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A comparative analysis of start-up access to external funding in the EU and Western Balkans

Iris Kruja[1*], Ana I. Irimia-Diéguez[2]

[1]*Doctoral Programme of Economics, Businesses and Social Sciences, Universidad de Sevilla, Ramón y Cajal, s/n, 41018 Sevilla, Spain.*
[2]*Departament of Financial Economy and Operations Management, Universidad de Sevilla, Ramón y Cajal, s/n, 41018 Sevilla, Spain.*

Corresponding author: Iris Kruja (*Email: irikru@alum.us.es*)

Abstract

This study aims to compare the access to external finance of start-ups between the Western Balkans and European Union (EU) countries, exploring differences and commonalities in their entrepreneurial finance ecosystems. A composite Access to Finance Index was developed, integrating five key indicators: Fitch sovereign credit ratings, private sector credit-to-GDP ratio, venture capital investment volume, stock market capitalization relative to GDP, and the investor protection index. These indicators provide a multidimensional assessment of financial system maturity and institutional quality relevant to start-up development. The study shows that there are significant disparities between the EU and the Western Balkans. EU countries show higher institutional and financial maturity, including better credit ratings, deeper venture capital markets, and stronger investor protections. Western Balkan countries, by contrast, face constraints in all measured areas, though some exhibit emerging potential. The EU provides a more conducive environment for start-up financing, while the Western Balkans require substantial institutional and financial reforms to bridge the gap. The study offers policymakers and stakeholders a structured framework for diagnosing financial barriers and prioritizing reforms. Recommendations include strengthening legal protections, fostering venture capital ecosystems, and leveraging cross-regional cooperation to support inclusive start-up growth.

Keywords: Access to finance index, European Union, Start-ups, Western Balkans.

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1. Introduction

In this paper, start-ups are defined as companies that are newly established, tend to focus on technological innovation, and have high growth potential [1-5].

Without external funding, any start-up (whose objective is to develop the latest technology) will not be able to realize its business idea. In other words, access to financing is a basic element for the development of such projects. Access to external funding gives startups access to capital, which can be used to develop new technologies, effectively market them, and scale their operations so they can become self-sustainable [6]. Additionally, external financing will allow firms to employ higher-skilled talent, produce higher-quality products, and ensure startups have better leverage in the market [7]. Moreover, it may enhance the start-up's reputation with customers, suppliers, and future investors, thus potentially opening future business opportunities and paths to additional external funding.

Therefore, any investors who want to use their financial resources to grow their capital should be intrigued by this type of project. This situation is also advantageous for the state, as it now receives a chance to gain returns both from funding operations when investors use their funds as well as gains from both the investors and the project itself. It is also beneficial to society, which receives the project itself and the benefits of the state scholarships (the tax revenues will be directed to the benefits of society) [8]. In other words, the capacity to provide opportunities for funding projects like these is essential to the startups themselves as well as all their stakeholders.

The startup ecosystem in the European Union (EU) and the Western Balkans is characterized by unique features and opportunities. On the one hand, in the EU, the ecosystem is more stable and reliable for investors, supported by policy actions, a wide range of funding options, a highly educated talent pool, a large market size, and established innovation centers in major cities such as London, Berlin, Paris, and Stockholm [9]. On the other hand, the startup ecosystem in the Western Balkans is in its infancy, facing numerous challenges such as underdeveloped infrastructure and limited access to credit, an underdeveloped venture capital landscape, weak investor protection mechanisms, and underdeveloped infrastructure [10-12]. The strategy of local startup companies most often focuses on external funding opportunities, primarily from EU countries, but this is not always successful, often due to regulatory and economic constraints [13].

Despite these limitations, the Western Balkans possess unique strengths, including a rapidly growing talent pool, competitive labor costs, and a rising entrepreneurial spirit, which offer substantial untapped potential for economic development [13, 14]. Nevertheless, attracting significant amounts of investment from developing countries could lead to much more impressive results in the development of startups in the region. Therefore, finding approaches to attract external funding for startups in the Western Balkans remains relevant.

Regulatory and economic barriers continue to hinder progress, emphasizing the importance of tailored strategies to enhance access to financing. While studies have extensively explored individual regional ecosystems, there remains a scarcity of comparative analyses that examine disparities in financing access between the EU and the Western Balkans [15, 16].

1.1. Contributions of the Study

One of the key contributions of this study is the construction of a novel index that quantifies access to external financing for startups by considering multiple financial indicators such as Fitch ratings, the availability of private sector credit, venture capital investment, stock market size, and investor protection measures. This data-driven approach enables a more holistic comparison between the EU and the Western Balkans.

The paper is structured as follows: First, a review of existing research on start-up financing and ecosystem development provides context for the study. Next, we outline the methodology used to construct the Access to Finance Index, detailing the data sources, variables, and analytical approach. The findings section then highlights key trends and regional differences in start-up financing. Finally, the conclusion discusses the theoretical, practical, and social implications of the results and suggests areas for future research.

