

Conceptual Framework of An Academic City: A Model for Enhancing Graduate Employability in the RA

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Ակադեմիական քաղաքի հայեցակարգային շրջանակը, որպես ՀՀ-ում շրջանավարտների գրադավաճության ապահովման մոդել

Քելվորգյան Արփինե Հ.

*ՀՀ պետական կառավարման ակադեմիա, կառավարման ամբիոնի հայցորդ,
ՀՀ կրթության, գիտության, մշակույթի և սպորտի նախարարի խորհրդական (Երևան, ՀՀ)*

Ամփոփագիր. Բարձրագույն կրթության համակարգի բարձրորակ և արդյունավետ կառավարումը հանդիսանում է ազգային զարգացման հիմնարար հենասյուներից մեկը, որը ձևավորում է մարդկային կապիտալի ներուժը, աշխատաշուկան, երկրի կարողությունը և մրցունակությունը զարգացնելու գիտելիքահենք տնտեսությունը: Կարևորելով բարձրագույն կրթության որակի ապահովման առանցքային դերը՝ ակադեմիական և քաղաքական դիսկուրսներում համալսարանները ներկայումս դիտարկվում են ոչ թե որպես գուտ կրթական հաստատություններ, այլ բազմաֆունկցիոնալ առանցքային դերակատարներ, որոնք ինտեգրված են առավել լայն սոցիալ-տնտեսական համակարգերում: Վերջիններիս առաքելությունը ներառում է ոչ միայն գիտելիքի ստեղծում և ձևավորում այլ նորարարությունների ստեղծում, աշխատուժի ձևավորում և տարածաշրջանում շարունակական զարգացման օրակարգերին համապատասխանեցում, ինչի արդյունքում բարձրագույն կրթական էկոհամակարգերի ձևավորումն ու կառավարումը դառնում է ազգային մակարդակի ռազմավարական առաջնահերթություն:

Այսպիսով ակադեմիական քաղաքները՝ համալսարանների, գիտահետազոտական կառույցների և գործարար հատվածի համակցված կյանքերն են, հանդես են գալիս որպես փոխակերպող մոդել՝ ակադեմիական միջավայրում և աշխատաշուկայում համակարգերի կառուցվածքային մարտահրավերները հաղթահարելու համար: Մույն հոդվածում օգտագործվում է համեմատական որակական մոտեցում ակադեմիական քաղաքների, կրթական կենտրոնների և գիտական կենտրոնների հայեցակարգային տարբերությունները և ֆունկցիոնալ բնութագրերը վերլուծելու համար՝ հիմնվելով ամերիկյան բարձրագույն կրթական տարածքի, եվրոպական բարձրագույն կրթական տարածքի, Միացյալ Թագավորության բարձրագույն կրթության համակարգի և Մերձավոր Արևելքի կրթական տարածքի միջազգային լավագույն փորձի վրա: Հոդվածում ներկայացվում է ոլորտային գրականության և ոլորտի կարգավորող քաղաքական փաստաթղթերի վերլուծությունը:

Հոդվածը վերլուծում է, թե ինչպես են նման գիտելիքահենք էկոհամակարգերը ձևավորում կրթության, նորարարության և աշխատաշուկայի զարգացման միջև սիներգիա, ինչպես նաև գնահատում է դրանց կիրառելիությունը Հայաստանի համատեքստում: Հոդվածում անդրադարձ է կատարվում Հայաստանի «Ակադեմիական քաղաք» ծրագրին՝ որպես բարձրագույն կրթության համակարգի բարեփոխումներում առանցքային բաղադրիչ, ուսումնասիրելով դրա ներուժը՝ բարձրացնելու աշխատունակությունը, ամրապնդելու բուհ-աշխատաշուկա համագործակցությունը և նպաստելու երկրի սոցիալ-տնտեսական վերափոխմանը:

Հանգուցաբառեր և բառակապակցություններ՝ Ակադեմիական քաղաք, բարձրագույն կրթության որակի ապահովում, համալսարանական քաղաքներ, կրթական կենտրոններ, գիտատեխնոլոգիական ինստիտուտներ, մարդկային կապիտալ, աշխատունակություն, աշխատաշուկայի քաղաքականություն

Концептуальная основа академического города: модель повышения возможностей трудоустройства выпускников в РА

