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POLICY BRIEFING
UKRAINE

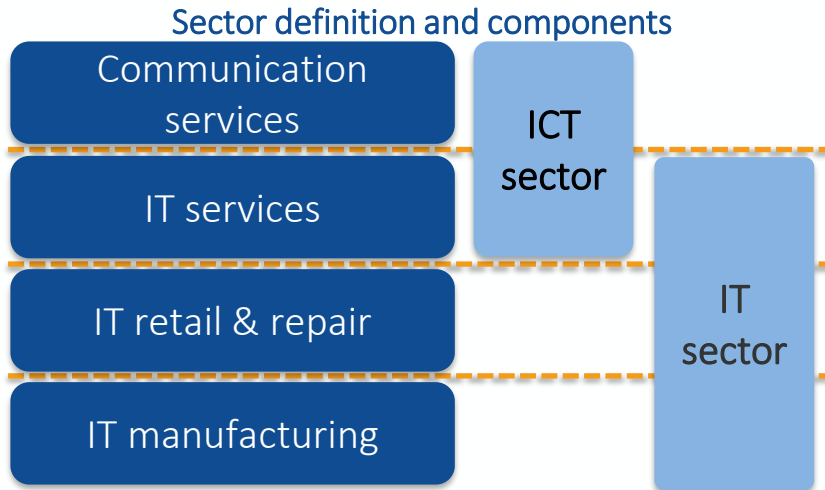
IT Sector Monitor Ukraine

by Iryna Kosse, Garry Poluschkin

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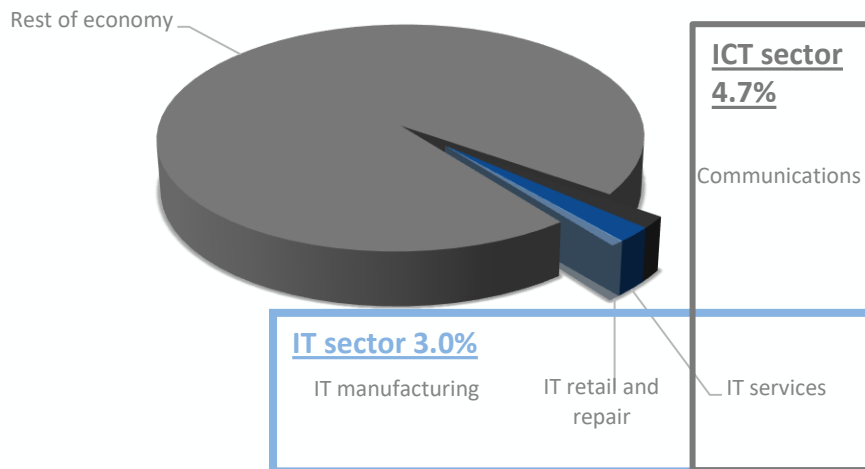
1. IT sector definition



Source: Own research and illustration

- » ICT sector concept (often used in statistics):
 - Communication services
 - IT services
- » We use a comprehensive IT concept:
 - IT services (e.g. programming)
 - IT retail & repair of software & hardware
 - IT-related manufacturing
 - but excluding communication

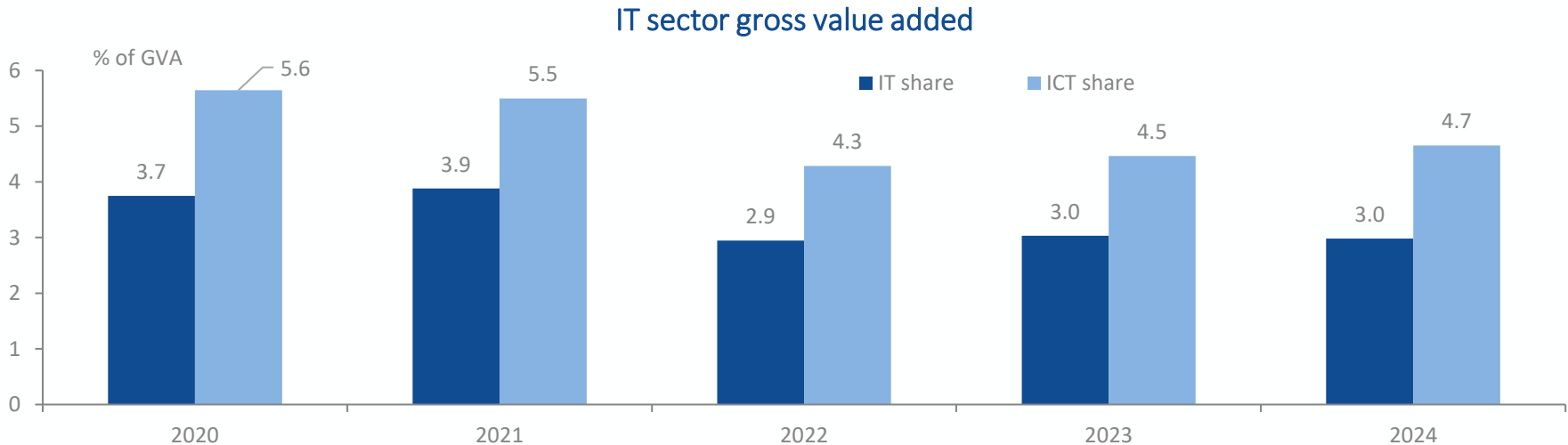
IT sector concept



Source: Own calculation and display based on State Statistics Service of Ukraine, 2024

- Comprehensive concept used here better suited for analysing IT sector

2. Size



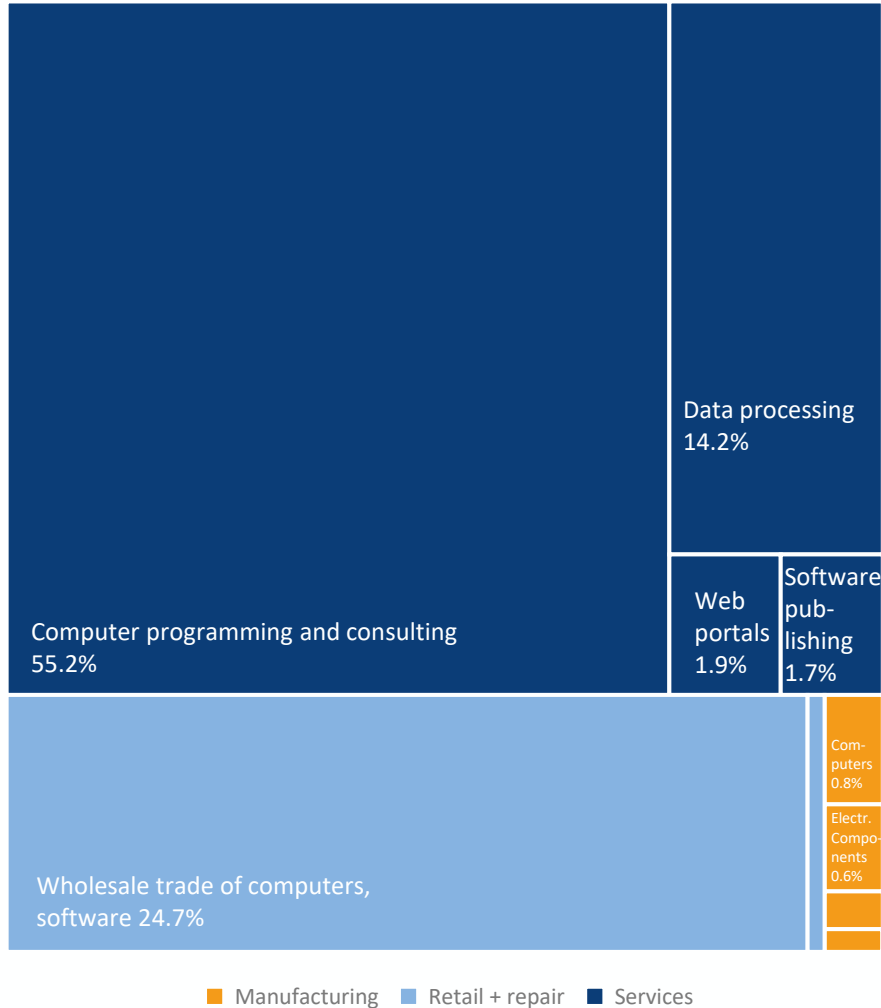
Source: Own calculation and display based on State Statistics Service of Ukraine, 2024, data for 2024 as estimates based on extrapolation