2. Literature Review

In modern economic scientific literature, the issues of startup development are given considerable attention. A key theme in startup financing research is the comparison between traditional financing methods, such as bank loans, and innovative financing approaches, like venture capital. Klein et al. [17] emphasize that credit financing, primarily through bank loans and financial institutions, remains the dominant source of startup capital, particularly in developed economies. While alternative funding mechanisms such as crowdfunding and angel investing have gained traction, the stability and lower cost of credit financing continue to make it a preferred choice for startups seeking initial capital. This is further supported by Giaretta and Chesini [18], who found that fintech startups relying on credit-based financing—including bank loans, credit lines, and asset-backed lending—were more successful in securing long-term capital compared to those dependent on equity financing from venture capitalists. Credit-based financing is particularly advantageous as it allows startups to retain operational control while accessing the capital necessary for sustained growth.

The significance of credit financing is further explored by Kee et al. [19], who underscore the critical role of external capital in enabling startups to meet their early-stage financial needs. They argue that consistent access to funding is essential for overcoming initial challenges and establishing a market presence. Similarly, Wang and Schøtt [20] examine how financial data transparency impacts funding acquisition, particularly for innovative startups. Their findings suggest that while a high level of innovation does not directly correlate with increased early-stage investment, securing funding remains a prerequisite for scaling and refining a business.

While credit financing is a critical driver of early-stage business development, venture capital (VC) investment plays a particularly vital role for startups in high-growth, high-risk sectors, such as technology and innovation-driven industries. Kolokas et al. [21] investigate the factors influencing venture capital availability across different regions, highlighting that the maturity of financial markets significantly affects VC activity.

According to Giaretta and Chesini [18] startups that secure VC funding benefit from both capital and strategic guidance, increasing their likelihood of success. However, venture capital tends to focus on high-risk ventures with the potential for substantial returns, making it less accessible for startups operating in financially underdeveloped regions or industries with uncertain profitability.

Skawińska and Zalewski [22] explore the role of stock markets in startup financing, noting that countries with well-developed stock exchanges provide greater opportunities for startups to raise funds. Similarly, Jędrzejczyk [23] emphasizes that the equity market serves as a key financing mechanism in developed economies, whereas many Western Balkan countries lack functioning stock markets, limiting startups' ability to raise public capital.

Investor protection mechanisms play a fundamental role in enhancing startup financing opportunities. Kee et al. [19] stress the importance of robust investor protection laws, arguing that regions with strong legal protections attract higher levels of venture capital, as investors feel more secure about their investments.

The role of legal structures in startup financing is further explored by Mustapha and Tlaty [24] who highlight the reluctance of traditional financial institutions—such as banks—to invest in high-risk ventures due to information asymmetry. They argue that greater financial specialization and regulatory improvements could enable banks to play a more significant role in funding innovative startups. In this context, legal tools such as the business disclosure index, directors' responsibility index, and legislative strength index serve as essential mechanisms for promoting corporate transparency, governance, and investor confidence. Mina et al. [25] emphasize that a well-regulated financial environment fosters innovation and investment, enabling startups to attract funding more effectively.

Mina et al. [25] examine the European Commission's SME Instrument, which has facilitated startup financing through government-backed grants and investment programs. The European Union has implemented numerous policy initiatives that improve startup access to financing, particularly for innovative and technology-driven enterprises. However, such initiatives remain underdeveloped in regions like the Western Balkans, where a lack of government-backed financial programs limits startup growth.

Wyrwa [26] highlights the role of EU governments in creating innovation-friendly environments, emphasizing investments in infrastructure, e-administration, and supportive legal frameworks.

3. Methodology

The study constructed an index that characterizes the level of access to finance for startups in the Western Balkans and the European Union. The table below provides a description of the selected data and their respective sources. This data was utilized in the construction of the index.

Table 1.
Data definition and sources for the Index

Indicator	Definition	Source
Fitch Ratings	The sovereign creditworthiness and overall financial stability, which influence investor confidence and the cost of capital [27].	Fitch Ratings (www.fitchratings.com)
Private Sector Credit Burden	The availability of traditional financing for start-ups, which is critical during their early stages [25].	World Bank - Global Financial Development Database (https://databank.worldbank.org)
Venture Capital Investments	The ecosystem's maturity and its capacity to support high-risk, high-reward startups [28].	European Investment Fund (EIF) - Venture Capital Survey (www.eif.org)
Stock Market Capitalization to GDP	The size and liquidity of equity markets, which are essential for providing startups with growth funding and investor exit opportunities [29].	World Bank - World Development Indicators (https://databank.worldbank.org/source/world-development-indicators)
Investor Protection Index	The strength of legal frameworks that safeguard investor rights, thereby reducing uncertainty and encouraging funding [15]	World Bank - Doing Business Report (www.doingbusiness.org)

This index is specifically designed for startups, as it considers data related to the volume of venture capital funding. The data for these indicators were collected both by country and aggregated for regions (Western Balkans and the European Union, respectively). The Western Balkans region includes Albania, Bosnia and Herzegovina, North Macedonia, Montenegro, Kosovo, and Serbia. These countries represent a growing but still developing entrepreneurial ecosystem, characterized by limited access to external finance, emerging infrastructure, and political and economic reforms. The European Union countries considered in this study include both core and peripheral EU nations such as Germany, France, Spain, Italy, Sweden, the Netherlands, and others, which are characterized by stable financial systems, well-developed infrastructure, and a wide variety of funding options available for startups.

