

THE STRATEGIC IMPORTANCE OF HUMAN CAPITAL IN THE CONDITIONS OF GLOBAL ECONOMIC TRANSFORMATIONS

Dilmonov Qudrat Baxtiyorovich

Bukhara State University

Abstract. *The global economy is passing through a period of overlapping structural transformations — technological, ecological, demographic, and geoeconomic — that are reshaping the sources of growth and competitiveness. This article argues that in such conditions human capital acquires decisive strategic importance, functioning both as the enabler of adaptation to these transformations and as the principal source of resilience and long-term advantage. Drawing on human capital theory, the resource-based and dynamic-capabilities perspectives in strategic management, and evidence from the World Bank's Human Capital Index and international data on the green and energy transitions, the study first establishes why human capital is properly understood as a strategic asset rather than a mere factor of production. It then maps the principal global transformations and analyzes, for each, the strategic role that human capital plays: absorbing and directing technological disruption, supplying the skills required by the low-carbon transition, converting demographic change into a dividend rather than a burden, and building resilience amid the fragmentation of global value chains. The article shows that disparities in human capital account for a large share of the income gap between nations, examines the risks of underinvestment and inequality, and considers the strategic positioning of a transition economy through the case of Uzbekistan. It concludes that in an age of permanent transformation, the deliberate, long-term development of human capital is the most reliable strategy for national and organizational competitiveness.*

Keywords: *human capital, global economic transformation, strategic asset, competitiveness, dynamic capabilities, green transition, demographic dividend, resilience, Human Capital Index, transition economies.*

The world economy of the mid-2020s is defined less by any single trend than by the simultaneity of several deep transformations. The digital and artificial-intelligence revolution is redrawing the boundary between human and machine labour; the transition to a low-carbon economy is reallocating investment and jobs across entire industries; demographic change is ageing the workforce of advanced economies while expanding the youth population of developing ones; and the geoeconomic order built on ever-deepening globalization is fragmenting into competing blocs, reshored supply chains, and contested technologies. These transformations do not unfold in isolation; they interact and reinforce one another, producing an environment of sustained uncertainty in which the foundations of competitiveness are continually redefined.

In such conditions the strategic question for firms and nations alike is not how to optimize within a stable structure but how to adapt to structures that keep changing. This reframes the role of human capital. Physical capital, natural resources, and even accumulated financial wealth can lose value quickly when the structure of the economy shifts; what allows an economy to move with the transformation — to absorb new technologies, enter new industries, and reorganize production — is the knowledge, skills, health, and adaptability of its people. Human capital thus moves from being one input among many to being the strategic asset on which the capacity to transform depends.

The aim of this article is to substantiate the strategic importance of human capital in the conditions of global economic transformations. It pursues four objectives: to clarify, drawing on human capital theory and strategic management, why human capital should be treated as a strategic asset; to map the principal global transformations reshaping the economy; to analyze the specific strategic role human capital plays in navigating each of them; and to consider the associated risks and the strategic positioning of transition economies, illustrated through the case of Uzbekistan. The central argument is that in an age of permanent transformation the deliberate development of human capital is the most durable source of national and organizational competitiveness.

The claim that human capital is strategically important rests on the intersection of two bodies of thought. The first is human capital theory, established by Theodore Schultz and Gary Becker, which holds that investment in education, skills, and health raises the productive capacity of individuals and, in aggregate, of nations, and that a large part of long-run growth unexplained by physical inputs derives from the quality of human effort. The second is strategic management, which asks what makes an advantage sustainable. The resource-based view, associated with Jay Barney, holds that advantage flows from resources that are valuable, rare, difficult to imitate, and organizationally embedded — a description that fits human capital closely, since the tacit knowledge and collective competence of a workforce cannot be quickly bought or copied. Michael Porter's analysis of the competitive advantage of nations likewise placed specialized skills and knowledge-creating institutions at the centre of national competitiveness.

What makes human capital strategic in conditions of transformation specifically, however, is captured by the theory of dynamic capabilities developed by David Teece and colleagues. Dynamic capabilities are an organization's abilities to sense opportunities and threats, to seize them, and to reconfigure its resources accordingly as the environment changes. These capabilities reside ultimately in people — in their judgment, learning capacity, and creativity. When the economic structure is stable, ordinary capabilities suffice; when it is being transformed, dynamic capabilities become decisive, and because they are embodied in human capital, the strategic value of that capital rises precisely in periods of upheaval. Human capital is therefore not merely a stock that raises productivity but the wellspring of the adaptive capacity on which survival through transformation depends.