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Аннотация. Высококачественное и эффективное управление системой высшего образования является ключевым элементом экономического развития, определяющим формирование человеческого капитала, рынка

труда, а также способность и конкурентоспособность страны вносить существенный вклад в глобальную экономику знаний. Подчеркивая ключевую роль обеспечения качества высшего образования в наши дни, современный академический и политический дискурс все чаще рассматривает университеты не просто как образовательные учреждения, но и как многофункциональных субъектов, встроенных в более широкие социально-экономические системы. Роль высших учебных заведений в настоящее время включает в себя не только формирование знаний, но и генерирование инноваций, подготовку рабочей силы и вклад в программы регионального развития, что делает разработку экосистем высшего образования и управление ими стратегическим национальным приоритетом. Таким образом, академгородки, то есть интегрированные кластеры, объединяющие университеты, научно-исследовательские институты и промышленность, становятся преобразующей моделью для решения структурных проблем в системах образования и занятости. В данной статье используется сравнительный качественный подход для анализа концептуальных различий и функциональных характеристик академгородков, образовательных центров и научных парков, основанный на лучших международных практиках высшего образования США, высшего образования ЕС, системы высшего образования Великобритании и ближневосточного образовательного пространства. В статье представлен анализ обзора литературы и политических документов РА, регулирующих данную сферу. В нем рассматривается, как такие экосистемы создают синергию между образованием, инновациями и развитием рынка труда, и оценивается их применимость в Республике Армения. Особое внимание уделяется инициативе "Академгородок" как ключевому компоненту реформы высшего образования, изучается ее потенциал для повышения возможностей трудоустройства, укрепления сотрудничества между университетами и промышленностью и поддержки социально-экономических преобразований в стране.

Ключевые слова и словосочетания: академгородок, качество высшего образования, университетские города, образовательные центры, научные парки, человеческий капитал, трудоустройство, политика рынка труда

Methodology

The article, through comparative qualitative approach, defines and analyzes the structural and functional characteristics of academic cities, academic hubs, and research parks across the American Higher Education Area, European Higher education Area, UK (United Kingdom higher education system), Middle East and The Republic of Armenia. The research examines policy documents, Armenian higher education and innovation policy frameworks, national strategic priorities and regulatory environments. The findings were integrated to discern recurring patterns, exemplary practices, and policy implications relevant to the design of multi-institutional academic ecosystems, including potential avenues for national-level adaptation.

Introduction

Nowadays, when the demand for short-term study programs is growing, the higher education system plays a key role in the education ecosystem. Maintaining the reputation of higher education has two important players: the university which ensures the quality of education and the government which ensures the policy in the field. The quality and reputation of a university remain among the most decisive factors shaping young people's choice of study destination [9]. However, their study also demonstrates that in certain urban contexts the broader quality of life, namely safety, cultural amenities, affordability, and environmental conditions can be equally influential. Primarily, the attractiveness of a city as a place to study may differ from its attractiveness as a place to live and work after graduation [6, p. 14]. Usually in course of academic studies, young people tend to prioritize

features associated with a vibrant Academic city, mainly a large student population, reliable public transport, digital connectivity, affordable public services, and discounted student pricing [7, p. 58]. Students also typically prefer to reside close to campus, within socially homogeneous student communities, and in low-cost accommodation [1, p. 93]. After completing their degrees, however, priorities tend to shift considerably, with employment prospects becoming the primary determinant of where graduates choose to settle. Quality of life becomes the secondary consideration once a stable career path has been secured [9].

Thus, as a result of the growth and development of the student population, the academic environment is formed and concentrated around higher education institutions, which, in turn, forms academic cities. Academic cities can be considered as special-purpose facilities that form the most important environment for the development of the country's human potential, contributing to the consistent academic, scientific and economic development in the country.

As academic cities are formed in the existing urban environment, they inevitably integrate into the socio-economic and spatial systems of the city, which leads to both positive and negative effects. Thus, academic cities experience both positive and negative effects as a result of growing student populations. Negative impacts often arise from conflicts between student lifestyles and local community expectations, including issues related to noise, housing turnover. On the other hand, the positive impacts are widely recognized, particularly students' spending power and their role in

stimulating demand for consumer goods, cultural services, and rental housing markets.