In addition, these data were normalized into a point system with a scale of 10. Different approaches were used for some indicators, which is worth noting—for instance, venture capital data were scaled differently from credit financing data. This methodology follows the approach of the OECD [30], which describes components of access to finance: it allows for the selection of high-quality data to analyze the financing of innovative enterprises and to compile an accurate index.

It is worth starting by looking at the conversion of Fitch grades into a point system. The grading itself involves scoring (D to AAA), which has been converted into numerical values as shown in Appendix Table 1.

Thus, the score for this index was set according to the rating agency's assessment and its interpretation within the study itself.

Regarding the three indices, they were also scored on a 10-point scale as part of the researchers' evaluations, except for the index of legislative strength, which was scored on a 12-point scale. This was converted to a 10-point scale as part of the work (i.e., a score of 12 equals 10, 11 equals 9.2, 10 equals 8.3, and so on). Subsequently, the average of the three calculated values was found to determine the Investor Protection Index.

All other indicators were complex enough to not allow this kind of simplified transformation. Initially, a square root was found for each indicator, the findings of which proved important in making the distribution of scores more normal. The method shown below was used to convert the obtained values into a common form:

$$X_n = \frac{K_m - K_{min}}{\left(\frac{(K_{min} - K_{\max})}{(X_{max} - X_{\max})}\right)} + X_{min} \quad (1)$$

$$X_{min} = \frac{G}{(n+1)} \quad (2)$$

$$X_{max} = G - \frac{G}{(n+1)} \quad (3)$$

Where: X_n - value of factor n; K_m - quantitative value of factor m; K_{min} - quantitative evaluation of the factor with the minimum value; K_{max} - quantitative evaluation of the factor with the maximum value; G - maximum possible evaluation that can be obtained within the given evaluation; X_{min} - evaluation for the indicator with the minimum value; X_{max} - evaluation for the indicator with the maximum value.

The approach shown in Formulas 1, 2, and 3 made it possible to turn the other indicators into a 10-point form to analyze them in comparison. Based on the obtained indicators for each of the countries, the average value for the region was also found. For this purpose, a weighted average value was used, where the weight of each country was determined based on the level of its GDP. This can be depicted as follows:

$$X_R = \sum X_n * \frac{GDP_n}{GDP_R} \quad (2)$$

Where: X_R - factor value for the region; Xn - factor value for the country; GDPR - GDP level for the region; GDPn - GDP level for the country.

The access to finance index value was determined as the arithmetic mean of five factors.

4. Results

As part of this research, it is important to evaluate selected data that characterize the features of startup funding in both the European Union and the Western Balkans. As outlined in the Methodology, specific indicators have been chosen to provide a comprehensive overview of the financial environment related to startup funding in these regions. These indicators include the Fitch Rating, the level of domestic credit in the private sector, venture capital to GDP, stock market capitalization to GDP, and the Investor Protection Index, which is comprised of three components: the business disclosure index, the directors' responsibility index, and the legislative strength index. These indices offer a comprehensive view of the financial environment in both the Western Balkans and the European Union. Table 2 below presents the scores assigned to each country based on this ranking system.

Table 2.
Data on Fitch's indices valuation characterization.

Country	Rank
Western Balkans	
Albania	B
Bosnia and Herzegovina	B+
North Macedonia	BB+
Montenegro	B
Kosovo	BB
Serbia	BB+
European Union	
Austria	AA+
Belgium	AA-
Bulgaria	BBB
Croatia	BBB+
Cyprus	BBB
Czech	AA-
Denmark	AAA
Estonia	A+
Finland	AA+
France	AA-
Germany	AAA
Greece	BBB-
Hungary	BBB-
Ireland	AA-
Italy	BBB
Lativia	A-
Lithuania	A
Luxembourg	AAA
Malta	A+
Netherlands	AAA
Poland	A-
Portugal	A-
Romania	BBB-
Slovakia	A-
Slovenia	A
Spain	A-
Sweden	AAA

As can be seen in Table 2 there are notable differences in the credit ratings between the Western Balkans and European Union (EU) countries, as measured by Fitch Ratings. The countries in the Western Balkans generally have lower credit ratings:

Albania and Montenegro are rated B, which indicates significant credit risk and economic instability. Bosnia and Herzegovina has a slightly higher rating of B+, but it still reflects a high risk for investors. Kosovo and North Macedonia have better ratings at BB and BB+, respectively, indicating a moderate credit risk, but still lower than most EU countries. Serbia also has a BB+ rating, reflecting similar conditions to North Macedonia.

