine.

According to the survey, the income of employees involved in labour relations with companies exceeded the average wage by 7 times, while the income of individual entrepreneurs – by 7.8 times. This ration remains stable for a long time.

Average monthly incomes in Ukraine, thous. UAH

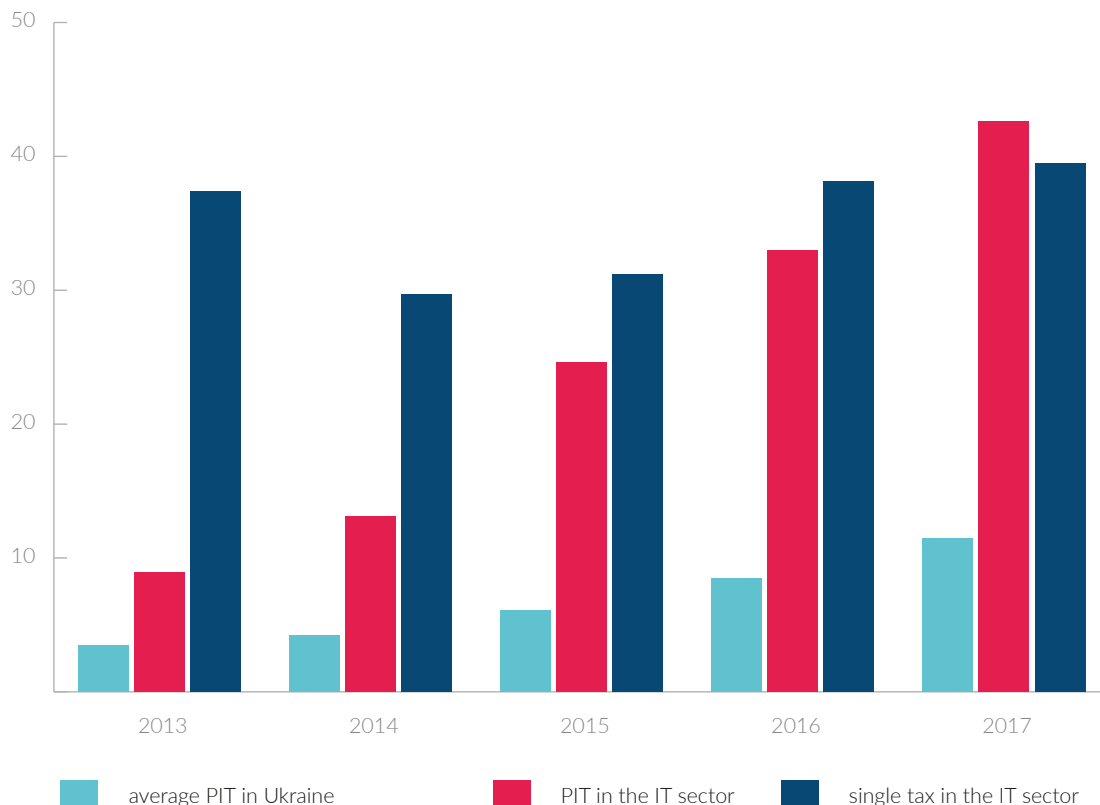


Accordingly, the amount of revenues to the state budget per 1 person employed¹⁰ in the IT sector was much higher than the national average. The personal income tax paid by IT industry specialists was 3.7 times higher than the national average. Since the industry widely applies the model of cooperation with specialists as IEs, the single tax paid by one active entrepreneur was also taken into account. Nevertheless, its amount was also 3.4 times larger than the amount of personal income tax per 1 employee.

⁹ dou.ua, average figures for Software Engineers

¹⁰ The price of the State – <http://cost.ua/budget/revenue/#1>, the SFS data, Derzhstat, BRDO estimates

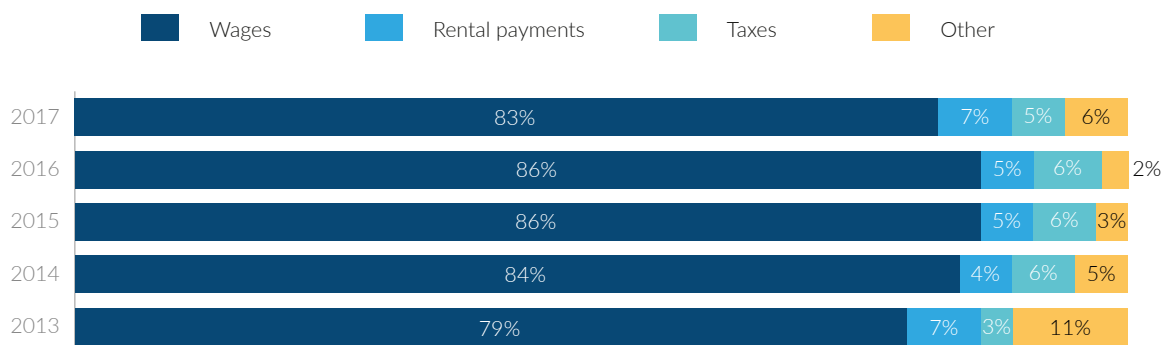
The volume of budget revenues per 1 employed person, thous. UAH per year



According to the survey conducted, wages amounted to 80-85% of companies' expenses.

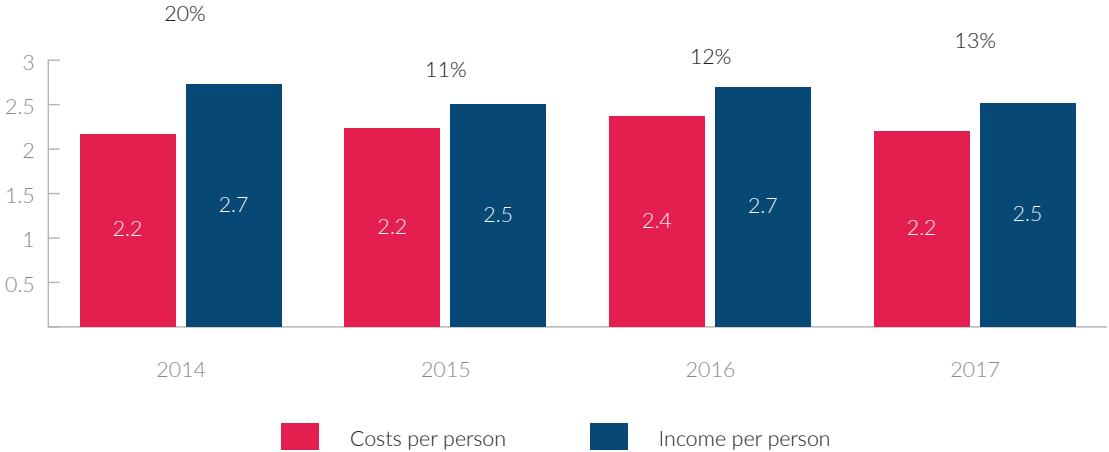
Other significant expense items are office space rentals (up to 7% on average) and taxes (up to 5%). Given this structure, ensuring the stability and predictability of taxes on wages is crucial for the IT market.

Cost structure of IT companies



According to statistics provided by companies, expenses per one person are about 2.2 thousand dollars per month. While the average income is 2.5 thousand dollars, which provides marginality of about 13%.

The average income, costs and margin of IT companies per person per month, in USD thous.



YURIY ANTONYUK, EPAM UKRAINE:

“The growth by 30% is a real scenario for Ukrainian IT”



With years of experience in IT management, Yuriy Antonyuk took the lead in EPAM Ukraine back in 2005 – from the moment of opening of the first office of this international company in Ukraine. During his management, the Ukrainian division has increased in terms of employees (from 50 to 5700 specialists) while being today the largest player in the IT services market of Ukraine both by the number of employees and financial indicators.

The problems of the domestic IT market development, challenges for the industry and expectations concerning the future – we discussed all these issues with the head of the industry’s leading company.

GROWTH RATES

The growth rates of EPAM Ukraine are about 20% from year to year, so we can say that we are growing harmoniously with the market. I define the growth as both financial indicators and the number of specialists – the interdependence between these two parameters is still typical for the Ukrainian industry. To my mind, this dependence is a significant advantage today: in Ukraine, unfortunately, there are not so many high-paid jobs, and the growth of IT industry revenues allows to create such jobs.

Over the next 3-5 years, we expect that the number of specialists EPAM Ukraine works with will be more than 10 thousand people, and at the same time, the total number of IT specialists in Ukraine will increase to 200-300 thousand. Of course, everything will depend on the market situation, its ability to develop – I mean the total number and quality of qualified human resources in the country – and the domestic demand for IT services. Ukraine should provide more self-realization opportunities with higher wages. And the IT industry is not a cure-all solution, but it is one of the elements of this system.

Only two factors may prevent such forecasts. The first one is a situation with human assets. Global competition for talents is growing, so we need to really think about how to keep young people inside the country – this is one of the most important tasks for both the government and Ukrainian businesses. Another factor is the state policy and its priorities. In this context, I do not mean that the state should focus just on the IT sector. The country needs a clear action plan while being focused on key areas that generate revenues and, most importantly, provide new jobs.

LEADERSHIP PRINCIPLES

First, EPAM is a global company, so we started our activity in Ukraine with tangible support from our head office.

Secondly, we have never been an outstaffing business, we have always focused on high value-added solutions, large-scale and sophisticated technological projects. All this allowed to concentrate a strong expertise in different areas within the company. The third element in the success of the Ukrainian EPAM office is investing in talents. In Ukraine, EPAM has become a pioneer and an example of collaboration with higher education institutions. Before we entered the Ukrainian market, IT companies didn't work actively with universities and colleges, didn't see all opportunities, and their potential was unclear. We quickly launched cooperation with key Ukrainian universities, starting to support talented second- and third-year students.

Of course, we constantly invest in the development of those specialists who have already joined our company.

COMPETITION FOR TALENTS

Today, the outflow of personnel is a speculative matter. In 2014-2015, the outflow indeed occurred, since people just did not know what to expect from tomorrow. Now the situation has significantly stabilized.

I believe that in this context, the topical issue is not the outflow of specialists, but the outflow of students that began. This fact should be a matter of concern to all of us. Other countries provide our talented young people with excellent learning opportunities and financial support. And while the specialists who went abroad to work often return to Ukraine, we lose our students for many years to come. Therefore, keeping students in the country and providing them with effective learning and self-realization opportunities, which should be a current state priority, can not be solved without the initiatives supported by the government.

Another issue is the quality of education. Each year Ukrainian higher education institutions produce more than 100 thousand engineering specialists and about 20 thousand graduated programmers with a university degree. The total number of new specialists meets the industry's needs, but there is a very small number of really qualified personnel.

In my opinion, these two aspects are the most acute issues in the context of a lack of qualified human resources and require the maximum attention from both the government and market players. And all the talk about the massive emigration of Ukrainian developers is nothing but speculation and populism.

REGIONAL SPECIALIZATION AS AN INSTRUMENT FOR BUSINESS DEVELOPMENT

EPAM Ukraine has representative offices virtually in all key regions of the country: Kyiv, Kharkiv, Lviv, Dnipro and Vinnytsia. Each of the offices has its own focus area. For example, our Vinnytsia colleagues are developing solutions in mobile segments, our specialists from Kyiv have strong positions in e-commerce and automotive cloud solutions. Our Kharkiv office was originally established to work with Oracle, but over the time, it began to specialize in digital transformation services – massive digitalization of clients' businesses. By the way, the EPAM Java Competence Centre head-base is also located in Kharkiv. Artificial intelligence, work with huge data sets, machine learning are developed competencies of EPAM developers in Lviv.