Contribution to gross value added (GVA)

- » Sector was growing steadily, but its growth is hampered by the RUS full-scale invasion since 2022
- » Significant loss of importance for economy in 2022 due to wartime disruptions to operations and infrastructure, reduced foreign demand amid global uncertainty, and the relatively stronger performance of budget-funded sectors like public administration, defense, education, healthcare
- » Since then, IT sector steadily accounts for 3% of total GVA
- » Underreporting of sectoral GVA data since 2022 in addition possible as data less reliable, because reporting became voluntary.
- » While national estimates are produced using modelling methods, uneven reporting across sectors could affect the reliability of GVA shares
- Sector's share in GVA below pre-war
- Increasing underreporting of data since war possible

3. Distribution of activities

GVA shares of IT sub-sectors 2023



Importance of IT services

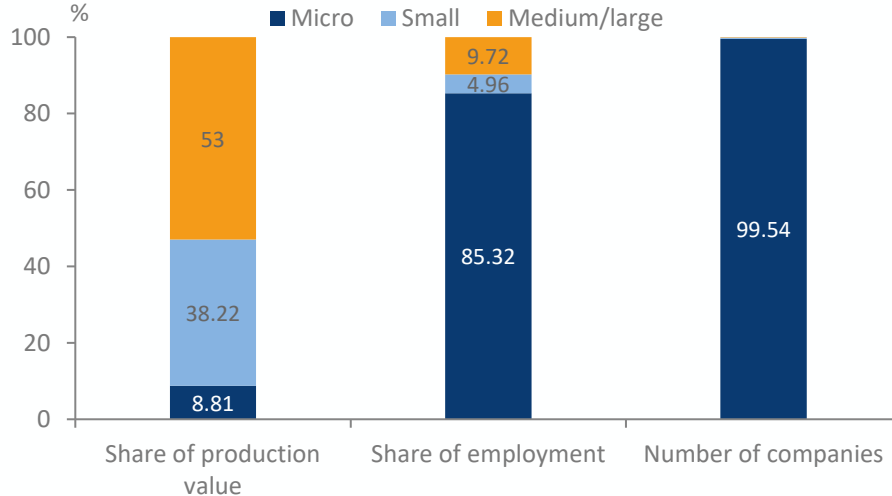
- » Services dominate: Make up 73% of sector's GVA in 2023: down from 88% in 2020
- » Programming accounts for lion share of IT services, making up 55% of the sector's GVA

IT retail repair and manufacturing

- » Retail + repair account for 25% of GVA in 2023, up from 10% in 2020
- » Manufacturing accounts for just 2%
- Services primary contributor to sector's GVA, mainly computer programming
- Sector is undergoing restructuring, share of retail & repair is growing