The strategic weight of human capital is visible at the level of nations. The World Bank's Human Capital Index, which measures the human capital a child born today can expect to attain by the age of eighteen given prevailing conditions of health and education, was created precisely to make this asset visible to policymakers and to spur investment in it. The Bank's analysis is striking in its implication: a substantial share — on the order of two-thirds — of the income gap between rich and poor countries can be attributed to differences in human capital rather than in physical capital or resources. If most of the wealth gap between nations is a human capital gap, then human capital development is not a social expense competing with economic strategy; it is economic strategy.

Before analyzing the strategic role of human capital, it is necessary to characterize the transformations to which it must respond. Five stand out, summarized in Table 1.

Table 1.
Global economic transformations and their human capital implications

Transformation	Key structural shift	Human capital requirement
Technological (4IR / AI)	Automation and augmentation of cognitive work	Digital and AI skills; adaptability
Green / low-carbon	Reallocation toward net-zero industries	Green and technical skills; reskilling
Demographic	Ageing in advanced, youth growth in developing economies	Productivity; lifelong learning; inclusion
Geoeconomic	Fragmentation and reshoring of value chains	Resilience; domestic capability building
Post-pandemic	Remote work and premium on resilience	Digital fluency; flexibility

The diffusion of digital technologies, and more recently of generative artificial intelligence, constitutes the most pervasive of the transformations. It automates routine tasks, augments cognitive work, and continually redraws the division of labour between humans and machines. Its defining feature, from a strategic standpoint, is speed: the value of specific technical skills can rise and fall within a few years, so that the capacity to learn continuously matters more than any fixed body of knowledge.

The transition to a low-carbon economy is reallocating capital and labour on a vast scale. Across the OECD, roughly one in five workers is already employed in green-driven occupations whose tasks are expanding or changing because of the net-zero transition. Global energy-sector employment reached about 76 million people in 2024, with the power sector — led by solar, grids, and storage — now the largest energy employer. Yet the supply of relevant skills lags demand: green talent has been sought roughly twice as fast as the workforce has acquired green skills, and industry analyses project a shortfall of several million skilled workers in core green sectors by 2030. The green transformation is, in large part, a human capital challenge.

Populations are diverging. Advanced economies and parts of East Asia are ageing rapidly, shrinking their workforces and raising the ratio of retirees to new entrants — in the energy sector of advanced economies, for instance, more than two workers approach retirement for every entrant under twenty-five. Much of the developing world, by contrast, is experiencing a youth expansion that can yield a demographic dividend — but only if young people are educated and employed. Demography thus poses opposite strategic problems in different regions, and in both the mediating variable is the quality of human capital.

The decades-long deepening of globalization has given way to fragmentation: reshoring and “friend-shoring” of supply chains, restrictions on the flow of strategic technologies, and intensifying competition for advanced capabilities such as semiconductors and artificial intelligence. In this environment, a nation's ability to build and retain domestic capabilities — rather than rely on frictionless access to global markets and talent — becomes a strategic priority, placing a premium on home-grown human capital.

Finally, the disruption of the early 2020s accelerated the normalization of remote and hybrid work and elevated resilience — the capacity to absorb shocks and continue functioning — as an explicit organizational and national objective. Both developments raise the value of a digitally fluent, flexible, and healthy workforce able to sustain performance under disruption.

Across all five transformations, human capital performs the same strategic function in different guises: it is the resource that converts external change from a threat into an opportunity.

In the **technological transformation**, human capital determines an economy's absorptive capacity — its ability to recognize, adopt, and productively deploy new technologies. Technology confers advantage only on those able to use it; the same tools that raise the productivity of a skilled workforce leave an unskilled one behind. The strategic imperative is therefore continuous reskilling, so that the workforce can complement rather than be displaced by intelligent machines, and the returns to technology accrue domestically.

In the **green transformation**, human capital is the binding constraint. Investment and policy commitments cannot be realized without engineers, technicians, and installers able to build and operate low-carbon systems; the widely reported green skills gap means that capital allocated to the transition risks being underused for want of qualified people. Strategically, economies that build green skills early can capture the new industries and export opportunities the transition creates, while those that do not may find their climate and industrial ambitions stalled regardless of available finance.