At the same time, all our offices have no strict limitations regarding the projects, which their specialists work on. It's just that each city has a certain historically developed profile expertise.

Due to such a specialized approach, our colleagues from different parts of the country can feel their uniqueness. This model allows to assign clients to different offices, instead of concentrating all them only in the company's metropolitan office, and develop all regions, where the company operates, in a balanced manner.

WHY DOES THE COUNTRY NEED THE DOMESTIC IT SERVICE MARKET?

To make sure that some of the industries is really successful within the country, the external and domestic market should have approximately the same value. Any industry doesn't operate properly without its harmonious development in the local market. However, as of today, the value of the domestic market of IT services in Ukraine is much smaller than the export share. So, if we are talking about further rapid development of the information technology industry, we simply cannot ignore the problem of domestic demand.

Traditionally, there is a little interest in domestic products in Ukraine. And it is even smaller when it comes to IT services, because digitalization is far from being the top priority for most local players. To change things, IT industry representatives should take the first step by providing their services to local organizations or pro bono institutions and considering their work in the domestic market as corporate social responsibility and investments in the future. EPAM Ukraine is taking these steps right now by supporting a number of public and social projects with its expertise.

The state cannot take no action in this situation. In my opinion, the government should stimulate the use of technological solutions by other industries, introduce incentive for businesses that

use Ukrainian IT products or services. The increased demand will lead to the increased number of technology companies focused on the domestic market.

EXPECTATIONS FROM THE MARKET

If current conditions are maintained, the growth rate of the IT industry will be 20-25% in the coming years. Of course, this is not bad. But the Ukraine's potential in IT products and services is much greater. Global demand for technological solutions is increasing and gaining some ground.

The industry's growth by 25-30% is possible in the near future if the government and the state as a whole will focus on priority sectors and begin to address urgent problems, such as the employment of foreigners, the development of human capital and education, the abolition of obsolete legal barriers, the development of ecosystems and the creation of technological parks, in a comprehensive manner. Indeed, it is a real and "moderately optimistic" scenario.

KEY PRIORITIES

Apart from the development and modernization of the educational system in Ukraine, the definition of key state priorities and the work on the domestic market development, the Ukrainian IT community should think about forming a common vision of the industry's future.

Undoubtedly, we can just earn money. But this is a losing option. By doing so, we will never be able to compete in this area, for example, with India, which only now has about 3 million IT specialists. This is the first point.

The second point is total automation presenting today in all areas of our lives, including the IT sector. In the future, only those countries, those industries and those specialties that will have a creative component will benefit. Therefore, taking into account these two factors, we should understand that the industry requires a unified plan of strategic development not for 3-5 years, but for the coming decades.

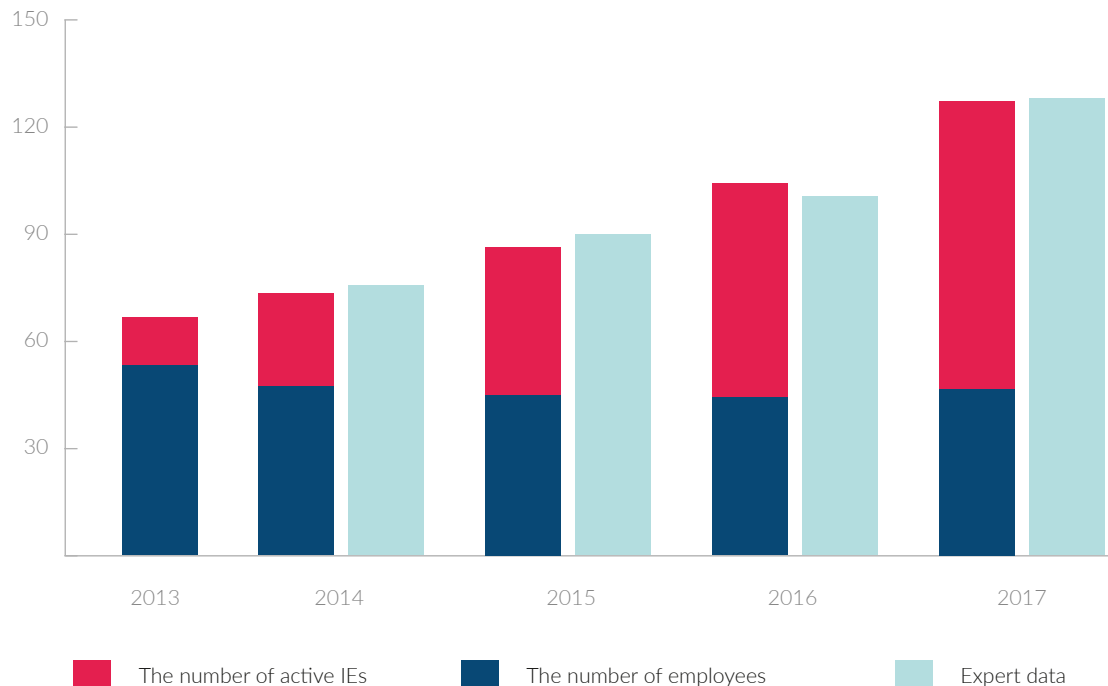
Our chance to stand out on the global market is to work on creating sophisticated products and services with a high creative component, and therefore with significant added value.

HUMAN CAPITAL

The core value for IT companies is people, so the number of persons employed in the sector is one of the main issues. Both official statistics and expert assessments confirm that the number of employees has increased significantly in recent years. According to unofficial data, the market grew by an average of 19% annually, and there were 127 thousand people employed by the end of 2017,¹ while, according to official figures, there were only 46 thousand people.²

However, it also makes sense to take into account the fact that most IT specialists work with companies as individual entrepreneurs. At the end of 2017, the number of registered individual entrepreneurs amounted to 94 thousand.³ However, IEs liquidated since the register's creation were also included in this list. Excluding such "ghost employees", there will be about 80 thousand persons.⁴ Accordingly, the total number of employed persons and IEs will be extremely close to the expert market assessment.

The number of persons employed in the IT industry, *ths.*



¹ dou.ua

² Derzhstat

³ The SFS

⁴ The SFS, BRDO estimates

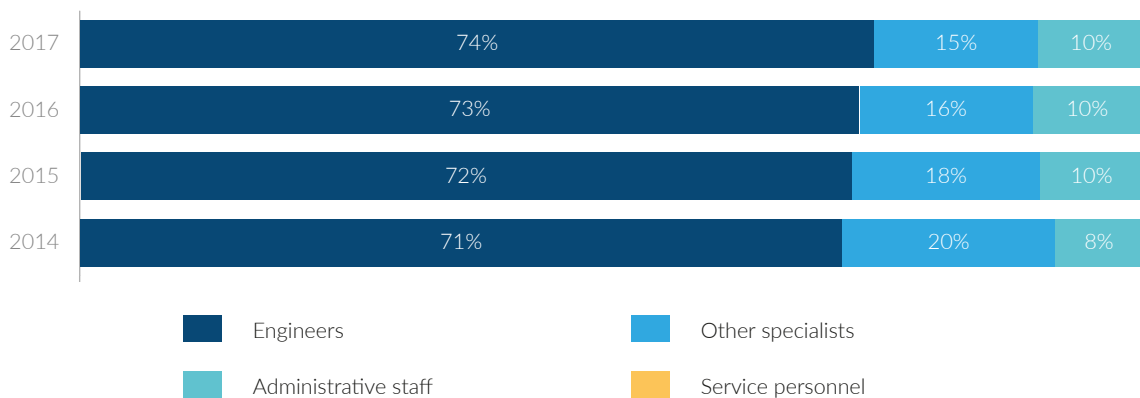
Data of official statistics and surveys of companies differ when it comes to the estimation of the IE proportion among all those employed in the IT sector,

but both sets of data confirm the market growth precisely because of the increase in the number of IEs

Such dynamics confirm the importance of tax incentives for industry development. It is important to note that not only programmers or highly specialized technicians work in the IT industry.

The market provides job opportunities also for representatives of other sectors such as design, finance, personnel management, etc. In addition, IT companies need additional maintenance personnel, although they usually hire external service providers, including security services, cleaning services, etc. According to the survey conducted, more than a quarter of persons employed in companies are the non-technical staff.

Specialization of employees in IT companies⁵



The geographical distribution can also be assessed based both on the unofficial survey and the official data on IEs. If we assume that the cities mentioned in the survey correspond to the regions from official statistics, then we can see that the percentage of IEs registered in the regions usually exceeds the percentage of relevant respondents, except for most of IT industry centers such as Kyiv, Kharkiv, Lviv and Odessa. The only exception is the Dnipropetrovsk region, which is also a large center for software development, but the percentage of registered IEs here is larger than the percentage of those who polled their votes. It should be noted that there is such an option in the polling as “Another city/remote”, which gained a significant percentage of support.

⁵ Technical specialists: SE, QA, etc.;
other specialists: PM, BA, Designer, etc.;
administrative staff: HR, PR, legal, etc.;
service personnel: cleaners, security men, etc.

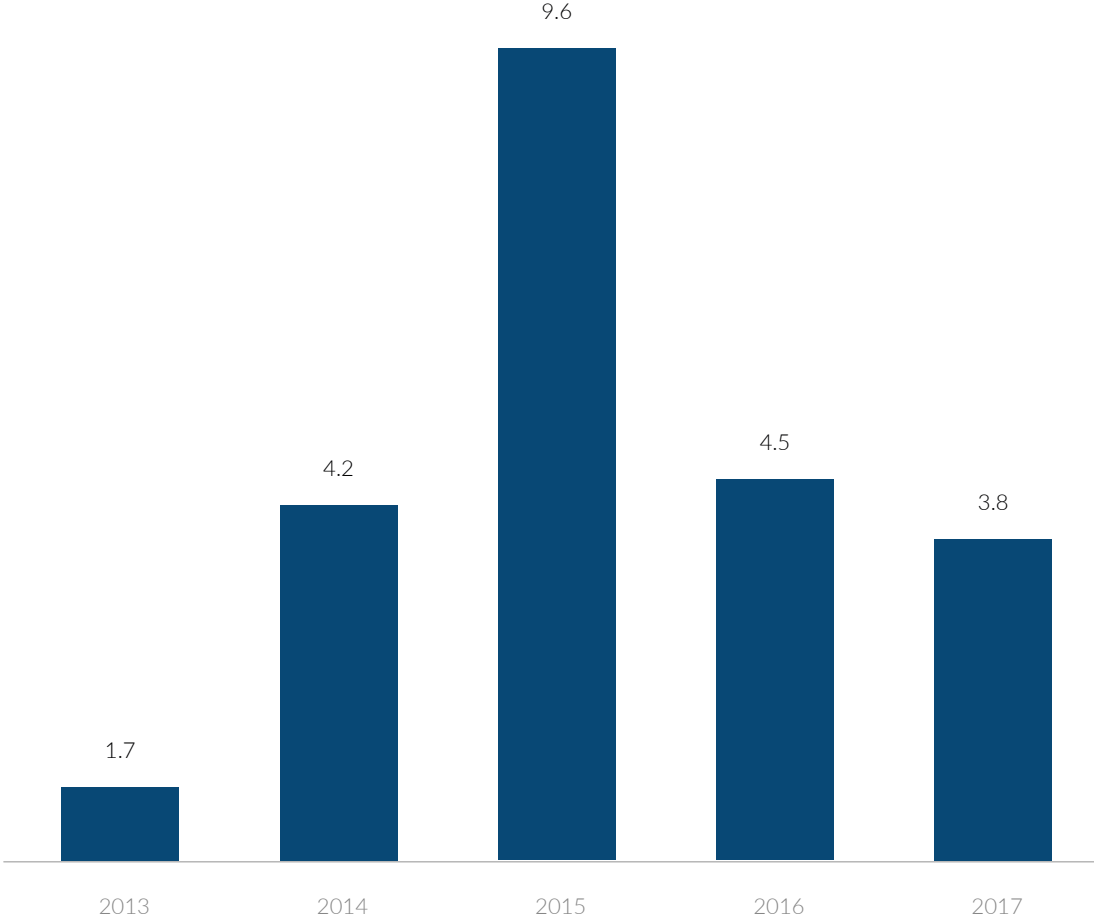
Dynamics of distribution of specialists by regions, % of the total number. Data: dou.ua