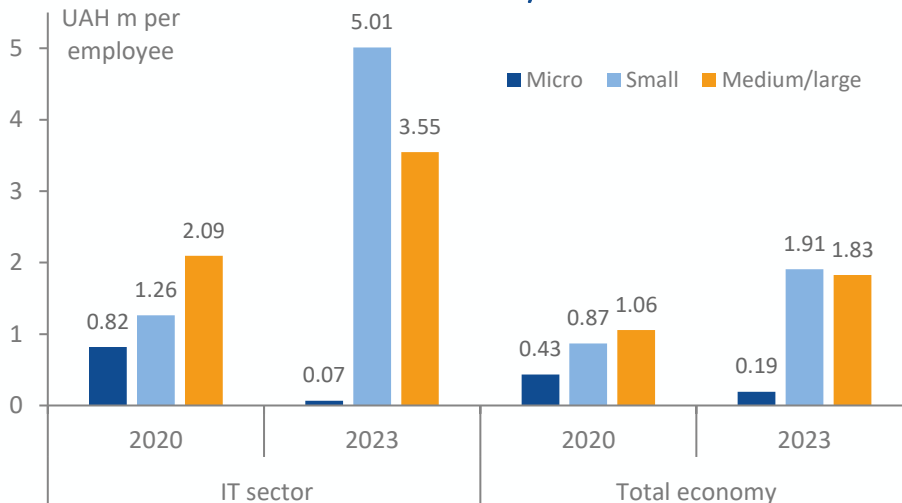
4. Company structure

Production, employment and company count by size



Source: Own display, based on State Statistics Service of Ukraine, 2023

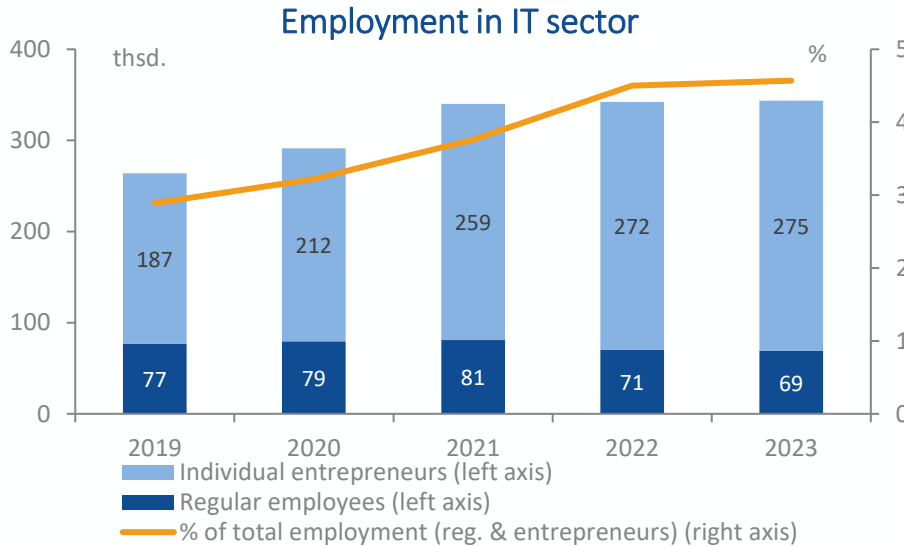
Productivity



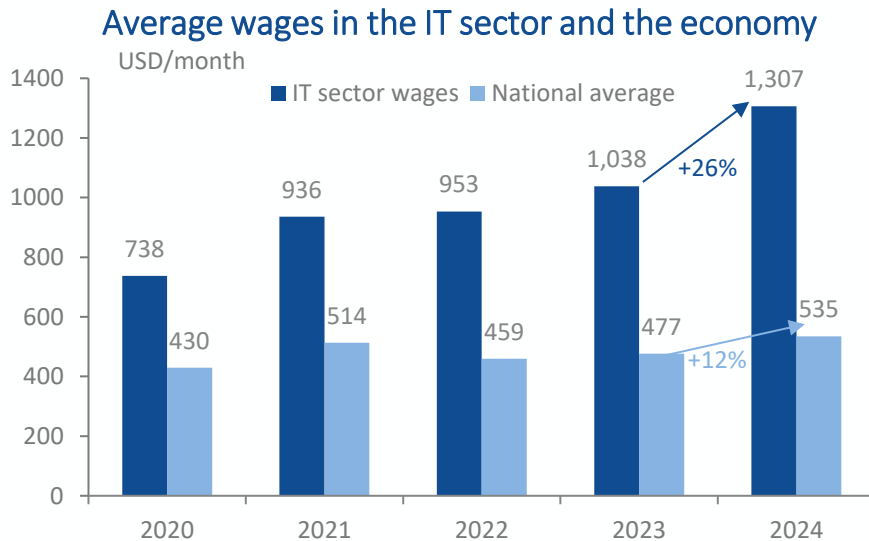
Source: Own estimate and display, based on State Statistics Service of Ukraine, 2023

- » Medium/large sized companies contribute most to the production value of the sector
- » Most micro companies are individual entrepreneurs (269 out of 278 thsd.) subcontracted to work for larger companies
- » Share of production value of micro companies dropped significantly: 9% in 2023 vs. 62% in 2020, reasons:
 - Diia.City effect: many IT specialists keep their individual entrepreneur status but now receive part of their income as salaried staff due to tax benefits and mobilization exemptions.
 - This shifts production value to non-micro companies without reducing the number of entrepreneurs
 - Increased production for state demand
- » IT sector displays higher productivity than total economy
 - Productivity further increased in small and medium/large-sized companies
 - But productivity fell in micro: 10-fold drop in production value

5. Employment and wages



Source: Own display based on State Statistics Service of Ukraine



Source: Own display based on State Statistics Service of Ukraine; note: Only regular employees' wages

Employment

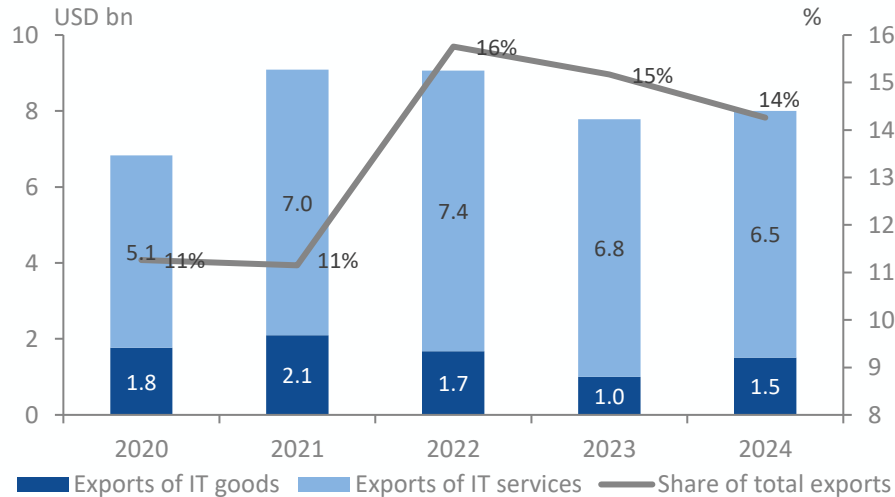
- » Employment did not fall during the war
- » Responses per vacancy ca. 27 in the IT sector while at ca. 7 total economy (2024 average: less tight in the sector)
- » Since 2024, Diia.City effect comes in (not yet in data) IE entrepreneurship status kept while regular employment contract signed

Wages

- » In 2024: 26% yoy increase for IT employees and +40% of pre-war level while national average just recovered to pre-war level
- » Diia.City effect in 2024: IE entrepreneurship earnings transferred into regular employee wages
- » Actual wages may be higher, surveys for IT services: USD ca. 2500/month
- From 2024, recovery of number of regular employees expected
- Wage growth remains strong for the moment

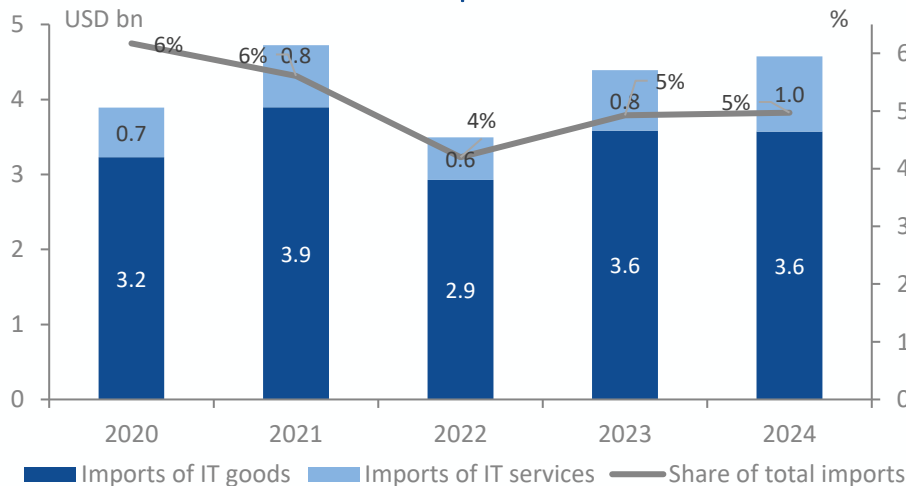
6. Role in international trade

IT exports



Source: Own display based on State Statistics Service of Ukraine, National Bank of Ukraine, note: we use Ukrstat data for IT goods and NBU data for the rest of indicators

IT imports



Source: Own display based on State Statistics Service of Ukraine, National Bank of Ukraine, note: we use Ukrstat data for IT goods and NBU data for the rest of indicators