However, it should also be mentioned that despite their substantial contributions to urban development, universities can also generate a variety of challenges for cities for instance rapid institutional expansion and the growing student population often increase pressure on urban housing markets, contributing to rising rents, displacement, and gentrification in adjacent neighborhoods [16]. For a comprehensive assessment of all advantages and disadvantages it should be noted also that while universities can stimulate economic dynamism, they may also unintentionally reinforce socio-spatial inequalities, especially when local communities are excluded from the benefits of knowledge-based regeneration. That is to say cities that become heavily dependent on higher education institutions for economic vitality also face structural vulnerabilities: reductions in public funding, demographic shifts, or fluctuations in international student mobility can destabilize local economies that rely on university-driven demand [8]. Furthermore, tensions can also emerge when universities act as dominant urban actors whose institutional goals, particularly around land acquisition, research priorities, or campus expansion, do not always align with municipal planning agendas or community interests. These dynamics show that university-led development must be coupled with inclusive governance to ensure that the benefits of academic growth are distributed equitably across the urban population [3].

Thus, considering the pace of globalization and innovation development in the 21st century universities today are called upon to operate far beyond their traditional missions of teaching and research; they function as major urban actors whose presence reshapes economic structures, demographics, and spatial development patterns. As higher education institutions grow in size and complexity, they increasingly influence the attractiveness of cities for young people, employers, investors, and creative industries. This influence is reflected in the expansion of student populations, the rise of knowledge-intensive sectors, and the gradual transformation of urban areas surrounding campuses. Cities that host major universities often experience intensified demand for housing, transportation, cultural services, and digital infrastructure, leading to new forms of urban planning tailored specifically to academic populations. In many cases, the presence of a strong university becomes a central element of a city's competitiveness strategy in the global knowledge economy. These dynamics do not affect cities

uniformly, what is more, they generate differentiated patterns of development based on city size, institutional capacity, and the broader socio-economic context. In smaller cities, universities may act as anchor institutions that sustain local economies, while in metropolitan regions they often serve as innovation hubs embedded within broader technological ecosystems. The cumulative effect is the emergence of urban environments where educational, scientific and entrepreneurial activities converge, creating synergistic spaces that foster collaboration and creativity.

Accordingly, the transformation and evolution in higher education system has led to the identification of a distinct category of urban formation known as **academic cities**. It can be inferred that unlike traditional university campuses or isolated research parks, academic cities represent comprehensive knowledge-based environments that combine higher education institutions, research centers, innovation infrastructure, residential areas, and cultural amenities within a unified urban ecosystem. With the regard to their essential characteristics and functions academic cities are deliberately structured to attract talent, stimulate innovation, and enhance regional competitiveness by leveraging the full potential of the knowledge economy. Understanding the characteristics, opportunities, and challenges associated with academic cities is pivotal for policymakers, urban planners, and higher education leaders seeking to position their regions within the global landscape of innovation and learning. The diversity of academic infrastructure requires their differentiation based on structural and functional and conceptual features.

Definitions and Conceptual Distinctions of Academic Infrastructure

➤ **Academic city (or University Town / University City)**

An *Academic city* is a physically defined urban area or district built (or repurposed) around higher education institutions, research centres, student housing and often innovation/entrepreneurial infrastructure. Academic cities or also called "University cities" in Europe are described as smaller or medium sized cities "where the main socio-economic processes are closely related to the university and scientific activities" [25, p. 4]. Some of the world known examples are: Boston–Cambridge Academic city in USA¹¹, Oxford Academic city¹² and Cambridge Academic city in UK¹³, in Europe Leuven Academic city

¹¹ Boston–Cambridge Academic City: <https://www.cambridgema.gov>

¹² University of Oxford: <https://www.ox.ac.uk>

¹³ University of Cambridge: <https://www.cam.ac.uk>

(Belgium)¹⁴, Heidelberg Academic city (Germany)¹⁵, Paris-Saclay Academic Cluster / “Academic city” (France).¹⁶

➤ **Academic / Education Hubs**

Education hubs or *academic hubs* are defined as a deliberate strategy by a country, territory or city to build a concentration of higher-education institutions (domestic and foreign), knowledge industries, and associated services, with the aim of becoming a regional or global node in higher education, training and innovation. Education hubs are known to be described as “a planned effort to position a country or city as a centre for higher education, research and training” [16]. In this typology, according to the J. Knight hubs are distinguished into three types: student hubs, talent/work-force hubs, and knowledge/innovation hubs). Some of the world known examples are.