City	2013	2014	2015	2016	2017	2018
Vinnitsia	1.6%	1.3%	1.8%	1.7%	2.0%	2.6%
Dnipro	7.1%	8.2%	7.9%	8.1%	7.0%	6.9%
Donetsk	3.0%	2.2%	0.3%	n/a	n/a	n/a
Zhytomyr	0.7%	0.8%	0.8%	0.6%	0.7%	0.6%
Zaporizhia	1.2%	0.9%	1.3%	1.3%	1.6%	1.6%
Ivano-Frankivsk	0.6%	0.6%	1.1%	0.8%	1.0%	0.8%
Kyiv	46.1%	44.6%	46.5%	47.0%	44.2%	43.7%
Kropyvnytsky	0.1%	0.2%	0.2%	0.1%	0.2%	0.1%
Luhansk	0.6%	0.7%	0.0%	n/a	n/a	n/a
Lutsk	n/a	0.1%	0.1%	0.2%	0.2%	0.2%
Lviv	8.9%	9.3%	9.9%	10.4%	12.0%	12.1%
Maryupol	0.2%	0.2%	0.1%	0.1%	0.0%	0.1%
Mykolayv	1.0%	0.9%	1.1%	0.9%	0.7%	0.7%
Odesa	5.4%	5.5%	5.5%	5.1%	5.1%	5.8%
Poltava	0.4%	0.2%	0.2%	0.4%	0.4%	0.5%
Rivne	0.4%	0.1%	0.4%	0.3%	0.5%	0.4%
Sevastopol	1.4%	0.6%	0.2%	n/a	n/a	n/a
Simferopol	1.4%	0.7%	0.1%	n/a	n/a	n/a
Sumy	0.4%	0.3%	0.4%	0.4%	0.6%	0.3%
Ternopil	0.2%	0.3%	0.8%	0.5%	0.5%	0.6%
Uzhhorod	0.1%	0.3%	0.4%	0.4%	0.3%	0.2%
Kharkiv	16.7%	18.7%	16.2%	15.2%	15.5%	15.6%
Kherson	0.2%	0.2%	0.2%	0.4%	0.2%	0.3%
Khmelnitsky	0.3%	0.3%	0.5%	0.5%	0.5%	0.6%
Cherkasy	0.6%	0.7%	0.6%	0.8%	0.8%	0.8%
Chernyhi	0.7%	0.3%	0.4%	0.4%	0.5%	0.4%
Chernivtsy	0.6%	0.3%	0.8%	0.7%	0.7%	0.8%
Other city/remote	n/a	1.5%	2.4%	3.6%	4.8%	4.4%

It should also be noted that according to the survey, up to 30% of individual entrepreneurs conclude service supply contracts with foreign companies. Domestic enterprises have to compete for talents not only with each other, but also with representatives of other countries. The problem related to the specialists' outflow has become even more urgent during the period of the aggression of the Russian Federation in the East of Ukraine, when, according to the survey, the percentage of specialists who moved abroad was 9.6%. Although current labour outflow rates are gradually decreasing to previous indicators,

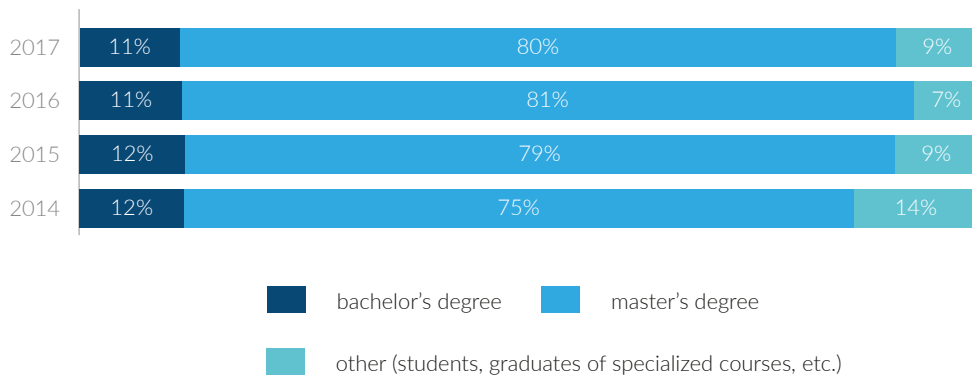
the public policy should take into account the risks associated with global competition for skilled workers

Percentage of workers who moved abroad



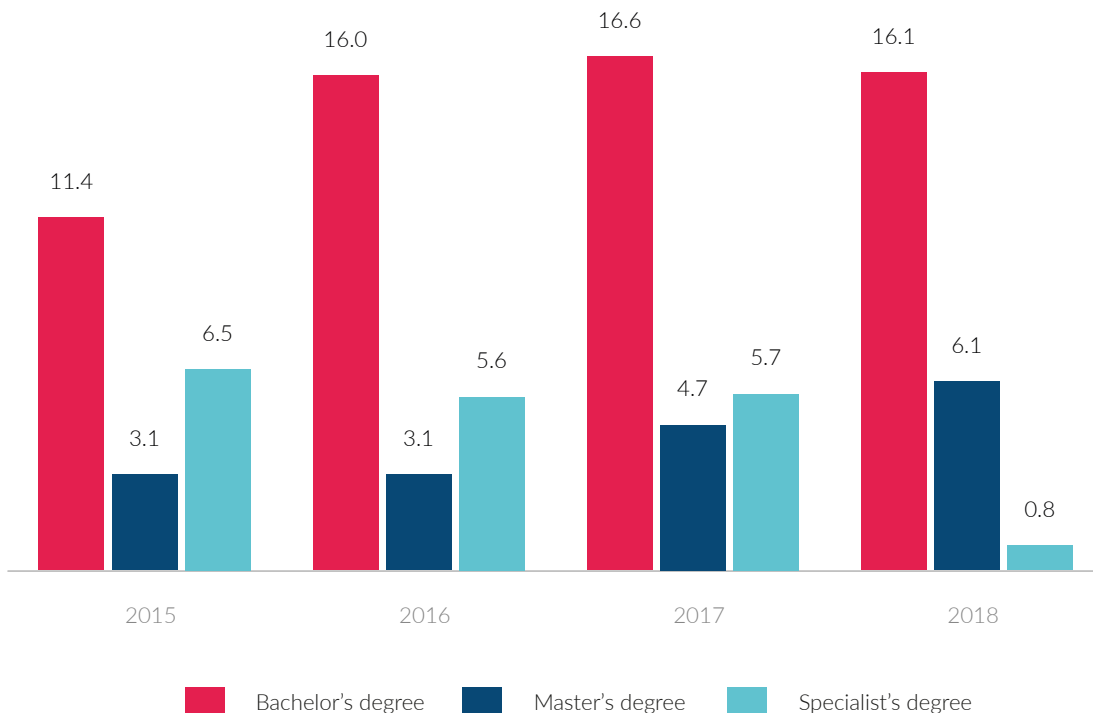
Ukrainian specialists are very qualified: about 80% of employees have a master's degree (or a specialist degree), more than 11% have a bachelor's degree. Other workers are either still getting higher education degrees, or graduated specialized courses or choose self-education. In addition, dozens of employees with a PhD degree work on the market, which stimulates the development of both the domestic business and science.

Education level of employees in IT companies⁶



For example, in 2017, the number of persons employed in the market increased by 27 thousand people, while the number of graduates was only 23 thousand⁷ in 2018. Moreover, the number of new workers who will be really employed in the market is even less, since most bachelors will undertake a master's degree and won't work, and some students were already employed and combine their education with work.

Number of IT graduates (diplomas awarded by Ukrainian universities), *thous.*



⁶ Based on the survey conducted by BRDO and the IT Ukraine Association

⁷ Data of the Unified State Electronic Database on Education. The list of specialties is available at <https://goo.gl/STtfbC>

In 2017, 150 Ukrainian higher education institutions provided education to students. 147 of them provided bachelor's degree programs, 99 – master's degree programs, and 35 – specialist's degree programs. However, the distribution of students between institutions is very uneven:

top 15 universities graduated 52.6% of bachelors, 53.3% of masters and 87.2% of specialists

It should be noted that according to the reform of higher education, the last admission of students to a 'specialist's' education qualification level was in 2016, and there will be no such graduation requests in the future.

IHOR BYEDA, GLOBALLOGIC UKRAINE:

“Modernization of education is the foundation for the industry’s growth”



Ihor Byeda has more than 17 years of experience in software development both in Ukraine and abroad. Ihor started his career in GlobalLogic as a project manager in telecommunication, mobile application development and embedded systems in 2007.

Today, as Managing Director of the company’s Ukrainian office, Ihor is responsible for the entire GlobalLogic’s operations in the region: from business development and software engineering to PR, infrastructure and talent retention.

Under his leadership, GlobalLogic Ukraine has undergone some effective transformations and came very close to having 4,000 specialists working with the company.

As part of our sectoral research, we talked with the top manager of one of the country’s largest IT companies about the industry development, barriers, prospects and top priorities for market players.

CURRENT BUSINESS INDICATORS

In the last fiscal year (April 1, 2017 – March 31, 2018), the GlobalLogic company in Ukraine showed remarkable results – we increased by almost 24%. Every year, we exceed key business targets and grow much faster than the market does. It is important for the development of the entire company, because Ukraine is one of the key GlobalLogic’s locations by the number of engineers and the business volume. Today we are working on 300 projects for clients who are leaders in a variety of industries, from automotive engineering to medicine, from media to telecommunications and financial technologies.

In 2018, GlobalLogic got a new strategic investor – the international company Partners Group with headquarters in Switzerland. As a result of an agreement between Partners Group and the previous investor Apax Partners, GlobalLogic was valued at more than \$2 billion. This is a very high market rating, which indicates that investors believe in the company’s prospects and its further development.

In the current fiscal year, we are also ahead of our company’s growth plans. There is every reason to believe that we will not only have the same success as last year, but also beat it.

With regard to human capital assets, our company in Ukraine has grown by more than 600 people over the last 12 months. Thus, the increase in the number of engineers was more than 20%. As the development of any service business depends on the number of specialists, we are definitely planning to grow in the future. Moreover, our growth rates have increased over the last

few years. Our company came very close to having 4,000 specialists, although only a year ago, we had just over 3,000 employees.

CLIENT GEOGRAPHY

Most of our clients come from the USA, followed by Europe. I am convinced that the number of European customers will grow, especially with the help of our colleagues from Poland, Slovakia and Croatia. Through our efforts, it is easier for us to get new clients and businesses, some of which come to Ukraine.