In the **demographic transformation**, human capital decides whether population change becomes a dividend or a drag. Where the workforce is ageing, higher productivity through skills and health, extended working lives, and technology-enabled work can offset a shrinking labour force. Where the population is young, education and skills determine

whether that youth becomes a source of innovation and growth or of unemployment and instability. In both cases, investment in human capital is the strategic lever.

In the **gloeconomic transformation**, human capital underpins resilience and strategic autonomy. As access to foreign technology and talent becomes less certain, the depth of a nation's own skill base determines its ability to sustain critical industries, substitute for disrupted inputs, and negotiate from a position of capability rather than dependence. A strong human capital base is, in this sense, a form of economic security.

The strategic significance of human capital is confirmed by its measurable relationship to national prosperity. Beyond the finding that most of the income gap between nations reflects differences in human capital, cross-country evidence consistently links education, health, and skills to productivity, innovative capacity, and the ability to move into higher-value activities. The proliferation of composite measures — the Human Capital Index, the Human Development Index, and the human capital pillars of competitiveness and innovation indices — reflects a broad consensus that the wealth of nations increasingly resides in their people. Table 2 gathers several indicators that illustrate the human capital dimension of the current transformations.

Table 2.

Selected indicators of the human capital dimension of global transformations

Indicator	Value
Share of the income gap between rich and poor countries attributable to human capital (World Bank)	≈ two-thirds
OECD workforce in green-driven occupations (OECD, 2024)	≈ 20%
Global energy-sector employment (IEA, 2024)	≈ 76 million
Growth in green talent demand vs. green skills supply, 2023–2024	≈ 11.6% vs. 5.6%
Projected shortfall of skilled workers in green sectors by 2030	several million
Governments in the World Bank Human Capital network (2025)	95

These figures point to a single strategic conclusion. In an economy being reshaped simultaneously along technological, ecological, demographic, and gloeconomic lines, the common denominator of successful adaptation is the quality of human capital. Nations and firms that treat its development as a strategic priority position themselves to lead the transformations; those that do not risk being led by them.

Recognizing human capital as a strategic asset implies a distinctive approach to its development. At the national level, it means treating education, health, and skills systems as instruments of economic strategy rather than as social spending to be balanced against growth: aligning curricula and training with the direction of the transformations, expanding tertiary and vocational capacity, embedding lifelong learning, and investing in the foundational health and cognitive development without which later skill formation is impossible. Because the transformations are fast-moving, strategic human capital development also requires anticipation — identifying emerging skill needs before shortages

bind — and inclusion, so that the whole population, not a narrow elite, can participate in and contribute to the new economy.

At the organizational level, the strategic view implies building the dynamic capabilities that reside in people: investing in continuous learning, cultivating the ability to sense and seize new opportunities, and retaining the knowledge workers who embody the firm's adaptive capacity. In both cases the logic is the same. The returns to human capital are long-term and cumulative, and the capabilities it generates are difficult for competitors to replicate; consistent, patient investment in people is therefore among the few strategies capable of producing durable advantage in an unstable environment.

Several risks complicate the strategic development of human capital. The first is underinvestment. Because the returns are long-term and hard to measure, investment in people is easily deferred in favour of expenditures with more immediate and visible payoffs — a tendency aggravated during fiscal pressure and precisely when the transformations most demand it. International evidence on the green transition illustrates the danger: fewer than half of the world's climate-action commitments incorporate any workforce-skills dimension, leaving investment plans exposed to skills shortages.

The second risk is inequality. The transformations tend to reward those with high skills and to disadvantage those without, so that without deliberate inclusion the gains concentrate and social cohesion frays. The third is mismatch: even where investment is adequate in aggregate, the skills produced may not correspond to those the transformations require, a gap visible in the persistent green and digital skills shortages. The fourth, especially acute for developing and transition economies, is the outflow of skilled people, which can drain precisely the human capital in which a country has invested. Managing these risks — through sustained financing, inclusive access, close alignment of skills with demand, and conditions that retain talent — is itself part of the strategic task.

For transition economies, the strategic importance of human capital is heightened by the need to converge with more advanced economies while simultaneously navigating the same global transformations. Uzbekistan illustrates both the opportunity and the challenge. With a young and growing population, the country possesses a potential demographic dividend that can be realized only through sustained investment in education and skills. Its national development strategy makes human capital and innovation explicit priorities, and recent years have seen a substantial expansion of educational provision — the higher-education enrolment rate rising from about 9 per cent in 2016 to some 42 per cent in 2023, with a target of 50 per cent by 2030 — alongside programmes to develop digital and technical skills and to strengthen the national innovation ecosystem.