1. Stanford University & Silicon Valley Academic Hub¹⁷ and MIT Kendall Square Innovation Hub in USA¹⁸, **in Europe** ETH Zurich Knowledge Hub (Switzerland)¹⁹, Technical University of Munich (TUM) Innovation Hub (Germany)²⁰, KU Leuven Science & Technology Hub (Belgium)²¹ and in UK University of Cambridge Science & Innovation Hub²².

➤ **Science / Research Parks**

A *science/research park* (also called “science & technology park”, “university research park”, “technopole”) is a property-based development affiliated with a university or research organization, with the principal aim of fostering knowledge transfer, innovation, start-ups and firm growth. Science parks are also defined as an “organization” managed by specialized professionals, whose main aim is to increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions” [4]. Some of the world known examples which are also included in the QS World University Rankings²³, are. 1. Stanford Research Park²⁴ and Research Triangle

Park in USA²⁵, Cambridge Science Park in UK²⁶ in Europe Sophia Antipolis Science & Technology Park (France)²⁷ and Adlershof Science & Technology Park (Germany)²⁸.

These three models share common traits namely higher-education institutions, research/innovation systems, talent flows, however they differ in **scope/spatial form, governance and purpose and dominant features**.

• **Scope / Spatial Form**

Academic / Education Hubs may be region or nation-wide networks of campuses and partnerships, not necessarily confined to a single locality.

Academic Cities (or University Town / University City) are typically physically bounded districts or districts within a city or metropolitan area, focused on co-location of institutions and services.

Science / Research Parks are more compact, often adjacent to a university or within an innovation district, focusing on research-industry linkages.

• **Governance and Purpose**

Academic / Education Hubs are often strategic policy instruments (by national/regional governments) for internationalisation and talent attraction.

Academic Cities (or University Town / University City) may be led by urban planners, governments or consortia of universities aiming to create a live-learn-work ecosystem.

Science parks are often run by universities, developers or specialised agencies with the commercialisation of research as the key goal.

• **Dominant Features**

Academic / Education Hubs emphasise networked partnerships, mobility, branding, and cross-border education (Knight, 2024).

Academic Cities (or University Town / University City) emphasise student housing, campus life, mixed-use infrastructure, urban amenities.

Science parks emphasise labs, incubators, technology transfer, start-ups, industry co-location.

In practice, **academic cities** can embed science parks, hubs may include multiple campus sites which may themselves resemble university towns, and science parks may be components of both hubs and cities (e.g., a university town that includes a research park).

¹⁴ Europe Leuven Academic City: <https://www.kuleuven.be>

¹⁵ Heidelberg University: <https://www.uni-heidelberg.de>

¹⁶ Université Paris-Saclay: <https://www.universite-paris-saclay.fr>

¹⁷ Stanford University: <https://www.stanford.edu> also Stanford Research Park: <https://srp.stanford.edu>

¹⁸ Kendall Square Association: <https://kendallsquare.org/>

¹⁹ ETH Zurich, [ETH Zurich - Homepage | ETH Zurich](https://www.ethz.ch/)

²⁰ The Technical University of Munich, <https://www.tum.de>

²¹ KU Leuven Science & Technology Hub, <https://www.kuleuven.be>

²² University of Cambridge Science & Innovation Hub, <https://www.cam.ac.uk>

²³ QS Top Universities, <https://www.topuniversities.com/world-university-rankings>

²⁴ Stanford Research Park: <https://www.stanford.edu/>

²⁵ Research Triangle Park: <https://hub.rtp.org/>

²⁶ Cambridge Science Park: <https://www.cambridgesciencepark.co.uk/>

²⁷ Sophia Antipolis Science & Technology Park: <https://www.sophia-antipolis.fr/en/the-technopole/>

²⁸ Science and Technology Park Berlin Adlershof: <https://www.adlershof.de/en>

Understanding these differences is essential for planning major higher-education infrastructure projects. For example, adopting the *hub* model emphasises global partnerships and branding, but might risk neglecting local spatial integration and living/learning infrastructure. Adopting the *city* model emphasises physical co-location and campus life, but may under-emphasise international connectivity and networked collaboration. Adopting a *park* model emphasises technology and commercialisation but may miss student housing, teaching mission or wider urban integration. ***In some national strategies for instance UAE [22], Germany [28] a hybrid approach is used: creating a university district (Academic city) within which a science park is located, while the national system also markets itself as a higher-education hub globally.***

