“A PERSON WITH A SKILL WILL NOT FALL INTO HARDSHIP” (“HUNARLI KISHI XOR BO‘LMAS”): DIGITAL TALENT DEVELOPMENT MECHANISMS IN UZBEKISTAN THROUGH THE IT TALENTS PROGRAMME

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Abstract: Developing digital talent is essential to Uzbekistan’s efforts to grow its digital economy and expand IT services exports. This paper takes the IT Talents program as a case study. It draws on collective skill formation theory and extends it to a state-led context. Using policy documents, publicly available implementation materials and two program cases, the paper analyzes the institutional linkages among the state, non-state training providers, enterprises and workers. It examines three dimensions: training objectives, how responsibilities and costs are shared, and organizational coordination. The findings show that employer associations and similar foundations for collective coordination are weak in Uzbekistan. In this setting, the state has taken over the role of organizing collective coordination. It does so by setting training priorities, linking subsidies to employment outcomes, building intermediary platforms and verifying information across agencies. The result is a state-led model of collective skill formation. The program offers comparable experience for digital talent policies in Central Asia. Its actual effects on firm capabilities and on regional cooperation still need further verification.

Keywords: Uzbekistan; IT Talents; collective skill formation; state-led; digital talent development

Annotatsiya: Raqamli kadrlar tayyorlash O‘zbekistonda raqamli iqtisodiyotni rivojlantirish va IT xizmatlari eksportini kengaytirishning muhim tayanchidir. Ushbu maqolada IT Talents loyihasi keys sifatida tanlangan. Maqola jamoaviy ko‘nikmalar shakllanishi nazariyasiga tayanadi va uni davlat yetakchiligidagi sharoitga tatbiq etadi. Davlat siyosati hujjatlari, loyihani amalga oshirishga oid ochiq materiallar hamda loyihaning ikki misoli asosida davlat, nodavlat ta’lim tashkilotlari, korxonalar va xodimlar o‘rtasidagi institutsional aloqalar tahlil qilinadi. Tahlil uch jihatni qamrab oladi: tayyorlash maqsadlari, mas’uliyat va xarajatlarning taqsimlanishi hamda tashkiliy muvofiqlashtirish.

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Tadqiqot shuni ko‘rsatadiki, ish beruvchilar uyushmalari kabi jamoaviy muvofiqlashtirish asoslari zaif. Bunday sharoitda jamoaviy muvofiqlashtirishni tashkil etish vazifasini davlat o‘z zimmasiga olgan. U buni ta’lim yo‘nalishlarini belgilash, bandlik bilan bog‘liq subsidiyalar, vositachi platformalar va idoralararo ma’lumotlarni tekshirish orqali amalga oshiradi. Natijada davlat yetakchiligidagi jamoaviy ko‘nikmalar shakllanishi modeli vujudga kelgan. Mazkur loyiha Markaziy Osiyodagi raqamli kadrlar siyosati uchun qiyosiy tajriba beradi. Biroq uning korxonalar salohiyati va mintaqaviy hamkorlikka real ta’siri hali qo‘shimcha tekshirishni talab qiladi.

Kalit so‘zlar: O‘zbekiston; IT Talents; jamoaviy ko‘nikmalar shakllanishi; davlat yetakchiligi; raqamli kadrlar tayyorlash

Introduction. In recent years, the digital economy has become an important priority in Uzbekistan’s economic modernisation. The Digital Uzbekistan 2030 Strategy incorporates digital industry development and talent development into the national development agenda. As digital services exports grow, coordinating educational provision with employer demand so that workers’ skills translate into employment and productive capacity has become an issue worthy of investigation. The Uzbek proverb “A person with a skill will not fall into hardship” (Hunarli kishi xor bo‘lmas) expresses the relationship between skills and livelihoods; realising this relationship also requires appropriate institutional conditions.

Launched in Uzbekistan in 2024, the IT Talents digital talent development programme links two areas: subsidising non-state training providers and promoting graduates’ employment in IT services exporting firms. It therefore provides a representative case for examining how the state, educational institutions and firms jointly participate in collective skill formation. Taking collective skill formation as its theoretical starting point, this paper draws on policy documents and publicly available materials to examine objective setting, responsibility and cost sharing, and organisational coordination within IT Talents. It analyses the mechanisms through which the programme supports Uzbekistan’s digital economy and discusses its potential significance for regional cooperation in Central Asia and the conditions under which this potential may be realised.

