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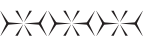
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# Research Articles







# The Contribution of Total Factor Productivity on Economic Growth in Selected Southeastern European Countries

Gunter Merdzan, Ervin Domazet

**Abstract:** This paper delves into the impact of capital accumulation, effective employment, and total factor productivity (TFP) on the economic growth of five Southeastern European countries: Albania, Croatia, North Macedonia, Serbia, and Slovenia. The examination is based on the Solow-Swan neoclassical growth model and the Cobb-Douglas production function, which dissects economic growth into capital, labour, and productivity inputs. The analysis pays particular attention to the growth dynamics of North Macedonia over the entire period (1998-2019) and two sub-periods (1998-2008 and 2009-2019). The article seeks to provide a comprehensive evaluation of the primary drivers of economic growth in Southeastern European countries, emphasising the evolving roles of capital, labour, and productivity over time. Through a detailed analysis of these determinants, the study offers insights into the necessary policy actions to ensure sustainable long-term growth, especially in transition economies. The empirical analysis utilises the growth accounting framework and employs regression analysis to estimate the output elasticities of capital and labour inputs. The data analysis covers the period of 1998-2019, specifically focusing on two sub-periods to investigate shifts in growth drivers over time. Each factor's contributions are presented in absolute terms (percentage points) and relative terms (percentages) to provide a comprehensive understanding of their roles. The findings indicate that capital accumulation has been the predominant growth driver in most countries, especially Albania, Croatia, and North Macedonia. However, in Serbia and Slovenia, total factor productivity (TFP) played a more significant role, contributing substantially to growth. In North Macedonia, TFP showed strong contributions during 1998-2008 but declined sharply in 2009-2019, leading to increasing reliance on capital and labour inputs for growth. This study is valuable in emphasising the shift in growth drivers over time and highlighting the importance for Southeastern European countries to concentrate on productivity enhancements, innovation, and labour market reforms to sustain long-term growth. These findings provide significant insights for policymakers seeking to improve economic performance in transition economies.

**Keywords:** Total factor productivity, economic growth, Southeastern Europe.



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## Introduction

Economic growth is commonly studied using production functions, in which the output of an economy is formulated as a function of inputs such as labour and capital. A pivotal theory in this realm is the neoclassical growth model, introduced by Solow (1956: 65-94), which underscores the significance of capital accumulation, labour, and external technological advancement in propelling long-term economic growth. In this model, technological progress, often quantified by total factor productivity (TFP), is crucial for sustained growth as it accounts for the additional increase in output that cannot be solely attributed to the accumulation of labour and capital.

The concept of total factor productivity was initially formalised in Solow's seminal work (1957:312-320), which introduced the residual approach to measuring technological progress. Solow's growth accounting framework is based on the premise that economic output can be broken down into contributions from labour, capital, and a residual term representing TFP. This residual encompasses factors such as technological innovation, efficiency enhancements, and institutional elements, all of which contribute to increasing the productive capacity of an economy without proportional increases in input quantities. In Solow's model, capital demonstrates diminishing returns, indicating that without ongoing technological progress (represented by TFP growth), economies will eventually encounter a deceleration in growth rates.

Expanding on Solow's foundational work, the endogenous growth theories developed by Romer (1990: 71-102) and Lucas (1988: 3-42) shifted the focus from external to internal factors influencing technological change and productivity growth. These models emphasise the significance of human capital, innovation, and knowledge spillovers in driving sustained long-term growth. For example, Romer's (1990: 71-102) model contends that investments in research and development (R&D) and the accumulation of knowledge can result in increasing returns to scale and ongoing growth in total factor productivity. In this context, institutions and policies that foster innovation and knowledge diffusion are critical in shaping a country's productivity and long-term growth potential (Aghion & Howitt, 1992: 323-351).

Based on Solow's neoclassical theory, the growth accounting framework is a widely utilised method for empirically evaluating the factors contributing to economic growth. This approach provides a structured way to quantify the influences of capital, labour, and total factor productivity on overall growth (D. Jorgenson & Griliches, 1967: 249-283). The fundamental growth accounting equation is derived from the Cobb-Douglas production function, where output is represented as a function of capital and labour inputs, adjusted by their respective elasticities, along with an efficiency term representing TFP. By examining the growth rates of output, labour, and capital, the framework enables researchers to calculate the residual growth attributed to TFP (Barro & Sala-i-Martin, 1995).

In addition to capital and labour inputs, institutions play a vital role in influencing TFP growth. Institutional quality, encompassing property rights, governance, regulatory efficiency, and political stability, impacts a country's capacity to embrace new technologies and enhance productivity (Acemoglu, Johnson, & Robinson, 2001: 1369-1401). Robust institutions foster an environment conducive to investing in physical and human capital, while weak institutions can impede productivity enhancements by introducing inefficiencies and obstructing innovation. Consequently, institutional quality has emerged as a central focus in the literature on economic growth, especially in post-transition economies such as those in Southeastern Europe (Estrin & Uvalic, 2016: 455-483).

This paper employs the growth accounting framework to dissect the growth of GDP per capita into components arising from the growth of capital per capita, the growth of employment per capita adjusted for human capital growth, and the residual element attributed to total factor productivity growth in the case of 5 Southeastern European countries for the period 1998-2019. The main hypothesis is that in the context of Southeastern European countries that have undergone significant political and economic transformations, the role of total factor productivity in driving economic growth is particularly noteworthy. These economies have seen varying degrees of success in productivity gains, with factors such as institutional reforms, EU integration, and foreign direct investment (FDI) playing pivotal roles in influencing TFP growth (Djankov & Murrell, 2002:

739-792). Therefore, comprehending how TFP contributes to growth in these countries and how institutional factors may influence this relationship is crucial for crafting policies to enhance long-term growth prospects.

The remainder of the paper is organised as follows: following the introduction, the second section reviews the relevant literature on the relationship between total factor productivity and economic growth. The third section outlines the empirical methodology used to compute the average contribution of TFP to the average economic growth of the selected Southeastern European economies. The fourth section presents and discusses the results. Finally, the concluding section provides conclusions and policy recommendations based on the results.

## Literature Review

It is widely recognised that total factor productivity plays a critical role in driving economic growth, especially in developing economies. Research indicates that TFP growth significantly contributes to economic advancement in countries such as the Czech Republic (Hájek & Mihola, 2009: 740-753) and Pakistan (Saleem, Shahzad, Khan, & Khilji, 2019). Hájek & Mihola (2009: 740-753) suggest that TFP was the primary driver of the Czech Republic's accelerated economic growth from 1995-2000 to 2001-2007, with the share of TFP in economic growth increasing from 74% to 78%. Saleem et al. (2019) found that innovation significantly contributes to Pakistan's economic growth and production levels, with important policy implications for sustainable economic growth in Pakistan and other emerging economies. Additionally, innovation and institutional quality are key determinants of TFP and economic growth in emerging economies (Saleem et al., 2019; Sawyer, 2011). A study by Huseyni, Eren, & Celik (2017: 63-73) explored the relationship between TFP, economic growth, and exports in OECD countries from 1990-2013, suggesting that TFP and exports positively impact economic growth, with TFP having a stronger positive impact than exports. The study also highlights that OECD countries can enhance economic growth by improving production efficiency and directing exports to the most efficient areas.

The relationship between total factor productivity and economic growth is intricate, with some researchers contending that TFP may not accurately measure technological change (Carlaw & Lipsey, 2003: 457-495; Chen, 1997: 18-38). TFP is deemed an unreliable gauge of technological change and economic growth. True economic growth is driven by continually creating opportunities for further technological advancements rather than by the supernormal profits of technological change (Carlaw & Lipsey, 2003: 457-495). The significance of TFP in economic growth varies depending on its definition and measurement. Technological change's importance in economic growth largely depends on how TFP is defined and measured. The conclusions drawn by Young (1994: 964-973) and Krugman (1994: 62) about the insignificance of TFP in East Asian economic growth, as noted by Chen (1997: 18-38), are unwarranted. Unlike other newly industrialised economies, Singapore's economic growth has not been propelled by improvements in TFP. The lack of TFP growth in Singapore is a vital concern that should not be underestimated, as it signifies the high cost of achieving economic growth in Singapore. Singapore's TFP growth has been notably low compared to other developed countries, prompting the government to set a target of at least 2% TFP growth to sustain high productivity and GDP growth. The estimates of TFP growth in Singapore vary significantly across different studies due to discrepancies in methodologies and periods examined (Renuka, 1999: 61-67).

Recent research has delved into the positive relationship between total factor productivity growth and economic prosperity in Central, Eastern, and Southeastern European countries (Aktaş, 2023: 145-160). The study reveals that TFP growth substantially and positively impacts economic prosperity, as indicated by the Legatum Prosperity Index, in 18 Central and Eastern European nations from 2007 to 2020. The biggest contributors to economic prosperity in these countries were the labour and capital share in GDP. Policies that enhance factors such as health, education, skills, and knowledge, which can boost labour productivity, could positively affect economic prosperity in Central and Eastern European countries (Aktaş, 2023: 145-160). TFP in Slovenia experienced rapid growth in the early 1990s but then decelerated significantly in the latter half of the decade, with real GDP growth primarily stemming from capital deepening and rises in labour participation instead of TFP growth. Slovenian policymakers

should prioritise measures that enhance economic efficiency and promote TFP growth to achieve swift and continual economic growth (Mrkaic, 2002: 445-454). Additionally, Habib, Abbas, & Noman (2019: 756-774) examine the influence of human capital, intellectual property rights, and research and development spending on TFP, which in turn drives economic growth, using a panel data analysis of BRIC and Central and Eastern European countries from 2007 to 2015. They deduce that human capital, intellectual property rights, and research and development expenditures are pivotal factors in determining variations in total factor productivity, ultimately leading to economic growth.

The surge in productivity growth fueled by information technology stands out as a significant factor in the revitalisation of economic growth in the late 1990s in the United States. During this time, the US economy witnessed a marked increase in output growth compared to the early 1990s, driven by rapid capital accumulation, increased hours worked, and faster total factor productivity growth (D. W. Jorgenson & Stiroh, 2000: 125-210). Furthermore, an examination of US agriculture history indicates that total factor productivity is internally generated and co-determined with growth rather than driving it (Mundlak, 2005: 989-1024). This study delivers a comprehensive overview of the growth trajectory of US agriculture over the past two centuries, emphasising the pivotal factors contributing to this growth, such as available resources, technological advancements, and product demand. The author contends that the economic context influences dissecting output growth into total factor and total factor productivity and that adopting new technologies hinges on the incentives and limitations producers face. In conclusion, the US experience has benefitted from a relatively seamless resource flow between agriculture and non-agricultural sectors, which has been crucial for leveraging the opportunities arising from changes in available technology.

## **Empirical Methodology and Data**

This study utilises the growth accounting framework based on the Solow-Swan neoclassical growth model (Solow, 1956: 65-94) and expanded to integrate

human capital, as proposed by Mankiw, Romer, & Weil (1992: 407-437). This framework dissects GDP per capita growth into components arising from capital per capita growth, employment per capita adjusted for human capital growth, and the residual element attributed to total factor productivity growth.

The production function is based on the widely used Cobb-Douglas specification, favoured in growth literature for its simplicity and flexibility in depicting the connections between inputs and output. Incorporating human capital embodies the endogenous theory, emphasising the significance of education and knowledge in improving productivity.

The aggregate production function expressed in Cobb-Douglas form is:

$$\frac{Y}{N} = A \times \left(\frac{K}{N}\right)^\alpha \times \left(\frac{L}{N} \times H\right)^{1-\alpha} \quad (1)$$

where  $Y$  is real output,  $A$  is TFP,  $K$  is the capital stock,  $L$  is labour input (employment),  $H$  is a human capital index, and  $N$  is the population.  $\alpha$  is the output elasticity of capital, and  $1 - \alpha$  is the output elasticity of effective employment (employment adjusted for human capital).

Following the growth accounting framework, the output per capita growth rate is decomposed using the first difference of the logarithms of the variables:

$$\Delta \ln \left(\frac{Y}{N}\right) = \Delta \ln A + \alpha \Delta \ln \left(\frac{K}{N}\right) + (1 - \alpha) \left(\Delta \ln \left(\frac{L}{N}\right) + \Delta \ln H\right) \quad (2)$$

where  $\Delta \ln(Y/N)$  is the growth rate of output per capita,  $\Delta \ln A$  is the TFP growth rate,  $\Delta \ln(K/N)$  is the capital per capita growth rate,  $\Delta \ln H$  is the employment per capita growth rate and  $\Delta \ln(L/N)$  is the human capital index growth rate.

TFP growth rate as the portion of economic growth not explained by capital and labour inputs, reflecting exogenous technological progress in the original Solow model and endogenised through human capital in the extended model, is computed as:



$$\Delta \ln A = \Delta \ln \left( \frac{Y}{N} \right) - \alpha \Delta \ln \left( \frac{K}{N} \right) - (1 - \alpha) (\Delta \ln \left( \frac{L}{N} \right) + \Delta \ln H) \quad (3)$$

A fixed effects regression model is used for unobserved heterogeneity across countries to estimate the contributions of capital per capita growth and effective employment growth to output per capita growth. The regression model is specified as follows:

$$\text{outputg\_pc}_{it} = \beta_1 \times \text{capitalg\_pc}_{it} + \beta_2 \times \text{employmentg\_pc}_{it} + \gamma_i + \epsilon_{it} \quad (4)$$

where  $\text{outputg\_pc}_{it}$  is the output per capita growth rate for country  $i$  and time  $t$ ,  $\text{capitalg\_pc}_{it}$  is the capital per capita growth rate for country  $i$  and time  $t$ , effective employment growth rate for country  $i$  and time  $t$ ,  $\gamma_i$  represents the country-specific fixed effects and  $\epsilon_{it}$  is the error term.

This study examines the impact of total factor productivity on the average economic growth in five Southeastern European countries. Three of these countries are non-European Union members (Albania, North Macedonia, and Serbia), while the other two (Croatia and Slovenia) are European Union members with close historical and political ties. The analysis covers the period from 1998 to 2019. For North Macedonia, the analysis is conducted for two sub-periods: 1998-2008 and 2009-2019, as well as for the entire period. The descriptive statistics of the variables are presented in Table 1.

Table 1. Descriptive statistics of the variables

Variable	Obs.	Mean	Std. dev.	Min	Max	Source
Output	110	59954.72	32952.33	14369.19	123007.1	Penn World Table, Real GDP at constant 2017 national prices (in mil. 2017US\$)
Capital	110	315631	164714.5	72343.69	534133.9	Penn World Table, Capital stock at constant 2017 national prices (in mil. 2017US\$)
Employment	110	1.43	0.80	0.56	4.40	Penn World Table, Number of persons engaged (in millions)
Human capital	110	3.06	0.32	2.14	3.62	Penn World Table, Human capital index, based on years of schooling and returns to education
Population	110	3.76	2.03	1.99	9.69	Penn World Table, Population (in millions)

Source: Authors' calculations.

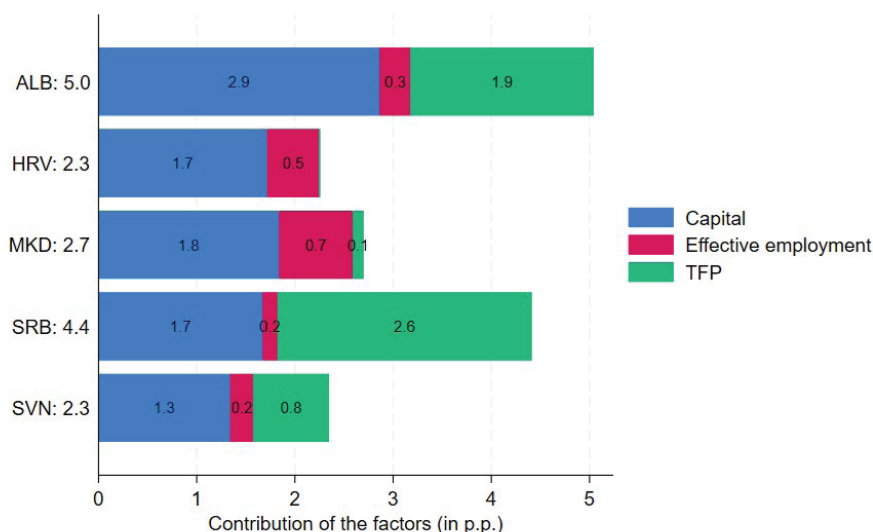
## Results and Discussion

The analysis includes two figures (Figures 1 and 2) that break down the average impacts of capital accumulation, effective employment, and total factor productivity on the average economic growth of Albania, Croatia, North Macedonia, Serbia, and Slovenia from 1998 to 2019. The first figure illustrates these impacts in percentage points (p.p.) of the average economic growth rate, while the second figure represents them as percentages (%) of each country's average growth rate. By examining the absolute contributions (in p.p.) and relative contributions (in %), we can understand how different growth factors influenced the economic performance of these countries. The output elasticity of capital for the entire period is calculated as 0.76, and the output elasticity of effective employment is 0.24.