At the same time, the country must position its human capital in relation to each of the global transformations: developing digital and AI competencies to participate in the technological economy; building green and technical skills to take part in the low-carbon transition, in which Central Asia's energy and water challenges make skilled workforces particularly valuable; converting its demographic youth into productive employment; and

deepening domestic capabilities as global value chains fragment. The strategic lesson is that, for a transition economy, human capital development is not one policy among many but the connective thread linking its convergence ambitions to the global forces reshaping the economy. The decisive constraints — the quality and international standing of research and higher education, the alignment of skills with emerging demand, and the retention of talent — are, in every case, human capital constraints.

The global economy is being reshaped by several deep transformations at once — technological, ecological, demographic, and geoeconomic — whose combined effect is to make continuous adaptation the central strategic challenge of the age. This article has argued that under these conditions human capital acquires decisive strategic importance. Grounded in human capital theory and in the resource-based and dynamic-capabilities perspectives of strategic management, the argument is that human capital is not merely a factor of production but the strategic asset that embodies an economy's capacity to sense, seize, and reconfigure in the face of structural change. Across every one of the transformations examined, the same pattern recurs: human capital is the resource that turns external change from a threat into an opportunity — through absorptive capacity in the technological transformation, through the skills that unlock the green transition, through the conversion of demographic change into a dividend, and through the resilience and autonomy demanded by a fragmenting global order.

The evidence reinforces the argument. Most of the income gap between rich and poor nations reflects differences in human capital; the realization of vast investments in the green and digital economies is constrained by shortages of skilled people; and the proliferation of human capital measures reflects a broad recognition that the wealth of nations now resides principally in their people. The strategic implication, for advanced, developing, and transition economies alike — and with particular force for a young economy such as Uzbekistan — is that the deliberate, patient, and inclusive development of human capital is the most reliable strategy for competitiveness in an age of permanent transformation. The task for future research and policy is to refine the measurement of human capital and to align its development ever more closely with the direction of the transformations it must serve.

REFERENCES:

1. Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120.
2. Becker, G. S. (1964). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. New York: Columbia University Press.
3. Bloom, D. E., Canning, D., & Sevilla, J. (2003). *The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change*. Santa Monica, CA: RAND Corporation.

4. Goldin, C., & Katz, L. F. (2008). *The Race between Education and Technology*. Cambridge, MA: Harvard University Press.
5. International Energy Agency (2025). *World Energy Employment 2025*. Paris: IEA.
6. OECD (2024). *OECD Employment Outlook 2024: The Net-Zero Transition and the Labour Market*. Paris: OECD Publishing.
7. Porter, M. E. (1990). *The Competitive Advantage of Nations*. New York: The Free Press.
8. Romer, P. M. (1990). Endogenous Technological Change. *Journal of Political Economy*, 98(5), S71–S102.
9. Schultz, T. W. (1961). Investment in Human Capital. *American Economic Review*, 51(1), 1–17.
10. Schwab, K. (2016). *The Fourth Industrial Revolution*. Geneva: World Economic Forum.
11. Sen, A. (1999). *Development as Freedom*. Oxford: Oxford University Press.
12. Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, 18(7), 509–533.
13. UNDP (2024). *Human Development Report 2023/2024*. New York: United Nations Development Programme.
14. World Bank (2018). *The Human Capital Project*. Washington, DC: World Bank.
15. World Bank (2019). *World Development Report 2019: The Changing Nature of Work*. Washington, DC: World Bank.
16. World Bank (2025). *Human Capital Project: Umbrella Program Annual Report 2024*. Washington, DC: World Bank.
17. World Economic Forum (2024). *Closing the Global Green Skills Gap*. Geneva: World Economic Forum.
18. World Economic Forum (2025). *The Future of Jobs Report 2025*. Geneva: World Economic Forum.
19. Prahalad, C. K., & Hamel, G. (1990). The Core Competence of the Corporation. *Harvard Business Review*, 68(3), 79–91.
20. Government of the Republic of Uzbekistan (2023). *Strategy “Uzbekistan – 2030”*. Tashkent.