II. Collective Skill Formation Theory and the Analytical Framework

Research on collective skill formation situates skills development within a framework of institutional relationships among the state, firms, social organisations and individuals, addressing training provision, financing, standard setting and the allocation of supervisory responsibilities. Busemeyer and Trampusch identify important divisions in skill formation systems concerning the allocation of

responsibilities for training provision and financing, the relationship between firm autonomy and public oversight, and the links between vocational and general education [1]. This perspective provides an institutional analytical tool for explaining talent development mechanisms and how they serve industrial development.

Classic studies primarily examine European vocational education systems in which employer organisations and trade unions are extensively involved. In the case of Uzbekistan, this paper uses collective skill formation as an analytical reference and takes IT Talents as an example to examine coordination among multiple actors under state guidance. The programme establishes support rules through a presidential resolution and Cabinet regulations, is implemented by the competent authorities and implementing body, and incorporates non-state training providers and exporting firms into a framework of eligibility and employment requirements. It thus displays a clear administrative impetus and industrial orientation [2][3].

Accordingly, this paper develops four analytical dimensions. The first is objective formation, examining how national digital economy objectives and firms' staffing needs inform training priorities. The second is responsibility and cost sharing, analysing the investments and risks borne by the government, training providers, firms and trainees. The third is organisational coordination, distinguishing administrative coordination, such as eligibility review and employment verification, from coordination in training, including curriculum cooperation, practical training and demand feedback. The fourth is developmental outcomes, examining how these arrangements support skills utilisation, firms' access to talent and cross-border connections.

III. Collective Skill Formation Mechanisms in IT Talents

1. State Guidance: Translating Industrial Development Objectives into Training Priorities. IT Talents reflects Uzbekistan's policy approach of organising digital skills supply through administrative rules. Presidential Resolution No. PQ-51 requires the Ministry of Digital Technologies to identify areas of shortage and continually update the training areas eligible for subsidies in accordance with the needs of IT services exporting firms [2]. The state thereby assumes responsibility for identifying demand and providing policy guidance, translating digital services export objectives into selective support for training provision.

This orientation is reflected in the List of High-Demand Training Areas Eligible for Subsidies to Non-State Educational Institutions under the IT Talents Programme, approved on 10 February 2025. The list contains 70 entries eligible for educational subsidy support, covering software development, digital design, mobile applications, cybersecurity, data science, artificial intelligence and cloud

technologies, as well as IT English, project management and product management [4]. These entries encompass technological fields, development tools and occupational competencies, reflecting the attention given by Uzbekistan's national policy to different stages of digital service production. The inclusion of technical, language and management capabilities provides a basis for understanding the combination of skills required for international business. However, the list defines only the scope of subsidy support and does not establish that a unified curriculum or occupational qualification standard has been introduced.

From a collective skill formation perspective, the Uzbek government plays a role in organising demand: by defining the scope of support, it provides guidance to dispersed training providers. Whether firms' needs are accurately incorporated into this process depends on how demand assessments, curriculum updates and employer feedback operate in practice.

2. Shared Responsibilities: Combining Training Provision with Public Support. IT Talents establishes a division of responsibilities that combines state support, provision by non-state institutions and individual investment. The presidential resolution stipulates that eligible training providers may receive a one-off subsidy for each graduate, up to 75 times the base calculation amount in ordinary cases and up to 105 times that amount for young graduates with disabilities [2]. Cabinet regulations link the subsidy to requirements including employment in an eligible exporting firm within three months of graduation and continuous employment for more than six months. Trainees generally need to pay course fees in advance [3].

Public funding therefore provides conditional support, while training providers and trainees continue to bear upfront costs. This arrangement may encourage providers to prioritise the connection between training and employment, while also indicating that the public sector does not fully assume the uncertainties associated with enrolment, learning and employment. For collective skill formation, the key issues are whether the resources of different actors complement one another and whether cost sharing affects opportunities for institutions and trainees to participate.

3. Organisational Coordination: Linking Administrative Verification with Cooperation in Training. The Centre for the Development of Digital Education serves as the implementing body for IT Talents, using a dedicated information system and interdepartmental data to verify training and employment circumstances [3]. This arrangement provides a traceable basis for the use of public funds and brings training providers, trainees and employers into a common administrative process.