The EU countries exhibit much stronger credit ratings: Germany, Denmark, the Netherlands, Luxembourg, and Sweden hold the highest ratings of AAA, reflecting a stable and low-risk investment environment. Austria, Finland, and France follow closely with ratings in the AA range, which still represent very low credit risk. Even countries with relatively lower ratings in the EU, such as Bulgaria, Croatia, Italy, and Greece (which are rated BBB to BBB-), are still considered investment-grade, indicating lower risk compared to the Western Balkans.

The lower credit rating in the Western Balkans suggests greater economic and political risks for these countries, meaning it is more difficult for startups in these areas to obtain funding from external resources. Investors may choose to invest less due to perceived risks, resulting in higher borrowing costs and fewer financial options for startups.

On the other hand, the European Union countries have higher credit ratings, providing a more stable and dependable financial environment. Therefore, it is generally easier for startups in EU countries to raise funds, attract investments, and take advantage of lower borrowing costs because the investors do not have as high a perceived risk. Table 3 describes the countries and the level of credit burden in the private sector:

Table 3.
Data on credit burden in the private sector in the Western Balkans and the European Union, % of GDP 2023

Country	**Ratio to GDP. %**
Western Balkans	
Albania	34
Bosnia and Herzegovina	48.2
North Macedonia	53.4
Montenegro	47.3
Kosovo	52.5
Serbia	40.3
European Union	
Austria	89.6
Belgium	73.6
Bulgaria	44.9
Croatia	50.3
Cyprus	75.6
Czech	50.5
Denmark	143.4
Estonia	57.4
Finland	95.4
France	120
Germany	83.4
Greece	52.6
Hungary	36
Ireland	26.2
Italy	71.5
Latvia	28.8
Lithuania	35.7
Luxembourg	101.5
Malta	72
Netherlands	92.1
Poland	39.7
Portugal	90.1
Romania	24.8
Slovakia	66.9
Slovenia	41.1
Spain	90
Sweden	132.3

As seen in the data, countries in the European Union generally exhibit a much higher credit burden compared to those in the Western Balkans.

The lower credit-to-GDP ratios in the Western Balkans (ranging from 34% in Albania to 53.4% in North Macedonia) suggest limited access to private sector credit, which can be challenging for startups. Fewer available funds often mean that startups in these regions may face higher barriers to accessing loans and lines of credit from financial institutions. This indicates a challenging environment for startups seeking traditional financing.

Higher credit-to-GDP ratios in many EU countries, such as Denmark (143.4%) and Sweden (132.3%), indicate that financial systems are more conducive to credit access. Startups in these countries may find it easier to secure loans and other credit facilities for their growth and expansion. Addressing these disparities can empower startups across regions, fostering innovation and economic growth in both the Western Balkans and the EU.

Data on venture capital investment can be seen in Table 4 below:

Table 4.
Data on venture capital investment volumes in the Western Balkans and the European Union in 2023, USD bn.

Country	Volume of investments. USD mln	Ratio of investments to GDP. %
Western Balkans		
Albania	25	17.5
Bosnia and Herzegovina	34.8	14.2
North Macedonia	35	25.8
Montenegro	10	16.1
Kosovo	0	x
Serbia	35.2	5.5
European Union		
Austria	706.3	15.0
Belgium	426.5	7.3
Bulgaria	20	2.2
Croatia	105.3	14.7
Cyprus	412.1	140.9
Czech	79.2	2.7
Denmark	790.9	19.8
Estonia	102.6	26.9
Finland	1800	63.7
France	3200	11.5
Germany	4100	10.0
Greece	63.6	2.9
Hungary	250.2	14.1
Ireland	280.3	5.3
Italy	1170	5.7
Latvia	7.3	1.8
Lithuania	26.9	3.8
Luxembourg	830	101.7
Malta	33.8	18.6
Netherlands	1860	18.4
Poland	466	6.8
Portugal	50.7	2.0
Romania	110	3.7
Slovakia	79	6.8
Slovenia	0.5	0.1
Spain	1353	9.5
Sweden	2200	37.2

Note: * - data multiplied by the value of 100,000 for ease of perception: this is because the real value of the ratio of GDP to venture capital investment in countries is extremely low, which makes it difficult to perceive. Thus, to find the percentage value of the investment-to-GDP ratio, we need to divide this value by 100,000.
x - data not available

The table analysis highlights significant disparities in venture capital (VC) investment volumes and their ratios to GDP between the Western Balkans and European Union (EU) countries in 2023.

Countries like Albania and North Macedonia have relatively low VC investment volumes and limited ratios to GDP, with Albania at $25 million (0.000175% of GDP) and North Macedonia at $35 million (0.000258% of GDP). Kosovo shows no VC investment, indicating a highly underdeveloped VC market in the region. These figures suggest that startups in the Western Balkans face challenges in accessing significant VC funding, which could restrict entrepreneurial growth and innovation in these economies.