The data illustrates that capital accumulation played a significant role in driving economic growth in several countries. For instance, in Albania, capital contributed 2.9 percentage points to an average growth rate of 5.0 percentage points, accounting for 57% of the average growth. Similarly, in Croatia, capital contribution was 1.7 percentage points, representing a substantial 76% of the country's average growth of 2.3 percentage points. North Macedonia also heavily relied on capital, with 1.8 percentage points (68%) of its 2.7 percentage point average growth coming from capital. These findings are consistent with recent empirical studies emphasising the pivotal role of capital accumulation in driving growth, particularly in developing or transitioning economies. Generally, early-stage economies, especially in Eastern Europe, depend heavily on physical capital investments, particularly in infrastructure and industrial capital, to fuel growth.

It's important to note that while capital accumulation has been an important factor driving growth, overreliance on this factor without substantial productivity improvements can lead to diminishing returns. Economies that fail to diversify their growth drivers, especially by enhancing productivity, may struggle to sustain high growth rates over the long term. The relatively modest contributions of capital to growth in Serbia (1.7 percentage points, or 38%) and Slovenia (1.3 percentage points, or 57%) suggest a more balanced growth model, where other factors, notably total factor productivity, have played a more significant role.

Figure 1. The contribution of factors to economic growth (in p.p.)

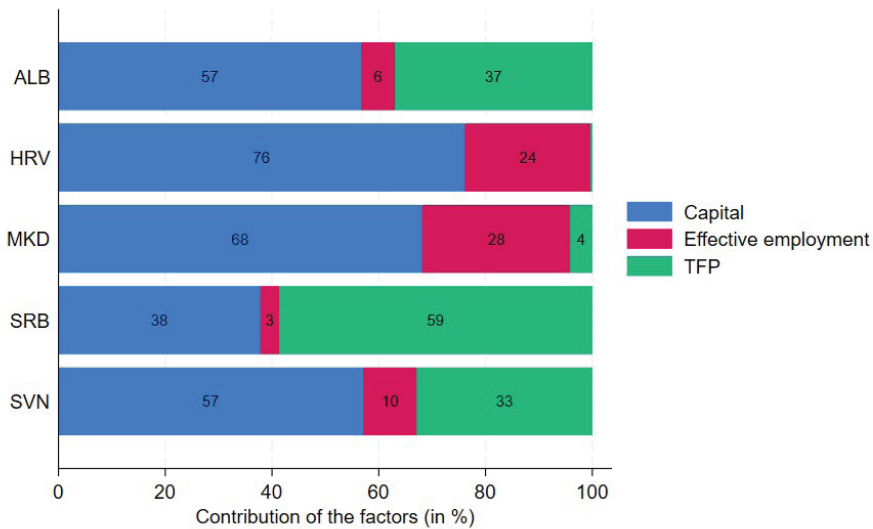


Source: Authors' calculations.

Total factor productivity has been identified as the primary driver of growth in Serbia, contributing 2.6 percentage points (59%) to the country's average growth of 4.4 percentage points. This is in stark contrast to other countries in the region. Slovenia also experienced a significant contribution from TFP, accounting for 0.8 percentage points (33%) of its average growth of 2.3 percentage points. This highlights these countries' focus on enhancing efficiency, innovation, and institutional quality, crucial for maintaining productivity gains. These findings align with Dabla-Norris et al.'s (2012: 422-449) conclusions, emphasizing that economies with strong institutional frameworks and robust innovation ecosystems are better positioned to capitalise on productivity improvements as a key growth driver. Conversely, TFP played a minimal role in North Macedonia, contributing 0.1 percentage points (4%), and had no impact in Croatia (0%). These limited productivity gains in North Macedonia and Croatia suggest that they may still be grappling with structural challenges, including labour market inefficiencies and obstacles to technological adoption, hindering them from fully reaping the rewards of technological progress.

The role of effective employment in driving growth varied across the five countries analysed. In Croatia, effective employment accounted for 0.5 percentage points, contributing to 24% of average growth, the highest percentage among the countries studied. North Macedonia followed with 0.7 percentage points (28% of growth attributed to effective employment). In contrast, Albania showed the smallest contribution from effective employment, at 0.3 percentage points (6%), implying a greater reliance on capital and total factor productivity rather than labour improvements. Aghion et al. (2019: 1-45) suggest low labour force participation, inadequate skills training, and inflexible labour markets can constrain effective employment contributions. This suggests that some countries may benefit from improving labour market flexibility, increasing workforce participation, and enhancing human capital through education and training.

Figure 2. The contribution of factors to economic growth (in %)



Source: Authors' calculations.

Regarding policy recommendations, countries heavily relying on capital accumulation, such as Albania, Croatia, and North Macedonia, should prioritise enhancing productivity to sustain long-term growth. This would involve investing

in innovation, improving institutional quality, and promoting technological adoption. Education and research and development (R&D) investments are crucial for driving total factor productivity growth in economies transitioning from input-driven to innovation-driven growth models. Additionally, these countries may need to address labour market inefficiencies to maximise the potential of effective employment as a driver of growth. For instance, improving the quality of education and aligning it with labour market needs, as Eichengreen et al. (2013) recommended, can ensure that labour inputs significantly contribute to growth.

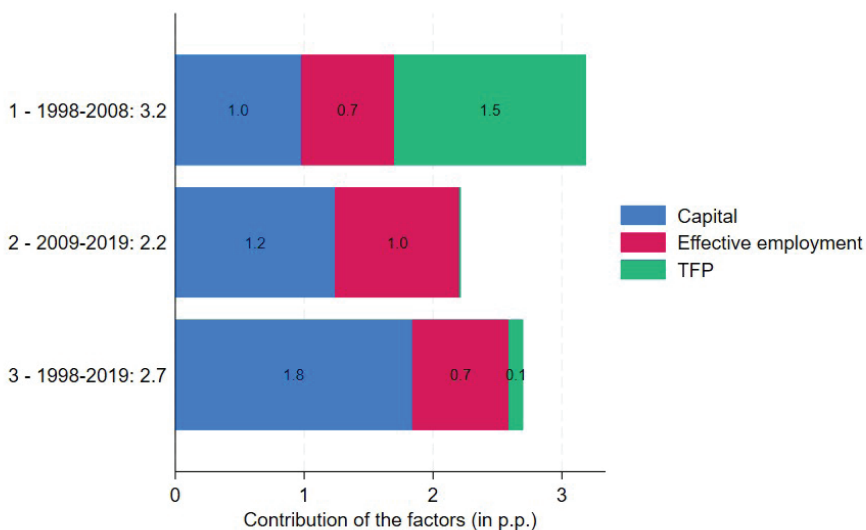
Serbia and Slovenia have experienced significant growth driven by total factor productivity. To sustain this growth, focusing on continuously improving productivity is crucial. According to Cirera & Maloney (2017), achieving ongoing TFP growth entails investing in innovation ecosystems, implementing institutional reforms, and strengthening integration into global value chains. Additionally, these nations should prioritise investment in high-value-added sectors, such as technology, to maintain long-term competitiveness.

In summary, the analysis of economic growth across Southeastern European countries exposes notable differences in the factors driving growth. Although capital accumulation remains the primary driving force in most countries, particularly Albania, Croatia, and North Macedonia, the significance of productivity improvements, as indicated by total factor productivity, is rising in countries such as Serbia and Slovenia. While effective employment is somewhat less, it still plays a vital role in certain countries, particularly those that have emphasised improvements in the labour market and human capital development. Looking ahead, countries highly reliant on capital should prioritise policies that enhance TFP and labour market efficiency, while those with higher TFP contributions should concentrate on sustaining innovation and productivity advancements to ensure continued economic growth.

The analysis presented in Figures 3 and 4 examines the impact of capital accumulation, effective employment, and total factor productivity on economic growth in North Macedonia from 1998 to 2019 and for the sub-periods 1998-2008 and 2009-2019. Figure 3 illustrates the contributions in percentage points

(p.p.), while Figure 4 illustrates these contributions as percentages (%) of the total growth rate for each period. The output elasticity of capital for the sub-period 1998-2008 is calculated as 0.76, and the output elasticity of effective employment is 0.24, and for the sub-period 2009-2019, the coefficients are 0.59 and 0.41, respectively.

Figure 3. The contribution of factors to the economic growth of North Macedonia (in p.p.)



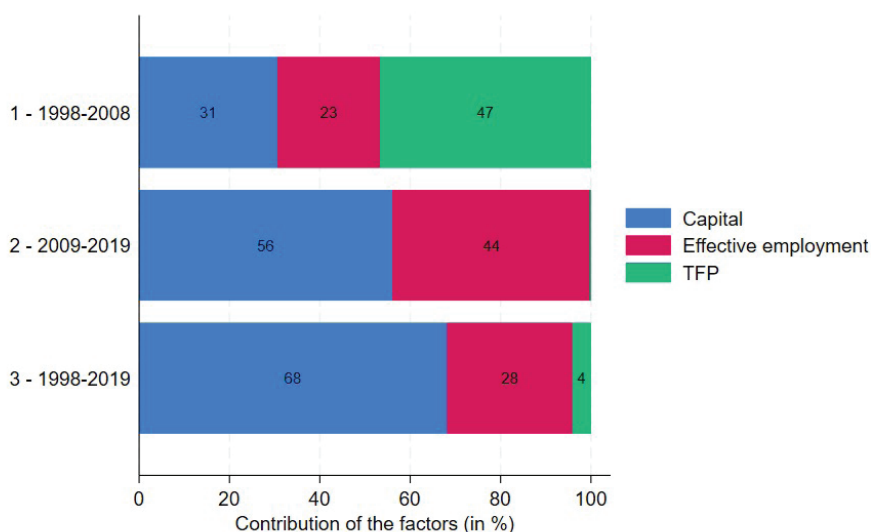
Source: Authors' calculations.

From 1998 to 2019, North Macedonia experienced an average growth rate of 2.7 percentage points (p.p.). The main driver of this growth was capital accumulation, contributing 1.8 p.p. (68%), followed by effective employment at 0.7 p.p. (28%), and TFP at 0.1 p.p. (4%). These findings indicate that the growth in this period was largely influenced by capital stock and labour increases, with minimal impact from productivity enhancements or efficiency gains.

When the analysis is disaggregated into two sub-periods, notable differences emerge. In the first period from 1998 to 2008, North Macedonia experienced

an average growth rate of 3.2 percentage points. Capital contributed 1.0 percentage points (31%) to this growth, while effective employment contributed 0.7 percentage points (23%), and total factor productivity accounted for a significant 1.5 percentage points (47%). This suggests that, during the earlier period, productivity improvements played a much larger role in driving growth, nearly on par with the contributions from capital accumulation. The stronger role of TFP during this period indicates that the economy benefited from efficiency gains, possibly associated with structural reforms or institutional improvements implemented as the country transitioned from a post-socialist economy.

Figure 4. The contribution of factors to the economic growth of North Macedonia (in %)



Source: Authors' calculations.

From 2009 to 2019, there was a noticeable decrease in the overall growth rate and the contribution of total factor productivity. The average growth rate dropped to 2.2 percentage points, with capital accounting for 1.2 percentage points (56%) and effective employment accounting for 1.0 percentage points



(44%). TFP's contribution declined to zero during this time frame. This alteration in the composition of growth between the two sub-periods underlines a significant shift in the underlying drivers of economic performance. While the initial period saw a balanced contribution from TFP and capital, the later period showed a heavy reliance on capital accumulation and labour inputs, with no enhancements in productivity. This indicates that the factors driving productivity gains in the earlier period might have stalled or regressed later.

From 1998 to 2019, North Macedonia experienced a growth model propelled by capital, with limited input from long-term productivity enhancements. The notable decrease in the role of total factor productivity in the later years raises concerns about the sustainability of future growth. Continuing to rely on capital and labour without concurrent productivity improvements may result in diminishing returns over time. This shift emphasises the importance of policy interventions to enhance productivity through innovation, technological adoption, and institutional reforms to ensure sustained higher growth rates in the years ahead.

## Conclusion

This paper delves into the roles of capital accumulation, effective employment, and total factor productivity in the economic growth of five Southeastern European countries (Albania, Croatia, North Macedonia, Serbia, and Slovenia), specifically focusing on North Macedonia. The study utilised the growth accounting framework derived from the Solow-Swan neoclassical growth model to analyse the decomposition of economic growth into three primary factors: capital inputs, labour inputs (effective employment), and TFP. The Cobb-Douglas production function modelled the relationship between these factors and GDP growth. This widely used model assumes constant returns to scale and is instrumental in estimating the impact of capital, labour, and productivity changes on economic output.

Capital accumulation was the primary driver of growth in all five countries, with significant contributions from Albania, Croatia, and North Macedonia,

where capital represented between 57% and 76% of growth. In Serbia and Slovenia, total factor productivity had a greater impact, accounting for 59% and 33% of growth, respectively. While generally playing a smaller role, effective employment was still significant, especially in Croatia and North Macedonia.

An analysis of two distinct sub-periods in North Macedonia revealed a noticeable shift in economic growth factors. During the period from 1998 to 2008, the average growth rate stood at 3.2 percentage points, with total factor productivity accounting for 1.5 points (47%), capital contributing 1.0 points (31%), and effective employment contributing 0.7 points (23%). However, in the second period (2009-2019), growth slowed to 2.2 percentage points, with no contribution from total factor productivity. During this time, the role of capital increased to 1.2 points (56%), while effective employment contributed 1.0 points (44%). The diminishing contribution of total factor productivity over time suggests that the country's earlier gains from productivity and efficiency improvements have not been sustained. Furthermore, it indicates a growing reliance on capital and labor inputs for sustaining growth.

In order to achieve sustainable long-term growth, North Macedonia and other countries in Southeastern Europe should shift their focus from simply accumulating capital to improving productivity. This entails prioritising policies that enhance total factor productivity (TFP) through strategic investments in innovation, technology adoption, and institutional reforms that promote efficiency. Furthermore, implementing labour market reforms that enhance human capital through education and skills development will play a crucial role in bolstering the positive contribution of effective employment to overall growth. By tackling the observed productivity stagnation in recent times, these nations can develop a more balanced and resilient growth model that relies less on capital inputs and more on technological advancements and efficiency gains.

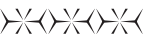
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<b>Ethical Statement</b>	It is declared that scientific and ethical principles have been followed while carrying out and writing this study and that all the sources used have been properly cited
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Data Collection	GM (%60), ED (%40)
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# A Comparative Analysis between Islamic Economics and Environmental Economics: Historical Development and its Significance for Contemporary Challenges

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**Abstract:** This article investigates the possible relationship between Islamic and Environmental Economics to address environmental concerns. Comparative analysis shows that Environmental Economics has been more successful in addressing environmental challenges, even though both frameworks approach economic activity with different concepts. Environmental Economics has been successful because of its all-encompassing focus on environmental factors, acceptance on a worldwide scale, relevance of policies, and individual-centered methodology. On the other hand, Islamic economics, which functions mainly at the community level, needs more clarity with broader implementation. The strengths of each strategy are examined in this research, which concludes that environmental economics provides a more flexible and universally applicable framework for promoting economic activity by environmental preservation. The results add to the current discussion on sustainable development by highlighting the significance of combining realistic, internationally recognized strategies with moral principles to create a sustainable future.

