

A theoretical assessment of Albania's post-transition economy, structural weaknesses, and framework for sustainable productivity-led growth _____

Geida KALIA

<https://orcid.org/0009-0005-0539-8737>

MSc CEMS INTERNATIONAL MANAGEMENT

BOCCONI UNIVERSITY, MILAN, ITALY

Email: geida.kalia@bocconialumni.it

Abstract

This paper assesses whether productivity-led growth can drive economic convergence in Albania's small transition economy by analysing the existing neoclassical and endogenous growth literature, utilizing a theoretical and comparative methodology based on descriptive statistics. The results show that Albanian economic convergence is conditional to structural constraints unique to the country – such as low-productivity sector predominance, lack of innovation, low knowledge absorption capacity, brain drain, and skill mismatches – which suppress total factor productivity growth in the country. This paper's novel contribution resides in its proposal of a qualitative productivity-led growth framework tailored to the Albanian structural characteristics, demonstrating that the path to convergence is through coordinated policy interventions and private sector engagement.

Keywords: *productivity-led growth; economic convergence; Albania; structural transformation; human capital; innovation*

Introduction

The paradigm of poorer economies is that they inevitably remain trapped behind income levels of more advanced economies, until an eventual shift in circumstances leads to them breaking out of the low-income trap or succumbing to it. The first neoclassical national income growth models considered the automatic and inevitable convergence of countries' income levels caused by capital accumulation and diminishing returns to capital; however, contemporary empirical evidence has shown that the 1900s models are insufficient in mapping the complexities arising in peculiar cases, such as transition economies, which possess unique structural traits even when compared to countries in the same geographical region.

Such limitations of the neoclassical framework have caused many scholars and economists to delve into adjacent theories and empirical studies, emphasizing the role of more "subjective" and often unquantifiable factors that can affect production, such as human capital or innovation. This theory applies perfectly to the Albanian context, as in the past two decades, the country has undergone massive positive structural shifts, such as market liberalization, openness, and foreign markets integration; however, it still faces substantial blocks it must overcome in order to converge with the EU bloc. Such challenges include resource allocation among economic sectors, dependence on remittances, continuous emigration, brain drain, low-to-inexistent innovation etc.

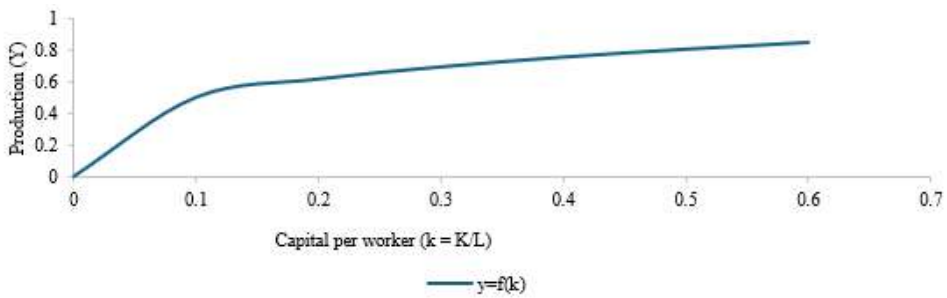
This paper seeks to shed light into the question of whether productivity-led growth can drive convergence to EU income levels in Albania, albeit its rampant structural weaknesses. For this purpose, this paper examines the available literature review on productivity and a related framework built to map the drivers of long-term convergence. Ultimately, this paper contributes to the never-ending debate on the factors of convergence for low-income countries by offering relevant insights on the Albanian structural traits and a framework for convergence that is replicable for small low-income economies with similar fundamentals.

Neoclassical convergence theory

The neoclassical growth model first introduced by Solow (1956) represents the simplest framework for understanding output dependence on economic factors of production, such that Output (Y) at any time equals a function of technological innovation (A), capital (K), and labour (L), as follows:

$$Y_t = AK_t^\alpha L_t^{1-\alpha}$$

FIGURE 1. Example of Solow's curve



Note. The figure illustrates an example of Solow's curve, where production (Y) is expressed as a function of capital per worker (K/L). As capital per worker increases (a term called “capital deepening”) arriving at the higher levels, the productivity Δ becomes lower, showing diminishing returns. Source: Author's calculations based on Solow's (1956) production model

In the formula above for long-term production growth (Solow, 1956), such growth is mostly driven by the exogenous factor of technological progress, which will greatly affect the outcome in case of country-wide productivity increases. As for the endogenous factors of capital and labour, by plotting the non-linear differential Cobb-Douglas equation of production growth proposed by Solow (1956) in Figure 1, with production (Y) in the Y-axis and capital per worker (k) in the X-axis, the resulting concave curve will display diminishing returns to capital as capital per worker increases. This characteristic of the Solow model curve implies that countries with a lower level of capital-per-worker ratio will represent poorer economies generating less production (Y); however, the potential increase in production for such economies will be much greater than that of richer ones residing in the diminishing returns portion of the Solow curve (as illustrated by the slope of the two arrows in Figure 1). As a result, this prediction represents the theoretical basis for economic convergence theory.

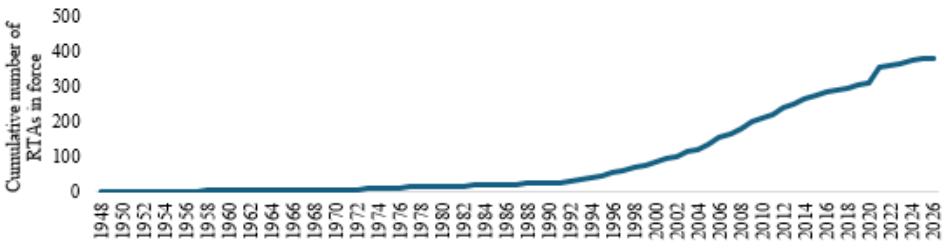
After Solow's pioneering efforts, a door was opened on the analysis of economic convergence, where subsequently Barro and Sala-i-Martin (1992) demonstrated that countries with lower initial income levels exhibited higher subsequent growth rates, once again proving the convergence dynamics described by Solow almost five decades earlier. For example, PRC's quick convergence to top-tier global production levels occurred in merely 40 years, resulting in a massive economic transformation that today rivals that of historically rich economies (Kuo, 2025). Nevertheless, modern empirical research has shown that economic convergence is not universal or uniform, suggesting that additional structural factors must be considered based on the economy of interest, for which peculiar structural factors might apply (Islam, 1995).