COMPANY'S PRESENCE IN UKRAINE AND REGIONAL SPECIALIZATION

The head office of the Ukrainian GlobalLogic's branch is located in Kyiv. In addition, it is our largest engineering center. Together with a small office in Mykolaiv, it is almost 2,000 people. Our Kharkiv office is approaching to have 1,000 specialists. Over the past year, we have grown by 46% by the number of engineers, and now we occupy six and a half of 9 floors of the local business center. Recently, our office in Lviv has reached the mark of 1,000 consultants. Even now, we completely occupied a business center in the historic district of the city and opened our second office built specifically for GlobalLogic. It is important to note that we are growing in all locations of our presence while actively developing local infrastructure for our future growth.

Regional specialization was a company's feature in the past. For example, in our Kharkiv office, we were more engaged in medical projects, and the Lviv office was more focused on the development of so-called embedded systems. Now I feel like these distinctions are erased. For example, we have almost equally represented medical projects in Kharkiv and Lviv, and, since recently – in Kyiv. The same is true for other areas. We believe in the success of distributed teams, so we try to develop one or another expertise not only in usual locations, but also where there are skilled specialists of the profile we need. This is the advantage of being a global company, and we are actively using it.

LABOR MIGRATION

According to our observations, the mass moving of specialists that began several years ago has slowed down. Some of those who left the country are coming back. There are several reasons for this. First, the situation in Ukraine has largely stabilized that eased internal concerns and tensions. Secondly, with the Ukrainian market development, there are more and more new IT proj-

ects that open up opportunities for working with new technologies and creating things that can really make a difference in people's lives around the world.

Computer vision and self-driving cars, robot surgeons and financial market analysis systems, technologies to broadcast media content through cloud services and state-of-the-art education systems – you can create all this and many other things in Ukraine together with the GlobalLogic team. And you do not need to move anywhere for this.

Of course, we are ready to support specialists who have decided to build their career abroad. And as a global company, we have all the opportunities for this. But I am pleased to realize that today our specialists choose to move not because they do not like something in Ukraine. It is rather a search for additional career opportunities that they can realize only abroad for now.

FOREIGN SPECIALISTS

There are also foreign specialists in the GlobalLogic's Ukrainian office, although, of course, this is not very common. They are mainly foreigners with deep knowledge of a certain technological domain or industry that we simply do not have in Ukraine. Basically, such experts advise us on certain areas and help to develop an expertise that we do not have yet.

But I am convinced that the number of foreign IT specialists in Ukraine will grow due to the simplified registration of foreigners, which we achieved together with the IT Ukraine Association this year and on which we will continue to work. Our market is very attractive to residents of neighboring countries, where compensation payments for IT engineers are linked to local money. To my mind, we should actively promote the career opportunities in Ukraine among our neighbors, and then foreign specialists will come to our country.

PROJECTS FOR LOCAL CLIENTS

We have projects for the domestic market. There are few of them, because the demand on the domestic IT market as well as its volume is small enough, reflecting the overall state of the country's economy. Usually, our clients are large international R&D developers, but there are currently no such companies in the country.

Most of our services provided to domestic consumers are a part of corporate social responsibility, our desire to support important and necessary initiatives in Ukraine. For example, our leading engineers help create new troop command systems, from software architectures to user interfaces. Such a system created with our help is unique, since it is based on the latest NATO standards. This is not the only but very illustrative example of how the knowledge and skills of Ukrainian

engineers that they gained in projects for foreign clients help solve important tasks within the country.

As part of our social responsibility, GlobalLogic engineers also advise other projects and initiatives to help find the best architectural and technical solutions to their tasks. By joining such projects on a voluntary basis, we share our unique expertise in technologies and solutions for various industries. This allows to organize the work properly from the very beginning and significantly reduce the time and cost to create ready-made solutions. In that way, we have started and continue to collaborate with organizations such as the BRDO and Okhmadit as well as National eHealth system and Veteran Hub projects over the past year.

DOMESTIC MARKET: CURRENT SITUATION AND PROSPECTS

Any market is based on two important elements: the availability of effective demand for goods or services and the supply of such goods. The supply of software products and services, as well as services for their development, depends on skills and abilities of people who can create these products.

I am convinced that service companies like ours help to create this offer within the country. Creating own products and services requires not only having programming skills, but also understanding how the business functions and how to use software products to solve certain business tasks. Ukrainian engineers gain all this knowledge by working with leading global brands together with GlobalLogic. Only by learning how to create high-standard products and services for others can you do it for your own use. Thus, the software development service industry creates a new generation of engineers capable of solving the tasks of a particular business and its customers.

The second part of this story is effective demand. The more developed the country's economy, the more resources it has for investing in high technologies. And here our industry makes its contribution, supporting the inflow of currency into the domestic economy. This is the taxes we pay as a company (by the way, according to the criteria of the State Fiscal Service, GlobalLogic in Ukraine has been on the list of large taxpayers for several years). In addition, this includes a systemic demand that we create in the market of office real estate and related services.

But it is even more important where our technical specialists spend the money earned in the IT sector. They create demand for consumer services and goods of the domestic market in education, insurance, medicine, rental and purchase of real estate, various personal services, etc. According to studies, one technical specialist creates up to 4 jobs in related industries. Apart from the fact that engineers spend their money within the country, they also create certain services consumption standards that they have seen in other countries when visiting customers abroad.

Here is a simple example of a private clinic. The more clients it has, the more financial opportunities to create a high-quality CRM system, a website with personal accounts and online appointments, own chat bot for popular messengers, etc. The effective demand for IT solutions within the country is being created exactly in that way. By the way, a draft law on tax on withdrawn capital supported by the IT Ukraine Association is another real instrument that will contribute to even more investments in the Ukrainian economy both from IT companies and any other business.

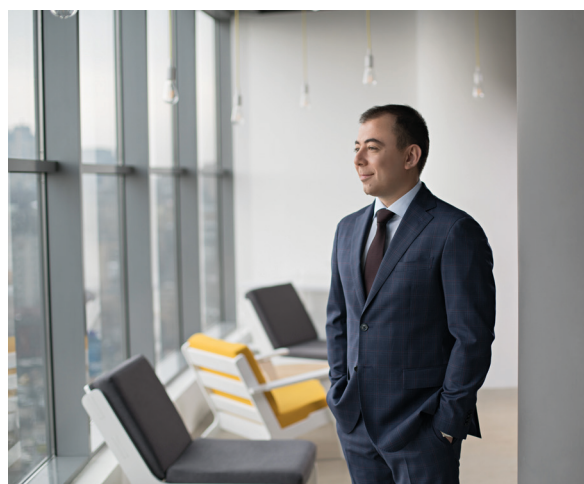
PROSPECTS AND BARRIERS FOR UKRAINIAN IT INDUSTRY

Global interest in information technology, digital transformation of individual businesses and entire industries create a favorable environment in the international market. The demand for high-tech R&D services and the creation of digital products and services (this is key GlobalLogic's profiles) continues to grow. All this contributes to our growth in Ukraine.

The factors that can slow down our growth are the Ukraine's overall image in the world, political and economic instability and lack of transparency and predictability of the business environment.

But the most important factor hindering the industry's development, in my opinion, is the number of IT specialists on the market. By some estimates, the country's technical universities produce about 16 thousand young specialists annually, while the industry's needs exceed 20 thousand people. It is important to note that not all graduates are ready to participate in projects for foreign clients straight from the university. The key task we need to address is to help Ukrainian universities producing more specialists who can participate in commercial projects right after graduation. I believe we can address this task at the level of strategic business cooperation and higher education system. Addressing the educational issue will provide the basis for further industry growth in the long run. Of course, both the industry as a whole and individual companies actively support the modernization of the education system.

For example, GlobalLogic actively co-operates with leading technical universities in the country. Only this year we opened or will open 4 university laboratories in the near future. In addition, we actively provide universities with modern computer equipment, hold lectures and seminars and support academic activities. For many years, we have been offering joint courses for young



and experienced technical specialists – GL BaseCamp and GL ProCamp respectively. Just a few years ago, these were targeted programs that covered a maximum of dozens of people a year, but already last year, the total number of people completed these courses was more than 350 people. This year, that number will definitely be even larger.

Having organized such a systematic work in education, we combined a wide range of our activities under the single GlobalLogic Education brand. We are one of the few IT companies that works with universities in Ukraine in such a consistent manner. And we became the first GlobalLogic office in the world that made it. In such a way, Ukraine sets a trend for cooperation with universities for our global company.

PRIORITIES FOR MARKET PLAYERS

I am ready to highlight three areas where consolidation of all industry players is the most important thing. First, it is a systemic industry's approach to the education system development and, above all, to higher technical education.

Secondly, it is a consolidation of efforts to reform the tax legislation and preserve the conditions allowing the industry to develop and be internationally competitive.

Thirdly, it is a joint effort to strengthen the positive image of Ukraine on the international scene. It is important for us to ensure that Ukraine is mentioned less in the context of corruption and war and more in the light of our participation in the global economy, innovation and strategic partnership with leading international brands. And this is exactly what we are doing today.

TRANSFORMING EDUCATION. PRIVATE INITIATIVE

As an integral part of the global creative economy, the Ukrainian IT industry directly depends on talents, knowledge and skills of specialists working in the sector, and further financial success depends on the number and quality of human resources. Therefore, the development of human capital assets in Ukraine is one of the main issues for representatives of the domestic IT-services market. According to various estimates, there are currently more than 120 thousand software development specialists in the industry, and non-official figures report that the increase in the number of specialists is about 19% annually. A perfect illustration of the growth dynamics of the number of developers in Ukraine may be the data obtained from a research conducted by PwC at the request of the IT Ukraine Association: from 2011 to 2016, the number of IT specialists in Ukraine increased by 144%.

However, despite the significant growth dynamics of the number of specialists, as noted above, today a lack of skilled workers is becoming an increasingly pressing issue for the Ukrainian information technology market. This challenge is not unique to Ukraine – a number of other countries where the industry is actively developing also face with it, and this problem is becoming global.

According to the survey conducted by the Association, virtually every one of the heads of IT companies working in Ukraine identified the development and modernization of the education system as an urgent issue, and market players should address it by working together.



UNIVERSITY EDUCATION

One of the most effective methods of supporting and improving the quality of higher education in Ukraine has been the active cooperation of IT-businesses with higher educational institutions that train specialists for the industry. The support is multifaceted while including financial and program aspects: companies provide Ukrainian universities with financial aid, along with material and technical resources and launch educational programs that fully meet today's market requirements, sponsor student subject competitions, etc.

The Ukrainian EPAM office was one of the pioneers in cooperation with higher education institutions. The company started to work with universities in 2010, and the Taras Shevchenko National University of Kyiv and the Ihor Sikorsky Kyiv Polytechnic Institute were the first institutions that took up this initiative. *"Before we did it, IT companies didn't work so actively with this segment in Ukraine and didn't see all the opportunities, and the potential was unclear. Instead, we quickly launched a partnership with leading Ukrainian universities, having started to support talented second- and third-year students,"* the EPAM Ukraine Head **Yuriy Antoniuk** said. According to **the head of company's educational programs Maksym Pochebut**, the first task was to create knowledge about the EPAM in the student environment, as well as disseminate information on education and employment opportunities in the company.