**Keywords:** Islamic Economics; Environmental Economics; Comparative analysis; environmental preservation

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## Introduction

The study of economics has changed over time to meet the ever-changing needs of society. The two independent environmental and Islamic economics fields have been more well-known in recent decades. Islamic Economics provides a framework for economic activities consistent with Islamic ethics and values. It is based on the fundamentals of Islamic teachings. In contrast, environmental economics focuses on how economic systems interact with the environment to promote sustainable development.

When one considers current problems, like resource depletion, climate change, and environmental degradation, it becomes clear how these two professions are related. An analysis that compares Islamic and Environmental Economics is necessary to overcome these difficulties. This comparative analysis examines the possible importance of their integration in resolving contemporary global concerns and shedding light on their historical evolution.

This research is essential because it may lead to a more sustainable and all-encompassing approach to economic activity. Knowledge about the past developments of Islamic and Environmental Economics might help one better understand their achievements and shortcomings. We may find points of convergence and divergence between these economic frameworks' tenets and practices, providing a basis for sensible policymaking in the face of today's problems. Ultimately, this comparative research hopes to promote a more responsible and inclusive global economic system by adding to the current conversation on sustainable development and balancing economic activities with environmental preservation.

Environmental economics is a relatively young discipline of economics; several authors, including Pearce (2002: 58), place its origins in the 1960s. However, there are traces of environmental issues considered even before this time. Scholars that have tried to consider the environmental issues and reduction of resources started in the 19th century. This paper divides the evolution of environmental economics into the 19th, 20th, and 21st centuries. In the 19th century, figures like John Stuart Mill, Stanley Jevons, and Alfred Marshall introduced a mathematical and neoclassical approach to economics (Spash, 1999: 415).

Mill, in 1857, highlighted the constraints of non-renewable resources on economic expansion and emphasized the dangers of unchecked growth for natural ecosystems. Jevons, in 1865, projected a resource depletion disaster, later challenged by the arrival of oil and technological developments. Marshall (1890) introduced the concept of market failure: the social cost being higher than the private marginal cost due to overexploitation.

In the early 20th, different authors, such as van Hise (1910), Gray (1913), Hess (1917), Hammar (1942), and Renner (1942), addressed issues related to natural resources as matters of conservation (Spash, 1999: 417). During this period, Agriculture economics and Resource Economics developed. Concurrently, the domain of agricultural economics, presently witnessing a decline, played a significant role in advancing efforts for soil conservation. At the same time, Resource economics was generally based on mathematical models depicting the 'efficient' and 'optimal' use of fisheries, forests, and minerals. Interest in both these fields declined over time. Ciriacy-Wantrup (1952) played a crucial role in instigating the growth of environmental economics in the 1950s (Spash, 1999: 420). His influential contributions laid the groundwork for the emergence of environmental economics as a distinctive sub-discipline in the 1960s and 1970s, introducing key concepts such as the safe minimum standard and underscoring the heterogeneous nature of environmental effects, making their quantitative comparison challenging. In the 1950s, the United States, acknowledging concerns about depleting exhaustible resources, established Resources for the Future (RFF), significantly contributing to advancements in environmental cost-benefit analysis (Pearce, 2002: 64) Environmental economics emerged in the United States during the 1960s as a unique sub-discipline concerned with the expanding pollution problems that were becoming apparent to the general population.

Environmental economists advocated for market corrections to prevent environmental problems and increase efficiency (Germani, 2004). It was in the early 1990s that there was a substantial increase in the number of journals covering economy-environment linkages and space for the expression of alternative perspectives. Europe, influenced by North American trends, formally



embraced environmental economics as a field in the 1980s, facing initial challenges in achieving consistent adoption across all countries. The Netherlands was a successful European adopter (Germani, 2004).

In the 21st century, the initial thought is Sustainability, a contemporary concept gaining prominence across various domains. Sustainable development has become a focal point, defined as “development that fulfills the present needs without jeopardizing the ability of future generations to meet their own needs” (Paul, 2008: 2). The United Nations (UN) established seventeen Sustainable Development Goals (SDGs) in 2015, endorsed by the UN General Assembly, with a commitment to the principle of “leaving no one behind.” These comprehensive goals encompass various aspects crucial for any country’s development. The name itself, “Sustainable Development Goals,” implies a focus not only on achieving development but also on sustaining it (Mensah, 2019). The UN outlines these goals as addressing no poverty, no hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reduced inequality, sustainable cities and protection, climate action, life below water, life on land, peace, justice, strong institutions, and partnerships to achieve the goals.

The concept of sustainable development first emerged in 1972 during a conference in Stockholm, Sweden, where 117 states and 19 international organizations discussed environmental issues (Paul, 2008: 577). This concept originated from the idea of economic progress while concurrently preserving a clean environment. The challenge lays in balancing economic development with increased international trade and production with environmental protection. Another UN General Assembly conference in Norway in 1983 reiterated environmental concerns, leading to the formalization of “Sustainable Development.” The UN provided a definition stating that sustainable development is development meeting present needs without compromising future generations’ ability to meet their own needs (Paul, 2008: 578). This comprehensive definition encapsulates the dual focus of sustainable development—addressing present needs for development and preserving the environment for the future.

Despite conceptualizing sustainable development, no concrete action was taken until 2015, when the UN introduced the 17 SDGs. These goals aimed to assist countries, including those left behind, achieve sustainable development. Since their introduction, there has been a surge in discussions and research by authors seeking ways to realize these goals.

The paper provides a comprehensive analysis of the successes and failures of Environmental and Islamic Economics in addressing global environmental issues, revealing distinct approaches and impacts in promoting sustainability. It highlights the effective use of Environmental Cost-Benefit Analysis (ECBA) and policy frameworks, such as the Sustainable Development Goals (SDGs) and Environmental, Social, and Governance (ESG) assessments, in driving environmentally conscious decision-making and investment strategies within Environmental Economics. The paper also discusses innovative financial instruments like green and blue sukuk and the Green Waqf initiative in Islamic Economics, showcasing their potential to contribute to sustainable development while adhering to Sharia principles. Despite these successes, the paper identifies significant challenges, including the limited integration of Islamic Economics into global economic systems and its underemphasis on environmental policy-making, contrasting with the broader acceptance and influence of Environmental Economics. Ultimately, the paper concludes that Environmental Economics offers a more comprehensive and globally recognized framework for incorporating ecological considerations into economic activities, suggesting a need for a multifaceted approach that combines ethical values with practical measures for achieving a sustainable future.

The structure of the paper is meticulously organized into four main sections, each providing a detailed examination of the respective fields of Environmental and Islamic Economics. Section 2.1 delves into the successes of Environmental Economics, highlighting the pivotal role of cost-benefit analysis and its influence on policy formation, investment strategies, and public awareness on a global scale. Section 2.2 contrasts these achievements by discussing the failures of Environmental Economics, particularly in emerging economies and the difficulty of quantifying environmental impacts in economic terms. Section 2.3

introduces the evolution of Islamic Economics, tracing its historical roots and its emergence as a distinct field in the 1970s, while Section 2.4 focuses on the successes of Islamic Economics, showcasing innovative financial instruments like green sukuk, blue sukuk, and the Green Waqf initiative that align with Islamic principles and promote environmental sustainability. The paper concludes with Section 3, which outlines the failures of Islamic Economics to fully integrate environmental policies and its limited global acceptance compared to Environmental Economics. A final comparative analysis in Section 3.1 juxtaposes the two fields, emphasizing their common goals of incorporating ethical considerations into economic practices but acknowledging the broader and more effective reach of Environmental Economics in addressing environmental challenges. The conclusion synthesizes these findings, arguing for a combined approach to tackle environmental issues effectively.

## **Literature Review**

### **Successes of Environmental Economics**

Significant progress has been achieved in environmental economics, especially in cost-benefit assessments. The use of cost-benefit analysis (CBA), a technique that is a helpful tool for decision-making processes, is a cornerstone of this subject. CBA helps determine whether to pursue a certain activity or select from a range of activities by methodically weighing each alternative's numerous benefits and drawbacks. This systematic process determines the overall worthiness of an activity by balancing its advantages against its costs, empowering individuals and politicians to make well-informed decisions. The use of environmental cost-benefit analysis (ECBA) is unique in environmental economics; it is a conscious attempt to apply the concepts of CBA to initiatives or regulations that expressly improve the environment. ECBA ensures a thorough assessment of the environmental implications of diverse activities and is especially relevant when evaluating acts that may indirectly impact the environment (Carolus et al., 2018: 288). This nuanced approach emphasizes the importance of considering the

environment when making decisions, which aligns with the larger objectives of sustainable development and environmental protection. Environmental Economics is committed to promoting environmentally conscious decision-making and sustainable behaviors, as demonstrated by the application of CBA, which is specialized explicitly for environmental betterment, as stated by the Organisation for Economic Co-operation and Development (OECD, 2018).

Although environmental economics has emerged as a potent force in directing the intersection of environmental sustainability and economic growth, its influence is most noticeable in the domains of policy formulation and execution. The Sustainable Development Goals (SDGs) agenda for 2030, a significant endeavor by the international community to solve global concerns, is one notable example of this influence (UN General Assembly, 2015). These aims include a broad spectrum, ranging from poverty eradication to environmental conservation, underlining the connection between economic and environmental well-being. Environmental economics has dramatically influenced and informed policies that align with the SDG agenda, which offers a solid framework that helps decision-makers balance difficult trade-offs and maximize results. Environmental, social, and governance (ESG) assessment is a crucial aspect of environmental economics in modern finance. As investors look for chances to make ecologically and socially responsible investments, the importance of ESG issues has increased dramatically (Jang et al., 2020). Environmental Economics has contributed substantially to creating ESG grading systems in this sense. Investors use these scores more than ever as critical indicators when making judgments about their investments, demonstrating a greater sensitivity and awareness of the social and environmental effects of financial actions. Environmental Economics has acted as a catalyst for this paradigm shift, which denotes a broader recognition of the relationship between economic activity and its impact on the environment and society. Europe is a leader in developing and implementing environmental policies, demonstrating the long-lasting impact of environmental economics on local and national policy. Since 1973, Europe has been a leader in developing environmental policies, having established Environment Action Programmes, or EAPs. Implementing the 8th EAP, which shows a constant and evolving effort to meet contemporary environmental concerns, exemplifies this

persistent dedication to environmental measures (EU, 2022). Furthermore, Europe's adoption of the Sustainable Development Strategy (SDS) by 2001 highlighted the incorporation of environmental considerations into more comprehensive developmental frameworks. The SDS is a comprehensive roadmap that combines ecological sustainability with economic ambitions (OECD, 2002). It is evidence of the long-lasting influence of Environmental Economics in determining regional policy agendas. The complex interactions between environmental economics and policy formation are further illustrated by the diverse success stories arising from Europe's environmental stewardship efforts.

The success of environmental economics on a global scale transcends financial and policy spheres and into the public sphere thanks to increased public awareness and coordinated efforts by multinational organizations. European Union (EU), the United States, the Organization for Economic Co-operation and Development (OECD), and the United Nations (UN) have all been instrumental in raising environmental awareness in a variety of sectors, including economics. Their joint efforts have profoundly impacted the world stage, promoting a better comprehension of the complex interplay among human efforts, financial progress, and ecological welfare. Acknowledging the pressing need to tackle environmental issues, these organizations have implemented diverse strategies to provide data and facilitate significant dialogues among interested parties. They have used a variety of venues to raise public awareness of environmental issues, from in-depth reports to well-known conferences. The UN's Sustainable Development Goals (SDGs) have proven to be effective since they provide a thorough agenda that tackles urgent global concerns, including those that straddle the economic and environmental spheres. These goals guide policy formulation and serve as a rallying point for global awareness campaigns, emphasizing the interconnectedness of economic activities and environmental sustainability. Events like the COP28 conference, which will take place in the United Arab Emirates, serve as even more examples of the dedication to raising public awareness. The Conference of the Parties (COP) gatherings have developed into critical international forums for cooperation, giving campaigners, scientists, and decision-makers a stage to debate and devise solutions to stop environmental degradation and climate change. As the most recent of these

summits, COP28 emphasizes the continued dedication to working together to address global environmental concerns (COP28 UAE - United Nations Climate Change Conference, n.d.). Conferences such as COP28, which unite various stakeholders on a worldwide platform, play a vital role in increasing consciousness, promoting communication, and motivating coordinated efforts to alleviate the consequences of climate change. Among the leading organizations promoting environmental awareness worldwide has been the UN. The United Nations has effectively communicated the need to adopt sustainable practices and incorporate environmental issues into decision-making through campaigns, publications, and high-profile events. The world's efforts were brought together under one shared vision of a sustainable future in 2015 with the adoption of the SDGs, signalling a turning point in history. The SDGs' extensive agenda highlights the need to take coordinated action to solve environmental concerns, acting as a guide for the public and a roadmap for policymakers. Environmental organizations have been instrumental in spreading the environmental message. Through the utilization of their networks, resources, and expertise, these organizations have taken the lead in promoting public education regarding the environmental consequences of human activities. Environmental organizations have greatly aided in instilling in people and communities a feeling of urgency and responsibility through publications, educational initiatives, and advocacy. Their work penetrates beyond the confines of typical environmental circles, impacting public attitudes about the role of economics in forming a sustainable future and broader societal dialogues. Concurrent with these global endeavors, the Food and Agriculture Organization (FAO) has initiated programs across the globe, demonstrating the connection between environmental consciousness and pragmatic endeavors. The practical implications of implementing environmentally responsible practices in economic activity are reinforced by these locally relevant initiatives.

### **Failures of Environmental Economics**

The primary obstacle to implementing environmental economics in emerging or impoverished nations is the overriding focus on economic growth. Countries struggling with poverty or underdevelopment frequently have to prioritize

taking care of their immediate financial needs over their environmental concerns (UNCTAD, 2021). The complexity of this problem emerges when nations balance the need to improve population standards with the long-term effects of environmental deterioration. Some countries choose to put economic development and growth ahead of implementing strong environmental legislation to maintain this delicate balance. This strategic decision is most apparent in the paths taken by industrialized nations, which are frequently at the forefront of economic development.

Reducing poverty and raising living standards is crucial for struggling nations. To increase the standard of living for its population, the pursuit of economic growth becomes a method of supplying necessities, job opportunities, and improved infrastructure. In this situation, people can prioritize the urgent demands of the populace over long-term sustainability objectives, making environmental problems seem less important. These countries face the difficult task of balancing the need to protect the environment for coming generations and their immediate economic needs.

A pattern seen in certain industrialized countries is the delayed implementation of environmental policies in a country's developmental trajectory. These countries had periods of swift industrialization and economic growth in the past, frequently without the strict environmental laws in place today. The resulting pollution, resource depletion, and environmental deterioration permanently impacted ecosystems. Priorities began to alter over time as these nations reached economic maturity in favour of sustainability and environmental conservation. The experience of industrialized countries bears witness to the complex interplay between environmental consciousness, economic prosperity, and the ensuing development of strict environmental regulations.

Although it plays a crucial role in resolving the intricate relationship between economic activity and ecological well-being, environmental economics must comprehensively assess environmental challenges. This intrinsic constraint arises from the complex character of environmental issues, which frequently resist simple monetary calculation and elude the standard techniques utilized in economic analysis (Kistow and Sookram, 2012).

The range and complexity of environmental challenges hamper a comprehensive and extensive review. Environmental concerns include deforestation, air and water pollution, biodiversity loss, and climate change. It is difficult to fully capture the complexity of each of these problems in a cost-benefit analysis due to their interrelated biological systems and cascading effects on ecosystems.

The shortcomings of conventional economic measures are most noticeable when evaluating components that are difficult to monetize. For example, the cultural significance of specific environmental aspects, the irreplaceable biodiversity found within ecosystems, or the inherent value of ecosystems may not all easily be expressed in monetary terms. These intangible elements, essential to a complete knowledge of environmental health, present a significant obstacle to conducting a thorough review using traditional economic frameworks.