Exports 2024

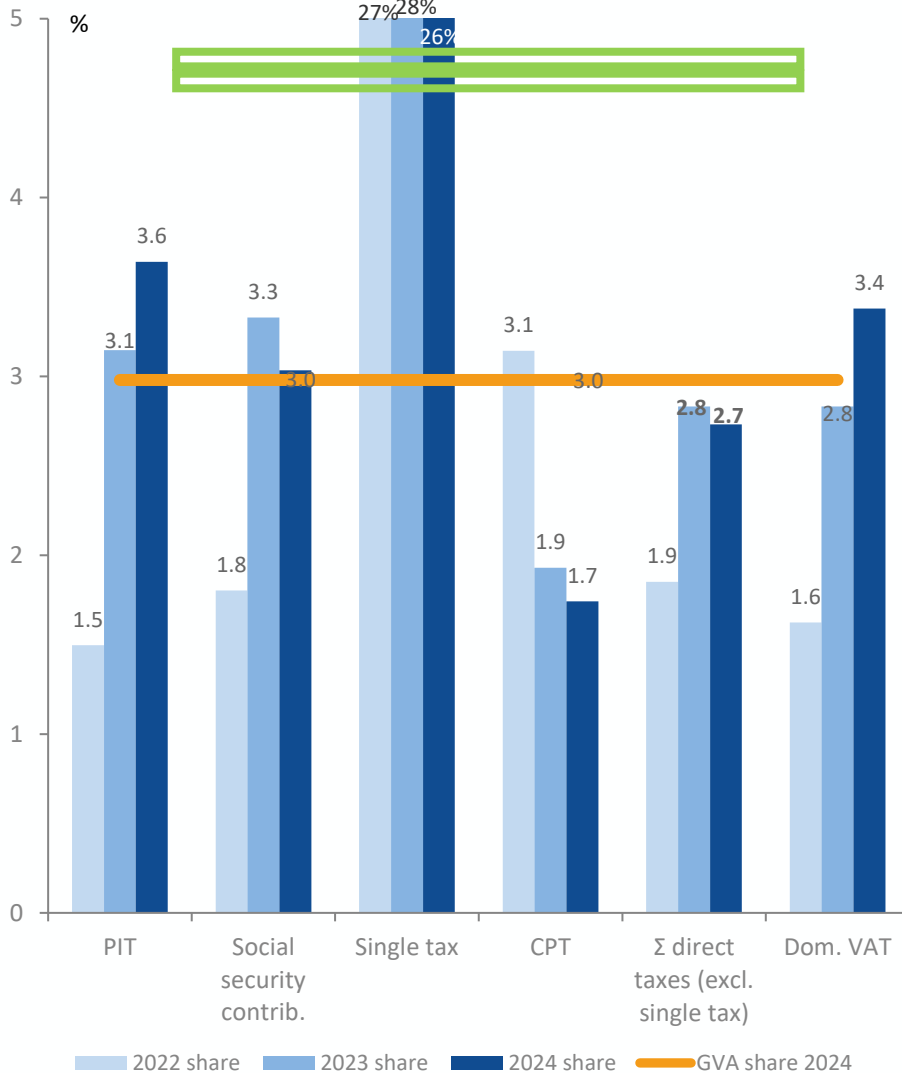
- » Sector's exports increased by 3%
 - IT export growth is below average growth rate for UKR exports
 - Consequentially, share of total exports fell to 14%
- » IT services dominate

Imports 2024

- » Imports mainly driven by goods (hardware)
- » IT imports increased by 4.5%, in line with average import growth: share of total imports remained stable
- IT trade surplus 2024 at 2023 level (USD 3.4 bn) while high trade deficit in total economy
- Focus on services very beneficial as goods transport routes remain challenging
- Sector keeps functioning as part of international value chains

7. Tax contribution

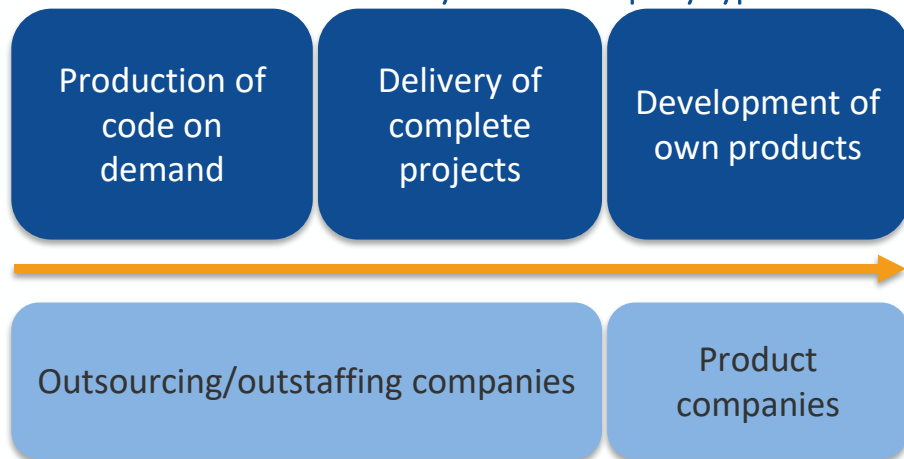
IT sector contributions to tax revenues



- » Sector's tax contribution slightly declined in 2024 yoy but strong improvement compared to 2022
- » Share of tax revenues slightly below GVA share: 2.7% vs 3.0%
- ➔ Sector is still slightly undertaxed in 2024
 - Tax revenues under Diia.City increased compared to 2023
 - Possibility to reserve employees from mobilization under Diia.City regime is the main driver of increased PIT, social contribution but decreased CPT
 - Tax policy changes under Diia.City to further increase tax contribution in 2025
 - Decreased tax contributions yoy from individual entrepreneurs
- ➔ Subcontracting individual entrepreneurs is increasingly used,
- ➔ Diia.City employment policy change is major driver of tax contribution of the sector

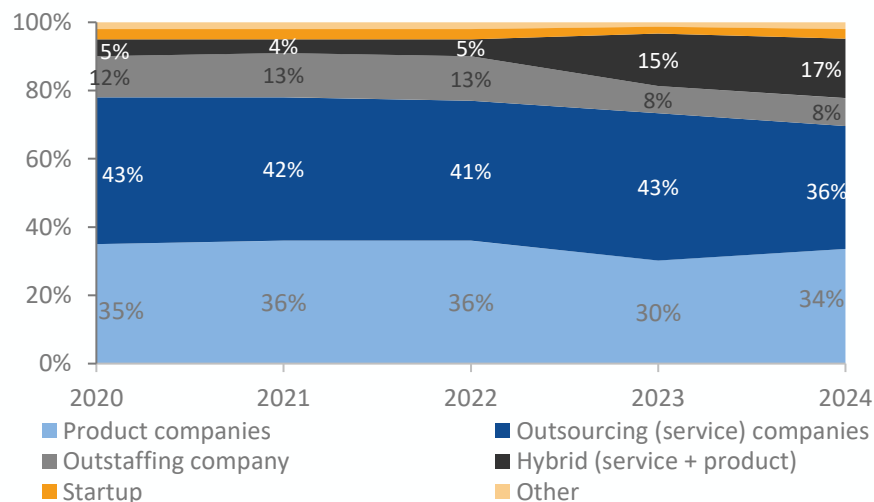
8. Value chain position

Value-added intensity across company types



Source: Own illustration

Employment by type of IT company



Source: Own display, based on DOU.ua, Lviv IT Cluster, Note: DOU.ua data based on regular survey of IT services professionals

Companies position in the value chain

- » Outsourcing/outstaffing companies provide services for third companies
- » Product companies develop and market their own products