Academic cities, as integrated ecosystems combining universities, research institutions, and urban infrastructure, are uniquely positioned to serve not only as education hubs, but also as engines for practical knowledge acquisition, workforce development, and strong private-sector engagement. In modern innovation regions, the value of such integration lies in how universities contribute to regional economic development by aligning education with industry, thereby improving both graduate employability and local employment. Academic cities possess and form a key potential that has a direct impact on economic development. Academic cities can affect local development of the country through several distinct ways. They increase the level of education of the region in which they are located and in this way contribute to the creation of human capital and for the possible workforce. That is to say, they can promote the increase of the average educational attainment of a population.

Among the various pathways through which higher education institutions affect the local economic performance, a special place is that of entrepreneurship. There are two main pathways: academic entrepreneurship, or the direct creation of new firms by academic staff, and startup creation, or the indirect contribution of universities to the generation of entrepreneurial ideas and opportunities [5]. Thus, based on the above, it can be concluded that combining all the possibilities in one environment makes the system more flexible and capable of cooperation to promote economic development. This can be implemented through various manifestations.

First, the involvement of the private sector in academic cities amplifies the capacity for students to gain applied and soft skills during their studies. Collaboration between universities and industry facilitates curricula that respond directly to

labor-market needs, embedding internships, project-based learning, and research partnerships. Systematic reviews of university–industry collaboration demonstrate that such relationships foster innovation through knowledge exchange, benefiting both academic institutions and commercial enterprises [2]. Moreover, these collaborations enhance universities’ mission of technology transfer and socio-economic development by ensuring that education is not siloed but rather aligned with private-sector challenges and opportunities [23].

Second, spatial agglomeration of higher education institutions within cities has empirically been shown to foster human capital accumulation, innovation, and industrial restructuring [24]. When universities are physically embedded in economic clusters, students have more opportunities for engagement with local employers, and companies benefit from a flow of highly skilled graduates familiar with their operations and needs.

Third, academic cities’ integration with the private sector is underpinned by their role as **anchor institutions**, as long as universities and research centers provide long-term economic stability, human capital development, and innovation capacity that structure and sustain the whole educational ecosystem and public–private interaction. Universities in such contexts act as stabilizing economic and social actors, not only educating students but also creating employment, supporting start-ups, and anchoring innovation districts [15]. Research on regional innovation ecosystems emphasizes the changing role of universities: beyond teaching and research, they must co-create with industry, government, and society to build sustainable, innovation-driven urban economies [12]. This alignment enables graduates to transition smoothly into employment, as they have often been involved in real projects, labs, and co-innovation spaces.

Fourth, from a knowledge-economy perspective, academic cities embody the cluster theory: geographically concentrated industries and firms foster spillovers, increased productivity, and specialization. When universities are embedded in such clusters, they both supply talent and absorb industry knowledge. This co-location improves employability by giving students direct exposure to real-world innovation processes.

Fifth, there is a dynamic mechanism of coupling higher education capacity and regional innovation capability. In academic cities, the presence of private-sector actors alongside universities and government can bolster knowledge exchange, co-creation, and socio-economic impact. The model of academic cities must go beyond

traditional academic missions such as from teaching-learning processes, research and knowledge production to economic development and innovation, talent attraction and retention, higher education and labor market alignment, and governance and cross-sector collaboration. That is to say by embedding practical, work-integrated learning and leveraging partnerships with private-sector firms, academic cities can more effectively cultivate employability, foster local job creation, and drive economic development. This integrated model not only benefits individual students through meaningful employment trajectories but also strengthens regional innovation ecosystems and long-term urban resilience. To demonstrate the practical application of this approach Dubai International Academic city should be observed: Dubai International Academic city²⁹ (DIAC) and Innovation Campus Lemgo (ICL) provide spatial and institutional ecosystems that support applied learning and work-oriented education [13]. DIAC fosters research-based institutions and hands-on learning across its partner universities (DIAC Press, 2022), while ICL consolidates vocational training, academic study, research, and business to form a full innovation chain [17; 21]. These environments function not only as hubs of higher education but also as ecosystems where students engage directly with industry, acquire practical skills, and develop employability competencies. Embedding work-based learning within academic cities enhances the relevance of higher education programs and aligns them with labor market demands [12; 15]. The further analysis of the article focuses on the reforms currently being implemented in the higher education system of the Republic of Armenia. At present, Armenia is implementing comprehensive reforms in its higher education system. The aforementioned systemic reforms undoubtedly contribute to the improvement of Armenia's higher education system, strengthening its competitiveness and international standing. Furthermore, such reforms must also be viewed from the point of view of the country's socio-economic development, as they should foster the growth of human capital, meet labor market demands, and enhance the international recognition of Armenia's higher education. Among the most significant ongoing reforms in the current higher education system is the "Academic city" initiative, around which the Government is shaping and advancing the field's strategic objectives.