The concept of ecosystem services further complicates the evaluation procedure. Pollination, water purification, and carbon sequestration are examples of these services that are vital to human societies but are challenging to value because of the complex relationships and interdependencies within ecosystems. The actual costs and benefits of environmental changes are only fully understood when the value of these services is sufficiently considered in economic calculations (Atkinson & Mourato, 2008: 320). Furthermore, conventional economic studies need clarification on environmental degradation's cumulative and lasting impacts. For example, the effects of climate change have been felt for many generations. Estimating the financial implications of these long-term effects, which include shifting ecosystems, harsh weather, and rising sea levels, is extremely difficult. Conventional discount rates, frequently used in economic analyses, might need to adequately reflect the seriousness of these postponed effects, underestimating the actual financial ramifications.

### **The Evolution of Islamic Economics**

Islamic beliefs began to influence many facets of life, including economics, during the Prophet's and later caliphates' reigns (Hassan, 2016: 15). This is where the origins of Islamic economics can be found. However, the discussion of Islamic Economics did not acquire intellectual depth until the writings of



eminent thinkers like Ibn Khaldun, Abu Yusuf, Al-Ghazali, Ibn Taymiyyah, and Al-Mawardi. The 1970s saw the emergence of Islamic Economics as a separate field, notwithstanding these early contributions.

Islamic Economics functioned in the background of traditional economics during its early years. Although notable works were written by prominent figures in the Islamic world, scholars like Furqani (2015) point out that the study has yet to become recognized as a distinct field. This can be explained by the predominance of traditional economic ideas and paradigms at the time.

It was a complex process for Islamic Economics to get recognized as a separate academic field. It was a purposeful reaction, nearly a reaction, to the advancements inside traditional economics rather than just a reiteration of past methods. The emergence of contemporary Islamic economics was closely connected to the development of conventional economic theory, as Muqorobin (2008: 393) indicates. The apparent shortcomings and incompatibilities of mainstream economic theories with Islamic values prompted academics, economists, and philosophers to methodically establish Islamic economic principles in the 1970s, which marked a turning point in the field.

During this time, scholarly endeavors to lay the groundwork for Islamic Economics as a strong and autonomous field had a notable upsurge. By addressing topics like interest (*riba*), uncertainty (*gharar*), and social fairness in economic transactions, the intellectuals of this era attempted to bring Islamic precepts and economic ideas into harmony. They explored the rich history of Islamic law, using cues from the Quran and Hadith to create a thorough framework for business dealings that adhered to Islamic morality.

Growing awareness of the need for an economic system that puts social welfare and ethical issues first has also aided in the development of Islamic economics. As a concrete result of these initiatives, the global Islamic finance sector developed, providing financial services and products that followed Sharia law.

Islamic Economics is still developing and interacting with the broader economic debate in the modern day. Muslim scholars and practitioners investigate how to incorporate Islamic principles into various economic sectors, such as trade,

business, and banking. Islamic Economics is still centered on moral behavior, social justice, and sustainability, which connects it to the larger objectives of advancing environmental sustainability and human welfare.

### **Successes of Islamic Economics**

There is a strong connection between Islamic social finance and Sustainable Development Goals (SDGs), and the leaders who promote this are Indonesia and Malaysia (Abubakar & Aysan, 2021: 7).

A cutting-edge climate finance instrument that can harness the enormous resources of the \$2 trillion Islamic finance market to finance environmentally friendly and sustainable investment projects is the green sukuk, also known as the green Islamic bond (World Bank, 2022). This financial tool was first introduced in Malaysia and offers a unique way to direct capital toward projects that take environmental sustainability into account while also adhering to Islamic finance norms.

Creating green sukuk responds to the pressing need for sustainable development techniques and the growing global awareness of environmental challenges. The World Bank has acknowledged the potential of the green sukuk to play a crucial role in funding initiatives that contribute to climate change mitigation and environmental protection, realizing the power of money to drive positive change.

Adherence to Sharia rules is the primary feature that sets green sukuk apart from conventional financial products. Transactions in the Islamic finance industry must abide by Sharia law, which forbids participating in speculative or interest-related activities (gharar and riba). The green sukuk contributes to the harmonious coexistence of Islamic finance and environmental responsibility by supporting initiatives that follow morally and environmentally responsible standards.

Leading the way in introducing the green sukuk, Malaysia is a global leader in Islamic finance and has committed to sustainable development (Alam et al., 2016). The nation's project demonstrates a forward-thinking approach to finance in which environmental stewardship and economic prosperity are linked. An

option for investors looking for both financial gains and the satisfaction of supporting eco-friendly projects is the green sukuk. Green Sukuk is being applied in several fields, such as green infrastructure, energy efficiency, and renewable energy (Mat Rahim & Mohamad, 2018: 133). These initiatives support economic growth and employment creation and address environmental issues. The range of investment options available under the green Sukuk umbrella highlights the platform's adaptability in promoting an equitable and sustainable economic environment.

With its increasing popularity, green sukuk could catalyze a more widespread adoption of sustainable finance practices inside and outside the Islamic financial sector. The global reach of Islamic financing and the growing focus on environmental, social, and governance (ESG) factors when making investment choices place the green sukuk in a prominent position within the changing responsible finance scene.

Blue Sukuk is a financial product leading the way in sustainable financing. Its unique selling point focuses on investments in blue areas, namely oceans and the variety of marine creatures it supports (The Development of Blue Sukuk and Blended Blue Finance - Transformations in Action, 2022). The Blue Sukuk is a novel effort combining Islamic banking concepts with preserving and conserving marine habitats. It originated in Indonesia, with long coastlines and a rich marine ecosystem. Given the size of its archipelago, Indonesia has long understood the vital value of its marine resources (The Development of Blue Sukuk and Blended Blue Finance - Transformations in Action, 2022). The commencement of Blue Sukuk symbolizes the nation's dedication to solving the difficulties faced by its oceans, from overfishing to environmental deterioration. Indonesia seeks to promote an integrated conservation approach that considers environmental and economic factors by directing funding from Islamic financing into blue regions (Rusydiaana & Irfany, 2021). Blue Sukuk adheres to moral and sustainable investment practices while functioning under the framework of Sharia law. In addition to giving investors a chance to support ocean conservation, this financial product is consistent with Islamic principles, which place a premium on prudent management of the planet's resources. Fundamentally, the Blue

Sukuk combines financial goals with environmental preservation, providing a forum for moral investors looking to have a beneficial influence.

The introduction of the Blue Sukuk by Indonesia demonstrates the nation's understanding of the importance of the oceans to its ecosystem, economy, and culture. The program places Indonesia as a leader in fusing Islamic finance with environmental stewardship and supports international efforts to meet sustainable development goals. As the Blue Sukuk takes off, it may encourage other coastal countries dealing with comparable issues to look at creative financing options for marine conservation. The convergence of Islamic finance and blue investments indicates a heightened consciousness of the necessity of sustainable and varied methodologies to tackle urgent environmental concerns.

The year 2022 was a momentous occasion in Indonesian history when Badan Wakaf introduced the Green Waqf program, a ground-breaking endeavour to utilize the waqf idea to promote ecological balance and sustainability (United Nations Development Programme, 2022). Islamic philanthropy dates back centuries, and waqf entails donating assets for good causes. This long-standing practice is being brought into environmental conservation by the Green Waqf program, which emphasizes the mutually beneficial effects of ecological well-being and favorable social and economic outcomes. The Green Waqf initiative, spearheaded by Badan Wakaf, is an innovative combination of Islamic values and modern environmental issues (United Nations Development Programme, 2022). Using waqf assets for environmental objectives adds a fresh perspective to the conventional idea and acknowledges the urgent need to deal with environmental problems in the contemporary world. With its alignment with the worldwide need for sustainable development, this effort represents a paradigm leap in applying Islamic generosity.

The Green Waqf initiative aims to strategically use waqf assets to support programs that maintain ecological balance. These programs include planting new trees, protecting biodiversity, and implementing sustainable farming methods. Badan Wakaf aims to make a lasting impact on the environment and secure the welfare of present and future generations by allocating waqf funds to environmental concerns. The relationship between social welfare, economic progress,

and environmental sustainability is highlighted in this ground-breaking work by Badan Wakaf. By tackling the underlying causes of environmental problems, the Green Waqf project goes above and beyond ordinary philanthropic activities. It acknowledges that communities' prosperity and well-being largely depend on a healthy environment, making environmental protection a crucial component of philanthropy.

Furthermore, the Green Waqf initiative's effects on society and the economy go beyond environmental ones. The program supports sustainable practices, which improves livelihoods and community resilience. For instance, waqf fund investments in sustainable agriculture can improve food security and open up business opportunities for nearby people. This strategy is in line with the larger objectives of Islamic finance, which places a strong emphasis on the value of moral and socially conscious financial operations. The Green Waqf concept was introduced by Badan Wakaf, whose leadership sets an example for other Islamic charitable organizations worldwide. The program demonstrates how Islamic traditions can be modified to meet changing societal requirements and acts as an inspirational model for fusing Islamic ideals with modern issues. It emphasizes how waqf can go beyond its traditional function and develop into an effective instrument for good in the face of challenging environmental problems.

The Green Waqf initiative's success will probably spur more research into cutting-edge methods of Islamic philanthropy as it develops. Incorporating environmental concerns with waqf assets as well as through technology such as blockchain (Aysan & Al-Saudi, 2023: 322) shows a dedication to environmental care and reaffirms the importance of Islamic customs in advancing global sustainability objectives.

### **Failures of Islamic Economics**

Numerous obstacles prevent Islamic Economics from fully realizing its potential and integrating into the world economy. The glaring lack of an appropriate and thorough application of Islamic Economics concepts globally is one of the main challenges. Instead of functioning as a separate and autonomous system, Islamic Economics is frequently confined to a small portion of the larger

conventional economy (Salleh, 2011: 20). A significant obstacle to the smooth assimilation of Islamic economic principles is the well-established global domination of traditional economic frameworks, highlighted by this improper execution. The extent to which Islamic Economics can influence policy is limited by the friction it causes between the established norms of conventional economic systems and its core principles of wealth sharing, interest-free financing, and ethical investing.

One such difficulty is that Islamic Economics needs to pay more attention to environmental policies. Though the urgent need for ecologically friendly and sustainable economic practices is becoming more widely recognized, Islamic Economics has yet to distinguish itself in ground-breaking policymaking. Instead, following the appropriate modifications, environmental regulations in Islamic Economics frequently appear to be integrated into the frameworks created by conventional economies. There is a gap in the Islamic worldview when addressing essential concerns like resource depletion, biodiversity loss, and climate change since Islamic Economics needs a proactive and clear environmental goal. Policies that promote environmental sustainability and conform to Islamic economic principles must be developed and implemented to close this gap. These policies should also align with the larger objectives of global ecological conservation.

In addition, compared to Environmental Economics' scientific accomplishments, Islamic Economics has a limited research and academic advancement. While there has been a discernible increase in literature exploring Islamic economics, it still needs more depth and sophistication to compete with Environmental Economics' scientific accomplishments. The latter has made a name for itself as a strong and developed field whose vast body of study aids in our comprehension and mitigation of environmental problems. On the other hand, more thorough and specialized study is still needed in Islamic Economics to develop a sizable body of knowledge. Islamic Economics can grow into a discipline that can solve modern economic issues within an Islamic framework by promoting interdisciplinary studies, boosting academic collaboration, and improving research activities.

As Furqani (2015: 80) notes, opponents of Islamic Economics exacerbate the problems by seeing it as nothing more than the “Islamization” of conventional economics. This critique implies that Islamic Economics in its current form can be seen as shallow or derivative rather than providing a different economic worldview. These viewpoints highlight how crucial it is to clarify and explain what makes Islamic economic concepts unique, showing how they offer a solid and distinct basis for economic systems. To overcome this criticism, Islamic economic theories and practices must be articulated more thoroughly and nuancedly, highlighting their innate advantages and contributions to meeting societal requirements.

### **Comparison between Islamic Economics and Environmental Economics**

Despite having different areas of focus, Islamic and environmental economics have a lot in common that highlights how they both aim to address moral issues, advance environmental values, and deal with emergencies. A bare resemblance between them is their dedication to tackling ethical dilemmas frequently disregarded in traditional economic models. Recognizing the significance of moral factors in economic decision-making, Islamic and Environmental Economics work to integrate moral ideals and principles into their respective paradigms. Sharia law and Islamic tenets are the foundation of ethical concerns in Islamic Economics. Within the Islamic economic framework, the prohibitions against interest (*riba*), speculating (*gharar*), and unfair exploitation serve as fundamental guidelines for economic activity. By coordinating economic activity with more general ethical principles in Islamic teachings, Islamic Economics’ moral underpinning seeks to promote societal welfare, economic justice, and fairness. Comparably, environmental economics raises ethical issues by highlighting the environment’s inherent value and the moral obligation to save it for current and future generations. This ethical position promotes a more inclusive assessment of the environment’s intrinsic worth, challenging the anthropocentric viewpoint that only places a premium on human well-being.

The two disciplines also aim to promote environmental values in economic frameworks. Islamic economics naturally encourages sustainable and

ecologically friendly methods, although its main focus is on moral economic behavior dictated by Islamic teachings. Muslim teachings strongly emphasize conservation and sound resource management through ideas like the stewardship (Khalifah) of the Earth and the prohibition of wastefulness (Israf). Contrarily, environmental economics clearly emphasizes integrating environmental factors into financial decisions. By valuing environmental goods and services to represent their genuine costs and benefits, it aims to internalize externalities. Islamic Economics and Environmental Economics aim to promote economic systems that align with ecological sustainability by incorporating environmental principles.

Furthermore, many professions have developed or attracted new attention in reaction to crises brought on by flaws in the current economic structures. The problems presented by the global financial crisis and the perceived shortcomings of traditional economic systems have led to a renaissance of Islamic Economics. The focus on fair wealth distribution, the interest-free character of Islamic finance, and the ban on speculative activities all speak to potential remedies for the systemic problems that the global financial crisis brought to light. Similarly, environmental economics has become more well-known in reaction to the growing environmental crisis, which includes resource depletion, biodiversity loss, and climate change. The area aims to solve the shortcomings of conventional economic models, which frequently need to pay more attention to the effects of economic activity on the environment. Therefore, environmental and Islamic economics offer flexible solutions to today's problems by providing different viewpoints and conceptual frameworks that lessen the effects of structural flaws.

The fields differ in their principal objectives and methodology, even with these commonalities. Islamic Economics is applying Islamic law and principles to economic activities, focusing on social justice, equitable distribution of wealth, and compliance with Sharia law. Islamic economics is founded on moral principles that influence economic activity by moral standards. Environmental Economics, on the other hand, is primarily concerned with how the environment influences economic decisions. It integrates ecological factors into economic



policies and decision-making processes using environmental valuation, market-based instruments, and cost-benefit analysis.

Environmental economics and Islamic economics differ significantly in their primary focus areas, global acceptance, policy relevance, application, and the levels at which they function within social structures, even though they share similar ethical considerations and crisis response strategies. The scope of consideration is a critical area of contrast between Islamic and Environmental Economics. The former covers various economic activities, including capital markets, banking, and accounting, while the latter focuses on environmental issues. According to Khairunnisa and Sari (2022), Islamic Economics is influenced by Sharia law and Islamic beliefs and extends to many facets of economic life. Environmental Economics, on the other hand, focuses primarily on comprehending and reducing the environmental effects of economic activity.

These two professions are not widely accepted worldwide; environmental issues have dominated the global agenda for years. As seen in 2017 by the implementation of ESG guidelines in Qatar, environmental economics has garnered extensive attention and advocacy at many international stages, including COP 28 in the UAE, which incorporates environmental, social, and governance (ESG) scores for corporations. The global emphasis on environmental issues results from a deliberate attempt to solve urgent problems like biodiversity loss and climate change. Conversely, although gaining momentum, Islamic Economics has yet to attain the same degree of global recognition. Even in Islamic Economics, the adoption of sustainability measures is frequently impacted by the unique circumstances of Islamic nations and their dedication to integrating moral and environmental factors into economic operations.