β vs. σ convergence

Barro & Sala-i-Martin (1992) distinguished convergence into two types: β -convergence and σ -convergence; where the former represents the negative relationship between initial income levels and growth rates (if income levels are low, potential growth is high), while σ -convergence represents the reduction in income dispersion over time across countries (meaning that countries will eventually converge to comparable levels of output). As of today, β -convergence has been frequently observed in economies like the PRC or post-communist Eastern European countries (Kuo, 2025), whereas σ -convergence has been less noted because countries ultimately possess significant differences in structural characteristics causing their production levels per worker to remain distant despite economic convergence theory (Islam, 1995).

Regarding the σ -convergence type, cross-country income distribution continues to showcase major polarization around the globe (Quah, 1996), where several convergence “clubs” have emerged in areas of similar fundamental economic characteristics. Such a theory is evidenced by the exponential creation of regional trade agreements (RTAs) after WW2 in countries with similar structural factors (WTO, 2026), such as the EU, AfCFTA, Mercosur, or RCEP (Figure 2). This ultimately challenges the simplistic implications of the neoclassical Solow model, proving that growth is heterogeneous among countries, especially those of distant geographical regions.

FIGURE 2. Trend of regional trade agreements (RTAs) in force for the period 1948-2026



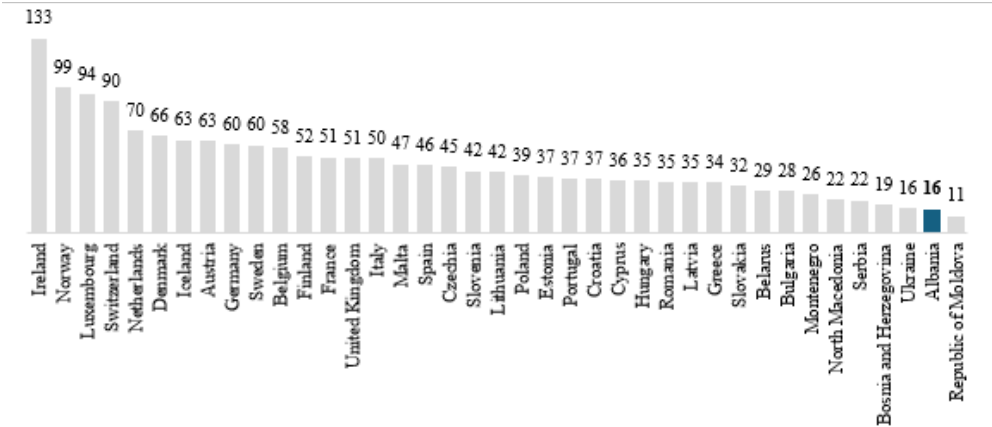
Note. The figure illustrates the cumulative number of RTAs per year for the period 1948 – 2026.
Source: Author’s calculations based on WTO (2026), Regional Trade Agreements Information System (RTA-IS), extracted on 28/03/2026

Conditional vs. absolute convergence

Another theoretical distinction among types of convergence is the conditional vs. absolute theory, which represents a refinement of the neoclassical production growth model (Mankiw, Romer, and Weil, 1992). Absolute convergence (Solow, 1956) is the neoclassical production growth model which predicts identical

structural parameters across economies. On the other hand, conditional convergence predicts differences in savings rates, population growth, human capital, and institutional quality across countries that possess diverse structural parameters (Mankiw, Romer, and Weil, 1992). For example, based on the conditional convergence theory, the Albanian economy reasonably shall possess a much lower savings rate, a higher population growth rate, lower quality human capital, and weaker institutions compared to Ireland, the EU country with the highest GDP/capita (Figure 3); therefore, one cannot compare these two countries solely on the basis of capital (K), labour (L), and technological innovation (A), as that would bypass the entirety of structural factors making these economies so disparate.

FIGURE 3. Real GDP per capita in Europe in 2023 (in USD thousands)



Note. The figure illustrates real GDP per capita (in \$K) in Europe in 2023, where the Albanian real GDP/Capita is second to last.

Source: Author’s calculations based on based on the Penn World Table 11.0 (Feenstra et al., 2015)

Indeed, empirical evidence provided by economists strongly supports the conditional convergence theory (Mankiw, Romer, and Weil, 1992), proving that when the Solow model is expanded to include human capital parameters pertaining to a particular economy, the observed patterns of convergence will be similar to theoretical predictions. Conclusively, conditional convergence theory proves that structural features are key to determining the long-run income levels of a particular economy.

Role of capital deepening

Capital (K) is one of the key pillars of the neoclassical Solow production growth model; however, diminishing returns are applicable in the long run as per the concave plot of the Solow curve in Figure 1, meaning that capital has a relatively low influence in attaining sustainable long-term growth. In contrast, economists have suggested that it is not capital, but technological innovation what leads to improvements in productivity, which in turn leads to sustainable growth in the long run (Islam, 1995). As evidenced by empirical studies, technology and productivity levels are crucial for explaining persistent income disparities among countries, despite low-income ones having ample room for growth according to the Solow curve.

For example, despite the strong economic growth of the Albanian economy in the first 35 years post-transition, the country still showcases vast disparity in income levels per capita compared to South Korea, whose post-war economic “miracle” has caused its GDP per capita to rise from \$158 in the 1960s to over \$35,000 in 2023 (Jeon, 2025). The boom of South Korea’s GDP per-capita is attributable to its fast pace of technology innovation, transforming it in the second most technologically advanced country in the world after Japan, according to the World Population Review (2026).

Endogenous growth and productivity

The neoclassical production growth model (Solow, 1956) led to the subsequent development of endogenous growth theory (Romer, 1990), which focuses on the role of internal factors of production (human capital, innovation, and knowledge spillovers) that drive sustainable economic growth over time. In Romer’s endogenous growth theory, conversely to Solow’s neoclassical production model’s assumption, the technological factor (A) is not exogenous but endogenously determined within the model (Romer, 1990).