Another pioneer in developing the university IT education was the SoftServe corporation, which began cooperation with higher education institutions about 10 years ago. Today, the company actively interacts with more than 20 Ukrainian universities.

Luxoft, which, together with EPAM Ukraine, is among the top 5 largest IT companies in the country, launched systematic work with universities five years ago, and has been involved in the regular Corporate Junior Program designed to provide young specialists with employment assistance since 2014.

MUTUALLY BENEFICIAL PARTNERSHIP

As of today, IT companies have implemented a number of projects to support Ukrainian higher education institutions. For example, Intellias contributes to the development of Ukrainian education while being involved in the Internet of Things Education Program in Lviv Polytechnic National University. Another leading player in the Ukrainian IT services market, the Ciklum company, have been a partner of the Ukrainian Catholic University as part of a master's degree course in computer and data science since 2016. And the Ukrainian EPAM office has launched several web development programs in Java, JavaScript, C#, .Net programming, testing, system engineering or DevOps and Big Data at universities. In addition, all of these companies provide scholarships for

talented youth. For example, Ciklum fully covers fees for a master's degree program, provides internship positions and paid part-time jobs in the company during university studies. Other companies in the industry also provide similar support for young specialists.

“Usually we do not provide direct funding, but cover certain types of expenses. Classroom repairs and computerization are at our own expense. A lot of support and direct work with students take place on a pro bono basis: mentorship, student project support, university teaching or holding lectures in our offices, and organizing training activities for students. We devote considerable time to develop new training programs at universities. We also can provide funds to organize conferences or cover the participation of students in international contests,” **SoftServe** representatives said.

Of course, besides administrative resources, such assistance requires considerable financial investments from businesses. Unfortunately, most market players do not disclose how much they spend to support higher education institutions and students. **Maksym Pochebut** gave indicative figures: *“EPAM Ukraine spends more than \$50,000 annually on the work with universities.*



However, this is far from the final amount, as additionally \$1,000 are allocated for each student per year to train them on the basis of our laboratories”.

As there are no full data from companies, also, it is currently not possible to give the exact number of students who participate in training programs at universities. However, taking into account

the data on the annual number of program participants from Ukrainian EPAM and Luxoft offices (more than 2.5 thousand and 1 thousand students respectively), we can assume that more than 20 thousand students take advantage of programs provided by IT companies at universities annually.

“Over the past year, we have jointly trained about 700 young specialists, of whom more than 50% joined the company. But as for our public activities for the university community, much more students are getting involved in them. Since the beginning of this academic term, we have held more than 15 open lectures at the partner universities together with the company’s experts in Kyiv, Kharkiv, Lviv and Mykolayiv (cities with GlobalLogic offices). Thousands of students attend our events, where we talk about trends in the IT industry, our company and projects, as well as advise on training and career start-ups, every year,” Tetyana Khryapina, Learning & Development, GlobalLogic, comments on the coverage of joint initiatives of businesses and higher education institutions.

Another example of business-university interaction is a traineeship program for teachers. The EPAM Ukraine program was launched for the first time in 2017, and to date, three stages of traineeship in Kyiv, Kharkiv and Lviv, as a result of which over 100 teachers learned more about IT business principles and attended training lectures on project management, processes in modern projects, teamwork applications and tools, have been completed. *“For us, this project is an opportunity to build a community of teachers who will be united by the desire to grow professionally and provide students with high-quality knowledge,”* the company representatives said. It should be noted that now other players of our industry readily joined to the initiative as well.

Thus far, IT industry representatives have established a series of criteria they are guided when choosing a partner among higher education institutions. But the main one is the openness of university administrations to new ideas and qualitative changes and their willingness to improve a learning process, update programs in line with market expectations and needs. *“We focus on higher education institutions providing high-quality education in STEM disciplines, because they produce new trained specialists for the IT industry. Of course, higher education institutions located in the cities with our company’s offices are of high priority in our list,”* **Kateryna Hubareva, Global HR Director, Luxoft,** said about the principles of selecting partner universities.

In general, according to the survey, the active support of Ukrainian higher education institutions is a remarkable tendency for both large international players and small companies.

INTERACTION EFFICIENCY AND PLANS FOR THE FUTURE

According to the survey, representatives of IT companies, responsible for work with universities, assess cooperation with them as the one that justify investments. The experts also see no sig-

nificant obstacles that could hinder the implementation of such initiatives. In their opinion, the vast majority of universities are open to cooperation, except for a few isolated cases, which often depend on personal qualities of heads of educational institutions. The excessive bureaucracy in decision making by universities also creates some obstacles. But the competition that can be stimulated by changing a system of public funding could significantly accelerate the development of higher education institutions.

“We believe that our investments produce good results. Some of the challenges are the communication with university representatives and, in most cases, different approaches to goals and projects. But it is very important for us to hear each other, discuss and perform common tasks by means of dialogue. That is why the priority area of cooperation with universities is to hold “round tables” with representatives of specialized departments both at universities and with institution groups in the company’s office. Active and initiative teachers help us so much to cooperate with universities, and we are constantly looking for such contacts,” **Tetyana Khryapina** described the partnership.

“By investing time and money in the development of such initiatives, we invest in the future of the entire market, which will have a positive impact both on the company and the Ukraine’s economy and growth as a whole. When working with higher education institutions, the implementation of programs may be delayed because of a series of bureaucratic procedures. However, both institutions themselves and our company are working on solutions to simplify their implementation,” **Kateryna Hubareva** summarized.

However, despite the generally positive assessment of cooperation, market participants note that there are still a number of outdated regulatory restrictions that hinder partnership prospects. They include the complicated legalization of financial and technical assistance provided to universities, too bureaucratized system of applying for traineeship for teachers and several other aspects. *“Domestic IT companies should fight for the implementation of public-private partnership between higher education institutions and businesses and the corporatization of universities. Along with the systemic reform of education, this is the key to success for us in the next ten years. These issues are of strategic importance, and everything else in this area is just a tactic,”* **Oleksandr Medovoy, Altex-Soft CEO** and chairman of the Kharkiv IT Cluster Supervisory Board, said.

Summarizing, we note that, in general, companies are planning to expand cooperation with higher education institutions in both quality and quantity by developing initiatives and adapting their importance to requirements of the dynamic market.

CORPORATE PROGRAMS

Internal educational initiatives of market players are another important tool for the develop-

ment of human resources. Like the partnership with universities, this type of activity is widely used by both large international companies and smaller industry representatives.

Internal educational initiatives of companies have several aspects: long-term training programs and individual lectures and workshops. Training topics cover important segments of knowledge and skills necessary for further harmonious development of employees and accumulation of expertise within the company: communication skills and teamwork, project management, foreign language learning and technical initiatives.

“First, with the help of programs in corporate education, we can perform complex tasks to meet customer needs. Secondly, specialists choose their employment not only by wages, they mostly go to the companies, where they see prospects for their professional development. Thirdly, the company attracts the best specialists on the market, and providing training programs allows us to accumulate expertise that makes us more attractive for future customers. Finally, such training programs help us solve various problems we as specialists face in our work,” **Intellias representatives said** about the challenges that the corporate education addresses.



Tetyana Khryapina, Learning & Development, GlobalLogic, also confirmed this thesis: *“One of the main tasks the company sets when launching educational initiatives is to increase the experience exchange and improve skills of our specialists. Our engineers are involved in a large variety of projects,*

and with the help of the GlobalLogic Education platform, they find the expertise, knowledge and support they need for development. In addition, we become more competitive on the market and can provide better services to our partners and customers". Other surveyed companies also mentioned similar priorities. All the training topics and formats are based on relevant business requests.

It should be noted that some of such projects are open not just for IT business workers, but for external users as well. The vast majority of surveyed companies created specialized corporate education departments and even academies or universities that have strategic importance for further business development.

A **SoftServe** corporate university established in 2008 is a good example of the development of educational trends within the company. Today, it is an efficient fully-functional department with several vectors of work aimed at both professional growth of company's specialists, students and those who want to obtain knowledge and skills in information technology. As part of this university, there are several main projects operating on an ongoing basis: an **IT Academy department** that has been organizing technological courses for IT graduates in virtually all the cities with company's engineering offices for almost 10 years; a **Training and Development Group unit** responsible for internal training and workshops for employees, from technological and soft skills courses to six- and nine-month training leadership programs for managers of various levels; a **corporate Language School** providing group and individual studies in English, German, Polish, French and Spanish; an e-learning team department involved in developing internal online courses, which are regularly updated with new content upon the request of employees and the company itself; a **Certification Center**, which provides employees with the opportunity to obtain internal and international technological certification (including such certification partners as Nevco HIPAA, Microsoft, ISTQB (ASTQB, BCS, iSQI), Oracle, Brainbench testing and others) and helps to be properly trained. In such a way, corporate universities such as SoftServe technically meet all the needs of specialists in vocational education, creating the necessary environment to develop talents and expertise within the company.

Almost all educational programs offered by companies are popular among trainees. *"All topics related to career change are popular and in high demand among our colleagues. I mean the transition to another career level. For example, we have a program for the development of basic soft skills, which helps to do the Senior assessment. It is very popular just like an Introduction to management program for beginning managers. These programs help make the next big step in the specialist's career. I would like to pay special attention to a number of technical mentoring programs. They are aimed at improving technical skills and are also in great demand. Thanks to them, for example, junior engineers can accelerate their professional development. In general, we have developed and now offer about 50 programs, 30 of*

which are devoted to technical skills,” Oleksiy Fedorenko, Learning & Development Senior Manager, EPAM Ukraine, said.

The **Intellias** company also confirms the high demand for corporate programs: *“When we started launching comprehensive training programs, we did not even expect such a level of interest from colleagues: we received about 70 applications for 20 vacancies. This encourages us to launch comprehensive training programs again for two offices at once”.*

According to the data provided, about 65% of specialists in companies take advantage of corporate education services.

It should be noted that the vast majority of companies’ educational initiatives are free of charge for trainees – IT business does not consider internal and external corporate programs as a source of profit. Instead, the work in this segment is a significant item of expenditures. For example, the Ukrainian EPAM office spends up to \$100 per year for one trainee in such programs.

In general, IT companies implement corporate programs in the cities where their offices are located, and in fact, they are available in all major population centers, developing one of the main elements of the Ukrainian IT industry infrastructure. Almost all companies surveyed use online learning tools, so educational content is available in every corner of the country or outside it.

All market players noted a significant increase in the demand for corporate programs among both company specialists and external trainees. *“In recent years, we see a trend of professional development and self-improvement, which predetermines the popularity of such initiatives and the constant growth in demand for them,” Lubov Pryadko, the training and development specialist at Ciklum, explained.* Another trend admitted by **Luxoft** specialists and evidenced by comments from other market players is the increasing popularity of both technical programs and soft skills trainings, because this type of skills significantly affects the team performance, the atmosphere in the project and so on.

In general, all surveyed companies consider corporate education programs to be very effective and plan to increase their number and quality both for employees and outside users in the near future.

DMYTRO KUSHNIR, LUXOFT:

“Implementation of technological solutions is a trend that will touch Ukraine as well”



As part of the sectoral research initiated by the IT Ukraine Association, we talked with management representatives of leading Ukrainian and international companies about main trends in the service IT industry development in the country, their future expectations from the market and main challenges faced by the business community.

Dmytro Kushnir, director of the Luxoft office in Ukraine (2006-2013), now Vice President of Global Luxoft Development Centers, spoke about the development dynamics and main myths related to the Ukrainian industry.