Maturing of Ukrainian IT sector

- » Product companies' growth driven by strong share increase of hybrid product/outstaffing companies
- » Ukraine's public demand for IT products has increased since the full-scale war:
 - Cybersecurity products,
 - Government services,
 - Military applications etc.
- Sector moves towards product/hybrid companies
- Improvement of position in the value chain possibly driven by increased public demand
- Digitalisation/cybersecurity demand increases trend

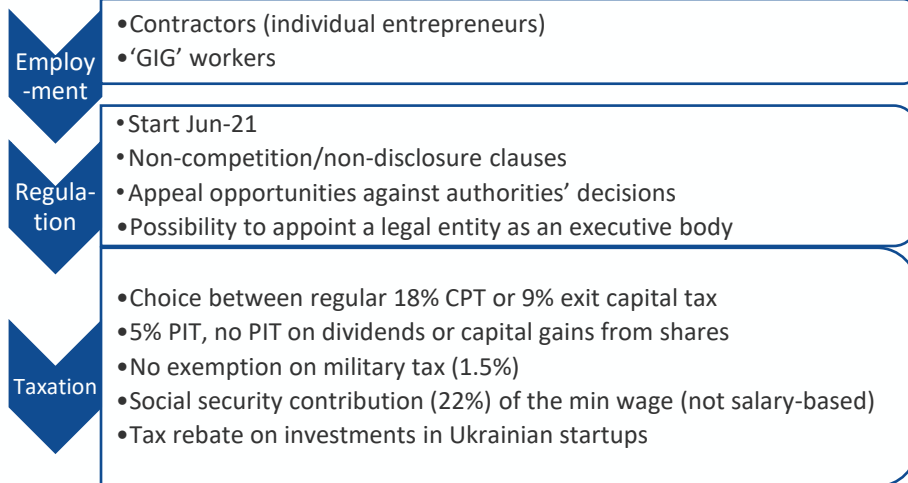
9. Top companies

	Number of employees in Ukraine	Year of foundation	Country of origin	Location of HQ	Location in Ukraine
In 2019					
EPAM Systems	10,300	1993	USA	Newtown, USA	Kyiv, Kharkiv, Lviv, Dnipro, Vinnytsya
SoftServe	7,900	1993	Ukraine	Austin, USA	Lviv
Global Logic Ukraine	5,712	2006	USA	San Francisco, USA	Kyiv, Kharkiv, Lviv, Mykolaiv
Luxoft Ukraine	3,469	2000	Russia	Tysons, USA	Kyiv, Odesa, Dnipro
Ciklum	2,650	2002	Ukraine	London, UK	Kyiv, Dnipro, Kharkiv, Vinnitsya, Lviv, Odesa
In 2024					
EPAM Systems	9,570	1993	USA	Newtown, USA	Kyiv, Kharkiv, Lviv, Vinnytsya, Odesa, Ivano-Frankivsk, Chernivtsi, Khmelnytsky, Rivne, Uzhgorod, Ternopil, Lutsk
SoftServe	7,279	1993	Ukraine	Austin, USA	Lviv, Chernivtsi, Dnipro, Ivano-Frankivsk, Kharkiv, Kyiv, Rivne, Vinnytsya, Odesa, Uzhhorod, Lutsk, Khmelnytsky, Ternopil, Poltava, Cherkasy
Global Logic Ukraine	5,660	2006	USA	San Francisco, USA	Kyiv, Lviv
Ajax Systems	3,900	2011	Ukraine	Kyiv, Ukraine	Kyiv, Kharkiv, Lviv, Vinnytsya
Luxoft Ukraine	3,200	2000	Russia	Tysons, USA	Kyiv, Odesa, Dnipro

Source: Own display and research based on DOU.ua

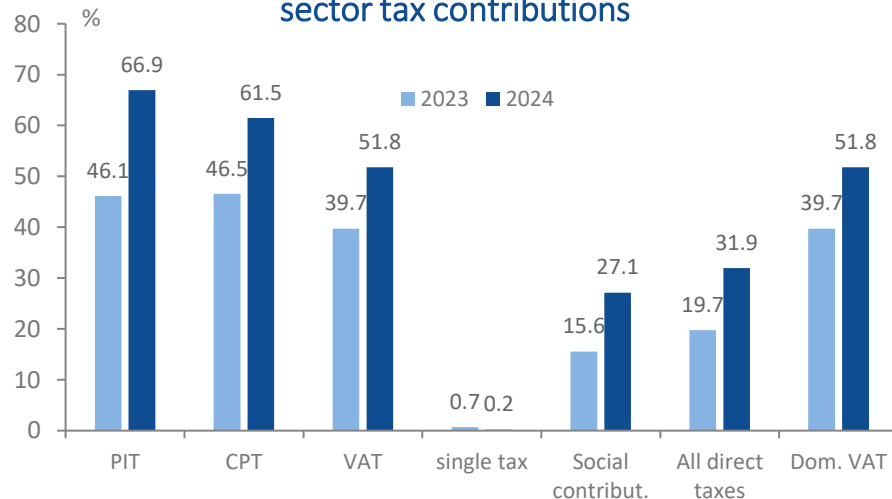
10. Special regime: Diia.City

Regulation and tax under Diia.City



Source: Own display based on city.diia.gov.ua

Diia.City tax revenue contributions compared to total IT sector tax contributions



Source: Own display and estimate based on State Tax Service of Ukraine

Background

- » Diia.City is a special regulatory/tax regime for IT-companies started in Jun-21, e.g. PIT employees at 5% while 18% without Diia
- » First Diia.City residents registered in Feb-22
- » Diia.City conditions fixed for 25 years

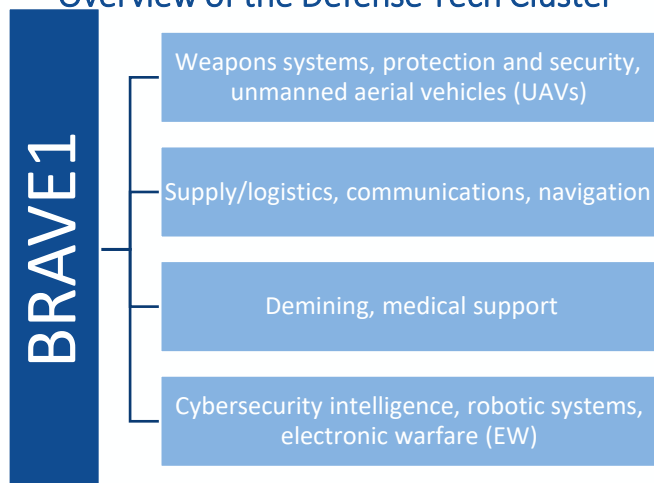
Taxes and employment

- » Since 2024, incentives for Diia.City companies to switch employment from individual contractors to “gig-contractors”
- » Companies under Diia.City granted allowance to retain $\leq 50\%$ of employees liable for military service for up to 6 months
- » Possibility is main driver of increased PIT, social contribution and decreased CPT
- » Share of taxes by IT companies in Diia.City increased but remains below sector's one
- » New tax policy regime since 2025 expected to further reduce the tax contribution gap

- IT companies use Diia.City to reserve employees from mobilization to the army
- Tax contribution within regime increases