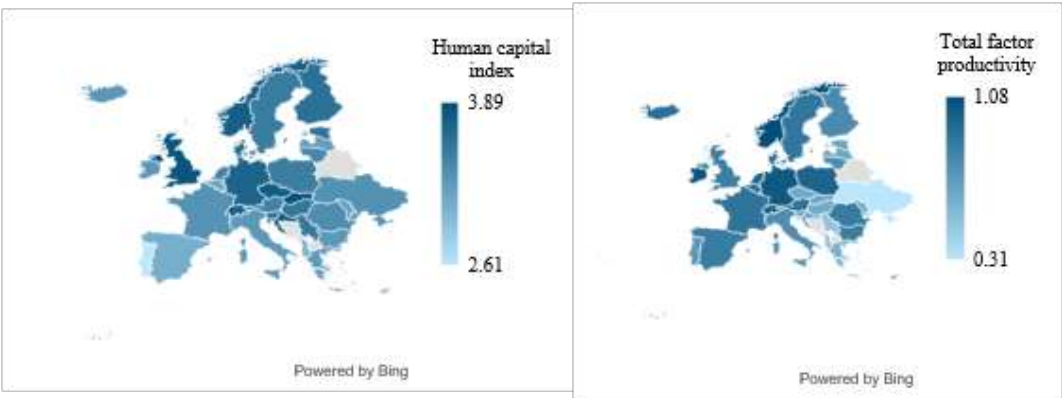
Human capital accumulation

Human capital is extremely relevant to endogenous growth models, as an advanced set of skills and aptitudes of the labour force can generate positive externalities that drive productivity (Lucas, 1988). Economists have further added that education and continuous training are crucial investments to obtain a skilled workforce that is adaptable to change and increasingly productive (Becker, 1964). This paradigm persists nowadays. For example, top employers and governments are currently

funding massive training campaigns to be able to keep up with GenAI-related labour market shifts, in order to not fall behind early adopting countries and to remain competitive in the global landscape.

Moreover, there are vast empirical studies and statistics in support of the human capital and production link (OECD, 2015), proving that diversity in human capital quality determines the productivity gap across countries. As evidenced in Figure 4 (Feenstra et al., 2015) reporting the hc (human capital index) and ctfp (total factor productivity) parameters across Europe in 2023, EU countries (Germany, Switzerland, Croatia, Norway) visibly surpass non-EU economies (Albania).

FIGURE 4. Human capital index (hc) and total factor productivity (ctfp) dispersion in Europe in 2023



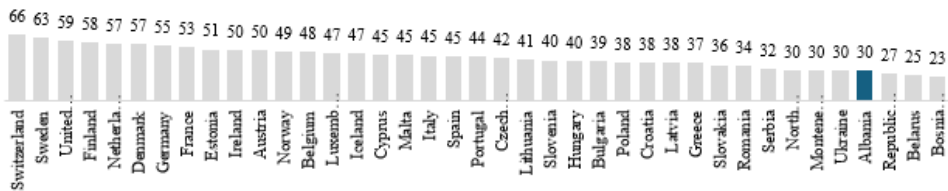
Note. The figure illustrates the dispersion of human capital index (on the left) and total factor productivity (on the right) in Europe in 2023, where data for Bosnia-Herzegovina, Montenegro, North Macedonia, and Belarus are missing. Human capital index is calculated based on years of schooling and returns to education, whereas total factor productivity (index of relative productivity of a country compared to other countries) is calculated at current PPPs (purchasing power parities, where the baseline is USA=1).
Source: Author's calculations based on the Penn World Table 11.0 (Feenstra et al., 2015)

Statistics on human capital index and total factor productivity help explain the trend of real production GDP per capita across European transition economies in 2023 as illustrated in Figure 3 (Feenstra et al., 2015), where for same region countries like Albania and Bulgaria in the Balkans, the result is significantly higher in Bulgaria where ctfp and hc are greater (\$ 28K, Figure 3) vs. Albania where the two parameters are much lower (\$ 16K, Figure 3). Such a difference in human capital factors of non-EU countries can be explained by deficiencies in the education system, structural inefficiencies hindering knowledge spillover, lack of investment in training, and lack of upskilling/reskilling, resulting in a workforce significantly less competitive compared to EU countries (Barro and Sala-i-Martin, 2004).

Innovation and knowledge spillovers

According to the endogenous growth theory, innovation is not an exogenous factor of the Solow model but endogenous, created by governments and companies through investment in R&D (Romer, 1990), which in turn improves productivity via technological change, generating increasing returns to scale. Aghion and Howitt (1992) provided further contribution in support of Romer’s endogenous innovation theory; by introducing the concept of creative destruction, meaning that new innovations will eventually become obsolete in time as they get replaced by better technology with higher productivity performance.

FIGURE 5. Global Innovation Index scores in Europe in 2025



Note. The figure illustrates the Global Innovation Index 2025 scores across European countries, calculated as the simple average of the Innovation Input and Output Sub-Index scores per country.
Source: Author’s calculations based on WIPO 2025 Global Innovation Index dataset (World Intellectual Property Organization, 2025)

Innovation and productivity performance are tightly linked, as suggested by reports of the World Economic Forum (2019) and the European Commission with statistics showcasing that innovation leader EU countries (Figure 5) with strong innovation systems exhibit higher productivity growth and resilience against uncertainty than the emerging innovators of the bloc (European Commission, 2025).

Technology diffusion in small open economies

Productivity growth is driven by technology diffusion rather than pioneering innovation in the case of small open economies, such as Balkan countries, which lack the investment capacity and human capital quality to produce proprietary technology. International R&D knowledge spillover, oftentimes enabled by trade and FDI routes between industrialized countries and emerging economies (Coe and Helpman, 1995), significantly increases productivity in the receiving country.
For example, if an MNE opens up a subsidiary in a Balkan country to say, produce cars, then it is highly likely that the manufacturing handiwork shall be

done by the cheaper local labour, but the managers of the production plant shall be highly-skilled imported workers who will explain to locals how to use the machinery, raise productivity, understand defects, and so on. As a result, local labour force working for the MNE will become upskilled and apt enough to run the plant on their own, without external supervision. Ultimately, if a worker gathers enough knowledge, at any time he/she could open their standalone domestic car production facility benefitting from state subsidies or funding schemes, reaching the full-circle outcome of the knowledge spillover effect. This theory is reasonably backed by real-life statistics and examples, such as Serbia's successful car manufacturing industry which was honed by Fiat-Chrysler Automobiles FDIs.

However, knowledge spillovers follow a cautionary tale, that a country is only able to reap the benefits of such spillovers if it has sufficient absorptive capacity, which ultimately depends on human capital and cultural fit. Countries with higher human capital KPIs (proxied by *hc* and *cftp*) and stronger institutions (less bureaucracy and corruption) will be more absorptive of the knowledge imbued by foreign investments (International Monetary Fund, 2019), because of their ability to swiftly adopt and later adapt to foreign technologies. On the other hand, if a country's human capital is scarce, institutions are weak, and local culture clashes with the externally introduced technology, the knowledge diffusion will be limited, causing convergence to industrialized countries unlikely unless the structural factors change (Coe and Helpman, 1995).