DEVELOPMENT RATES

When it comes to the global company development trend, we see increased rates of between 10-20%. But this indicator varies in each individual region. For example, now our overall strategy is to focus on the business development in Asia and in some Western European countries. This approach is determined by the fact that we provide ever more consulting services to our partners, and we need to be as close as possible to our clients to ensure the effectiveness of such services.

Today, Luxoft Ukraine is the global company's largest engineering center, employing more than 3,500 technical specialists. At the same time, the Ukrainian office that shows positive dynamics is developing less intensively as compared with overall growth rates of Luxoft business – within 10% per year. Such rates are a result of the company's focus on regional expansion.

ABOUT REGIONAL PRESENCE IN THE COUNTRY

Today, Luxoft has offices in three cities of Ukraine – in Kyiv, Odesa and Dnipro. The Kyiv office, where there are about 70% of all specialists working at Luxoft Ukraine office, is a hub that concentrates the main company's expertise in key areas, such as financial technologies, automotive industry, media, telecom, energy, travel, etc., merged into the so-called digital enterprise segment. As for the other two offices, it was historically formed that they have had their specialization and focus. For example, the Odessa office is focused to work on solutions for the automotive industry. Dnipro specialists have deep expertise in financial technologies.

At least once a year, we analyze the market profile and see what actions our competitors take, what trends appear, in what area the resources should be allocated and what should be focused on. So, the specialization may change somewhat over time, because the industry is very dynamic, especially in Ukraine.

WHAT DOES LUXOFT IN UKRAINE WORK ON?

First, this is solutions for the automotive industry. Today, manufacturers' investments for integrating technologies into vehicles are tens of billions of dollars a year. Luxoft has been working in this area for many years. For example, our projects include a platform for information and entertainment system installed in all new Mercedes-Benz A-Class cars. In addition, we have a strong expertise in the creation of navigation and autonomous control systems.

We are actively working on the development and integration of integrated financial systems for banks and international corporations. Of course, we also paid attention to such a trend as blockchain. In this segment, our engineers have solid experience in implementing sophisticated trading systems.

MIGRATION OF SPECIALISTS AND “BRAIN DRAIN”

The information technology industry is a fundamentally global industry. Today, IT-specialists are in demand in virtually all countries, and competition for highly-qualified employees continues to grow. And if we talk about working in a large international company like Luxoft, in this case, skilled specialists have an opportunity to change the country of work and residence to be closer to clients and bring their expertise to some or other project. If a specialist is interested to start working in a company's office in another country, we will have no problem with that, because it is a standard practice. Skilled migration is quite normal for such a dynamic industry as IT.

There are a lot of discussions on “brain drain” as a specific phenomenon for the market. I can say that the wage level, which, for example, in Luxoft, can be comparable with neighboring countries, along with a relatively small tax rate on incomes of individual entrepreneurs can make Ukraine an attractive place to work. Of course, a number of other countries can offer better basic living conditions, social protection and so on. But, if you compare the “net income” of specialists, Ukraine is definitely ahead, as it is difficult for other countries to compete with us by this parameter.

Of course, the industry lacks experienced highly skilled specialists. But this problem is typical not only for Ukraine, but also for most countries of the world. The competition for highly qualified specialists was, is and will remain.

ATTRACTION OF FOREIGN SPECIALISTS

Today, Luxoft Ukraine employs several dozens of specialists from different countries (Kazakhstan, Belarus, the Russian Federation, EU countries). The company has a rather broad geography. After 2014, the number of foreigners wishing to work in the industry has decreased somewhat, but now we observe a cautiously renewed interest of foreign specialists to Ukraine.

MARKETS AND CLIENTS

The main customers of Luxoft services are companies from Western Europe (Germany, Britain). Business relations with the United States come in second place by amounts of orders. Why do not, for example, Luxoft and other Ukrainian companies actively cooperate with Asian countries? Firstly, the lion's share of global taxes on IT services and IT consulting comes from the United States and Europe, which is a rather big market. Secondly, it is the geographical distance. As I've already mentioned above, clients want to see performers closer to themselves, since it is much more convenient and efficient to work on the project in that way. Therefore, the focus on western markets is natural for the Ukrainian IT industry – we are closer to them, both logistically and culturally.

DOMESTIC MARKET: MYTH OR REALITY?

The domestic demand for IT services depends directly on the economic situation in the country. Unfortunately, although the Ukrainian economy is growing steadily, it is difficult to say that we have high rates of growth. Luxoft has customers from Ukraine, but such projects represent only a few percent of the total share of company's projects.

As for the domestic market's trends, I will mention the rise in demand for IT services from public authorities and institutions. This is a very positive trend. We see good dynamics here and believe that this demand will continue to grow.

The implementation of technological solutions is a global trend that will touch Ukraine as well. But the efficiency of implementing these solutions by local players will depend on the country's welfare rates. In addition, the domestic market development also requires such clear state priorities as a focus on digitalization and creation of programs for stimulating enterprises that implement digital solutions.

INDUSTRY PROMOTION AND EXPECTATIONS

I expect that the demand for Ukrainian IT services will only increase, which will have an impact both on total revenues and the number of jobs. But we need to develop in order to meet this demand, because the technological environment is constantly transforming. So today, investments in staff education and training is an extremely important issue for the industry while being a driver that will contribute to the further growth of the Ukrainian IT industry.

Of course, the industry development requires a stable social and political environment along with a predictable public policy. We are working to ensure that our needs are clear to officials, but it requires a consistent and understandable dialogue.

In my opinion, today there is no need to create special conditions and promotion tools for the industry, because the current environment is perfectly acceptable while being the basis for the industry growth. It is important, above all, to address education issues in a consistent manner, implement reforms and incentives in this area. The industry is developing by talented specialists, so the staff issue should become a priority for both the IT industry and the government.

ECOSYSTEM FOR INDUSTRY DEVELOPMENT

The ecosystem is a vital factor for the functioning and development of the Ukrainian IT industry. The IT industry is an industry of knowledge, talents and expertise, so the main task of the IT- ecosystem is to ensure the continuous interaction of market participants at different levels regarding the exchange of experience and communication to solve common problems faced by market players.

Although Ukraine has the relatively young IT-ecosystem, it is still possible to characterize it as multifaceted and dynamic at this stage. Such system includes specialized business associations, regional associations (clusters), higher education institutions (which actively develop the technical education) and private educational projects, innovation parks, technological hubs, major industrial activities and professional formal and informal associations. Each of these elements has its own priorities and aspects, which, as a result, create a positive environment for the industry development.



IT CLUSTERS

Currently, there are 17 regional associations in Ukraine, and their number is growing annually. And while several years ago the creation of regional associations of IT companies was typical largely for big cities, today the situation is somewhat different, as sectoral clusters also appear in small cities of the country. Summing up the above, there are several key areas in IT clusters ac-

tivities: modernization and development of IT education within their cities and regions (as part of both the systematic work with higher education institutions and career guidance initiatives); a dialogue with local authorities; the formation of a positive country's and regional image in the international arena. It should be noted that quite often, clusters' initiatives include projects, which are not directly related to the industry being aimed at supporting the development of a city or region and raising their competitiveness level on a national scale. There are both service and product IT companies among clusters participants.

Map of IT clusters



BUSINESS ASSOCIATIONS

Participation in business associations is typical for large and medium-sized IT companies. This aspect is determined, above all, by activity areas of this type of communities – unlike clusters, associations are characterized by the participation in national Government Relations projects. This includes most areas of activity: the creation of legislative initiatives for the harmonious development of IT business, the educational system modernization, the industry promotion abroad, etc.

It is important to note that IT-business associations in Ukraine have a certain segmentation

on an industrial basis. For example, the IT Ukraine Association members are just representatives of the service IT industry, while the Ukrainian Venture Capital and Private Equity Association (UVCA) focuses on working with investors and startups.

Key business associations working with the segment of IT services and products:



INNOVATION CENTERS

Hubs and innovation centers are an important element in supporting the development of domestic startups. This element of the ecosystem is characterized by associations of business representatives within a single territory, which aims at creating a favorable business environment and increasing the exchange of experience through cooperation and mentoring.

The most famous Ukrainian innovation hubs and centers:



It should be noted that in Ukraine, the ecosystem for IT business has begun to develop actively over the last few years. The main reason for this is the rapid growth of the domestic industry, new players in the market, and hence new demands and needs. But, despite positive trends, representatives of surveyed companies point out that the Ukrainian IT ecosystem is still at the beginning of its development, and their further evolution requires considerable attention and consolidation of business efforts.



ALEX LUTSKIY, INNOVECS:

“Focus on added value”



Alex Lutskiy started his IT career as a software engineer in the US, where he moved with his family in 1994. Having valuable experience in startups launching and technology business management, Alex returned to Ukraine at the invitation of GlobalLogic in 2011 and opened his own service IT company here over a year.

Over 7 years, Innovecs has developed from a small office and team of several people into one of the fastest growing US companies according to Inc. 5000 in 2017 and 2018, and was included in the prestigious highly-rated IAOP's Global Outsourcing 100, which is a rating of the best and youngest service IT companies in the world.

GROWTH DYNAMICS

In Ukraine, the overall growth of the IT industry is about 20% per year. And this is a quite good organic indicator. As for Innovecs, the situation is somewhat different. We are a relatively small and therefore flexible company, so we can afford to be ahead of the market in terms of growth rates. Last year we grew by 68%, this year we expect to have approximately the same dynamics. Of course, with the further development of our company, the organic growth rates will somewhat slow down. We are planning to focus on the development of engineering services, creating added value of services that we provide to our customers.

I note that in Innovecs, we consider the growth of business not in terms of the increase in the number of specialists, but only in terms of revenues. Our goal is to increase the business turnover and profitability. It is archaism and a relic of the past to measure the success of IT companies by the number of jobs created. Today, nobody mentions how many developers work at Facebook, since everyone is interested in business capitalization, its added value and profitability.

OUR CUSTOMERS

The three main markets, which Innovecs is working with, are the United States, Europe (Great Britain, Nordic countries) and Israel. Recently, we have been working with a very large number of customers from Israel, as there is the extremely rapid industry's development that far outpaces the country's resource potential.

Customers from Qatar and the United Arab Emirates also demonstrated the great interest to Ukrainian services. But it is difficult for us to work with these countries because of the specifics of this region.

REGIONAL PRESENCE

In Ukraine, Innovecs is represented in two regions – Kyiv and Mykolayiv. All the company's expertise is concentrated in the metropolitan office, while the Mykolayiv office is involved in the same projects as the Kyiv office, performing the role of team extension. Regional specialization and distribution of expertise between representative offices is not typical for our company.

PERSONNEL MATTERS AND SKILLS DRAIN

In Ukraine, we are faced with some staff shortage issues. Especially, when it comes to qualified managers. Unfortunately, there are very few experienced managers, who would be experts in IT business management, in the Ukrainian market. It is not enough just to have strong talents, but it is important to accompany them with high-quality services. And the issue of service and creating additional values for clients is a key task of management.

Due to the lack of qualified managers in the Ukrainian market, today we are inviting experienced managers from large international companies such as Amazon and Paramount to key management positions at Innovecs. Drawing on better foreign experience is crucial for building a powerful business that will compete with other players in the global marketplace.

“Brain drain” is not a critical issue for the domestic IT industry. There was a time when I decided to move to work in the USA myself, but now I'm here and build a successful company in Ukraine, using the business experience gained abroad. My work abroad has taught me a lot of things and, most importantly, the right understanding of business.