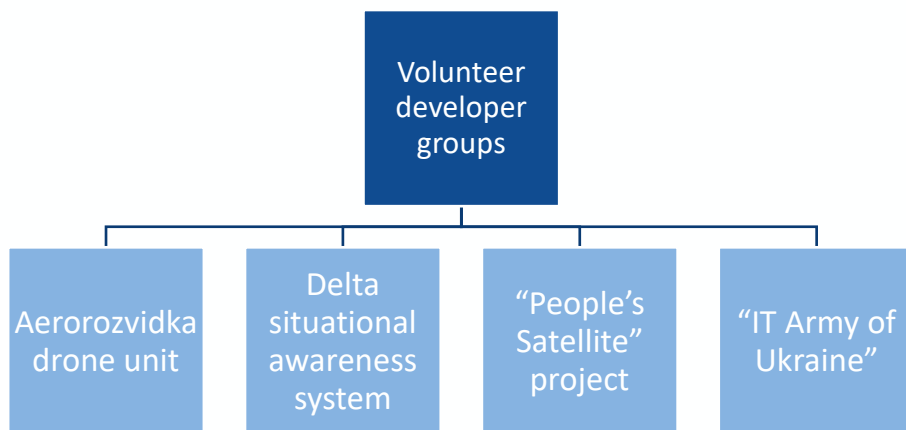
11. Ukraine's Defence Tech Cluster

Overview of the Defense Tech Cluster



Source: Own display based on the Government of Ukraine <https://brave1.gov.ua>

Overview of volunteer developer groups in the war effort



Source: Own display based on dou.ua, texty.ua

Government initiatives

- » BRAVE1 defense tech cluster, launched in Apr-23, enhances cooperation between defense, tech companies, state, investors
- » Single entry point for any individual or company with a defense-tech idea
- » 12 priority directions (e.g. weapons, demining, cyber security, robots, etc.)
- » Budget expanded from USD 2.7 m in 2023 to USD 39 m in 2024 to USD 70 m in 2025 to finance defense startups
- » Over 1,600 defense-tech developments registered (Apr-24)
- » 60 new systems certified to NATO standards
- » Other initiatives: dedicated Drone Forces unit within the Army, "Army of Drones"

Grassroots and private sector contributions

- » ~300,000 IT professionals involved in defense projects
- » Apps: eVorog, Air Alert, ePPO
- » Nationwide air-raid siren network controlled via apps (Ajax Systems)

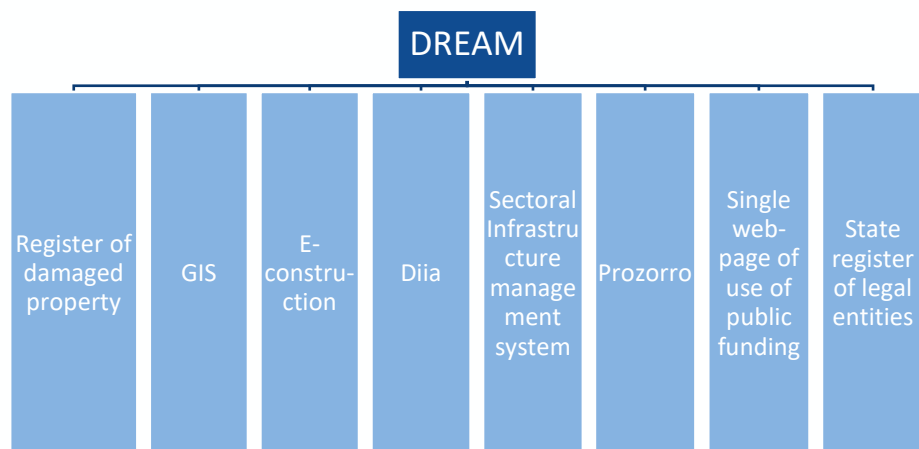
12. Role of the sector for Ukraine's reconstruction

Role of eRecovery module

Steps	Damage reports submission	Remote verification	Compensation
Description	Submitted by affected homeowners	Local authorities inspect the property	Funds or housing vouchers
Results	Over 80,000 damage claims processed		More than 55,000 families have received assistance

Sources: Own display based on Diia

Digital solutions by Digital Restoration EcoSystem for Accountable Management (DREAM)

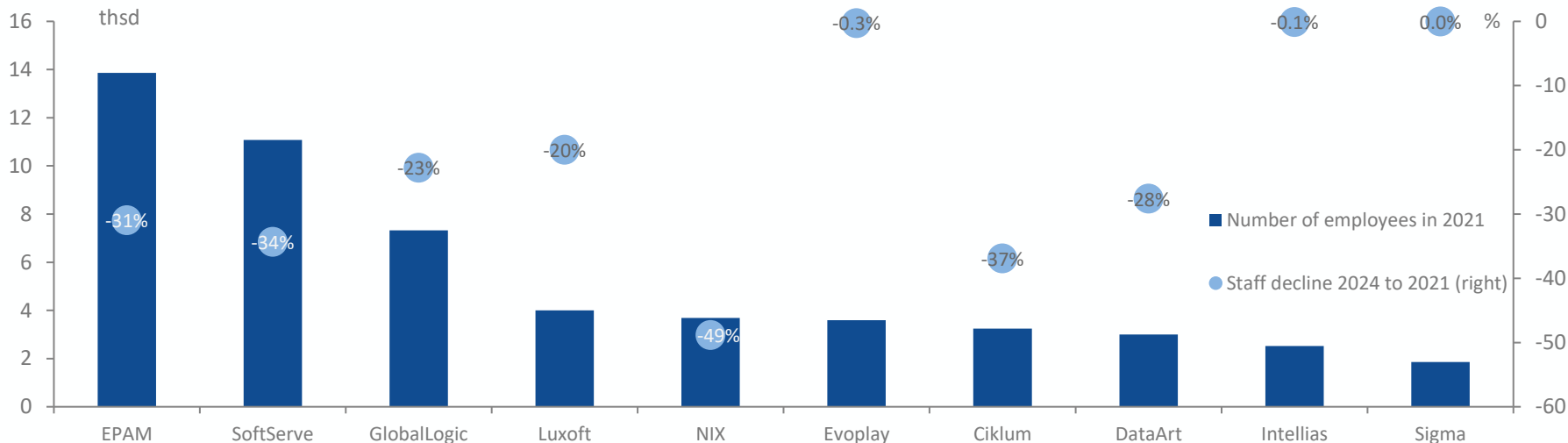


Source: Own display based on DREAM webpage

- » IT companies contribute to collecting, publishing and assessment of damages
- » Example: eRecovery module in the government's Diia e-government app
 - Digital housing damage compensation programme rolled out
 - Reported property losses feed into the national Register of Damaged Property
- » Example: ONOVA GIS Hub - geospatial platform to document and visualize war damage as a basis for rebuilding
- » Example: 'DREAM'
 - Single pipeline for all reconstruction projects
 - Integrates data from damaged property register, GIS maps, procurement (Prozorro), project tracking tools
- Sector plays a decisive role for damage recording, facilitating reconstruction and coordinating stakeholders