EU integration and convergence clubs

As this paper focuses on the European economic landscape and its inherent dynamics, it is important to note that for smaller non-EU countries, integration within the EU club appears to be a most-desirable outcome to overcome current convergence dynamics. However, this presumed benefit comes with its own cautionary tale, as the European Union itself has promoted income-level convergence among member countries through market integration efforts (Eurozone) and funding (liquidity packages for new members), and yet the process of convergence has failed in various regions creating core-periphery dynamics within the bloc.

Core-periphery dynamics

The European Commission itself has identified persistent core-periphery dynamics, where the more advanced economies in the club continue to maintain high productivity and strong innovation, while emerging economies still struggle to converge even after many years of EU accession (Figure 3 and 5).

This phenomenon can be explained by the structural differences that exist across countries, creating a vicious cycle of disparities in income, lower productivity, and cultural clashes, making convergence ever more difficult because of the fundamentals of each country rather than temporary external shocks (European Commission, 2023).

Middle-income trap risk

Another economic theory that seeks to explain the lack of convergence among countries is the middle-income trap (Eichengreen et al., 2013), which shows that after reaching middle-income levels many countries will experience a slowdown in growth, explained by the Solow curve's marginal returns section. If economies fail to switch from factor-driven growth (capital and labour only) to innovation-driven growth (technology which increases productivity), they will inevitably get stuck in the middle-income trap with diminishing returns to capital, unable to break out of the trap unless they promote R&D, technology absorption, and productivity enhancement measures. This risk is particularly noticeable in transition economies, which grow extremely rapidly in the first post-transition years thanks to early gains from labour reforms and capital accumulation, but later stall once the baseline for middle-income is reached, unable to achieve sustainable productivity growth.

For example, in the last decades few countries have been able to “escape” the middle-income trap and achieve high GDP per capita levels, namely Saudi Arabia, Latvia, Bulgaria, and South Korea (Feingold, 2024). Research from the International Monetary Fund further adds that the countries still stuck in the middle-income trap oftentimes struggle to keep up with the pace of ever-changing technology innovation in advanced economies, causing their products and services to become more easily mature and obsolete, thus lowering comparable productivity and driving lower wages (Imam and Temple, 2024).

Western Balkan specificities

The Western Balkan region has demonstrated unique structural traits, which stand at the root of the current convergence challenges these countries face. The region is characterized by weak institutions, high levels of emigration, and incomplete post-transition transformation (EBRD, various years; World Bank). According to the EBRD (2023, 2024), the region has made gigantic steps in recent decades, narrowing the GDP per capita gap; however, according to recent growth trends, convergence to EU income-levels could require 70 years more, given the structural factors that confine Western Balkan's income-level inside the middle-income trap (Figure 3). Better governance, cross-border cooperation, and green

economy adoption are some of the reforms proposed by the EBRD (2023) to help Western Balkans bridge the gap with EU countries.

Compared to Central or Eastern European post-transition economies, the Western Balkans' unique structural factors cause volatile production, slow convergence, and low innovation adoption (EBRD, 2023). Based on OECD's (2025) economic convergence scoreboard statistics, the Western Balkan region remains far below the EU average for several important convergence attributes, such as control of corruption, informal employment, trade flows, lifelong learning, labour productivity, youth NEET¹ rate, waste management, water productivity etc. This data shows that despite the rapid progress made in the first transition decades, substantial gaps reside between the Western Balkans and Eastern European EU members.

Structural characteristics of the Albanian economy

Albania provides a peculiar case of transition from closed to open economy, given the unique traits of its Communist regime with repercussions still felt nowadays after almost 3 decades post-transition. Understanding Albania's unique structural characteristics will help assess productivity dynamics and explain its convergence trend compared to other countries in the Western Balkan region.

Unique Albanian structural characteristics

Small open economy

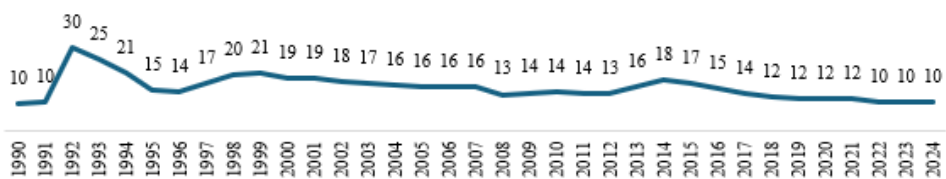
Albania began adopting an open economy from the beginning of the 1990s, following a wave of revolution against socialism across Eastern European countries resulting in the chain dismantlement of Communist regimes, bringing about the switch from closed to open economy. Today, Albania boasts fully open liberal markets, with a strong reliance on foreign trade and welcomes foreign capital flows (World Bank, 2023). The high degree of openness of the Albanian economy, as well as policies that stimulate foreign investments, have facilitated rapid GDP growth while simultaneously increasing vulnerability to negative external shocks due to globalization (such as the Covid-19 pandemic) (Uku, Ilollari, & Shehu, 2024).

Nevertheless, Albania's road to an open economy has not been without hurdles. When the economic transition first started in 1991-1992, causing the collapse of the centrally planned economic system and its related institutions, the country

¹ Youth not in education, employment, or training. If this rate is high it signals potential structural issues in the labour market as youth is disengaged

went into shock. Be it for the dismantling of institutions leaving many jobless, or the “exodus”-like wave of emigration that followed, the transition caused unemployment rates to jump dramatically in only one year, from 10% in 1991 to 30% in 1992 as illustrated in Figure 6 (World Bank WDI). During this time, most citizens still worked in agriculture (Figure 7), which in 1990 covered more than 60% of the total employed workforce (industry 15% and services 25%), showing that the economy was relatively “primitive” compared to Western countries which had already industrialized at this point (World Bank WDI).

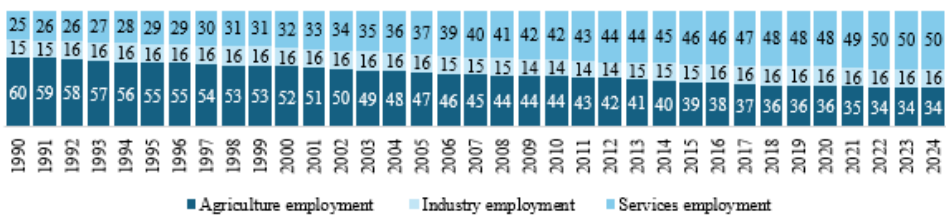
FIGURE 6. Unemployment in Albania for the period 1990-2024 (in %)



Note. The figure illustrates the level of unemployment in Albania for the 1990-2024 period (in %).