Today, the “outflow” of Ukrainian specialists is about 1%, and a significant number of those who moved come back, bringing a solid international expertise.

Speaking about wages in the industry, I would like to note that in Ukraine, the level of wages for IT specialists has increased significantly in the last 8 months. Today, the average amount of remuneration for developers in our company ranges between \$2.8-3 thousand. Wages of programmers in such cities as Kyiv, Kharkiv, Lviv and Odesa are approximately the same – they get payed not very differently. In smaller cities, the situation is somewhat different, as the level of wages is more fragmented there due to somewhat lower level of expertise of local specialists.

DOMESTIC MARKET AND MENTAL BARRIERS

The development of the domestic IT-services market in Ukraine requires, first of all, changing the wrong perception of the service industry and outsourcing services. In Ukraine, unfortunately, outsourcing is associated with unnecessary expenses: why pay a company if we can hire the specialists we need ourselves? But this is a very wrong opinion. A service company (not necessarily in the IT sector) having experience and expertise in a particular area saves the customer's money and time. But so far, the Ukrainian business doesn't fully understand that the external expertise can and should be paid for.

I am convinced that Ukraine has every opportunity for active development of the domestic IT services market. The obstacle to introducing digital solutions is not that market players have or have not large money, but that there is a lack of managerial will to introduce changes within companies. But the overcoming of these mental barriers is just a matter of time, especially taking into account that Ukrainian businesses will soon have to compete seriously with powerful international players not only outside Ukraine but also with those global companies, a growing number of which will enter the domestic market.

FORECASTS AND EXPECTATIONS

In coming years, there will be the redistribution of players among Ukrainian IT market participants. There will be a certain consolidation, and large companies will acquire only those small companies having expertise or prospective clients. The competition will completely remove the last "body shops", that is, those companies that only provide specialists "on lease terms" without creating added value, from the market. There will be a regrouping of forces, and finally, we will have rules of the game in this market. Such a process is a standard practice and an integral element of the industry's evolution.

Today, I do not see serious barriers for further growth of the industry within the country. The national fiscal policy and the opportunity to have concessional terms for the IT industry development will still be the key issues.

I do not think that the Ukrainian IT industry will face serious external obstacles to the further development in the near future. The growth of this industry is a global trend that we have successfully implemented. But the next global economic crisis, the effect of which we have already observed in 2008-2009, can be a potential threat. It may be resulted in a 'financial bubble' burst that appeared on the market of startups and technological products. Of course, this turn of events may lead to some IT services market turbulence.

But despite all possible external and internal influential factors, I expect that the Ukrainian IT industry will grow smoothly together with the global digital services market, while maintaining current growth rates.

REGULATORY FRAMEWORK

Currently, there is no sector regulation of the software development industry in Ukraine. This is fully in line with existing world practice. When there are no regulatory burdens in the industry, it is a positive factor for its growth and competition in the market.

At the same time, the companies of this sector operate within the overall legislative framework of Ukraine: the requirements, established in the relevant regulatory acts (tax, customs, currency legislation, etc.), apply to separate business processes.

Human capital

Human capital is one of the main factors for the growth of the software development industry (just as for other sectors of the so-called knowledge-based economy or new economy).

That is why the industry's progress depends on both the availability of qualified specialists and terms of cooperation with them

This determines the importance of taxation of payments to developers, attraction of foreigners, the level and quality of specialists training for the sectors.

Coexistence of the traditional model and IEs

The industry is sensitive to taxation of payments to developers, since this item is about 80% of company expenditures. It is normal for traditional sectors of the economy, when payments to employees do not exceed 10% of expenditures (for example, for export of ferrous and non-ferrous metals). That is why the taxation of payments to specialists is a major factor for the IT industry while being not so significant for most other sectors of the economy.

Currently, most developers in Ukraine cooperate with companies as individual entrepreneurs on the basis of commercial agreements. The vast majority of such IEs pay taxes according to the third group of the simplified taxation system.¹

¹ It should be noted that IEs of the third group work in software development. Such IEs pay 5% of the single tax from any income. They should not be confused with the IEs of the second group, who pay a fixed single tax in the amount of up to 744.60 UAH/month (IEs of the second group are usually related, for example, to the restaurant business)

Payments of IEs of the third group of simplified taxation system

Payment	Rate	Average payments to IEs in IT
Single tax	5 percent of income	2,345 UAH/month
Unified Contribution for Compulsory State Social Insurance (UST)	22 percent of minimum wage per month	819,06 UAH/month as of October 2018 ²

An alternative to the model of cooperation with developers as IEs can be formal employment relations.

Payments in case of employment relations

Payment	Amount
Personal income tax	18% of wages
Military levy	1,5% of wages
UST	22% of the portion of wage, which doesn't exceed 15 minimum wages (55,845 as of October 2018)

As noted above, the Ukraine's software development industry is mainly focused on exports. That is, Ukrainian companies compete at the global level. In our opinion, the model of cooperation with the developers as IEs is the main advantage of Ukraine, which allows our companies to be competitive in the international market and provides the rapid growth of the industry as a whole.

The main factor is a competitive tax burden on such main expenditure item of IT companies as payments to developers, rather than the IE model itself.

At the same time, it should be noted that the uncertainty of companies regarding the long-term stability of the IE model has some negative impact on the industry. That is why, the following measures would contribute to the more rapid growth of the industry:

- guaranteeing the possibility for companies to use the IE model for a certain period of time by the state;

and/or

- reducing the overall tax burden on payments to highly skilled specialists significantly.

² If they wish, IEs can increase the UST amount.

Promoting the industry's development. Recent legislative changes

The Law of Ukraine “On State Support for the Development of the Software Products Industry” has come in effect since 2012. This Law does not impose any additional requirements on business entities, but instead defines two forms of support for the development of the software products industry:

1. establishing the taxation procedure for software industry companies, provided for by the Tax Code of Ukraine;
2. other forms of state support defined by the State Agency for E-Governance of Ukraine with their subsequent approval by the Cabinet of Ministers of Ukraine.³

VAT

In general, value added tax (VAT) does not have a significant impact on the software development industry, which mainly focuses on exports. This is due to the fact that the VAT taxation is applied to operations on the supply of services, which place of delivery is located in the customs territory of Ukraine (p.185.1 of Article 185 of the TCU). In this case, the place of services delivery is considered to be a place, where a service recipient was registered as a business entity (p.186.3 of Article 186 of the TCU). That is, companies exporting software development services do not pay any VAT.

However, with regard to other operations on the supply of software products, paragraph 261 of subsection 2 of section XX of the TCU established that:

“From January 1, 2013 until January 1, 2023, operations on the supply of software products as well as operations with software products, payments for which cannot be considered as royalties, are temporarily exempt from value added tax...”

In addition, according to Art. 196 of the TCU, transactions on royalty payments in cash are not subject to VAT.

In such a way, VAT has no significant impact on the software development industry.

Employment of foreigners

Since there is a global shortage of IT specialists, and the developers' skills are universal, the process of migration of such specialists is still a world-wide phenomenon.

At the same time, the sustainable industry's development requires the circular migration of software developers: that is, to attract foreigners to fill positions of those specialists who moved.

³ Pursuant to that paragraph, the CMU approved a plan of measures to support the development of software products industry in Ukraine on an annual basis.

Currently, the state stimulates the arrival of IT specialists to in Ukraine at the legislative level – the Law of Ukraine “On Employment of the Population” provides for special conditions for their employment:

- the possibility to obtain a 3-year work permit (instead of a one-year permit);
- no minimum wage requirement for foreign IT specialists.⁴

However, this provision has a positive impact on the Ukraine’s competition for foreigners, who only start working in software development, but almost does not affect the attraction of experienced specialists. As noted above, the most important aspect in the cooperation of industry companies with specialists is the tax burden rate on payments to software developers. That is, the best incentive will be introducing special taxation on wages for foreign IT specialists or creating conditions allowing foreigners to work as IEs in the Ukrainian IT industry.⁵

Furthermore, some technical barriers that complicate the foreigners’ employment in Ukraine will be described below.

Importing prototypes of equipment (this problem was solved in 2018)

The software development for specific equipment requires the interaction of a company with the prototype equipment. In most cases, they are radio electronic devices and emitting devices (RED and ED), the import of which requires a conformity document under Art. 291 of the Law “On Radio Frequency Resource of Ukraine”. However, since only the prototypes of equipment are imported software development goals, its producers do not have such a document.

The above problem was solved by the decision of the National Commission for the State Regulation of Communications and Informatization No.78 of 13/02/2018. Thus, it was determined that it was allowed to import not more than 10 prototypes of each type without a declaration to conduct special studies (in particular, in software development).

We believe this step will have a positive impact on the industry as a whole and on R&D centers in particular.

Registration of foreigners without a place of residence as IEs (this problem was solved in 2018)

Previously, foreigners who did not have an official residence registration could not register as an IE in Ukraine and, accordingly, work with an IT company.

According to the Law of Ukraine “On State Registration of Legal Entities, Individual Entrepreneurs and Public Organizations”, the unified state register contains information on IE “location (place of residence or other address to contact with an individual entrepreneur)” (Part 4 of Article 9).

⁴ Part 1 of Art. 423 and Part 4 of Art. 421 of the Law “On Employment of the Population”.

⁵ In particular, it is possible to classify the cooperation with a Ukrainian IT company as an IE as the basis to obtain a temporary resident identity card (by amending Articles 4-5 of the Law “On Legal Status of Foreigners and Stateless Persons”)

In practice, this requirement was interpreted as the need for foreigners to obtain a permanent resident permit or a temporary residence permit.⁶

This problem was solved on January 23, 2018 by the letter of the Ministry of Justice of Ukraine No.1028/8.4.3/in-18 clarifying that a foreigner can use “*some other address, whereby to contact an individual entrepreneur, can be confirmed by other document (for example, a lease agreement for a building or other capital facility...)*” to register as an IE. That is, a foreigner without place of residence (that is, without a residence permit) can register as an IE in Ukraine by using, for example, leased premises as a place of IE registration.⁷

Employment entry/exit of foreigners from CIS countries (this problem was solved in 2018)

Azerbaijan, Belarus, Armenia, Moldova and Uzbekistan citizens need to obtain the following documents for employment:

- a permit for the employment of a foreigner and a stateless person (Part 4 of Article 3 of the Law “On Employment of the Population”) (hereinafter referred to as “permit”);
- a temporary resident identity card (hereinafter referred to as “card”).

The problem was that the State Migration Service (hereinafter – the SMS) refused to accept documents for the card from such foreigners, if the date of their entry into Ukraine was prior to the date of obtaining the permit. That is, foreigners from these countries should leave the territory of Ukraine and return to obtain such a card. In this case, such entry/exit could be made through the territory of any country and did not provided for any additional documents.

On July 18, 2018, the CMU adopted a Resolution No.651, which resolved the identified problem. This document stipulates that foreigners “*have the right to submit documents for obtaining the card without leaving Ukraine within 30 days from the date of the last entry into Ukraine*”. At the same time, the problem is still important for citizens of the Russian Federation, since this rule does not apply to the aggressor country.

Possible steps to improve regulation

Long-term visas in employment (problem is of current concern)

The problem now is that foreigners from visa-exempt countries (in particular, the US, EU) shall leave Ukraine to obtain a long-term visa (visa D) when applying for a temporary resident identity card.