The concept of establishing the Academic city comes from the Law on "Approval of the State Program for the Development of Education in the Republic of Armenia Until 2030" [26], which

envisages the creation of an Academic city as a cluster of campus-based educational environments designed to ensure high-quality higher education and research. The law stipulates that the Academic city will promote expanded network-based, synergistic cooperation among educational institutions, scientific organizations, and production entities, integrating modern virtual, social, and physical infrastructure [14].

The concept of the "Academic city" program was approved by the decision No. 1802-L of October 19, 2023 by the RA Government. According to the program, the Academic city will serve as an environment to give opportunity of modern research and innovation, where university education will be organized in direct connection with research activities, thereby ensuring the acquisition and strengthening of knowledge and skills through practical application in real-world contexts. The Academic city will also ensure the optimal use of newly generated knowledge, grounded in the principles of research excellence, discovery and development of applied results, knowledge transfer, innovation promotion, and intellectual property protection. In this way, it will serve society by addressing social, economic, cultural, and security challenges and, in cooperation with public and private organizations will support the integration of new knowledge, technologies, and innovations into public welfare and national progress.

"Academic city" concept emphasizes that the quality of educational programs and mechanisms for improving teaching and learning processes are the key determinants of system development, and only actions rooted in these principles can ensure sustainable improvement of educational outcomes.

According to the concept, as a prerequisite for the program's success, universities located within the Academic city will undertake a comprehensive revision of their instructional methodologies and content through collaboration with leading partner universities and through staff training. This process will be implemented alongside the construction of physical infrastructure, with specialized advisory councils formed for each cluster [14].

The establishment and development of the Academic city, as outlined in the concept, will create the necessary conditions within the educational environment to directly impact students' capacity to respond to labor market requirements. The concept examines how the Academic city will foster a favorable educational and research environment. However, it is crucial to recognize that such an environment serves as a direct link to the labor market, ensuring that students acquire the skills for which there is real demand.

²⁹ Dubai International Academic City: <https://diacedu.ae/>

The labor market requires education that can genuinely meet the productive needs of society. The skills students gain in an academic environment must be closely aligned with practical professional experience so that graduates are prepared for real labor market conditions. Whenever higher education supply does not correspond to labor market demands, gaps emerge between academic disciplines and workforce requirements. The reason is structural: a university graduate, despite holding a degree, does not immediately become a specialist in the field; specialization occurs through practical, production-based experience, which requires time. As a result, a significant portion of the workforce is not competitive and lacks the knowledge and soft and professional skills needed in an economy undergoing rapid transformation. This situation is shaped by several factors, including issues with education quality, insufficient implementation of economic policies that drive productivity growth, and limited effectiveness of state employment promotion policies [29]. In order to resolve both supply- and demand-side challenges in the labor market, ensuring they develop in harmony. In line with the goals set in the RA Government Program for 2021–2026 and the Armenia Transformation Strategy 2050 such as reducing unemployment and poverty, developing human capital, increasing labor productivity, and promoting exports the Government, by Decision No. 2083-L of December 27, 2024, approved the Employment Strategy for 2025–2031 [10]. This strategy aims to stimulate employment in high-productivity sectors through continuous human capital development and the promotion of entrepreneurship.