Source: Author’s calculations based on historical World Bank data.

FIGURE 7. Employment across economic sectors in Albania 1990-2024 (in %)



Note. The figure illustrates the dispersion of employment in Albania (in %) for the 1990-2024 period across the three economic sectors: agriculture, industry and services.

Source: Author’s calculations based on historical World Bank data.

As years passed, the ratio of employed workforce shifted among agriculture, industry, and services, resulting at respectively 34%, 16%, and 50% of the total workforce in 2024 (World Bank); which reflects the giant steps the Albanian economy has taken to switch agriculture with services as the largest domestic production sector (Figure 7). Such a trend can be explained by the recent tourism boom in Albania, that prompted widespread private and public investments into services, attracting more FDI inflows, as illustrated in Figure 8 (UNWTO, World Bank WDI).

FIGURE 8. Tourist arrivals in Albania (in millions) vs. FDI inflows (in USD billion), 2010-2024



Note. The figure illustrates the trend of tourist arrivals in Albania (in millions) and FDI inflows (in USD billions) for the 2010-2024 period, highlighting the boom of tourism and FDIs in the last four years of the dataset.

Source: Author's calculations based on historical dataset from UNWTO (for tourist arrivals) and World Bank WDI (for FDI inflows).

Another explanation for the “boom” of services is arguably the digitalization of the country’s out-of-date technological architecture and infrastructure. As many technologies have already become obsolete in the West, the younger generation is increasingly investing in education and digitalization projects to refurbish the country’s outdated tech pipeline. Post-pandemic, the main economic growth areas in Albania are precisely education, info-tech, communication, and trade, with the key FDI investors being Italy, the Netherlands, and Switzerland (United Nations World Tourism Organization).

Following the dip in employment in the first years post-regime change (Figure 6), the country underwent a series of internal reforms that led to the gradual labour market stabilization in the 2000-2012 period (World Bank), with the unemployment rate gradually falling from 30% in 1992 to 13% in 2012, reaching almost pre-transition employment levels. However, following the European sovereign debt crisis of the early 2010s, unemployment quickly rose to 18% by 2014, generating major public discontent that ultimately resulted in political rotation in the same year.

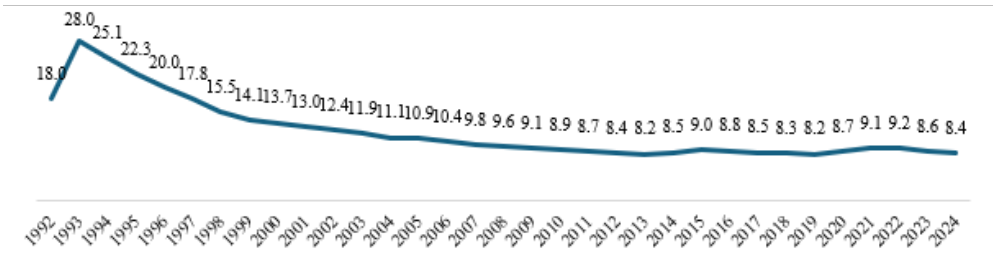
Reasons for the labour market stabilization in the 2000-2012 period are mainly the expansion of private sector employment (Muço et al., 2004), agriculture focus decline (World Bank), and services sector prioritization (World Bank). These efforts ultimately resulted in the steady shift of the Albanian economy from an agricultural primitive one to a modern services-oriented one (Figure 7), with unemployment steadily falling to about 10% by 2024 (World Bank) given the massive creation of new jobs by the services sector.

Nevertheless, several structural traits challenge the sustainable growth of the Albanian economy, namely high youth unemployment (historically fluctuating around 20%, according to World Bank data), large informal economy (causing unfair competition, low tax revenues, and misaligned incentives, according to Muço et al., 2004), mass migration (causing brain drain as 1 in 5 Albanians emigrated in the 2012-2022 decade, according to a survey from Balla and Canga, 2023), and relatively high agricultural employment in comparison to EU standards (capped at around 4% of total workforce in the EU vs. 35% in Albania in 2023, according to Trading Economics data).

Remittance dependence

Another major structural problem of Albania remains the dependence on remittances, which represent a significant share of national income as illustrated in Figure 9 (Trading Economics, 2026). Remittances, corresponding to personal money transfers and employee compensation from abroad, peaked at over 11% of national GDP in 2015 and later gradually declined to approximately 8% of GDP in 2024 (Trading Economics, 2026). Based on statistics from the World Bank and the Bank of Albania (various years), remittance inflows have supported consumption, balanced the current account deficit, and reduced poverty, showing massive increase in absolute amounts in recent years, despite the declining trend as a ratio of GDP in Figure 9 (Trading Economics, 2026). From a microeconomic perspective they are utterly necessary in the Albanian context, as they aid seasonal employees and unemployed family members of those sending the remittances, but on the other hand they can create adverse macroeconomic effects, such as the discouragement of the labour force from participating in the national economy by filling vacant job positions.

FIGURE 9. Personal remittance inflows in Albania (in % of GDP) for the period 1992-2024



Note. The figure illustrates the inflows of personal remittances in Albania (in % of GDP) for the period 1992-2024, highlighting a decline in the trend albeit the relatively high values.
Source: Author's calculations based on historical dataset from Trading Economics (World Bank).

Limited industrial base

The Albanian economy's weakest link is its industrial sector, employing only 15-16% of the total workforce since 1990 as illustrated in Figure 7 (World Bank). This aligns with Blanchard's (1997) comprehensive analysis of transition from central to market economy, which highlighted the widespread industrial output collapse in the early 1990s across Eastern Europe caused by abrupt disruptions of old supply chains and centrally protected domestic markets. Moreover, in the years following the regime fall, characterised by an ongoing institutional restructuring, many formal industrial jobs were lost due to production disruptions, which led civilians to seek occupation in the highly informal agricultural jobs that were more readily available (Muço et al., 2004). The Albanian industrial sector fits within the broader phenomenon of premature deindustrialization (Rodrik, 2016), applicable to transition economies that deindustrialize in the short-to-medium term, losing any potential productivity gains through manufacturing. Indeed, up until the 1990s, Communist-era industrial production had amounted to about 40–45% of total GDP, only to be more than halved at about 20–25% by the 2000s (World Bank).