EU countries show higher VC volumes and GDP ratios. For instance, Germany ($4.1 billion) and France ($3.2 billion) lead in investment volumes, supporting robust startup ecosystems. Smaller economies like Cyprus (0.001409%) and Luxembourg (0.001017%) have high investment-to-GDP ratios, suggesting concentrated VC activity relative to their GDPs, which benefits their startup sectors. However, other EU countries such as Bulgaria and Romania exhibit lower ratios, indicating limited VC impact relative to economic size.

As can be seen, EU countries and Western Balkan countries vary widely in the amount of funds they raised, with the EU countries raising considerably more. However, the amount of investments made by venture capital firms does not necessarily indicate that some countries are more active relative to venture capital firms, since the size of the relevant country matters significantly in this regard. Therefore, it is more meaningful to compare these amounts against another dimension; for example, GDP, as demonstrated in Table 4. However, this data also generally shows a greater percentage of the overall funding in EU countries, which is explained in more detail further below.

Table 5.
Data on the ratio of stock market capitalisation to GDP, %.

Country	Stock market capitalization. % GDP
Western Balkans	
Albania[1]	0
Bosnia and Herzegovina	21.6
North Macedonia	32.1
Montenegro	62.3
Kosovo[1]	0
Serbia	5.2
European Union	
Austria	30.5
Belgium	59.0
Bulgaria	25.3
Croatia	38.9
Cyprus	19.0
Czech	10.9
Denmark	68.1
Estonia	14.6
Finland	26.3
France	84.8
Germany	59.4
Greece	27.0
Hungary	17.9
Ireland	28.6
Italy	41.1
Latvia	1.6
Lithuania	6.3
Luxembourg	70.3
Malta	34.1
Netherlands	131.9
Poland	29.8
Portugal	25.6
Romania	10.2
Slovakia	5.4
Slovenia	14.5
Spain	59.2
Sweden	124.9

Note:
x - data not available
[1] – country stock exchange is not functional for now

Data Bank [31], Bosnia and Herzegovina Market Cap Data [32], North Macedonia Market Cap Data [33], Serbia market capitalization to GPD data [34], Montenegro Market Cap [35], Estonia Market Cap [36], Latvia Market Capitalization [37].

As shown in Table 5, the selected European Union countries generally have higher stock market capitalization to GDP ratios than the Western Balkans countries, which may indicate that the EU countries in this context have more opportunities to raise funds. Moreover, some countries in the Western Balkans do not have their own stock market (Kosovo), or it does not actually function (Albania), which complicates financing opportunities.

Table 5 highlights significant disparities between the EU and the Western Balkans in terms of stock market development and access to equity financing. EU countries generally have more mature stock markets, with some nations displaying very high market capitalization relative to GDP, offering extensive equity funding options for businesses. In contrast, the Western Balkans show much lower stock market capitalization levels, with some countries lacking public markets altogether, indicating fewer options for companies to access funding through equity markets. This disparity underscores the need for financial market development in the Western Balkans to enhance economic growth and support for startups and SMEs.

The last indicator assessed is the scholar's index, which evaluates the level of investor protection in the region: it consists of three other indices, namely the index of business disclosure, the index of directors' responsibility, and the index of legislative strength. The scores for these indices are shown in Table 6:

Table 6.
Investor Protection Index.

Country	Ease of shareholder suits index	Business Disclosure Index	Size of the Directors' Liability Index	Investor protection index
Western Balkans				
Albania	7	9	7	7.7
Bosnia and Herzegovina	9	3	6	6.0
North Macedonia	9	10	9	9.3
Montenegro	6	5	8	6.3
Kosovo	5	9	6	6.7
Serbia	5	6	6	5.7
European Union				
Austria	7	5	5	5.7
Belgium	7	8	6	7.0
Bulgaria	8	10	2	6.7
Croatia	6	5	6	5.7
Cyprus	7	9	4	6.7
Czech	9	2	6	5.7
Denmark	8	7	5	6.7
Estonia	6	8	3	5.7
Finland	8	6	4	6.0
France	6	8	3	5.7
Germany	5	5	5	5.0
Greece	5	9	4	6.0
Hungary	7	2	4	4.3
Ireland	9	9	8	8.7
Italy	6	7	4	5.7
Latvia	9	5	4	6.0
Lithuania	7	4	7	6.0
Luxembourg	4	6	5	5.0
Malta	8	3	6	5.7
Netherlands	6	4	4	4.7
Poland	9	7	2	6.0
Portugal	7	6	5	6.0
Romania	5	9	4	6.0
Slovakia	7	3	4	4.7
Slovenia	5	9	8	7.3
Spain	6	7	6	6.3
Sweden	7	8	4	6.3

Source: Compiled by the scholar based on data from The World Bank [38] and World Bank [39].

As can be seen from Table 6, the level of the index is generally higher in the European Union countries than in Western Balkan countries, which may indicate an advantage in this context for these countries.

Thus, it is possible to assess the overall level of access to finance in both categories of countries: by constructing the index according to the methodology, it is possible to assess the comparative level of access to finance in different countries. This information is provided in Table 7:

Table 7.
Access to finance index data for selected countries.