Administrative coordination and coordination in training nevertheless perform different functions. The former confirms eligibility and employment records, whereas the latter concerns firms' participation in teaching, practical training and competency assessment. Verified employment records can establish that graduates have entered firms, but cannot fully reveal whether courses meet job requirements. The institutional characteristics of IT Talents can therefore be described as participation by multiple actors organised by the state. Whether this develops into sustained cooperation in skills development requires an examination of whether stable feedback relationships exist between training providers and firms. The analytical value of collective skill formation lies in examining the depth of these connections rather than judging cooperation solely by the number of participating actors.

IT Talents' Contribution to the Digital Economy and Its Regional Significance

1. Connecting Skill Formation with Digital Service Production. The direct channel through which IT Talents contributes to the digital economy is the promotion of trainees' employment in IT services exporting firms, establishing a connection between training and business operations. The list of supported areas covers development, design, data and management, indicating that the policy encompasses several stages of digital service production [5]. In terms of its mechanism, if training content responds to job requirements, the programme may help firms recruit suitable personnel and create opportunities for workers to continue accumulating skills through practice.

Publicly available materials provide preliminary evidence of implementation. According to the Ministry of Digital Technologies, during ICTWeek 2024, a training centre in Khorezm Region received the first subsidy, exceeding 150 million soums, for training six specialists [5]. A September 2026 announcement further reported that, between 2024 and 2026, the programme allocated 4.4 billion soums to private training centres, supporting 169 young people in receiving IT education and entering exporting firms [6]. These materials demonstrate that the programme has entered practical operation, although its effects on firm productivity, export growth and workers' long-term earnings require further assessment.

2. The Talent Base and Institutional Experience in Regional Cooperation. The regional significance of digital talent development must be realised through cross-border connections among firms and educational institutions. In 2024, IT Park Uzbekistan and Kazakhstan's Astana Hub jointly launched Central Asian Innovation Hubs, proposing exchanges of experience in developing startup ecosystems and joint efforts to promote Central Asian projects on international platforms [7]. This

cooperation demonstrates that domestic digital industry capabilities have channels for outward expansion through regional organisational connections.

Against this background, the programme's potential regional contribution has two principal aspects: first, providing a talent base for firms engaged in cross-border digital business; and second, offering comparative institutional experience for Central Asian countries in coordinating training provision, public support and export demand. Realising these effects requires support from cooperation among firms, skills exchanges and sustained demand. It also requires further tracking of whether programme graduates participate in such cross-border business activities.

3. Institutional Conditions for Developmental Effects. The programme's sustained contribution depends on improvements in training quality, opportunities for participation and organisational cooperation. Ex post subsidies may increase the pressure of waiting for payment on institutions with limited financial resources, while tuition fees and differences in prior skills may also affect trainees' participation. If training providers primarily select trainees who are already more likely to find employment, stronger employment outcomes do not necessarily indicate a corresponding improvement in training capacity. Evaluation should therefore consider trainees' starting points, job matching and subsequent career development to assess whether state support has facilitated more stable and inclusive skill formation. Regional adoption must likewise be adapted to local training markets, employer demand and administrative capacity, rather than merely reproducing the subsidy arrangement.

Conclusion. IT Talents represents Uzbekistan's institutional attempt to connect digital skills development with industrial demand under state guidance. By defining supported training areas, providing subsidies and verifying employment information, the government brings non-state training providers, exporting firms and workers into a common policy framework. From the perspective of collective skill formation, the programme is characterised by administrative coordination that promotes participation by multiple actors and links public support to training outcomes through employment conditions. However, the available materials primarily establish the allocation of responsibilities and the introduction of support rules. Whether firms participate substantively in curriculum design, practical teaching and cost sharing requires further investigation.

This case indicates that the economic value of digital talent development depends on effective links between skill formation and actual skills utilisation. IT Talents has supported the supply of talent to digital services firms, while its sustained contribution also depends on training quality, employer demand and opportunities for different groups to participate. For Central Asia, the programme offers

comparative experience in coordinating educational provision and digital industry development. Its cross-border contribution must be realised through specific connections, including cooperation among firms and skills exchanges. Future research should draw on longitudinal evidence from institutions and graduates to examine further how institutional coordination translates into stable employment, firm capabilities and regional cooperation outcomes.

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