Service-dominated growth

Productivity growth in Albania has been mainly driven by the services sector in recent years which peaked to about 50% of national GDP in 2024 out of an absolute amount of \$ 27.18Bn total GDP (World Bank), with the main segments being tourism and retail. However, according to OECD research, the service sector provides lower productivity growth rates compared to manufacturing, one of the pillars of the industrial sector (Sorbe et al., 2018). Indeed, according to a study across 21 OECD countries, labour productivity growth (computed as value added per person engaged) resulted quite low for the services sector at a mere 1,3%, while it was more than double for the manufacturing sector at about 3% (Sorbe et al., 2018). Such findings could help explain why the levels of productivity in Albania remain so low despite the major growth observed in the services sector, as the country is suffering the opportunity cost of industrialization-led productivity growth which could open new frontiers towards convergence.

Productivity dynamics in the Albanian economy

Productivity gaps and low innovation

Productivity gaps across sectors are rampant in Albania, as statistics show that agricultural productivity is one of the lowest in Europe (OECD, 2021). Data

from INSTAT show that GDP growth in the last years has been mainly driven by construction and services, while the industrial and agricultural sectors have shown negative growth (contraction) (Albanian Conservative Institute, 2025).

Moreover, this negative trend is not fought through efforts of promoting innovation and knowledge absorption, as according to the EU Innovation Scoreboard, Albania showcased a relatively low innovation performance at 41,1% of the EU average in 2023, standing below the performance of fellow emerging innovator countries (OECD, 2024). The low results can be attributable to the complete lack of R&D expenditures by both the public and private sector, causing innovation activity in Albania to remain limited (OECD, 2024). Indeed, in 2022 Albania spent approximately 0,20% of its GDP on R&D initiatives, much lower in comparison to the 2,2% EU average (Eurostat, 2024). Such low R&D expenditures help explain the lacking innovation performance of the country, reflecting weak institutional and corporate support which must change in order to attain innovation-led productivity growth.

Human capital and innovation constraints

Despite consistent improvements in the domestic education sector, both public and private, which has led to the increase in average years of schooling from 9 years in 1990 to 12 years in 2023 (Global Data Lab), Albania faces many challenges in terms of quality of schooling and relevance of the learned skillset vis a vis the modern labour market (Nikolli & Shehu, 2022). Labour market research points out that the country is still suffering from widespread skill mismatch, as surveys indicate that more than 27% of employees have an education level higher than their current occupation, while 12% lower than their job requirements (OECD, 2024).

Moreover, Albania lags behind both the Western Balkans region and EU bloc in terms of digital skill development – surveys show that as of 2021, merely 23.8% of the workforce possessed basic or above-basic digital skills vs. the much higher EU average at 53.9% (OECD, 2024). The upskilling/reskilling of the current Albanian workforce requires training promoted by both the public and private sector, but this is currently not happening at the right pace, as in 2023 only 12% of employees had participated in continuous training to enhance their digital skills vs. 25% in the EU (OECD, 2024). These wide hurdles are also the reason for low labour productivity, technological adoption, and knowledge absorption in the country, and the government should take act via adequate policymaking to catch up to the regional skill and digitalization levels.

Nonetheless, arguably the biggest structural constraint for the Albanian workforce remains brain drain due to mass emigration of young students who wish to study abroad and receive greater qualifications thanks to the EU bloc's

high education quality (OECD, 2024). The cause-effect link between brain drain and low productivity is evidenced by Docquier and Rapoport (2012), who suggest that the loss of skilled workers (such as university students and NEETs²) hinders long-term productivity growth and innovation capacity.

Fortunately, there appears to be a recent trend of return migration, with 45% of all returns occurring between 2020 and 2024, which gives hope of the progressive Albanian labor market integration in the long run despite these initial challenges (World Bank, 2024). Nevertheless, data for 2020-2024 returnees reflects a low employment rate at 46% vs. 93% for those who returned in 2000-2004 (World Bank, 2024), suggesting that successful reintegration in the domestic labour market requires longer periods of time in order to reap the most benefits of integration. On the other hand, when comparing working-age returnees to non-migrants, the employment rates of the former are higher at 58% trailed slightly behind by non-migrants at 47% (World Bank, 2024), showing that employment prospects for non-migrants are inferior especially for jobs that require a more advanced skillset and digital know-how.

Conceptual framework for productivity-led convergence in Albania

Conceptual framework proposal

Stemming from the neoclassical and endogenous growth literature review, as well as structural characteristics of the Albanian economy as identified in the previous chapters, this research proposes a productivity-focused convergence framework based on descriptive statistics, that is conditional to the structurally unique traits of the country, tailored to reflect the weaknesses of Albania's post-transition economy.

As opposed to Solow's neoclassical production convergence model based on capital accumulation (Solow, 1956; Barro and Sala-i-Martin, 1992), the framework proposed in this paper emphasizes that convergence is not guaranteed by capital deepening but is a byproduct of the dynamism between productivity and structural limitations. Despite the generation of major short-to-medium term growth through capital accumulation, as per Solow's curve, the only way to sustain growth in the long run at the point of converging to the EU bloc would be through continuous improvements in total factor productivity, which is currently stalling around 0 for the Albanian economy as per the Penn World Table's statistics in Figure 4 (Feenstra et al., 2015).

As explained in the literature review section of this paper, the main drivers of total factor productivity are human capital, innovation, and technology diffusion

² Youth not in education, employment, or training

through knowledge spillovers (Romer, 1990; Lucas, 1988), meaning that in order to insert the subjective notion of total factor productivity in our model, we must account for these underlying factors. Therefore, the proposed framework for tracking convergence of the Albanian economy, hereby intended as a qualitative conceptual tool, shall map these three levers:

- 1) resource reallocation,
- 2) human capital,
- 3) innovation.

The resulting framework shall be as follows:

$$\Delta \text{ Production Growth} = f(R^+, Hc(B^+, E^+, U), I(B^+, A^+, Fd^+ \wedge In^+))^3$$

Resource reallocation

The reallocation of resources from low-productivity economic sectors to high-yield ones (from agriculture to light industry and services) is mapped as one of the main drivers for convergence based on productivity-led growth theories and supporting evidence. Despite being unable to adopt heavy industry in the short term given the high CAPEX requirements of such a sector, investing in light industrial segments (such as manufacturing, textiles, food and beverages) will prove highly beneficial in improving competitiveness in the region, exports, and import-dependency. Given Albania's premature deindustrialization, the government's focus must shift from honing the services sector towards industry to untap the productivity potential coming from it (Rodrik, 2016).