Country	Fitch Rating	Level of domestic credit to the private sector	Volume of venture capital financing	Market Cap to GDP	Investor Protection Index	Access to finance index value
Western Balkans						
Albania	5	1.4	3.6	0.3	7.7	3.6
Bosnia and Herzegovina	5.5	2.9	3.3	4.1	6.0	4.4
North Macedonia	6.5	3.4	4.3	4.9	9.3	5.7
Montenegro	5	2.8	3.5	6.8	6.3	4.9
Kosovo	6	3.3	0.3	0.3	6.7	3.3
Serbia	6.5	2.1	2.2	2.2	5.7	3.7
European Union						
Austria	9.5	6.3	3.4	4.8	5.7	5.9
Belgium	8.5	5.1	2.4	6.6	7.0	5.9
Bulgaria	7	2.6	1.5	4.4	6.7	4.4
Croatia	7.5	3.1	3.3	5.4	5.7	5.0
Cyprus	7	5.3	9.7	3.9	6.7	6.5
Czech	8.5	3.2	1.6	3.0	5.7	4.4
Denmark	10	9.7	3.8	7.1	6.7	7.4
Estonia	8.5	3.8	4.4	3.4	5.7	5.2
Finland	9.5	6.7	6.6	4.5	6.0	6.7
France	8.5	8.3	3.0	7.8	5.7	6.7
Germany	10	5.9	2.8	6.6	5.0	6.1
Greece	6.5	3.4	1.6	4.6	6.0	4.4
Hungary	7	1.7	3.3	3.8	4.3	4.0
Ireland	8.5	0.5	2.1	4.7	8.7	4.9
Italy	7	5.0	2.2	5.5	5.7	5.1
Latvia	7.5	0.8	1.4	1.3	6.0	3.4
Lithuania	9	1.6	1.8	2.4	6.0	4.2
Luxembourg	10	7.1	8.3	7.2	5.0	7.5
Malta	8.5	5.0	3.7	5.1	5.7	5.6
Netherlands	10	6.5	3.7	9.7	4.7	6.9
Poland	7.5	2.1	2.4	4.8	6.0	4.5
Portugal	7.5	6.4	1.4	4.4	6.0	5.1
Romania	6.5	0.3	1.8	2.9	6.0	3.5
Slovakia	7.5	4.6	2.4	2.2	4.7	4.3
Slovenia	9	2.2	0.5	3.4	7.3	4.5
Spain	7.5	6.4	2.7	6.6	6.3	5.9
Sweden	10	9.1	5.1	9.5	6.3	8.0

Thus, the data from Table 7 allow us to assess the level of access to finance in the European Union and Western Balkan countries: to simplify the perception of the results obtained, they have been depicted in the form of a diagram as shown in Figure 1:

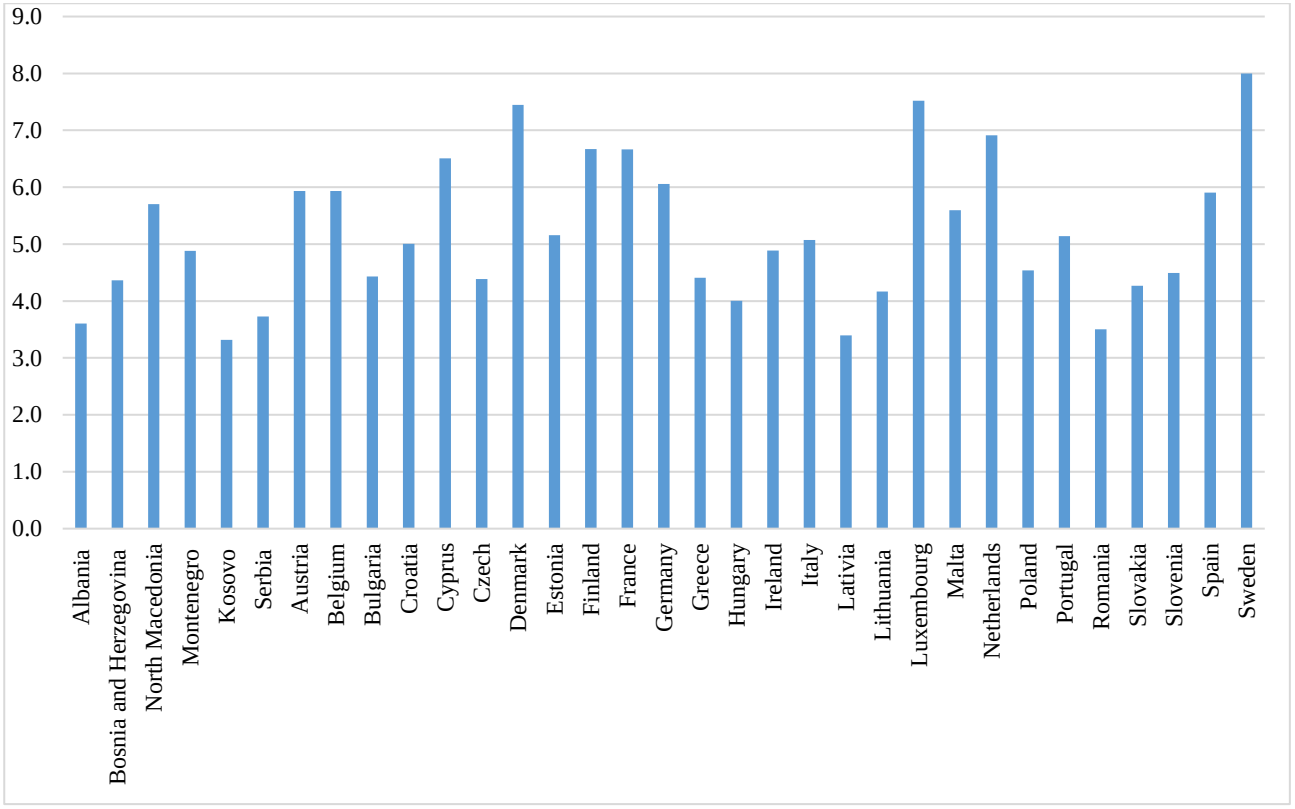

Figure 1.
Depiction of the results of the access to finance index construction.

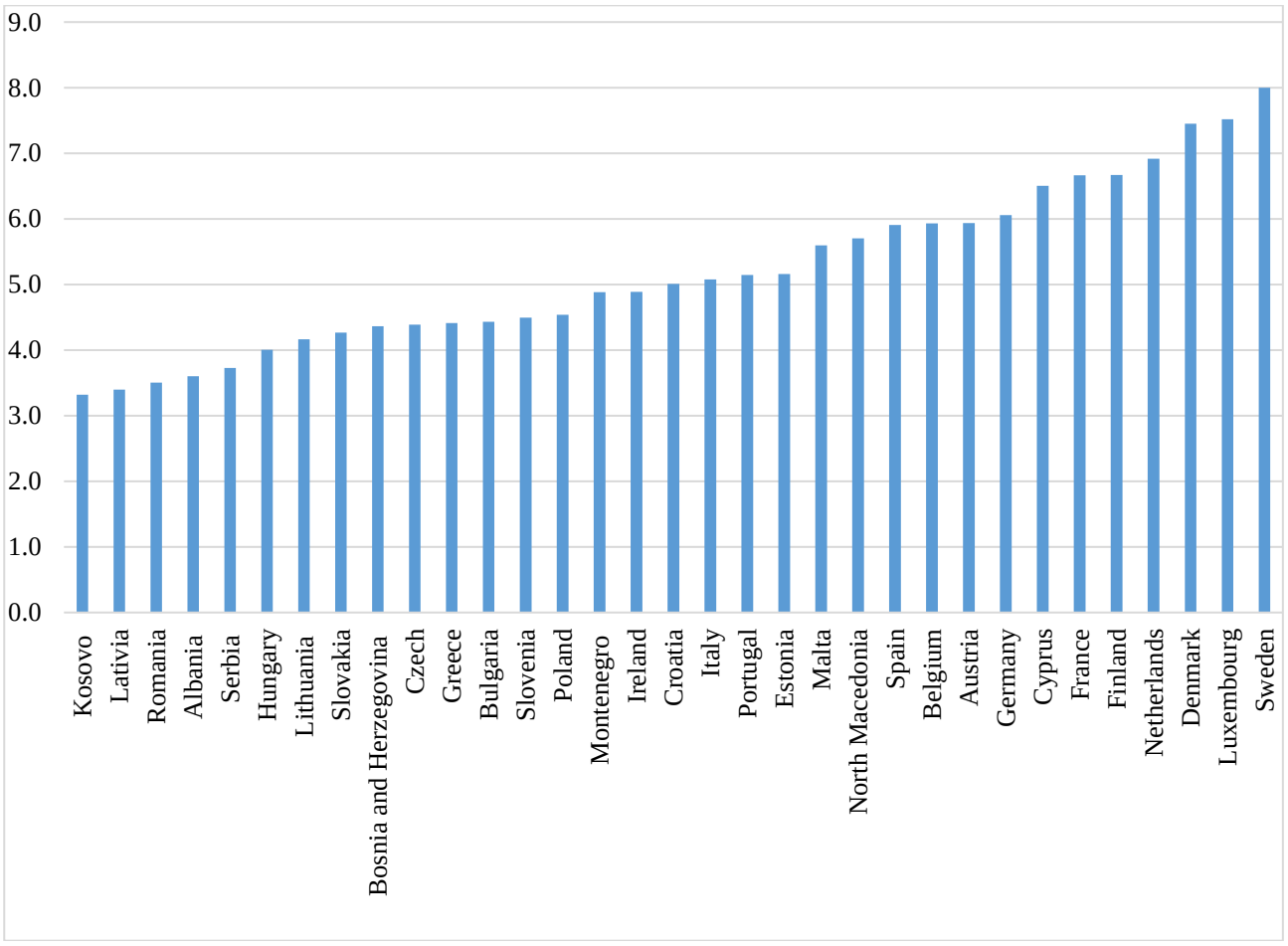

Figure 2.
Countries and their level of the access to finance index in ascending order.