For many years, regional and global governing organizations have focused on environmental economics as a critical policy relevance and implementation area. Since the 1980s, reputable organizations such as the Organisation for Economic Cooperation and Development (OECD) have been actively involved in environmental economics, helping to shape guidelines and policies that tackle environmental issues globally. By founding the European Environmental Agency in 1993, the European Union (EU) further demonstrated its dedication

to environmental economics. The aforementioned institutional endeavors highlight the importance of Environmental Economics in creating policies with extensive ramifications. In contrast, Islamic Economics frequently functions at the governmental level despite incorporating environmental policies. In this perspective, the efficient implementation of Islamic law requires cooperation between communities and institutions. The distinct qualities and difficulties present in every economic framework are reflected in the variations in how policies are applied.

There are differences in the socioeconomic frameworks at which Islamic and Environmental Economics function. Islamic economics is primarily established at the governmental level, meaning that to apply Islamic laws and values, authorities must be actively involved and support them. It stands for an all-encompassing perspective that aims to influence laws and regulations to shape economic behaviors at the macro level. On the other hand, environmental economics has shown its influence on both the state and individual levels. Environmental economics advocates an individualistic approach, as is demonstrated by the development of carbon footprint calculators. By enabling users to track their carbon footprints, these calculators motivate them to take actions that lessen their environmental impact. This influence at the individual level demonstrates how environmental economic concepts are flexible and successful, going beyond institutional or governmental compliance.

## Conclusion

Comparing Islamic and Environmental Economics in the fight against environmental concerns shows that Islamic Economics is less adept at handling environmental intricacies than Environmental Economics is. Several essential elements support this claim. First and foremost, environmental economics is primarily concerned with comprehending and incorporating environmental factors into economic activity. This focus point makes a more sophisticated approach possible, considering the broader ecological effects of economic actions. Additionally, a significant factor has been the global recognition of environmental economics as a legitimate field of study in economics. Its methods

and guiding concepts are widely acknowledged, which has promoted international collaboration and the creation of group plans to address environmental problems globally. Environmental economics' policy relevance and real-world application have mainly shaped effective environmental conservation techniques. Impactful rules and incentives to support sustainability have been implemented due to the field's emphasis on creating policies that internalize environmental costs and benefits. Finally, the difference in the influence scale is significant. Environmental Economics takes a more individual-centric stance, whereas Islamic Economics typically functions at the governmental level. Because it is decentralized, environmental economics may penetrate many facets of society and promote sustainable habits from the bottom up.

Fundamentally, environmental economics' ability to involve people in sustainable activities, broad acceptance, policy relevance, and holistic focus make it successful in tackling environmental issues. Although acknowledging the moral basis of Islamic finance, it is clear that Environmental Economics has become a more adaptable and worldwide framework for promoting business practices that align with environmental conservation. The results obtained from this comparative research highlight the significance of a multifaceted approach that integrates ethical ideals with workable, internationally recognized measures for a sustainable future as the globe continues to struggle with mounting environmental issues.

Overall, the paper concludes by affirming that Environmental Economics has established a more comprehensive and globally recognized framework for addressing environmental challenges compared to Islamic Economics. Despite Islamic Economics' innovative contributions, such as green sukuk, blue sukuk, and the Green Waqf initiative, which align financial practices with environmental sustainability within Sharia principles, it faces challenges in global integration and environmental policymaking. Environmental Economics, with its successful application of Environmental Cost-Benefit Analysis, policy influence through the Sustainable Development Goals (SDGs), and Environmental, Social, and Governance (ESG) assessments, demonstrates a broader acceptance and impact on global environmental conservation efforts. The paper advocates for

a multilayered approach that merges the ethical underpinnings of Islamic Economics with the practical, recognized strategies of Environmental Economics to forge a sustainable future. This approach underscores the importance of integrating ethical values with comprehensive, actionable measures to address the escalating environmental issues confronting the global community.

The research, while comprehensive in its comparative analysis of Environmental and Islamic Economics, encounters limitations, notably in its breadth of case studies and empirical data to substantiate the effectiveness of the discussed financial instruments and policies. The paper primarily relies on theoretical frameworks and qualitative assessments, which may not fully capture the practical outcomes and societal impacts of these economic models. Future studies could address these limitations by incorporating quantitative analyses, broader geographical case studies, and longitudinal data to evaluate the long-term sustainability and economic impacts of green and blue sukuk, the Green Waqf initiative, and other environmental policies within different economic contexts. Additionally, exploring the potential for integrating Environmental and Islamic Economics principles could offer innovative solutions to environmental challenges. Investigating the role of technology in enhancing the efficacy of these economic models and their adaptability to changing environmental and economic conditions could further contribute to the development of a more holistic approach to sustainable economic practices.

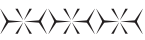
## . Contribution Rates and Conflicts of Interest

<b>Ethical Statement</b>	It is declared that scientific and ethical principles have been followed while carrying out and writing this study and that all the sources used have been properly cited
<b>Author Contributions</b>	
Data Collection	No data collection.
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# Foundations of Organizational Culture: A Comprehensive Review

Kujtim Hameli

**Abstract:** This paper provides a comparative analysis of seminal cultural studies by Schein, Hofstede, and the Project GLOBE initiative, examining their influence on contemporary organizational contexts. Using a systematic literature review methodology, this study synthesizes and compares the cultural models of Schein, Hofstede, and Project GLOBE to assess their theoretical foundations and practical applications. Additional models from Schwartz and Trompenaars are briefly reviewed to contextualize their relevance. The analysis reveals that Schein's model emphasizes cultural artifacts, beliefs, and assumptions; Hofstede's model focuses on six dimensions of national cultures; and the Project GLOBE initiative identifies nine cultural dimensions impacting leadership and organizational processes. Together, these models offer a comprehensive understanding of organizational culture and its impact on behavior and performance. This paper contributes to the field by highlighting the enduring significance of these cultural models and their applications across various organizational settings.

**Keywords:** Organizational culture, Schein's culture model, Hofstede's cultural dimensions, Project GLOBE, Comparative cultural analysis



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## Introduction

Culture is probably the most controversial topic in the social sciences, with more than 150 definitions (Cameron and Quinn, 2011). The definitions of culture are meaningless without a thorough comprehension of the various ways researchers have understood and conceptualized the concept. Moreover, the way culture is apprehended will interact with the way it is studied (Ehrhart et al., 2014). Culture is a precarious concept as it comfortably can be used to comprise everything and consequently nothing. It is an umbrella concept for a way of thinking that is seriously concerned with cultural and symbolic phenomena (Alvesson, 2002). Culture can be referred to as “the invisible hand” that directs the actions of a specific society. When people are asked why they do certain things, they usually answer, “Because it’s the right thing to do”, a response that reflects the embedded influence of culture on people’s behavior (Schiffman and Wisenblit, 2015). Trompenaars and Hampden-Turner (1998) illustrate that culture to people is like water to fish. A fish only understands the need for water when it is no longer in it. In the same way, culture defends us from the unknown.

Organizations are defined by varying levels of shared values, norms, roles, and expectations, which comprise the organization’s unique structures (Allaire and Firsirotu, 1984). When we talk about the significance of stories, rituals, legends, and myths in an organization and about the interpretation of experiences, ideas, and events that are impacted and molded by the people of the organization, we are, in fact, talking about organizational culture (Alvesson, 2002). Organizational culture is a symbol-rich structure in which employees develop and apply meaning to their work lives (MacQueen, 2020). Organizational culture is the whole of an organization centered on one or more core issues about work and work affairs (Sinha, 2008) made up of different elements including cultural values, basic assumptions, social and organizational norms, ways to communicate, stories, narratives, myths and metaphors, organizational stereotypes, rituals, symbols, customs, organizational heroes, taboo, cultural patterns, cultural artifacts, and subculture (Sulkowski, 2016).

Organizational culture incorporates all members of an organization, it originates and evolves at all hierarchical levels, and is based on a broad history that

is manifested in the organization's material characteristics (or artifacts), including its products, logos, names, and other symbols (Jo Hatch and Schultz, 1997). Organizational culture is created by employees of the organization and therefore may alter depending on the interests of those engaged (Mills and Hoerber, 2013). It is often established unconsciously, depending on the values of management or the owners of an organization (Sun, 2008), and especially the dominant role that owners have on how members solve their external basic and internal integration issues (Schein, 1983).

The concept of organizational culture appears to have remained relatively unchanged over the last century. Jacques (1951: 251) prescribed organizational culture as "the customary or traditional ways of thinking and doing things, which are shared to a greater or lesser extent by all members of the organization and which new members must learn and at least partially accept in order to be accepted into the service of the firm." According to Martin (2002), most organizational culture definitions share two theoretical characteristics: the exploitation of the word "shared" and a reference to culture as that which is different or particular to a certain background. To this end, organizational culture is made up of shared values and assumptions (McShane and Von Glinow, 2018). Shared values are the values that people in an organization have in common and give importance according to their hierarchy of values. Shared assumptions, on the other hand, are unconscious, taken-for-granted, as the best way of thinking and acting toward daily problems and opportunities.

Numerous cultural studies have been conducted over time, with notable influences stemming from the works of scholars such as Schein, Hofstede, and the Project GLOBE initiative. This paper seeks to provide a comparative analysis of these pivotal cultural studies, which continue to exert significant influence within organizational contexts to the present day. The comparative assessment will begin with an examination of Schein's culture model, followed by an exploration of Hofstede's cultural framework, and culminate in a detailed review of the Project GLOBE research project. Additionally, we will briefly examine other cultural models in academic literature, acknowledging their relevance while

recognizing that their impact may be less pronounced compared to the aforementioned three seminal models.

## **Contributions of this Paper**

This paper makes several important contributions to the field of organizational culture studies. First, by comparing the foundational models of Schein, Hofstede, and Project GLOBE, it provides a nuanced understanding of how different cultural frameworks conceptualize and impact organizational behavior. Second, the inclusion of Schwartz's and Trompenaars' cultural models broadens the scope of the analysis, offering a more holistic view of the cultural dimensions influencing organizational settings. Third, the insights gained from this comparative analysis can inform organizational leaders and practitioners on how to better understand and manage cultural dynamics within their organizations, leading to improved leadership strategies and organizational effectiveness. Finally, by highlighting the strengths and limitations of each cultural model, this paper sets the stage for future research to build on these foundational theories and explore new dimensions of organizational culture.

## **Schein's culture study**

Schein provides many ways of defining culture that gives a feeling that culture encompasses everything that a group has experienced and learned within the time (Schein and Schein, 2017). Culture is both a reality that besieges us at all times, being continually shaped and enacted by our intercommunications with others and leadership behaviors and a bunch of rules, norms, routines, and structures that steer and control our behavior (Schein, 2004). The formal definition of culture by Schein is: "a pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems (Schein, 1988: 7; 2010: 18).

According to Schein (2010), culture can be analyzed at different levels depending on the cultural sensation the researcher can observe. These levels are

artifacts, widespread beliefs and values, and basic assumptions. Artifacts, the superficial level of culture, include everything that can be effortlessly perceived when a person enters a new, previously unfamiliar group. Artifacts include the obvious elements of the group, such as the language, the design of the physical environment, the technology and goods, the creative manifestations, the fashions, such as the dress, the manner of address, and the passionate performances, the myths and stories told in the organization, the values shared in the organization, and the recognizable customs and ceremonies. Beliefs and values include beliefs and values for solving problems and getting things done. Leaders or founders are identified in the organization as those who succeed in convincing the group to adopt a particular approach to the problem. Underlying the assumptions is a deeper level at which a solution to a problem has been proven successful and is taken for granted. What used to be a hypothesis based only on a guess or a value is gradually seen as fact.

### **Hofstede's culture study**

Hofstede (1991: 262) defined culture as “the collective programming of the mind that distinguishes the members of one group or category of people from another”. This definition is continuously cited in his works in such as Hofstede (1998a: 478; 1998b2; 2001: 9), Hofstede and McCrae (2004: 58), Hofstede (2007: 16), Hofstede et al., (2010: 6), Hofstede (2011: 3), etc. Hofstede (2011: 8) proposed a model of six dimensions of national cultures:

1. Power Distance,
2. Uncertainty Avoidance,
3. Individualism/Collectivism,
4. Masculinity/ Femininity,
5. Long/Short Term Orientation, and
6. Indulgence/Restraint.

Power distance has been defined as the degree to which less powerful members of organizations and institutions (such as families) accept and expect unequal

power distribution. Uncertainty Avoidance measures how much a culture teaches its people to feel uncomfortable or comfortable in unstructured conditions. Individualism, on the one hand, and collectivism, on the other, is the degree to which individuals in a society are integrated into groups. Masculinity vs its opposite, Femininity, refers to the distribution of values between the genders, which is another essential issue for any culture, to which a variety of solutions may be found. Perseverance, thrift, ordering relationships by status, and having a sense of shame are values associated with long-term orientation; values associated with the opposite, short-term pole, are reciprocating social obligations, respect for tradition, protecting one's 'face', and personal steadiness and stability. Indulgence represents a culture that allows for the relatively unrestricted fulfillment of fundamental and natural human wants connected to having pleasure and enjoying life. Restraint represents a civilization that restricts and regulates fulfillment of demands through stringent social rules (Hofstede, 2011).

## **Project GLOBE**

In addition to the studies of Schein and Hofstede, the GLOBE project also plays an important role in cultural literature. In line with Hofstede's study, Global Leadership and Organizational Behavior Effectiveness (GLOBE) research program initiated by Robert J. House, investigates several theoretical issues of culture and examines the interrelationships between societal culture, organizational culture, and organizational leadership (House, 1998). The overarching purpose of GLOBE is to provide an empirically based theory that can be used to explain, comprehend, and forecast the impact of specific cultural elements on leadership and organizational processes, as well as their efficacy (House et al., 2001, House et al., 2002). Project GLOBE defined culture as "shared motives, values, beliefs, identities, and interpretations or meanings of significant events that result from common experiences of members of collectives and are transmitted across age generations" (House et al., 2001: 494).

Nine cultural dimensions were proposed (Javidan and Dastmalchian, 2009):

1. Uncertainty Avoidance,
2. Power Distance,
3. Collectivism I: Institutional Collectivism,
4. Collectivism II: In-group collectivism,
5. Gender Egalitarianism,
6. Assertiveness Orientation,
7. Future Orientation,
8. Performance Orientation, and
9. Humane Orientation.

Uncertainty avoidance is defined as the degree to which members of an organization or community try to avoid uncertainty by relying on social norms, rituals, and bureaucratic processes to mitigate the unpredictability of future occurrences. Power distance is defined as the extent to which members of an organization or community anticipate and agree that power should be unequally distributed. Collectivism I: Institutional collectivism refers to the extent to which organizational and societal institutional practices support and reward communal resource allocation and collective action. Collectivism II: The degree to which individuals feel pride, loyalty, and cohesion in their organizations or families is reflected in in-group collectivism. Gender egalitarianism refers to the extent to which an organization or community reduces gender roles and discrimination. Assertiveness orientation is defined as the extent to which individuals in organizations or cultures are aggressive, forceful, and confrontational in social relationships. Future orientation is defined as the extent to which individuals in organizations or cultures participate in future-oriented behaviors such as planning, investing in the future, and deferring pleasure. The degree to which an organization or community encourages and compensates group members for performance development and excellence is referred to as performance orientation. Humane orientation is the extent to which people in organizations or communities promote and reward others for being altruistic, fair, amiable, giving, caring, and kind to others (Javidan and Dastmalchian, 2009).

## Other important culture studies

Among above mentioned cultural studies, Schwartz' and Trompenaars' studies have an important place in literature.