Nevertheless, the current state of public policy in the employment sector demonstrates that the field still lacks a systemic and interconnected approach. Implementation across agencies is often fragmented, with limited coordination among institutions involved in related areas such as the economy, education, territorial development, social protection, finance, and security. Existing state policies and public social services are primarily oriented toward alleviating socio-economic consequences rather than preventing their underlying causes. Moreover, the absence of comprehensive analytical and research data, as well as incomplete information systems, hinders the formulation of unified policy and effective decision-making. Therefore, deep institutional and substantive reforms are needed in the employment sector to establish a coherent, interconnected, and data-driven public policy framework. Such an approach must ensure broad cross-sectoral cooperation, enable identification and prevention of root causes, and enhance the long-term effectiveness of employment policy while

incorporating the perspectives of all stakeholders. Moreover, incorporating the perspectives of all stakeholders namely government agencies, universities, employers, and civil society, strengthens the long-term effectiveness of employment strategies, will foster human capital development, and ensure that workforce capabilities remain adaptable to evolving economic and technological challenges.

Ultimately, linking systemic employment reforms with the development of academic city will contribute to sustainable socio-economic growth, regional innovation, and the creation of a competitive and flexible labor force.

What refers to the concept of the Academic city it addresses the involvement of the private sector, specifically envisaging that, in collaboration with public and private organizations [14], the knowledge, technologies, and innovations generated within the city will be applied and utilized to promote public welfare and societal progress. Furthermore, according to Clause 19 of the concept's structure, in addition to state institutions, relevant private-sector entities will also be relocated to the Academic city as deemed appropriate. This arrangement creates a unique environment where education and employer engagement coexist in a single, integrated setting. This conclusion is further reinforced by Clause 29 of the concept, which describes the clusters within the Academic city: the technological cluster, for example, is expected to generate income from its own developments while simultaneously collaborating with private-sector organizations as a source of intellectual capital and access to advanced equipment.

The active inclusion of private-sector entities is a critical dimension in the design and development of the Academic city. By co-locating private companies alongside universities and research institutions, the Academic city will create a fertile ecosystem for knowledge transfer, innovation, and workforce development. Private-sector involvement ensures that academic programs and research agendas are aligned with actual industrial needs, providing students with direct exposure to market-relevant requirements and technologies. This integration enhances employability by bridging the existing gap between theoretical instruction and practical application. The engagement enables academic programs to move beyond static academic curricula and consolidate emerging tools, practices, and relevant approaches that reflect certain production and innovation environments. By integrating experiential learning within academic pathways, private-sector engagement contributes not only to graduates career prospects but also to broader economic objectives, including productivity

growth, innovation capacity, and workforce adaptability.

Moreover, private companies generally contribute resources, expertise, and mentorship that complement academic capacities. They can provide opportunities for internships, collaborative research projects, and joint innovation initiatives, thereby fostering an environment where students, faculty, and industry professionals work in close partnership. The technological cluster's collaboration with private organizations can bring opportunity to exemplify how shared intellectual capital, advanced equipment, and commercial experience can stimulate both innovation and entrepreneurial activity within the Academic city.

From a strategic perspective, private-sector inclusion also strengthens the sustainability and competitiveness of the Academic city. By embedding industry partners in clusters, the city can respond dynamically to emerging labor market demands, technological trends, and societal needs. This not only ensures that graduates acquire the skills demanded by employers but also positions the Academic city as a regional hub of innovation, attracting additional investments, talent, and partnerships. Ultimately, the symbiotic relationship between public institutions and private-sector entities becomes a key driver for both educational excellence and socio-economic impact, reinforcing the Academic city's role as a holistic ecosystem where knowledge generation, practical experience, and employment opportunities converge.

Perspectives

1. Integration of Private and Public Sectors

The Academic city should serve as one **conjunctional ecosystem** where HEIs, research institutions, and private-sector organizations coincide and collaborate. Through co-locating private-sector entities within the Academic city, Armenia can create dedicated platforms for joint research, innovation, and experiential learning. This co-existence allows students to participate directly in applied projects, engage with industry-standard technologies, and develop skills that are immediately relevant for the labor market.

Private companies from diverse sectors such as technology, engineering, finance, healthcare, and social enterprises, can provide mentorship, practical training opportunities, and exposure to organizational processes. This integration can not only strengthen workforce readiness but also enhance the applied knowledge, bridging the gap between theoretical instruction and relevant practice.

2. Alignment of Educational Programs with Labor Market Needs

To ensure graduates are adequately prepared for employment, academic curricula should be periodically reviewed and updated with private-sector stakeholders. This includes the integration of work-based learning, cooperative education, and project-based courses that enable students to deal with labor-market needs within private companies situated in the Academic city.