13. Migration

Staff decline due to migration/reallocation at selected key market players

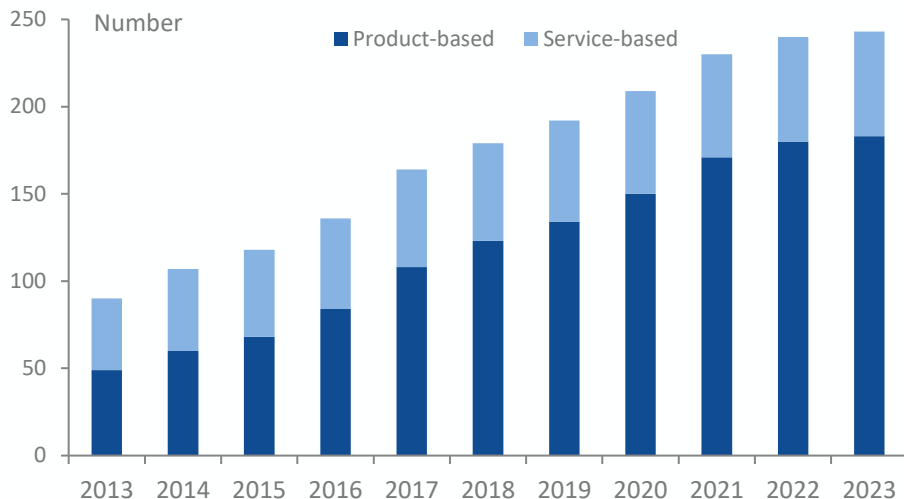


Source: Own display based on dou.ua

- » RUS war has been causing large migration flows: 5 m Ukrainians remain abroad
- » Top IT companies decreased staff due to migration/reallocation, most to POL
- » Top-50 IT companies decreased number of employees by 20 thsd between 2021 and 2024
- » However, 68% of IT positions in UKR are fully remote, allowing to be kept as employed working from any location and 12% are abroad
- » In 2024, 243 IT companies relocated to another region within Ukraine (2.2% of all relocated firms)
- UKR IT sector seems less subject to brain drain due to remote work opportunities
- Still, sectoral employment not unaffected by migration

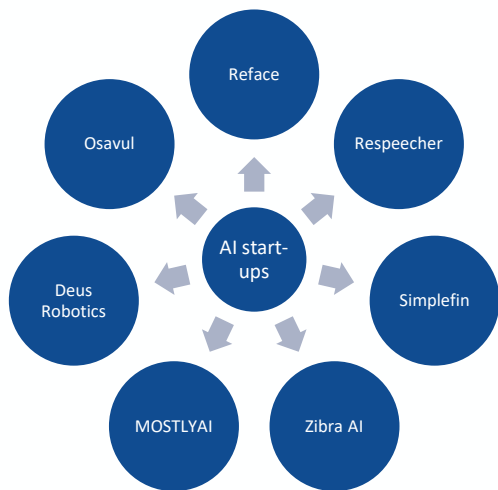
14. AI contribution

Number of AI companies



Source: Own display based on AI HOUSE, Roosh

Biggest AI start-ups



Source: Own display based on "Mapping the use of artificial intelligence in priority sectors and the competitiveness of Ukraine", UNIDO,

- » Increased talent pool: 240 companies, number of AI/ML specialists increased to 5.200 people in 2023
- » 106 AI/ML programmes launched in 42 universities
- » Significant research competitiveness: 33 AI laboratories (25 managed by IT companies and 6 affiliated with universities)
- » Government supports AI through educational programmes and partnerships with private companies: primarily Defense tech start-ups Osavul, Swarmer, UA Dynamics, Zvook
- » Combined value of TOP-3 UKR AI start-ups surpasses USD 14.5 bn
- Ukraine is emerging as an AI hub in Europe

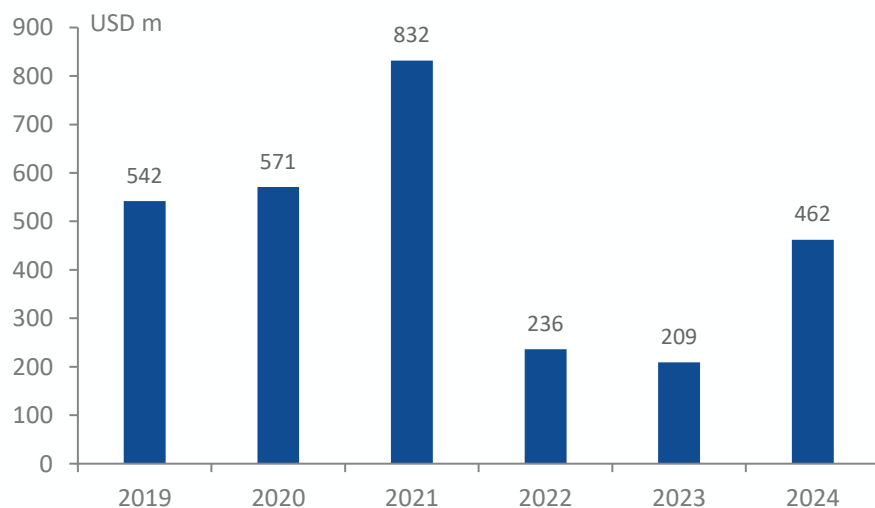
15. Venture capital

Biggest deals for tech companies in 2024



Source: Own display based on AVENTURES

VC deals in IT and tech companies

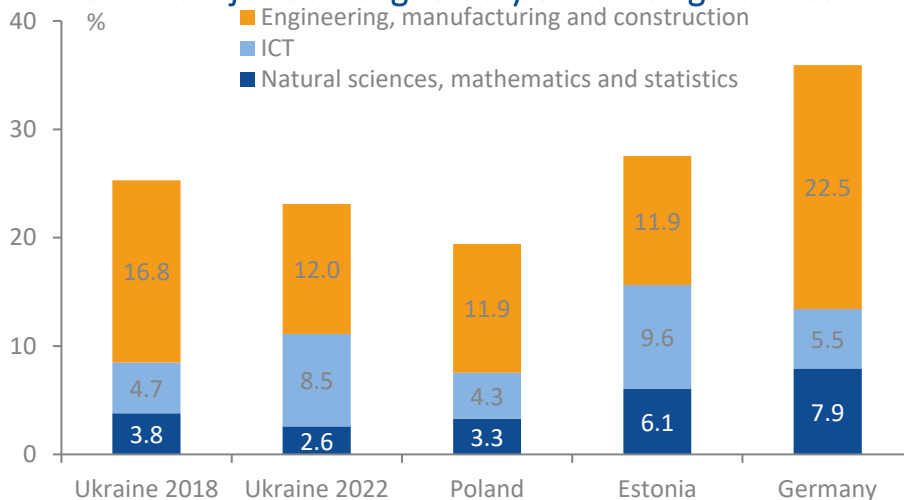


Source: Own display based on AVENTURES - tech companies which may explain some discrepancies in data

- » IT company (focus on B2B) ≠ tech company (focus on B2B and B2C) ([DEV Community 2025](#)): Possibilities to develop strong tech companies through deals between pure industry and pure IT companies
- » 2024: volumes doubled yoy but below pre-war
- » Strongest growth in defence tech sector
- » Early-stage investments account for 32%
- » Foreign VC companies investing in UKR tech sector: Euvic Group, InSoft.Partners
- Record volume of deal volume 2021 was not reached since war
- However, venture capital deal volume on the rise after sharp drop in 2022