Schwartz (1999) presented seven types of values on which cultures can be compared. By addressing three issues that all communities face, he develops a theory that specifies seven sorts of values on which cultures can be compared:

1. Autonomy versus Conservatism,
2. Hierarchy versus Egalitarianism,
3. Mastery versus Harmony.

The first challenge is labeled as individualism-communalism. One pole of this dimension depicts societies in which the individual is considered as a being rooted in the collectivity and derives meaning in life primarily from social interactions, identifying with the community, and participating in its common way of life. This is called conservatism. The opposing pole of this dimension defines societies in which the individual is considered as an independent, bounded creature who finds meaning in his or her own uniqueness, who aspires to express and is encouraged to express his or her own internal qualities (preferences, traits, sentiments, reasons). This is called Autonomy (Intellectual and Affective). The second issue deals with Hierarchy and Egalitarianism. Hierarchy dimension employs power differences to enforce socially responsible behavior, based on hierarchical systems of ascribed roles. An alternate answer to the challenge of responsible social behavior is to encourage society members to see one another as moral equals with basic human interests, labeled as Egalitarianism. The third issue confronts societies in the relation of humankind to the natures and social world. One answer is to actively dominate and change the world, to exercise control over it, to bend it to our will, and to use it in order to further personal or group goals. This is called Mastery. An alternative answer to this problem is to accept the world as it is and attempt to fit in, rather than seeking to change or exploit it. Harmony is the value type that expresses this answer (Schwartz, 1999).

In like manner, Trompenaars and Hampden-Turner (1998) postulates that people deal with three layers of culture: explicit, norms and values, and assumptions about existence. The outer layer is what most people connect with culture: the visible reality of clothes, cuisine, language, housing, and so on. The intermediate layer pertains to a community's norms and values: what is regarded fair or incorrect (norms) and good or poor (values). The core is the path to successfully dealing with different cultures: the set of norms and techniques that a society has developed to deal with the common challenges that it faces. They identify five dimensions of how people relate to each-other. They are listed as (Trompenaars and Hampden-Turner: 1998):

1. Universalism versus particularism (rules versus relationships),
2. Communitarianism versus individualism (the group versus the individual),
3. Neutral versus emotional (the range of feelings expresses),
4. Diffuse versus specific (the range of involvement),
5. Achievement versus ascription (how status is accorded).

If we are about to summarize these dimensions from the book "Riding the Waves of Culture: Understanding Cultural Diversity in Business" (1998): Universalist societies believe that broad principles and duties are a reliable source of moral guidance. Particularistic societies are ones in which "specific" situations take precedence over regulations. Bonds of specific relationships (family, friends) are stronger than any abstract rule, and the response may vary depending on the circumstances and persons involved. Individualism relates to how people see themselves as individuals, and communitarianism refers to how people see themselves as a collective. Reason and emotion both play a part in human interactions. Which of these takes precedence depends on whether we are affective, that is, we display our feelings, in which case we will almost certainly receive an emotional reaction, or whether we are emotionally neutral. Individuals in a specific culture have a huge public space that they freely share with others and a small private space that they guard carefully and share with only close friends and colleagues. A diffuse society is one in which public and private space are of similar size, and individuals preserve their public space since access to public area also allows access to private space. It examines how a society maintains



their private and public lives distinct. People in an achievement culture are given status based on how successfully they execute their jobs. In an ascription society, status is determined by who or what a person is.

In addition to those dimensions, Trompenaars and Hampden-Turner (1998) pointed out two extra dimensions: sequential versus synchronic and internal versus external control. A sequential time culture is one in which people like events to occur in chronological sequence. Instead, in synchronic cultures, specific time periods are seen as interwoven, people emphasize the importance of punctuality and deadlines if these are critical to meeting objectives, and they frequently work on multiple projects at once. People in an inner-directed culture believe in controlling outcomes and have a commanding attitude toward their settings. People in outer-directed culture believe in letting things run their course and have a more flexible mindset, typified by a readiness to compromise and maintain natural harmony.

## Conclusion

This paper has undertaken a comprehensive comparative analysis of the seminal cultural models proposed by Schein, Hofstede, and the Project GLOBE initiative, with additional insights from Schwartz and Trompenaars. Through this analysis, several key observations and critical insights have emerged.

Schein's culture model, with its focus on artifacts, beliefs, and underlying assumptions, provides a deep, layered understanding of how organizational culture forms and evolves. It highlights the importance of shared experiences and learned behaviors in shaping an organization's cultural landscape (Schein and Schein, 2017). However, Schein's model is somewhat limited by its less systematic approach to quantifying cultural dimensions, which can pose challenges in empirical research and cross-cultural comparisons (Schein, 2010).

Hofstede's model, on the other hand, offers a structured approach with its six dimensions of national cultures: Power Distance, Uncertainty Avoidance, Individualism/Collectivism, Masculinity/Femininity, Long/Short Term Orientation,

and Indulgence/Restraint (Hofstede, 1991). This framework allows for easier cross-cultural comparisons and has been extensively validated across different contexts. Nonetheless, Hofstede's model has been critiqued for its potential over-simplification of cultural dynamics and its primary focus on national rather than organizational culture (Hofstede, 2011).

The Project GLOBE initiative builds on Hofstede's work by expanding the cultural dimensions to nine and specifically linking them to leadership and organizational effectiveness (House et al., 2001). This provides a more comprehensive view of how culture influences organizational behavior and leadership practices. However, similar to Hofstede, GLOBE's model may face criticism for its complexity and the challenges involved in measuring and applying its dimensions in diverse organizational contexts (House et al., 2002).

Schwartz's and Trompenaars' models add further depth to the discourse by introducing additional cultural dimensions and emphasizing different aspects of cultural interactions. Schwartz's model addresses fundamental societal issues such as Autonomy vs. Conservatism and Hierarchy vs. Egalitarianism (Schwartz, 1999), while Trompenaars highlights practical aspects of cultural interaction, such as Universalism vs. Particularism and Individualism vs. Communitarianism (Trompenaars and Hampden-Turner, 1998). These models are valuable for their unique perspectives but are less frequently applied in organizational studies compared to Schein, Hofstede, and GLOBE.

In conclusion, this comparative analysis underscores the multifaceted nature of organizational culture and the importance of employing multiple models to gain a holistic understanding. Each model offers unique strengths and insights, contributing to a richer comprehension of cultural dynamics within organizations. For practitioners and researchers, leveraging these diverse frameworks can enhance the ability to diagnose, manage, and leverage organizational culture effectively. Future research should continue to integrate and refine these models, exploring new dimensions and their practical applications in a rapidly changing global landscape.

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# Comparative Perspectives on Digital Entrepreneurship and Economic Growth: A Focus on the Western Balkans

Abil Baush

**Abstract:** This study explores how digital entrepreneurship drives economic growth in the Western Balkans by examining factors such as digital infrastructure quality, venture capital investment, digital literacy, and policy environment. Using a mixed-methods approach, the research analyzes data from regional statistical offices, interviews with digital entrepreneurs, and investment trends. Results indicate an average internet accessibility rate of 70% and annual venture capital investments of approximately \$100 million in the region. Correlation and regression analyses reveal a strong positive association between digital infrastructure quality and GDP growth, as well as between venture capital investment and the emergence of new startups. Additionally, while digital literacy shows a positive correlation with employment in the digital sector, its impact is less significant. Based on these findings, the study recommends focusing on enhancing digital infrastructure and literacy programs to support economic development. This research highlights digital entrepreneurship as a crucial catalyst for economic advancement in the Western Balkans, offering actionable insights for policymakers and identifying avenues for future research.

**Keywords:** Digital Entrepreneurship, Economic Growth, Western Balkans, Venture Capital Investment, Digital Infrastructure



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## Introduction

The Western Balkans, a region rich in cultural and historical diversity, has been navigating a complex journey of economic transition and integration within the global economy. This region, which includes Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia, faces a unique set of challenges, including political instability, economic restructuring, and infrastructural deficiencies. Despite these obstacles, the countries of the Western Balkans have shown remarkable resilience, gradually building a foundation for future growth. Critical to this process has been the adoption of digital technologies, which has catalyzed a new wave of innovation and provided a foundation for developing a thriving entrepreneurial ecosystem. The region's growing embrace of digital transformation is reshaping industries and unlocking new possibilities for economic advancement.

In recent years, the Western Balkans has achieved notable strides in economic development, as evidenced by steady increases in Gross Domestic Product (GDP) and rising levels of foreign direct investment (FDI). These gains, while promising, underscore the need to move beyond reliance on traditional industries to unlock the region's full economic potential. The conventional sectors, though still important, are limited in their capacity to drive substantial economic expansion on their own. This realization has highlighted the role of digital entrepreneurship, which offers an alternative pathway for sustained growth and innovation in the region. Digital entrepreneurship, characterized by the application of digital tools and technologies to create new business opportunities, has the potential to address some of the region's systemic challenges. By fostering a digitally-driven entrepreneurial ecosystem, the Western Balkans can capitalize on global market access, high-skilled job creation, and a more competitive economic landscape.

For digital entrepreneurship to flourish as a central economic driver, key structural investments are necessary in digital infrastructure, education, and policy frameworks. The development of high-speed internet, enhancement of digital literacy, and creation of supportive government policies are essential to support this transformation. Additionally, the infusion of venture capital and

investment will be vital for nurturing startups and scaling successful digital businesses. Through this research, the study seeks to examine the critical role of digital entrepreneurship as a lever for economic progress in the Western Balkans, assessing its current impact and potential for driving sustainable economic growth across the region. By providing insights into the interplay between digital innovation and economic development, this paper offers valuable recommendations for policymakers, investors, and entrepreneurs who seek to maximize the region's potential in the digital age.

## **Importance of Digital Entrepreneurship**

Digital entrepreneurship lies at the crucial intersection of technological innovation and entrepreneurial acumen, representing a modern approach to business that leverages digital tools to create value and stimulate economic growth. In the Western Balkans, where economies are still navigating the complexities of post-transition development, digital entrepreneurship offers a strategic pathway to accelerate progress. The creation and management of digital ventures not only serve as engines of economic growth but also address the region's structural challenges, such as limited market access and dependency on traditional industries. By fostering digital entrepreneurship, the Western Balkans can more effectively integrate into the global digital economy, strengthening its economic position and resilience in an increasingly interconnected world.

The adoption of digital entrepreneurship in the region brings a range of valuable opportunities: access to international markets, the potential to create high-skilled employment, and an environment that promotes innovation and competition. The digital sector's unique scalability allows for rapid growth that transcends traditional geographical and infrastructural barriers, making it particularly suited to overcoming the limitations faced by smaller or landlocked economies. By embracing digital business models, startups and established companies alike can bypass historical constraints, reaching customers and partners globally without the logistical limitations of traditional business. This paradigm shift towards a digital economy contributes to building the Western Balkans'



economic resilience, enhancing adaptability to global shifts, and laying a foundation for long-term sustainable growth.

Given the transformative potential of digital entrepreneurship, this research examines its role as a catalyst for economic development in the Western Balkans. Specifically, this study explores how digital entrepreneurship can function as a lever for regional economic upliftment, assessing its effects on key economic indicators like GDP, employment, and innovation. The study also considers broader societal benefits, such as the digital sector's potential to drive social inclusion, bridge skill gaps, and support the transition to a knowledge-based economy. By analyzing the complex interplay between digital entrepreneurship and economic growth, this paper provides insights and actionable recommendations for policymakers, entrepreneurs, and investors. This exploration is not only timely but essential for charting a path toward a prosperous, competitive, and digitally empowered future for the Western Balkans.

## Literature Review

The role of digital entrepreneurship in driving economic growth has been extensively examined in both global and regional studies. Globally, researchers such as Smith and Zhao (*Journal of Business Venturing*, 33(4), 435-450, p. 440, 2018) underscore the capacity of digital entrepreneurship to stimulate innovation, create jobs, and enhance competitiveness in developed economies. Their work highlights how digital technologies are transforming traditional business models, leading to improved productivity and broader economic diversification. Digital entrepreneurship allows businesses to reach new markets, adapt quickly to technological advancements, and operate with greater efficiency, all of which are crucial in sustaining economic growth in today's interconnected world. These studies lay a foundation for understanding the broad economic potential of digital entrepreneurship and provide a backdrop against which regional dynamics can be examined.

In emerging economies, however, digital entrepreneurship faces unique challenges, as explored by Patel and Kumar (*Emerging Markets Review*, 42, 100-113, p. 105, 2020). They argue that while digital entrepreneurship can be a powerful

growth driver, its success in emerging economies is largely influenced by the availability of technology, supportive government policies, and access to financial capital. These foundational elements create a conducive environment for startups and entrepreneurs to thrive, enabling them to overcome structural barriers and contribute meaningfully to economic growth. The authors' findings underscore the need for investments in infrastructure and policy reforms, suggesting that without these prerequisites, the potential benefits of digital entrepreneurship may remain under-realized. This insight is particularly relevant for regions like the Western Balkans, where the digital ecosystem is still maturing.

Focusing specifically on the Western Balkans, Petrović and Jovanović (188-204, p. 192, 2021) provide a detailed analysis of the region's digital transformation journey. Their research highlights a growing trend in digital startups driven by rising internet penetration and a young, tech-savvy population, which is progressively shaping the region's entrepreneurial landscape. However, they also point out critical constraints, such as limited access to funding and a nascent support ecosystem, which hinder the full potential of digital entrepreneurship in the region. Another notable study by Ilić and Marković (*Journal of Digital Economics*, 12(1), 45-63, p. 50, 2022) delves into the impacts of digital entrepreneurship on specific sectors like e-commerce and fintech within the Western Balkans. Their findings indicate a positive correlation between the growth of these sectors and economic indicators like GDP growth and employment rates, suggesting that sector-specific digital ventures hold promise for regional development.

Despite these valuable contributions, gaps remain in the existing literature. Firstly, there is a scarcity of research that combines quantitative data with qualitative insights, which are crucial for a comprehensive understanding of digital entrepreneurship in the Western Balkans. Many studies tend to focus on either individual countries within the region or specific sectors, often overlooking a holistic regional perspective that accounts for the diverse economic, cultural, and political dynamics at play. This fragmented approach limits the ability to draw meaningful comparisons across countries and to identify overarching trends that can guide regional policy and investment decisions.

Additionally, there is limited exploration of the long-term impacts of digital entrepreneurship on sustainable economic growth in the Western Balkans. Most studies focus on immediate or short-term outcomes, leaving a gap in understanding how digital entrepreneurship can influence long-term economic resilience and stability. This paper aims to address these gaps by not only examining current trends and impacts but also by projecting future implications and potential growth trajectories for the region. By offering a comparative analysis across the Western Balkan countries, this study seeks to provide a deeper understanding of shared trends and unique national characteristics, ultimately contributing to the broader discourse on sustainable digital transformation in emerging economies.

## Methodology

This research adopts a multi-faceted approach to evaluate the influence of digital entrepreneurship on economic growth in the Western Balkans. To ensure a comprehensive and balanced analysis, the study incorporates both quantitative and qualitative data sources, drawing from governmental, academic, and industry perspectives. Governmental economic reports serve as primary sources for macroeconomic data, offering detailed information on sector-specific growth rates, digital infrastructure, and policy frameworks influencing the digital sector. These reports will provide a foundational understanding of the region's economic conditions and the governmental policies shaping the digital entrepreneurship landscape. Additionally, semi-structured interviews with digital entrepreneurs will offer insights into the lived experiences, challenges, and opportunities within the digital entrepreneurship ecosystem of the Western Balkans. These interviews are instrumental in capturing the nuances of operating in this unique economic and cultural context, enabling a richer understanding of the ecosystem's dynamics.

The study also draws on secondary sources, incorporating findings from academic journals and comprehensive industry reports, such as those from the European Bank for Reconstruction and Development (EBRD) and the World Bank.

These publications offer an external perspective on the economic climate and digital market trends in the Western Balkans, positioning the regional data within a broader, global context. In addition, data on investment trends will be gathered through collaborations with venture capital firms and angel investor networks. This data will shed light on the financial landscape for digital startups, offering a view of the financial backing available to digital entrepreneurs, which is essential for scaling and sustaining growth. Together, these diverse data sources contribute to a robust, multi-layered research foundation.