⁶ Paragraph 9 of Article 3 of the Law “On Freedom of Movement and Free Choice of Residence in Ukraine” established an exhaustive list of documents to indicate a foreigner’s place of residence).

⁷ At the same time, registration as an IE is not a ground for obtaining a temporary resident identity card, so such a foreigner can not stay in Ukraine for more than 90 days within a period of 180 days. This problem needs to be addressed separately

The employment of foreigners requires obtaining the following documents:

- permit for the employment of foreigners and stateless persons (permit);
- visa D;
- temporary resident identity card (issued on the basis of the permit and the visa D)⁸

In practice, there are three stages for foreigners to complete:

1. Arriving in Ukraine and obtaining the permit;
2. Going abroad for the visa D (since it is not issued in Ukraine);⁹
3. Returning to Ukraine to apply for the card.

We believe that the second stage is not necessary. It can be eliminated in different ways:

- by issuing visas D in Ukraine (it is necessary to amend the CMU Resolution No.118 of March 1, 2017, draft amendments were developed by the BRDO Office);¹⁰
- by issuing visas D in electronic form (requires technical implementation);
- cancelling the need to obtain the visa D for obtaining the temporary resident identity card (Art.52 “On Legal Status of Foreigners and Stateless Persons” should be amended).

These changes will simplify the process of employment of foreigners in Ukraine.

The right of IEs to dispose of foreign currency earnings (this problem is still unresolved)

The currency exchange regulation regarding IEs is important for the IT industry. For example, according to NBU data for ten months of 2017, only 2,617 IEs obtained payments for services in more than 20 thousand dollars and for goods in more than 50 thousand dollars under foreign economic contracts. 1,670 of them are entrepreneurs providing computer services.

That is, according to these NBU data, about 64% of IE, who are exporters, are entrepreneurs involved in export in the IT industry.

In Ukraine, there is a requirement for mandatory sale of 50% of foreign currency proceeds.¹¹ However, in practice, IEs can not freely dispose of the other half of foreign currency earnings,

⁸ According to Art.5² “On Legal Status of Foreigners and Stateless Persons”, “foreigners and stateless persons are required to obtain a long-term visa in order to obtain a temporary resident identity card in Ukraine, unless otherwise provided by laws or international treaties of Ukraine)”

⁹ Paragraph 4 of the Rules of obtaining visas for entry into Ukraine and transit through its territory approved by the Resolution of the Cabinet of Ministers of Ukraine No.118 of March 1, 2017.

¹⁰ The draft Resolution of the Cabinet of Ministers of Ukraine “On Amendments to the Rules of obtaining visas for entry into Ukraine and transit through its territory” <https://goo.gl/rNhT5d>

¹¹ The NBU Resolution No.65 of 12/06/2018 “On Introduction of the Mandatory Sale of Foreign Exchange Earnings and the Amount of the Mandatory Sale of Such Earnings”

namely transfer these funds to a foreign currency account of an individual.

That is, in fact, IEs should sell the other half of foreign currency earnings, which are not subject to the mandatory currency sale, for hryvnias to use it.

This restriction has not always been so and has not appeared due to legal amendments, but after the publication of the NBU's Letter No.57-0002/76798 of September 14, 2016. Prior to this, IEs could transfer the foreign currency to their own currency accounts they opened as individuals, and then freely dispose of it. This corresponded to the principle of business activity, as defined in Art. 44 of the Commercial Code of Ukraine: entrepreneurs should freely dispose of their income remained after paying taxes, fees and other payments provided for by law.

In October 2017, the NBU amended the NBU Instruction No.492 of 12/11/2003 that legalized this restriction, namely, it was prohibited to transfer funds from IE accounts to personal accounts of individuals opened for their own needs.

It is important to emphasize that this restriction is applied to the individual's right of ownership of currency. On January 14, 2011, the Ministry of Justice of Ukraine published a clarification regarding the *"Status of individual entrepreneurs: legislation application issues"*, which states that: *"the current legislation does not classify such a holder of ownership rights as an individual entrepreneur and does not contain rules regarding ownership rights of individual entrepreneurs"*. Thus, a holder of ownership rights for currency on an operating account opened for business activities is an individual.

At the same time, according to Art. 51 of the Civil Code of Ukraine, the regulation of entrepreneurs' activities is similar to legal entities, unless otherwise provided for by the type of relationship regulated. That is, in case of transferring funds from an account for business activities to an account for personal needs, a foreign currency holder is the same and, accordingly, in essence, such transactions can not be classified as the business ones.

In our opinion, the above restriction should be removed in view of the fact that:

- constitutional human and civil rights and freedoms shall not be restricted, unless a restriction is stipulated by the Constitution of Ukraine, and the right of ownership is a constitutional right (Articles 41 and 64 of the Constitution of Ukraine);
- the content and scope of the existing rights and freedoms shall not be diminished in case of an adoption of new laws or by introducing amendments to the effective laws (Article 22 of the Constitution of Ukraine);
- a person can be deprived of the ownership right or restricted in its implementation only in cases and per the procedure established by the law (Part 2 of Article 321 of the Civil Code of Ukraine).

However, the Concept for Development of Digital Economy and Society of Ukraine for 2018-2020 (hereinafter referred to as the Concept), approved by the Order of the Cabinet of Ministers of Ukraine No.67-r of January 17, 2018, stipulates that the development of digital entrepreneurship is one of the main goals of digital development and points to the need for simplifying foreign trade activities.

We believe that if IEs are allowed to transfer unspent foreign currency earnings to their own deposit and operating accounts opened by individuals for their needs, it will have a positive impact on the industry. In addition, such a step will significantly increase the positive image effect, since, according to our estimates, this restriction applies to tens of thousands of entrepreneurs.

We hope that the NBU will remove this barrier as part of the declared liberalization of currency regulation.

OLEKSANDR MEDOVOI, ALTEXSOFT:

“Tax on withdrawn capital is a driver for the domestic market growth”



Working in information technologies since 2002, Oleksandr has gained experience in software products development, project management, sales and business analytics. Today, being the AltexSoft's Founder and CEO, Oleksandr is responsible for the company's operational activities and strategic business development.

In addition to the company's development, Oleksandr is also involved in public activities as a chairman of the Supervisory Board at Kharkiv IT Cluster, which is a non-governmental organization that brings together the largest Ukrainian and international companies working in the region, and takes an active part in the IT sector development in Kharkiv region.

PROGRESS RATES AND DYNAMICS

AltexSoft is developing slightly faster than the market – this year we expect that the company's financial indicators will increase by 23-25%, it is rather cautious estimates. The number of employees has increased by 34% in the first 8 months of this year. And there is more to come.

A new company's strategy allowed us to be faster than the market. Over the past year and a half, we have been focusing on technology consulting services, and this specialization profile allows us to compete successfully with much larger companies.

As for more long-term plans, I will not talk in detail about that, since I do not want to jump ahead of myself. But we are definitely not going to slow down.

GEOGRAPHY OF OPERATION

Today, AltexSoft is represented in three cities of Ukraine: Kharkiv, Lviv and Kremenchug (Poltava region). The regions have approximately the same wage level, and there is a rather small difference. The regional offices do not have any domain specialization, and all branches work on the same company's projects.

The US market is the main sales market for us, because about 75% of projects come from this country. The second market for us is Britain. In addition, we cooperate with EU countries and Israel. We have not seriously thought over expanding our client geography yet, since we do not see this need for ourselves.

BRAIN DRAIN PROBLEM

I agree with the fact that there is a problem with the outflow of human resources in the IT sector. There are about 85% of “specialists” and 15% of “talents”, leading specialists who are the main drivers of business, in the IT industry, as well as in any other sector. I have to admit that, in most cases, the representatives of the second group leave the country on purpose, that is, we lose the best specialists, those who led the majority being the key elements of our business.

One of the factors supporting the “brain drain” is that the companies engaged in providing human resources for foreign R&D centers are becoming more active. Unfortunately, such “intellectual robberies” are systemic now.

In my estimation, 3-4% of Ukrainian specialists have recently relocated. It seems that such a number is not critical, but the best specialists leave the country in search of stable living conditions a stable living environment and better prospects.

TAX ON WITHDRAWN CAPITAL

We have several projects for Ukrainian customers. But the products that we have developed are used mainly by clients not in the domestic market, so saying that we are doing something for the domestic consumer only is not quite the case.

Of course, we are interested in developing the market of IT services within the country, but local customers are not financially prepared to actively implement technological solutions for their business yet. Obviously, the main reason is the overall state of the Ukrainian economy, as we are still a poor country.

Additional government programs and preferences to stimulate the use of IT products by Ukrainian businesses will certainly not help. We all know the cases when “preferences for everyone” declared by the state become the exclusive right of some elected group. I am convinced that in this case, there’s no reason to expect anything other than all sorts of abuses and corrupt practices.

How to improve the situation and help to develop the domestic IT market? To my mind, a tax on withdrawn capital could be a very good tool. More money will be deposited in the country and invested in business development. And what is important, entrepreneurs will have a choice: if you like, you can invest in the implementation of digital solutions and increase business efficiency or buy a new land plot or production equipment. The market will develop more actively, and money will work for the development, instead of remaining on accounts of foreign banks.

CHALLENGES AND PROSPECTS

The main thing needed for further development of the IT industry in Ukraine is not to hinder business activities. We have created one of the most successful industries in our country with our own hands and will be able to do even more if nobody is going to create any new barriers.

The industry's future depends directly on whether we can transform the educational system. If we want to see the industry growth at least at the level of 20% per year, we need to increase the number of specialists. Moreover, we need to increase it not by the same 20%, but by 25-30% and even more. This is a serious challenge for the IT industry, which we will hardly be able to overcome without understanding from the government.

We can make a big step in the modernization of education, if the level of state regulation of this sector is reduced. To do this, we need a law on public-private partnership, which will allow to establish a transparent cooperation with higher education institutions, and hence – to invest more in the development of education institutions.

Of course, unpredictable novelties in the public fiscal policy, ignoring the education problems by the government and radical changes in the country's management can become serious obstacles for both the company and the whole market as well. The latter factor is particularly serious for us.

PRIORITIES FOR THE COMMUNITY

Today, the country's IT community faces a number of challenges. First, it is maintaining current tax conditions for the industry. In addition, we need to remember that the key competition of the twenty-first century is the struggle for human resources, and the opportunity to work not as a salaried employee, but as a contractor, is a very important element of the process allowing to make labor conditions in the county competitive. Even now, the market players need to be proactive and start working on a draft law that could regulate relations with contractors working with a company under the contract. And this means that we will propose our own alternative to the existing labor code. I'm convinced that the IT industry has the right to develop such a document more than anybody else, since 80% of company's expenditures are the wages for specialists – no one industry in the country spends so much on employees.

Secondly, we need to fight for the implementation of public-private partnership between higher education institutions and businesses and for the corporatization of universities. Along with the systemic reform of education, this is the key to success for us in the next ten years. These are strategically important issues, and everything else in this context is just a tactic.

The third issue, for which industry representatives should work together, is the systemic transformations of the country's economy. It is difficult to build any business in a poor country. As I have already said, the main tool here should be the introduction of the tax on withdrawn capital.

The last point is that the industry requires a well-targeted export strategy. And we can't expect that someone will develop it for us. As always, it is only up to us.

ACKNOWLEDGMENTS

No one serious work can be done all alone by using only own resources, and especially such a serious work as this research. When preparing this material, we faced with a number of challenges, barriers and other factors, which greatly complicated the work and sometimes even challenged developing some section or other.

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