Human capital

Strengthening the human capital pipeline of the country is another focal point towards productivity-led growth based on the endogenous growth theory

³ Where:

R - resource reallocation from agriculture to industrial sector

Hc - human capital

B - brain drain

E - education years

U - upskilling/reskilling training

I - innovation

A - absorption capacity of knowledge spillovers

F - foreign trade

Fd - FDI (foreign direct investments)

In - Foreign markets integration through regional trade agreements (RTAs)

that education and skills training are malleable via policymaking and enhance both productivity at the microeconomic level and innovation capacity at the macroeconomic level (Lucas, 1988). In Albania, the underlying factors of human capital to be targeted are emigration (brain drain), education, and upskilling/reskilling.

Innovation

In the case of Albania, the focus should not be frontier innovation but R&D that aims at the adoption of foreign advanced technology and related adaptation of the public and private sector. The country could immensely benefit from international knowledge spillovers coming from the skilled workforce that has emigrated, so it could utilize brain drain in an advantageous manner if it seeks to attract the return/cooperation of such invaluable resources. Moreover, knowledge spillovers could be also gained via foreign trade, FDIs, and integration into RTAs⁴ and global markets (Coe & Helpman, 1995). However, it is important to also consider the negative externalities coming from weak institutions that could hinder the country's capacity to fully benefit from spillover effects, given its long history of informality, corruption, and bureaucracy.

It is important to note that the three framework pillars interact dynamically with one another. For example, the reallocation of material resources among sectors can affect the distribution of the workforce, shaping human capital and the skillset labourers need to hone. Moreover, education deepening and skillset amelioration can enhance absorptive capacity towards innovation coming from knowledge spillovers. This is an interconnected framework where each factor reinforces or weakens the others depending on their underlying mechanisms; highlighting that, while during effective policy periods the country will move in synch towards greater productivity, in times of policy misalignments or ineffectiveness potential dead-ends and vicious cycles might appear, trapping the country in subpar productivity levels. Consistent with the middle-income trap literature, failure to meet the frameworks' requisites for Albania's productivity-led growth will eventually bring about a growth slowdown or even economic stagnation (Eichengreen et al., 2013).

Theoretical policy implications

The conceptual framework proposed in section 5.1 suggests a set of important policy implications, considering the current stage of development of the Albanian transition economy. First, based on the literature review in the first sections of

⁴ Regional trade agreements

this paper, one can deduce that capital accumulation is insufficient for producing long-term sustainable growth and thus convergence to the EU bloc countries, given the diminishing returns of capital deployment.

Based on the observed evidence, FDIs and foreign capital inflows through remittances will continue to remain crucial for the Albanian economy's progress towards convergence, but they must not be the sole pillar of growth. They are to be accompanied by government measures that seek to improve the currently lacking structural factors, such as education through appropriate reform of the school system and related learnings, innovation through subsidies and tax benefits for tech companies and digital investors, and institutional weaknesses through the fight against corruption, bureaucracy, and organized crime.

Second, human capital must become the focus of policymakers who should prioritize quality rather than quantity of workforce. Moreover, skilled workers are not only characterized by merely longer years of schooling, but also relevant technical knowledge in each sector, so training programmes must be enabled for the acquisition of such aptitudes to upskill/reskill the existing workforce and prepare the next generation of skilled workers. This policy would help reduce the lack of adequately skilled figures for technical roles and align national higher-level education programmes to the labour market needs, thus lowering NEET⁵ unemployment rates. Lastly, creating policies for the incentivization of return migration of students and diaspora engagement of professionals could help lower brain drain, bringing invaluable skills and aptitudes "home" to hone innovation and knowledge spillovers.

Third, the government should also promote industrial sector production, which currently plays a marginal role in overall workforce employment and GDP growth. Given the premature deindustrialization that the Albanian economy underwent in its first transition years, much central support is needed to boost production in the largest industrial sectors, particularly for those with higher productivity and lower skill requirements. Simultaneously, the government should work towards improving the integration of Albania's industrial pipeline into the regional and global value chains, promoting exports and multilateral cooperation.

Fourth, promoting the creation of a domestic R&D pipeline should be a focal point for future policymaking, as currently there is a lack of innovation initiatives from the public and private sector, which in turn inhibits total factor productivity growth. Promoting R&D does not merely amount to increasing public spending in research or subsidizing private sector initiatives; it also requires honing the multilateral cooperation of companies, higher-level education institutions, private universities, and state offices to extract the most value out of the education system. Over time, policies like innovation-related FDI promotion (in sectors such as technology and communications), private sector subsidies and tax benefits for tech

⁵ Youth not in education, employment, or training

firms, and collaboration with universities and scholars will lead to a substantial shift in the mindset of the country's workforce and entrepreneurial ecosystem regarding innovation.

Lastly, strengthening foreign policy and international relations will be key to obtain European Union integration in the medium term, following recent efforts of the Albanian government which reopened EU accession talks in late 2025 (Nič et al., 2025). Diplomacy is crucial; however, merely a marginal factor in the successful integration within the bloc, as ultimately alignment to EU standards set forth by the European Commission in the negotiating clusters remains decisive; namely the alignment of economic fundamentals, internal market regulation, competitiveness and inclusive growth, green economy agenda, allocation of resources among economic sectors, and external relations (European Commission, 2025). Such indications align with literature suggestions that integration in the EU is not an end in and of itself, but the result of structural reforms spanning the entire domestic economic fabric.

Conclusions

This theoretical research examined whether productivity-led growth can cause convergence in the small, post-transition Albanian economy, characterized by important structural weaknesses in terms of human capital, innovation, and resource allocation. The theoretical bases of Solow's neoclassical growth theory (Solow, 1956) and endogenous growth theory (Romer, 1990), put in the context of the Albanian economic environment and regional Western Balkan-EU dynamics, allow a thorough and nuanced analysis of the main structural pillars for economic convergence in Albania. To account for the unique structural traits of the Albanian economy, a productivity-led production growth framework was proposed in this paper, suggesting that convergence is feasible if the factors show adequate increase or decrease depending on their relationship type with production (e.g.: if brain drain increases, productivity-led production falls; whereas if education quality increases, productivity-led production rises). The framework suggests that sustained convergence is conditional to the policies that affect the frameworks' components, requiring the simultaneous strengthening of the three framework pillars (resource reallocation, innovation, and human capital) as they affect one-another. As the structural factors are interrelated, they can also weaken one-another if adequate measures are not taken, hindering the convergence process and leading to growth slowdowns. Conclusively, production convergence in Albania is a conditional process that depends entirely on public sector policies and private sector investments. Convergence will not simply occur as time passes thanks to market dynamics, as the structural challenges will prohibit continuous growth

unless they are duly tackled in advance. Albania has the invaluable opportunity of learning from peer countries' best practices to turn around its structural blocks into enablers of productivity-led growth, with the only thing stopping this process being sensible decision-making at the top.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES

During the preparation of this work, the author used ChatGPT for reference collection and table of contents mapping. After using this tool/service, the author reviewed and edited the references and table of contents as needed and takes full responsibility for the final content of the publication.