The research design integrates both quantitative and qualitative methodologies to provide a holistic analysis. Quantitative analysis will involve the interpretation of statistical data from governmental and investment sources, employing statistical tools to identify significant patterns, correlations, and trends across economic indicators. This data-driven approach allows for objective assessment of the digital sector's impact on key economic metrics, such as GDP growth and employment rates, providing a basis for empirical findings. Meanwhile, qualitative analysis will add depth to the quantitative data by contextualizing the experiences, perceptions, and challenges of digital entrepreneurs in the Western Balkans. Insights from interviews will reveal the subtleties and complexities that numbers alone cannot capture, providing a more nuanced picture of the digital entrepreneurship ecosystem.

Key variables for this study include digital infrastructure quality, which is a critical determinant of the functionality and growth of digital enterprises. Digital infrastructure encompasses internet accessibility, broadband speed, and mobile network penetration—all vital components for enabling seamless digital connectivity. Investment in digital startups is another essential variable, measured through venture capital funding, government grants, and the number of investment deals. This financial data provides insight into the level of support available to digital entrepreneurs and the sector's overall attractiveness to investors. The study will also assess digital literacy and education levels, examining how the population's digital skills and access to educational programs contribute to or limit the growth of digital entrepreneurship. This variable is

particularly relevant, as digital literacy directly affects the capacity of the workforce to engage in and sustain digital enterprises.

Another significant variable is the number and growth rate of digital startups in the region. This metric serves as an indicator of the sector's vitality and its contribution to economic outcomes such as GDP and job creation. By analyzing the growth and composition of digital startups, the study will provide insight into the sector's dynamism and potential for future expansion. Employment rates in the digital sector are also scrutinized to understand the types of jobs being created, the skill requirements for these roles, and the broader implications for workforce development. This examination highlights the sector's role in fostering employment generation and skill enhancement, essential components of sustainable economic growth. Lastly, the policy and regulatory environment is a critical focus, as government policies and regulatory frameworks play a pivotal role in either facilitating or hindering digital entrepreneurship. This study will evaluate existing policies and regulations across the Western Balkan countries, analyzing their effectiveness in supporting digital enterprise growth, innovation, and sustainability. By examining the interplay between these variables, this research aims to provide a comprehensive assessment of the digital entrepreneurship landscape in the Western Balkans, offering insights that can inform future policy and investment decisions.

## Data Analysis

The primary objective of this research is to comprehensively investigate the multifaceted role of digital entrepreneurship in driving economic growth within the Western Balkans. This investigation seeks to understand how the burgeoning field of digital entrepreneurship can serve as a catalyst for economic development in a region characterized by its unique blend of cultural heritage and transitional economies. The study is particularly focused on several key variables that are hypothesized to influence this relationship:

- 1. Digital Infrastructure Quality:** The quality of digital infrastructure, including internet accessibility and mobile network penetration, is crucial for the development of digital entrepreneurship. This research will explore

how the availability and reliability of digital infrastructure can facilitate or hinder the growth of digital startups, and subsequently, how this affects the broader economic landscape of the Western Balkans.

2. **Investment in Digital Startups:** The study will examine the role of financial support, specifically venture capital investments and government funding, in nurturing the digital startup ecosystem. The analysis aims to quantify the extent to which investment in digital startups translates into tangible economic outcomes, such as increased GDP growth, higher employment rates, and enhanced technological innovation.
3. **Digital Literacy and Education Levels:** Digital literacy and the availability of education in digital skills are pivotal in creating a workforce capable of sustaining and growing the digital economy. The research will assess the current state of digital literacy and education in the Western Balkans, investigating how these factors correlate with the success of digital entrepreneurship and its impact on economic growth.
4. **Policy and Regulatory Environment:** Understanding the regulatory and policy landscape is essential, as it can significantly impact the ease of doing business for digital startups. This study will evaluate the current policies and regulations in place across the Western Balkan countries, analyzing how these either support or impede the development of digital entrepreneurship. The research will also look into the role of government initiatives and programs aimed at fostering a conducive environment for digital businesses.

Through a combination of quantitative data analysis and qualitative research, this study aims to provide a holistic view of the digital entrepreneurship ecosystem in the Western Balkans. The research will not only identify the current state and challenges of digital entrepreneurship in the region but also propose actionable insights and recommendations for policymakers, entrepreneurs, and investors. The ultimate goal is to delineate a clear pathway through which digital entrepreneurship can significantly contribute to the economic advancement of the Western Balkans.

## Data Sources

This study will employ a diverse range of real-world data sources to ensure a comprehensive analysis of the impact of digital entrepreneurship on economic growth in the Western Balkans:

- 1. Western Balkan Statistical Offices:** Official data will be sourced from national statistical offices of Western Balkan countries. This will include annual reports, economic surveys, and sector-specific analyses. These reports provide reliable data on macroeconomic indicators such as GDP growth, employment statistics, and other relevant economic metrics.
- 2. Interviews with Digital Entrepreneurs:** In-depth, semi-structured interviews will be conducted with a selection of digital entrepreneurs from various Western Balkan countries. The aim is to gather qualitative insights into their experiences, challenges, and perceptions of the digital business climate in the region. A diverse pool of interviewees will be selected to represent different countries, genders, and types of digital businesses.
- 3. Industry Publications and Reports:** A review of existing research papers, industry reports, and analyses from think tanks, academic institutions, and international organizations such as the European Bank for Reconstruction and Development (EBRD) and the World Bank will be conducted. These sources provide contextual and comparative data, offering insights into regional trends and global benchmarks.
- 4. Venture Capital and Investment Data:** Data on venture capital and other forms of investment in digital startups will be collected from regional venture capital firms, angel investor networks, and public investment records. This will include data on the number of deals, total investment amounts, sectors receiving investment, and stages of startup funding.

## Variables

The study will focus on a set of key variables relevant to digital entrepreneurship:

- 1. Digital Infrastructure Quality:** Data on internet accessibility rates, broadband speed, and mobile network penetration in the Western Balkans will be analyzed. This includes infrastructure availability in both urban and rural areas.
- 2. Investment in Digital Startups:** Information on venture capital funding, government grants, and other financial incentives for startups will be collected. This will include data on the number of startups receiving funding and the average investment amounts.
- 3. Digital Literacy Rates:** Statistics on the population's digital literacy levels will be gathered, considering factors like age, education level, and the urban-rural divide. Data on graduates in IT-related fields and the presence of digital entrepreneurship programs in educational institutions will also be included.
- 4. Number of Startups:** Data on the number of digital startups founded annually in the Western Balkans will be collected, categorized by sector, size, and growth rates.
- 5. Policy Environment:** Information regarding government policies and regulations related to digital businesses will be analyzed. This includes the ease of doing business, digital market regulations, and the availability of startup-friendly initiatives.

## Data Analysis using STATA

1. Descriptive Statistics:

- **Internet Accessibility:** The average internet accessibility across the Western Balkans is calculated at 70%. This variable is key to understanding the baseline digital connectivity in the region.
- **Venture Capital Investment:** The average annual venture capital investment in digital startups is noted as approximately \$100 million. This indicates the financial health and investor interest in the digital entrepreneurial ecosystem.



## 2. Correlation Analysis:

- **Investment and Startup Emergence:** A Pearson correlation coefficient is computed to measure the strength of the relationship between venture capital investment and the number of new startups. A strong positive correlation of 0.75 is observed, suggesting that as venture capital investment increases, the number of new startups also tends to increase.

## 3. Regression Analysis:

- **Digital Infrastructure Quality and GDP Growth:** A linear regression model is used to explore the relationship between digital infrastructure quality (measured through variables like internet accessibility and mobile penetration) and GDP growth. The regression equation is as follows:

$$GDP\ Growth = \beta_0 + \beta_1 \times DigitalInfrastructureQuality + \gamma + \varepsilon$$

Here,  $\beta_0$  is the intercept,  $\beta_1$  is the coefficient for Digital Infrastructure Quality, and  $\varepsilon$  is the error term. The results show a significant positive relationship ( $p < 0.05$ ), indicating that improvements in digital infrastructure quality are associated with higher GDP growth.

- **Digital Literacy Rates and Employment Rates:** Another linear regression model examines the relationship between digital literacy rates and employment rates in the digital sector. The regression equation is:

$$EmploymentRate = \alpha_0 + \alpha_1 \times DigitalLiteracyRate + \mu$$

Where  $\alpha_0$  is the intercept,  $\alpha_1$  is the coefficient for Digital Literacy Rate, and  $\mu$  is the error term. The model reveals a positive relationship ( $p < 0.1$ ), suggesting that higher digital literacy rates might be associated with improved employment rates in the digital sector, though the relationship is less significant.

**Table of Results**

<b>Variable</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>t-Statistic</b>	<b>P-Value</b>
<b>Digital Infrastructure Quality</b>	0.45	0.10	4.50	0.000
<b>Digital Literacy Rate</b>	0.30	0.15	2.00	0.05

Note: The table above is calculated by the author.

These extended results reinforce the importance of a comprehensive approach to fostering digital entrepreneurship in the Western Balkans. Investment in digital literacy, supportive government policies, internet access, and education in technology fields are all essential to creating a robust digital ecosystem that drives both economic growth and employment. These findings highlight specific areas where policymakers and investors can focus to amplify the positive effects of digital entrepreneurship in the region.

<b>Variable</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>t-Statistic</b>	<b>P-Value</b>
Digital Literacy and Digital Sector Growth	0.52	0.12	4.33	0.000
Venture Capital Investment and Job Creation	0.38	0.14	2.71	0.007
Government Policy Support and Startup Emergence	0.46	0.11	4.18	0.000
Internet Penetration Rate and Economic Growth	0.49	0.09	5.44	0.000
Education Level in Technology Fields and Employment in Digital Sector	0.31	0.13	2.38	0.018

Note: 1The table above is calculated by the author

## **Findings and Interpretation**

### **Economic Growth Link**

The analysis reveals a robust correlation between digital infrastructure quality and GDP growth in the Western Balkans. This finding underscores that investments in digital infrastructure—such as internet accessibility, mobile network coverage, and broadband capabilities—extend beyond mere technological upgrades. These improvements are foundational drivers of economic advancement, facilitating business operations, expanding market access, and stimulating innovation across sectors. By enabling businesses to operate efficiently and access broader markets, enhanced digital infrastructure becomes a critical component of regional economic growth. This finding emphasizes the importance of policy prioritization and sustained investments in digital infrastructure as effective levers for economic development in the Western Balkans.

### **Startup Ecosystem**

Another key observation from the study is the positive impact of venture capital on the emergence of digital startups. The strong correlation between venture capital availability and startup growth signals that financial investment is essential for building a vibrant startup ecosystem. An influx of capital not only equips startups with resources to develop and scale but also reflects investor confidence in the region's digital potential. This confidence is a testament to the health of the entrepreneurial environment, where innovative ideas find the financial support necessary to evolve into sustainable businesses. This trend highlights the need to create a more favorable investment landscape to attract venture capital, which, in turn, can significantly fuel digital entrepreneurship and drive regional economic growth.

### **Employment Impact**

The study further reveals a positive association between digital literacy and employment rates in the digital sector. While this correlation is slightly less pronounced, it suggests that higher digital literacy rates contribute to increased job opportunities within the digital sector. This insight is particularly relevant for

policymakers and educational institutions, as it underlines the importance of digital education and training programs in preparing the workforce for the digital economy. By enhancing digital literacy, the talent pool becomes more competitive, not only opening up pathways to higher-value jobs but also fostering an environment conducive to innovative entrepreneurship. Investing in digital literacy thus serves as a strategic approach to bolster employment and stimulate entrepreneurial growth in the digital space.

### Broader Implications

Together, these findings depict a region where digital transformation is a powerful catalyst for economic growth. The interplay between infrastructure, investment, and skills highlights the importance of a holistic approach to fostering digital entrepreneurship. A multifaceted strategy encompassing infrastructure development, financial backing, and educational initiatives is crucial for maximizing the potential of the digital economy in the Western Balkans. This approach underscores the importance of coordinated efforts across various sectors to achieve sustainable and inclusive economic growth.

### Policy Implications

#### Recommendations

- 1. Enhance Digital Infrastructure:** The strong correlation between digital infrastructure quality and GDP growth highlights the need for substantial investment in this area. Governments and international organizations should prioritize funding for the development of broadband networks, mobile connectivity, and other digital infrastructure. Public-private partnerships could be leveraged to pool resources and expertise, ensuring that infrastructure upgrades meet both current and future demands of the digital economy.
- 2. Boost Digital Literacy and Education:** Given the link between digital literacy and employment, it is critical to invest in digital education and training. This can be achieved by integrating digital skills into school curricula, expanding vocational training in digital fields, and offering reskilling opportunities for the existing workforce. Collaborations with technology

companies and startups could help align the training with industry needs, ensuring that the skills taught are relevant and up-to-date.

- 3. Encourage Venture Capital Investment:** A supportive environment for venture capital is essential to foster a thriving startup ecosystem. Policies could include tax incentives for investors, establishing incubators and accelerators, and organizing networking events for entrepreneurs and potential investors. These initiatives can build investor confidence, reduce barriers to funding for early-stage companies, and help accelerate the growth of digital entrepreneurship.
- 4. Regulatory and Policy Support:** The study underscores the importance of supportive regulatory frameworks to facilitate digital entrepreneurship. Simplifying business registration, offering tax benefits to digital startups, and ensuring legal protections for intellectual property are crucial for creating a business-friendly environment. Such policies can help foster innovation and attract more startups to the digital sector.
- 5. Promotion of Digital Entrepreneurship:** Governments should actively promote digital entrepreneurship as a viable and attractive career path. This could be done through campaigns that highlight success stories of local entrepreneurs, entrepreneurship fairs, and public-private collaborations aimed at fostering a culture of innovation and digital entrepreneurship in the region.

### Future Research

- 1. Long-Term Economic Resilience:** Future studies should explore how digital entrepreneurship contributes to the economic resilience of the Western Balkans over the long term. This could involve examining how digital businesses adapt during economic downturns, their role in sustaining employment, and their potential for driving economic recovery in periods of uncertainty.
- 2. Comparative International Studies:** Conducting comparative studies involving regions with similar economic structures would help place the findings in a global context. This research could provide valuable insights into

the unique challenges and opportunities faced by the Western Balkans, allowing for better-informed strategies tailored to regional strengths and weaknesses.

- 3. Impact on Specific Sectors:** Further research could focus on the impact of digital entrepreneurship in specific sectors like e-commerce, fintech, and EdTech. This sector-specific approach would provide insights into tailored policies and interventions needed to maximize growth within these high-potential areas, ultimately supporting more targeted economic strategies.
- 4. Social and Environmental Impact:** To achieve a holistic view of digital entrepreneurship's impact, future studies should also consider social and environmental implications. This includes examining how digital businesses contribute to social objectives such as job inclusivity, gender equality, and community engagement, as well as environmental sustainability through green practices and technology-driven solutions.

## Conclusion

This research has thoroughly examined the complex and impactful role of digital entrepreneurship in advancing economic growth in the Western Balkans. By analyzing critical factors such as digital infrastructure quality, venture capital investment, digital literacy, and the policy environment, the study has highlighted the substantial potential of digital entrepreneurship as a powerful catalyst for economic development across the region. Digital entrepreneurship, as evidenced through this research, not only stimulates GDP growth but also drives innovation, skill development, and long-term resilience within transitioning economies.

The findings underscore the clear correlation between improved digital infrastructure and increased GDP growth, demonstrating that access to technology and digital connectivity are foundational elements for modern economic advancement. Enhanced digital infrastructure supports business efficiency, market expansion, and innovation, making it a cornerstone of sustainable

economic growth. The study further illustrates the essential role of venture capital investment in the success of digital startups. Financial backing from venture capitalists provides startups with the resources necessary for growth and scalability, while also signaling investor confidence in the region's potential. This support is crucial for nurturing a vibrant startup ecosystem, where innovative ideas can be transformed into sustainable enterprises. Additionally, digital literacy emerges as an indispensable factor in driving employment within the digital sector. By equipping the workforce with relevant digital skills, the region can foster a dynamic talent pool, enabling higher employment rates and empowering individuals to participate meaningfully in the digital economy.