3. Establishment of Collaborative Research and Innovation Hubs

Academic Cities host joint laboratories, innovation clusters, and technology parks where students, faculty, and private-sector partners collaborate on applied research and entrepreneurial initiatives. Technological clusters within the city can serve as innovation engines, combining intellectual capital, advanced equipment, and industrial expertise to develop solutions with both academic and commercial value.

This strategy can support the creation of startups and spin-offs, strengthens the local knowledge economy, and enables students to gain hands-on experience in research commercialization.

4. Monitoring and Evaluation

To assess the effectiveness of the Academic city in achieving employability and innovation objectives, a robust monitoring framework should be implemented. This includes defining key performance indicators (KPIs) such as:

- Student employment rates within 6–12 months of graduation
- Number and quality of industry partnerships and internships
- Research commercialization outputs and innovation metrics
- Employer satisfaction with graduate competencies

Regular evaluation will allow policymakers and academic administrators to adjust strategies, improve curriculum design, and strengthen industry engagement to ensure that the Academic city meets both educational and labor market goals.

5. Incentives for Private-Sector Participation

In order to encourage active engagement, private-sector entities should be offered financial, tax, or regulatory incentives for participating in internships, collaborative research, and innovation initiatives. Embedded companies may have the opportunity to become strategic stakeholders, contributing to knowledge generation, mentorship, and the development of competitive graduates.

Moreover, participation will ensure a sustainable ecosystem, where private organizations may not only benefit from access to talent and research outputs but also contribute to the long-term development of the Academic city as a center for innovation, applied learning, and economic growth.

Conclusion

Academic cities represent a transformative model of higher education infrastructure capable of shaping not only educational outcomes but also the broader socio-economic trajectory of a country. By synthesizing comparative international experience from academic cities to education hubs and science parks and examining Armenia's current higher education and employment policy landscape, the study underscores that the Academic city offers a unique opportunity to align education, research, and labor-market development within a single integrated ecosystem. Such ecosystems extend beyond traditional university boundaries, functioning as dynamic urban system where knowledge production, human capital development, and economic innovation unite. International evidence shows that spatial clustering of universities, research institutions, and private companies generates significant advantages for regional innovation and employment. Academic cities, unlike isolated campuses or single-purpose research parks, provide a set of complementary infrastructures that strengthen applied learning, industry engagement, and graduate employability. These synergies are fundamental to the Academic city model, where interaction accelerates knowledge exchange and foster the development of flexible skills. Within the Armenian context, the Academic city initiative must be understood as both an educational reform and an economic development project. The conceptual framework approved by the Government highlights ambitions to create a campus-based cluster that facilitates high-quality teaching, research excellence, innovation, and knowledge transfer. However, the success of this initiative will depend on whether it can address systemic mismatches between higher education and labor-market needs. The Academic city provides an institutional mechanism to bridge these gaps by creating sustained platforms for university–industry collaboration, embedding private-sector actors within educational clusters, and ensuring that students acquire practical skills through exposure to authentic work environments. The Academic city presents a strategic opportunity to embed employment policy into the foundations of higher education reform by prioritizing human capital development, productivity growth, and entrepreneurship. This will require coordinated interministerial collaboration and a shift from fragmented interventions toward systemic, data-driven policymaking. Incorporating employer perspectives, labor-market intelligence, and sector-specific demand analyses will be essential for ensuring that educational programs evolve in line with economic transformation. Moreover, private-

sector participation should be positioned as a cornerstone of the Academic city's governance and sustainability model. Co-locating companies within technological, research, and innovation clusters will not only provide students with direct pathways into the labor market but will also strengthen the city's role as an innovation engine. Such arrangements can increase Armenia's competitiveness, attract investments, and stimulate the creation of high-productivity jobs.

In conclusion, the Academic city has the potential to become a catalyst for Armenia's socio-economic development by fostering an integrated environment where education, research, and employment are mutually reinforcing. Realizing this potential requires a comprehensive approach, which aligns national policy frameworks, institutional strategies, urban planning, and labor-market priorities. Through the convergence of public and private actors, academic excellence, and practical experience, the Academic city can reshape the country's educational landscape and contribute meaningfully to its long-term resilience, competitiveness, and prosperity.

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