References

- Aghion, P., & Howitt, P. (1992). *A model of growth through creative destruction*. *Econometrica*.
Albanian Conservative Institute. (2025). *Albania's economic model*.
Bank of Albania. (various years). Annual reports. https://www.bankofalbania.org/Publications/Annual_Report/
Barro, R. J., & Sala-i-Martin, X. (1992). *Convergence*. *Journal of Political Economy*, 100(2), 223–251.
Barro, R. J., & Sala-i-Martin, X. (2004). *Economic Growth*. MIT Press.
Balla, A., & Canga, L. (2023). *Albania: Emigration, depopulation and solutions*. Albanian Institute for International Studies.
Becker, G. S. (1964). *Human Capital*.
Blanchard, O. (1997). *The economics of post-communist transition*. Oxford University Press.
Coe, D., & Helpman, E. (1995). *International R&D spillovers*. *EER*, 39(5).
Docquier, F., & Rapoport, H. (2012). *Globalization and brain drain*.
Eichengreen, B., Park, D., & Shin, K. (2013). *Growth slowdowns redux*.
EBRD. (2023). Transition report 2023–24: Stuck in transition? EBRD. <https://www.ebrd.com/home/news-and-events/publications/economics/transition-reports/transition-report-2023-24.html>
EBRD. (2024). *Transition report 2024–25*. EBRD. <https://www.ebrd.com/news/publications/transition-report.html>
European Commission. (2023). *Economic Convergence Report*.
European Commission. (2025). *EU opens last accession negotiating cluster with Albania on resources, agriculture and cohesion*.
European Commission. (2025). European innovation scoreboard 2025. Directorate-General for Research and Innovation. https://research-and-innovation.ec.europa.eu/statistics/performance-indicators/european-innovation-scoreboard_en
Eurostat. (2024). *Gross domestic expenditure on R&D (GERD)*.
Global Data Lab. (n.d.). *Subnational Human Development Index (SHDI) database – mean years of schooling (MYS) table*.
International Monetary Fund. (2019). *Productivity in Emerging Markets*.
Imam, P. A., & Temple, J. R. W. (2024). *At the threshold: The increasing relevance of the middle-income trap* (IMF Working Paper No. 2024/091). International Monetary Fund.
Islam, N. (1995). *Growth empirics*. *QJE*, 110(4), 1127–1170.

- Jeon, S. (2025). *Beyond the miracle: Inequality in South Korea's new economy*. The Diplomat.
- Feenstra, R. C., Inklaar, R., & Timmer, M. P. (2015). *The next generation of the Penn World Table*. *American Economic Review*, 105(10), 3150–3182.
- Feingold, S. (2024). *The “middle-income trap” is holding back over 100 countries. Here's how to overcome it*. World Economic Forum.
- Kuo, K. (2025). *How China got rich: A deep dive into China's 40year history of economic transformation*. World Economic Forum.
- Lucas, R. E. (1988). *On the mechanics of economic development*. *JME*, 22(1), 3–42.
- Mankiw, N. G., Romer, D., & Weil, D. (1992). *A contribution to the empirics of economic growth*. *QJE*, 107(2), 407–437.
- Muço, M., Sanfey, P., Luci, E., & Hashorva, G. (2004). *Private sector and labour market developments in Albania: Formal versus informal* (wiiw Balkan Observatory Working Paper No. 39). The Vienna Institute for International Economic Studies (wiiw).
- Nič, M., Xaviereff, N., Zweers, W., Bechev, D., Gjoni, I., & Maillard, S. (2025). *Albania's EU accession sprint: Balancing momentum, reform, and EU scrutiny* (Policy Brief). German Council on Foreign Relations (DGAP).
- Nikolli, E., & Shehu, E. (2022). *Relationship between education and economic growth*. *ECONOMICUS*, 21(1), 100–115.
- OECD. (2015). *The Future of Productivity*.
- OECD. (2021). *Competitiveness in South East Europe 2021: A policy outlook*. OECD Publishing.
- OECD. (2025). *Economic convergence scoreboard for the Western Balkans 2025*.
- OECD. (2024). *Western Balkans competitiveness outlook 2024: Albania*. OECD Publishing.
- Quah, D. (1996). *Empirics for economic growth and convergence*.
- Rodrik, D. (2016). *Premature deindustrialization*.
- Romer, P. M. (1990). *Endogenous technological change*. *JPE*, 98(5), S71–S102.
- Solow, R. M. (1956). *A contribution to the theory of economic growth*. *Quarterly Journal of Economics*, 70(1), 65–94.
- Sorbe, S., Gal, P., & Millot, V. (2018). *Can productivity still grow in service-based economies? Literature overview and preliminary evidence from OECD countries* (OECD Economics Department Working Papers No. 1531). OECD Publishing.
- Trading Economics. (2026). *Albania: Workers' remittances and compensation of employees received (% of GDP)*.
- Trading Economics. (2026). *European Union: Employment in agriculture (% of total employment)*.
- Uku, S., Ilollari, O., & Shehu, E. (2024). *Economic and financial performance of Albania compared to the countries of the region and the EU*. Paper presented at the 11th International European Congress on Advanced Studies in Basic Sciences, Rome, Italy.
- United Nations World Tourism Organization. (n.d.). *Tourism doing business: Investing in Albania*.
- World Bank. (2020). *Global Productivity Report*.
- World Bank. (2023). *Albania Country Profile*.
- World Bank. (2024). *International mobility as a development strategy: Albania country report*. World Bank.
- World Economic Forum. (2019). *The global competitiveness report 2019*. <https://www.weforum.org/reports/global-competitiveness-report-2019/>
- World Intellectual Property Organization. (2025). *Global innovation index 2025: Innovation at a crossroads – Unlocking the promise of social entrepreneurship (dataset)*.
- World Trade Organization. (n.d.). *Regional Trade Agreements (RTA) database*. Retrieved March 28, 2026, from <https://rtais.wto.org/UI/PublicMaintainRTAHome.aspx>
- World Population Review. (2026). *Most technologically advanced countries 2026*.