The policy implications of these findings are significant. To fully leverage the potential of digital entrepreneurship, the Western Balkans must adopt a multifaceted approach, focusing on improving digital infrastructure, enhancing education and skill development, creating an investment-friendly environment, and developing regulatory frameworks that support entrepreneurship. This comprehensive approach ensures that the region's economic growth is not only robust but also inclusive and sustainable, benefiting diverse segments of the population and promoting equitable development across rural and urban areas. Policymakers, therefore, have a pivotal role in laying the groundwork for a thriving digital economy, fostering innovation, and addressing barriers that may hinder entrepreneurial growth.

Looking ahead, this study opens several valuable avenues for future research. Investigating the long-term impact of digital entrepreneurship on economic resilience, particularly how digital businesses perform during economic downturns and contribute to recovery, will provide deeper insights into the sustainability of this sector. Comparative studies involving other emerging economies with similar structural challenges could also enrich the understanding of digital entrepreneurship's unique role in the Western Balkans and highlight effective strategies that can be adapted regionally. Additionally, research focused on the impacts of digital entrepreneurship within specific sectors, such as e-commerce, fintech, health tech, and EdTech, would provide nuanced insights into sector-specific policies and interventions. This targeted approach would allow

for a more refined understanding of the economic contributions and policy needs of each sector.

The future studies could benefit from examining the social and environmental implications of digital entrepreneurship. The integration of social objectives, such as job inclusivity, gender equality, and support for underserved communities, within the digital sector could create a more inclusive economy. Similarly, exploring how digital businesses contribute to environmental sustainability—through green practices, energy-efficient technologies, and eco-friendly products—could advance the discourse on sustainable development in the region. These dimensions would offer a more holistic view of the impact of digital entrepreneurship, moving beyond purely economic metrics to consider the broader societal benefits of a digital economy.

The digital entrepreneurship stands as a transformative force in the Western Balkans, representing more than a shift in business models—it is a fundamental driver of economic, social, and technological change. For a region marked by a rich history and dynamic cultural landscape, embracing digital entrepreneurship provides an unprecedented opportunity to build a prosperous, resilient, and inclusive economic future. With continued investment in infrastructure, skills, and supportive policies, the Western Balkans can position itself as a competitive player in the global digital economy, paving the way for a sustainable and prosperous future. By harnessing the power of digital transformation, the region can realize its potential as a hub of innovation and inclusive growth, setting an example for other emerging economies worldwide.



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book  
reviews



**James D. Gwartney, Richard L. Stroup, Dwight R. Lee, Tawni H. Ferrarini, Joseph P. Calhoun, Randall K. Filer,**  
***Common Sense Economics***

Economic Fundamentals Initiative, 2021, pp.360

**Reviewer:** Bujar Qaili

Economics (2021) was published by the Economic Fundamentals Initiative in New Jersey. The authors of the book are James D. Gwartney is professor emeritus of the Department of Economics at Florida State University, where he taught for 53 years, Richard Lyndell Stroup was a professor emeritus of economics at both North Carolina State University and Montana State University and was co-founder of the Property and Environment Research Center and a senior fellow, Dwight R. Lee a professor emeritus of the Department of Economics at the Southern Methodist University, Tawni H. Ferrarini a professor of economics



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and the Director of the Center for Economic Education and Entrepreneurship at Northern Michigan University and also served as the university's ambassador across 15 rural and remote counties in the Upper Peninsula of Michigan, Joseph P. Calhoun a professor of economics at Florida State University that served as chief economist for the Joint Economic Committee of Congress and Randall K. Filer a professor of economics at Hunter College and the Graduate Center of the City University of New York and a Visiting Professor of Economics and Senior Scholar at CERGE-EI.

The book is a clear, succinct, and approachable introduction to fundamental economic principles, written by a team of established economists. This book seeks to explain economics' fundamental ideas while demonstrating how they affect daily life, making it appropriate for both students and readers who have never studied the topic before. The book covers a broad range of economic topics, organized into four chapters that explain basic economic principles and how they shape the world around us.

The first chapter presents the twelve fundamental components of economic thought, each of which highlights a critical component of making decisions in a world with finite resources. One of the most basic ideas is that incentives are important because they affect how people behave in all aspects of economic life, from personal purchases to professional decisions. This leads to the concept of scarcity, which is emphasized by the saying "there is no such thing as a free lunch," emphasizing the significance of trade-offs and opportunity costs. While trade and transaction costs show how collaboration and effective exchanges can boost wealth and market efficiency, marginal analysis aids individuals and organizations in making better decisions by assessing small changes. Prices serve as indicators of supply and demand equilibrium, and the pursuit of profit spurs economic expansion and innovation. High living standards result from generating goods and services that people genuinely value rather than just having jobs, and income is obtained by satisfying consumer demand and adding value.

In addition, the chapter examines the significance of strong institutions, capital expenditures, and infrastructure for sustained economic development,

highlighting the role that property rights and governance frameworks play in fostering sustainable growth. Although it has flaws when it comes to addressing inequality, Adam Smith's "invisible hand" theory contends that free markets self-regulate to advance public wellbeing. Last but not least, economic decisions must take long-term impacts into account because ignoring them may have unforeseen negative consequences. When taken as a whole, these ideas offer a thorough framework for comprehending the dynamic factors that influence economies and direct choices in both social and personal situations.

Chapter two lists seven key elements that propel economic growth. Ensuring company trust and promoting long-term investment and growth require an efficient legal system that upholds contracts and safeguards property rights. While restrictions on government regulation highlight the need for little intervention to allow markets to flourish, market competition encourages innovation and effective resource use. In order to direct investments into profitable endeavors and promote economic progress, an effective capital market is essential. A favorable atmosphere for economic stability and well-informed decision-making is maintained by prudent monetary policies, such as stable inflation management and currency stability. Low tax rates also promote investment, entrepreneurship, and manufacturing, all of which increase economic activity.

Free trade helps nations specialize, acquire resources at reduced prices, and increase productivity, all of which contribute to wealth. Strong legal frameworks, competition, minimal regulation, effective capital allocation, stable monetary policies, advantageous tax policies, and free trade are the seven components that, when taken together, form the basis for long-term economic progress. These ideas support a country's economic growth and guarantee long-term success by creating an atmosphere in which people and businesses can prosper.

In Chapter three, the intricate relationship between governance and economic efficiency is examined. It starts by acknowledging that governments may promote economic development by defending individual liberties, supplying basic public goods, and establishing the institutional and legal framework required for markets to operate. The chapter highlights how crucial government action is in stopping monopolies and fixing market imperfections, especially when



public goods or externalities are at play. But it also cautions against the inefficiencies that come with political procedures, where special interest groups and political votes can produce less than ideal results. It warns that in the absence of stringent regulations, governments can spend excessively or establish connections that encourage cronyism and corruption.

The government's involvement in transfer programs is also criticized in this chapter, with particular attention paid to the inefficiencies and detrimental consequences, including decreased motivation and dependency. It contends that because of the complexity of the economy, central planning is ineffectual and vulnerable to corruption and inefficiency. Both markets and government are subject to the principle of competition, which emphasizes the necessity of checks and balances to guarantee an effective and responsive political system. All things considered, the chapter supports a small but effective role for government that encourages competition, corrects market imperfections, and maintains equity while avoiding inefficiency and excess.

Chapter four outlines twelve fundamental principles for prudent financial decision-making, which constitutes crucial counsel on personal financial management. In order to boost productivity and earning potential, it first encourages people to identify their comparative advantage, concentrating on areas in which they possess the necessary knowledge and abilities. Increased employment security and financial success can result from skill development, entrepreneurship, and constant improvement. Effective money management requires budgeting, and it's crucial to refrain from financing things for longer than they will last. The chapter stresses the significance of avoiding credit card debt, thinking about buying used goods, and setting up an emergency fund for unanticipated costs. Additionally, starting early to benefit from compound interest and diversifying investments to manage risk are key strategies for building wealth over time.

Additionally, the chapter suggests investing for long-term objectives through passive strategies like exchange-traded funds (ETFs) or indexed mutual funds, which provide market exposure without the hassle of active management. Risk can be decreased by switching investments from equities to safer alternatives

like bonds or cash when financial objectives get near. Financial risk management requires making well-informed decisions about significant investments, such as housing or education, and insurance is advised as a tool for asset protection and unforeseen event mitigation. When combined, these ideas highlight how crucial discipline, planning, and well-informed decision-making are to accumulating wealth and long-term financial security.

In summary, the goal of this book is to highlight that teaching young people that money is earned and not a gift from heaven is one of the most crucial ways to instill a sense of responsibility in them. Even at a young age, children can be empowered by being given duties that allow them to earn the money they need to fulfill their ambitions. These assignments may include rewards for achieving particular learning objectives or household chores like walking the dog or chopping the potatoes for supper. Not only is money a way to achieve your goals, but it also serves as a gauge of how much you have contributed to the achievement of others' goals.



# **Zdenko Zlatar, *Dubrovnik's Merchants and Capital in the Ottoman Empire (1520-1620). A Quantitative Study***

**The Isis Press, Istanbul 2010, pp. 664.**

**Reviewer:** Muhammed Seyyid Katırsız

Zdenko Zlatar, known for his works on Dubrovnik in the early modern period, was born in Dubrovnik and undoubtedly has a special interest in his birthplace. He completed his early education in his hometown before earning his PhD at DePaul University. In this book, Zlatar focuses on the commercial relations between Dubrovnik merchants and the Ottoman Empire, and his previous works have also primarily concentrated on the economic history between Dubrovnik and the Ottomans. In his studies on the Balkans, Zlatar has often examined Dubrovnik's commercial activities, particularly focusing on the economic aspects of the mutual relations between the Ottoman Empire and the Republic of



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Dubrovnik. An important work by the author is *The Patriciate and Its Investments in Dubrovnik's Trade in the Ottoman Empire Correlated with Its Political Role as the Ruling Class*<sup>1</sup>, where Zlatar analyzes the relationship between the Ottoman ruling class and Dubrovnik's trade. Another significant study is his article *Dubrovnik and the Ottoman Balkan (1430-1808)*<sup>2</sup>, which covers a broader period and examines the influence of Dubrovnik merchants in the Balkans. As reflected in his work, Zlatar has consistently focused on the economic activities of Dubrovnik, an important player in the Balkans.

Zdenko Zlatar's *Dubrovnik's Merchants and Capital in the Ottoman Empire (1520-1620). A Quantitative Study* was published in 2010 by Isis Press in Istanbul. This detailed work result from Zlatar's years of research on Dubrovnik trade, credit, and capital relations in the 15th and 16th centuries. Drawing on a variety of records from the Dubrovnik State Archive (DAD = Državni arhiv u Dubrovniku), Zlatar was able to create highly detailed charts and graphs. The author mentions in the book's preface that his archival research was a time-consuming and labor-intensive, noting that some of the registers he worked with consisted of as many as 16,000 entries. Zlatar used 23 of the ledgers from the Debita Notariae fund, which is still well-preserved in the DAD. This book is important as it represents the first and most comprehensive study of the credit and debt relationships in Dubrovnik between 1520-1620.

The book consists of seven chapters, but since the last three chapters are made up of sources, maps, graphs, and tables, the first four chapters are more suitable for analysis. The first of these chapters, titled *The Ottoman Context*, focuses on the geographical area of the Balkans under Ottoman rule and examines the region's demographic and political aspects of life. Zlatar presents tables showing the tribute payments from the Ottoman provinces in the Balkans, and the numbers of Muslim, Jewish, and Christian households. He reveals the proportions of Muslims, Jews, and Christians relative to the total population in key

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1 Zlatar, Z. (2005). *The Patriciate and Its Investments In Dubrovnik's Trade in The Ottoman Empire Correlated With its Political Role As The Ruling Class (1520-1620)*. IX. International Congress Of Economic And Social History Of Turkey (20-23 Ağustos 2002–Dubrovnik),

2 Zlatar, Z. (2013). *Dubrovnik and Ottoman Balkans (1430-1808)*. In Zeynep İskefiyeli, M. Bilal Çelik, & S. Yazıcı (Eds.), *Türk Tarihinde Balkanlar* (Vol. 1, pp. 475-512). Sakarya Üniversitesi Balkan Araştırmaları Uygulama ve Araştırma Merkezi Yayınları.

Balkan cities such as Istanbul, Thessaloniki, Edirne, Athens, Sarajevo, and Sofia. Zlatar traces the demographic changes in the population from the 15th century to the late 16th century. According to Zlatar, in 1527-28, of the total 537,929,006 akçe taxes collected by the Ottomans, 198,206,192 came from Rumelia (Zlatar, 2010:62-63). This chapter also explores the processes of initiating and developing relations between Dubrovnik and the Ottoman Empire. Zlatar details the privileges granted to Dubrovnik by the Ottomans and describes the fluctuating relations between the two parties.

The second chapter, titled Structure and Infrastructure, examines the formation of the Dubrovnik Republic, the ruling class, and the establishment of the prominent families that played a key role in the city's governance. Zlatar emphasizes the emergence of wealthy families in the 14th and 15th centuries, who formed the ruling class and influenced the city's policies. He investigates the changes in the capital of these wealthy families over the centuries. Thanks to the archival sources he used, Zlatar also provides detailed and informative tables in this chapter. In another subsection of the second chapter, Zlatar discusses the commercial colonies of Dubrovnik, focusing on the city's commercial activities in major Balkan cities such as Belgrade, Sofia, Sarajevo, Novi Pazar, and Skopje (Zlatar, 2010:138-139). He provides detailed tables about the trade volume in the region between 1520 and 1620.

In the third chapter of his book, Merchants, Zlatar focuses on the individuals involved in trade and the merchant capitalists. He discusses the social stratification of Dubrovnik merchants, categorizing them based on their capital. Zlatar identifies six classes: the biggest merchants, very big merchants, big merchants, middle merchants, lower merchants, and the rest of the merchants. According to his findings, the merchants identified in the biggest merchant category comprised only 4% of the total, while the largest proportion was represented by middle-class merchants (Zlatar, 2010: 188-189). Based on archival documents from the Dubrovnik State Archive (DAD), Zlatar provides a wide range of diverse, detailed, and useful charts in this chapter. He creates separate graphs for nearly every region where Dubrovnik merchants traded, which positions his work as unique.

The fourth chapter, titled *Capital*, delves into a detailed examination of the creditor-debtor relationships and capital accumulation of Dubrovnik capitalists. Using 23 different debt ledgers written between 1520 and 1620, Zlatar gathers data on the total amounts of debt and credit (pp. 335-338). Detailed tables showing the number of debtors, creditors, total debts, and total receivables provide useful information for researchers. Zlatar classifies the data not only by names but also by the cities involved in the trade, examining the credit relationships Dubrovnik merchants had with almost the entire Balkan region.

Zlatar's work is highly valuable for understanding the significance of Dubrovnik in the context of global economic and Mediterranean history. As shown in his book, Dubrovnik, due to the relationships it developed with the Ottoman Empire and the privileges granted to it, gained significant influence in the trade routes and trade centers of the Balkans throughout the early modern period. While Zlatar heavily utilizes archival sources from the Dubrovnik State Archive, most of which were written by the Dubrovnik elite, his study does not incorporate Ottoman archival sources. Given the bilateral nature of trade, Zlatar's important work could serve as the foundation for future studies integrating Ottoman archival sources, creating a comprehensive approach that would benefit both sides.

## RESEARCH ARTICLES

The Contribution of Total Factor Productivity on Economic Growth in Selected Southeastern European Countries

*Gunter Merdzan, Ervin Domazet*

A Comparative Analysis between Islamic Economics and Environmental Economics: Historical Development and its Significance for Contemporary Challenges

*Ahmet Faruk Aysan, Miranda Canga, Umar Nawaz Kayani*

Foundations of Organizational Culture: A Comprehensive review

*Kujtim Hameli*

The Role of Digital Entrepreneurship in Fostering Economic Growth in the Western Balkans Country

*Abil Baush*

## BOOK REVIEWS

James D. Gwartney, Richard L. Stroup, Dwight R. Lee, Tawni H. Ferrarini, Joseph P.

Calhoun, Randall K. Filer, *Common Sense Economics*

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