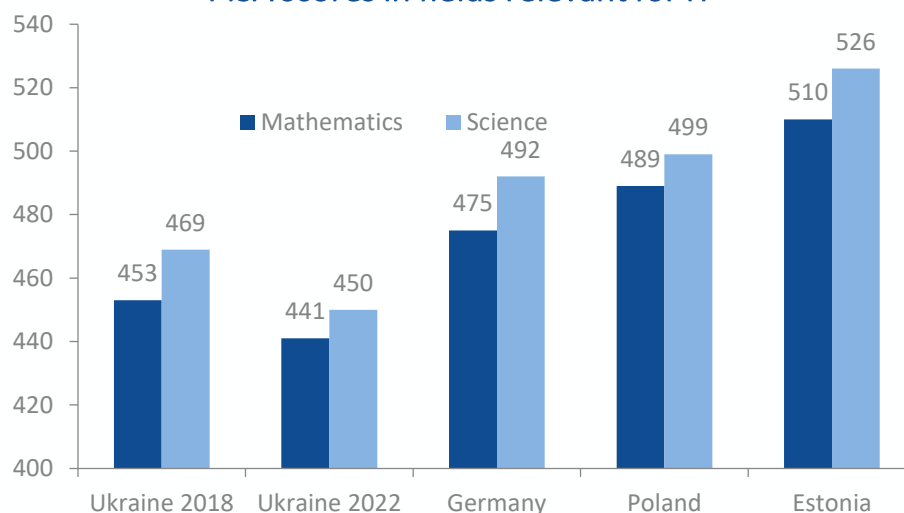
16. Education of new IT professionals

STEM subjects among tertiary education graduates



Source: Own display based on Unesco, Note: 2022 data

PISA scores in fields relevant for IT



Source: Own display based on the OECD report "PISA 2022 Results"

University education of potential IT workers

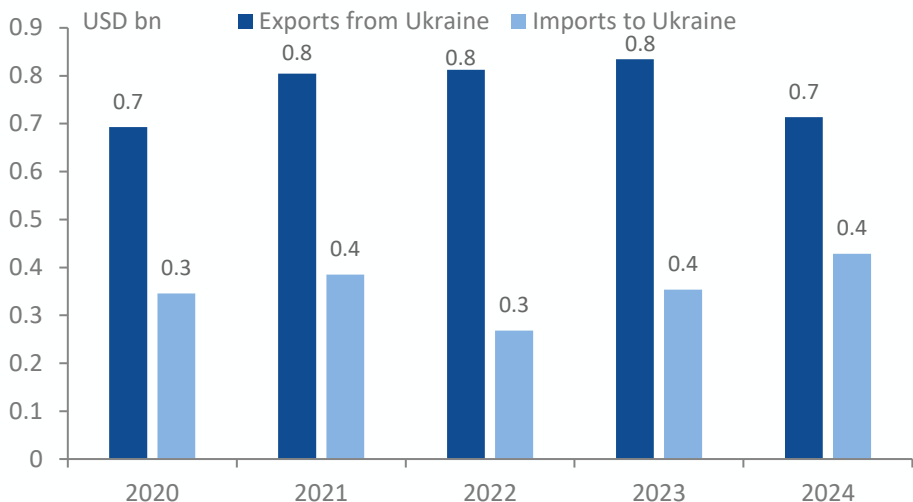
- » STEM graduates focus shift from engineering subjects to ICT
 - Share of ICT graduates now twice share in POL but natural sciences still behind peers

Quality of school education

- » Education in STEM subjects in Ukraine has generally a good reputation
- » Yet, Ukraine scores relatively low on standardised PISA test of 15-year-olds
- » In 2022, scores for Math and Science further decreased (441 and 450 vs. 453 and 469 in 2018) due to Covid-19 and war
- Strong growth of ICT graduation
- Education in STEM subjects should be further promoted and improved
- Lack of skilled workers is a key constraint to IT sector growth in Ukraine and elsewhere

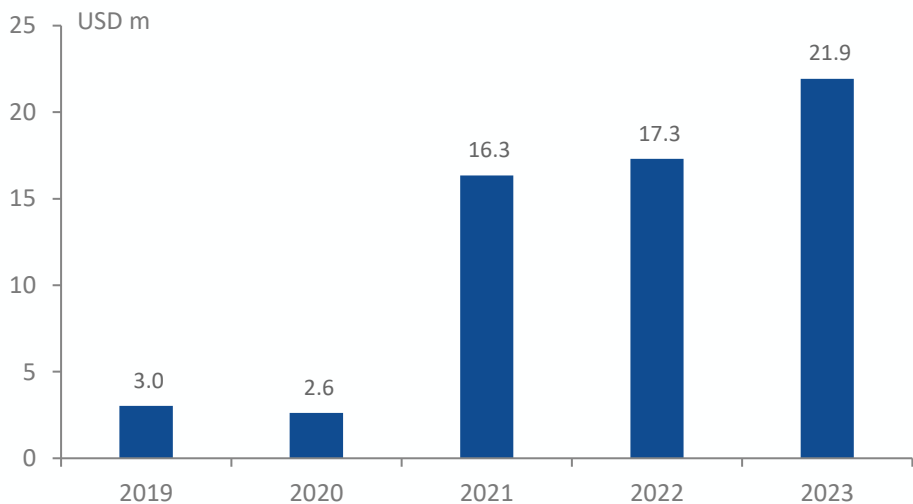
17. German-Ukrainian ties in the sector

Bilateral trade in IT



Source: Own display based on Eurostat, National Bank of Ukraine

German FDI stock in Ukraine's ICT sector



Source: Own display based on National Bank of Ukraine

Trade

- » In 2024, bilateral trade (goods) reaches record level of USD 12 bn, further expanding after already record level in 2023
 - GER: trade surplus of USD 4.7 bn in 2024
- » IT sector (service, goods): trade volume stagnates: UKR trade surplus of USD 0.3 bn
- » GER is No.7 destination country of UKR computer service exports (4%)
 - Cybersecurity software solutions, AI
 - Intellias, GlobalLogic working with GER automakers on infotainment, mapping, autonomous driving software

Investment

- » UKR-founded companies (Grammarly, N-iX, SoftServe, ELEKS, Sigma Software) established operations in GER
- » GER ICT FDI stock in UKR grew to USD 22 m
- » GER became a key destination for relocated IT talent due to war
- In the sector, strong trade surplus by UKR while sectoral bilateral trade stagnates
- Investment ties on the rise

About the German Economic Team

Financed by the Federal Ministry for Economic Affairs and Climate Action, the German Economic Team (GET) advises the governments of Ukraine, Belarus*, Moldova, Kosovo, Armenia, Georgia* and Uzbekistan on economic policy matters. Berlin Economics has been commissioned with the implementation of the consultancy.

**Within the framework of project activities in Georgia, we are in contact solely with reform-oriented partners for the time being; in Belarus advisory activities are suspended.*

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