As can be seen from Figures 1 and 2, the countries with the highest index values are Sweden, Luxembourg, and Denmark, while the lowest are Kosovo, Latvia, Romania, and Albania. It is important to note that 2 of the 4 countries that are in the last places are Kosovo and Albania. The reason for this is that they do not have their own stock market, or it is in its infancy. This has had a significant impact on this indicator in the index. Thus, to calculate the situation in the region, it is worth making additional calculations. The results obtained are presented in Table 8:

Table 8.
Data on Access to Finance Index indicators in the Western Balkans and the European Union.

Indicator	Fitch Rating	Level of domestic credit to the private sector	Volume of venture capital financing	Ratio of equity market capitalization level to GDP	Investor Protection Index	Access to finance index value
Western Balkans	6.0	2.5	2.5	4.8	6.4	4.5
European Union	8.7	6.0	3.1	7.4	5.7	6.2

As can be seen from Table 8, the access to finance index for the Western Balkans is lower than that of the European Union. It can be observed that higher ratings in the EU in this context are noted in 4 out of 5 indicators, namely the level of domestic lending, the volume of venture capital financing, Fitch Ratings, and the investor protection index.

5. Conclusions

The findings show that startups in the EU have easier access to finance compared to those in the Western Balkans, which face significant barriers due to underdeveloped financial systems and a lack of supportive government policies.

5.1. Theoretical Contributions

This study makes a significant theoretical contribution through the development of a comprehensive Access to Finance Index, which integrates key financial indicators to provide a multidimensional assessment of startup financing challenges across different regions. Unlike traditional frameworks that focus on isolated variables, this holistic approach enables a clearer understanding of the interplay between factors such as credit ratings, private sector credit availability, venture capital, and investor protection measures. By analyzing the interactions among these elements, the study advances the literature on startup financing by explaining how financial ecosystem dynamics shape regional entrepreneurial capacity. Furthermore, the comparative analysis between the European Union (EU) and the Western Balkans offers critical insights into the structural differences between well-established and emerging startup ecosystems, thereby contributing to broader discussions on entrepreneurial finance and ecosystem development.

5.2. Practical Implications

The findings of this research have important policy and investment implications, particularly for stakeholders in the Western Balkans, including policymakers, investors, and entrepreneurs. The study underscores the necessity of targeted policy interventions aimed at enhancing access to financial resources for startups. Key recommendations include strengthening investor protection regulations, expanding venture capital markets, and fostering the development of public equity markets to enable startups to secure funding through stock offerings. These measures would contribute to a more robust financial ecosystem, facilitating increased private investment and attracting international venture capital, ultimately enhancing the competitiveness of regional startups in the global market.

Moreover, the study emphasizes the strategic role of government-backed financial instruments in supporting innovation-driven entrepreneurship. Existing models, such as the EU's SME Instrument, demonstrate how structured public funding mechanisms can mitigate financial barriers, particularly for high-risk, high-innovation ventures. The adoption of analogous initiatives in the Western Balkans could stimulate early-stage investment, thereby strengthening the entrepreneurial ecosystem and fostering sustainable regional economic growth.

Social Implications & Alignment with Sustainable Development Goals (SDGs)

This study has substantial social implications, particularly in relation to the United Nations Sustainable Development Goals (SDGs), notably SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure). In the Western Balkans, constrained access to financial resources limits the ability of startups to scale, restricting job creation and economic expansion. By improving financial accessibility, governments and financial institutions can facilitate the emergence of new enterprises, fostering economic diversification, employment generation, and inclusive economic growth.

Furthermore, enhancing financial access for startups directly supports SDG 9, which prioritizes resilient infrastructure, inclusive industrialization, and technological innovation. Startups—particularly those operating in the technology and sustainability sectors—play a pivotal role in advancing these objectives. Increasing investments in innovative and sustainable business models can drive the development of green technologies and environmentally responsible practices, aligning regional economic development with broader sustainability goals.

Finally, addressing disparities in access to finance contributes to SDG 10 (Reduced Inequality). Regions with limited financial infrastructure, such as the Western Balkans, experience economic stagnation, intensifying socio-economic

inequalities. By implementing inclusive financing mechanisms, policymakers can reduce regional disparities, fostering more equitable economic development and bridging the gap between emerging and mature financial ecosystems.

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Appendix

Table 1.
Correspondence of Fitch scores to survey scores.

Fitch Rating	Score
D	0
C	2
C+	2.5
CC	3
CC+	3.5
CCC	4
CCC+	4.5
B	5
B+	5.5
BB	6
BB+	6.5
BBB	7
BBB+	7.5
A	8
A+	8.5
AA	9
AA+	9.5
AAA	10