Inflation and Intellectual Capital: What Do We Know?

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Abstract

This paper focuses on a bibliometric examination of the literature addressing the intersection between inflation and intellectual capital — two important yet traditionally distinct areas of research. Amid inflation and the growing importance of intangible assets, the relationship between instability and knowledge-based resources is gaining significance. Intellectual capital plays a key role in enhancing competitiveness, and innovation capacity within firms. However, its connection with inflation is inconsistently addressed in the literature. Using bibliometric analysis of 5,704 records from the Web of Science database (1990–2025), this study maps the development, structure, and thematic clusters of research in this domain. The findings suggest that, in the literature, inflation is often associated with corporate investment in intangible assets. In many studies, intellectual capital is presented as a potential stabilising factor during periods of uncertainty, particularly in sectors reliant on innovation and human expertise.

Keywords: *inflation, intellectual capital, bibliometric analysis, interdisciplinary research, intangible assets.*

Introduction

So far, the connection between inflation and investment in knowledge assets has not been extensively studied in academia. Investment in knowledge assets, which includes intangible fields like software development, brand management, production processes, and employee training, is vital for technological innovation, economic growth, enhanced corporate competitiveness, and overall economic advancement. This applies not only to private firms but also to the public sector, where investments in digital infrastructure, data systems, training of civil servants, and strategic knowledge management are increasingly important for effective governance and service delivery. These investments affect technological development and total factor productivity through various channels, potentially increasing production capabilities or minimising inefficiencies. While intellectual capital – often identified with intangible assets such as research and development, design, brand value, employee training, and business process reorganisation – is widely acknowledged as a crucial factor for sustainable growth,

research specifically examining how inflation impacts investment in these intangible assets remains scarce (Fan et al., 2023).

The study conducted by Fan et al. (2023) utilises panel structural vector autoregression (PSVAR) methodology across a sample of 29 developed economies for the period from 1995 to 2019. It provides empirical evidence pertaining to both the short- and long-term impacts of inflation shocks on investments in intangible assets. The findings indicate a robust and statistically significant association between investments in intangible assets and price volatility, with inflation recognised as a pivotal determinant influencing investment behaviour. Notably, inflation shocks demonstrate a high degree of synchronisation with investment in intangible assets, particularly during periods of economic expansion and contraction. Among the various types of inflation, Food Consumer Price Inflation (FCPIA) shocks exert the most substantial adverse effect on investments in intellectual assets, followed by shocks associated with Core Consumer Price Inflation (CCPIA) and Energy Consumer Price Inflation (ECPIA). Specifically, FCPIA shocks account for approximately 10% of the variability in investments in knowledge assets, in contrast to the influence of CCPIA shocks, which falls within a range of 0.5% to 0.8%. Overall, inflation shocks tend to precipitate a more pronounced decline in investments in knowledge assets in non-Western European nations compared to their Western European counterparts, potentially reflecting disparities in economic development levels. Furthermore, the reduction in investment subsequent to a positive inflation shock appears to be more persistent in economies characterised by higher inflation rates. Conversely, Producer Price Inflation (PPIA) exhibits a comparatively smaller and delayed impact on investment when juxtaposed with Consumer Price Inflation, indicating a more indirect relationship. Nonetheless, the findings regarding core inflation effects remain inconclusive; certain results suggest that a negative shock in CCPI fosters an increase in investments in knowledge assets, while alternative analyses propose that a 1% reduction in inflation corresponds to an approximate 0.5% decrease in investment over a six-year timeframe.

The relationship between intellectual capital and financial distress, as well as corporate profitability, is critically examined, considering inflation as a significant macroeconomic variable. Intellectual capital is recognised as a pivotal source of competitive advantage and enhanced financial performance, frequently defined as the disparity between a company's market value and its book value (Oktarina, 2018). The principal components encompass human capital, structural capital, and relational capital (Xu and Wang, 2018). The effective management of intellectual capital is deemed essential for fostering value creation and advancing business performance (Hendry et al., 2022). Oktarina's (2018) study concentrated on forecasting financial distress within the Indonesian manufacturing sector by analysing financial indicators, macroeconomic variables (including inflation), and the level of intellectual

capital. The results indicated that inflation exerted a detrimental effect on financial distress, with elevated inflation correlating with a diminished likelihood of encountering financial difficulties. This outcome was consistent with certain prior research while contradicting others. The authors elucidated that manufacturing firms engaged in producing everyday consumer goods could more readily transfer increased costs to end consumers during inflationary periods, thus mitigating the risk of financial distress. Furthermore, the same study revealed that although intellectual capital, as gauged by the Value Added Intellectual Coefficient (VAIC), was examined as a potential predictor of financial distress, the hypothesis concerning its influence was not substantiated, which stands in opposition to some earlier findings (Oktarina, 2018).

Furthermore, inflation has been analysed as a potential moderating variable in the relationship between intellectual capital and corporate profitability. One study (Nadiana et al., 2024) examined not only the direct impact of intellectual capital on profitability but also whether inflation moderated this relationship. The findings confirmed that intellectual capital had a positive and statistically significant impact on profitability, consistent with previous empirical research. However, the hypothesis that inflation moderates the influence of intellectual capital (measured by VAIC) on corporate profitability was not supported. The authors suggested that in an environment of unstable and rising inflation, the value created by intellectual capital could diminish, thus negatively affecting profitability and reducing firms' attractiveness to investors (Nadiana et al., 2024).

In a different research context, a study by Hendry et al. (2022) explored the influence of intellectual capital and inflation on stock returns, with corporate profitability analysed as a mediating variable. The findings indicated that neither intellectual capital nor inflation had a direct effect on stock returns. However, intellectual capital was found to have a positive and statistically significant impact on profitability, while inflation showed no significant effect within this model. Moreover, profitability was unable to mediate the relationship between intellectual capital or inflation and stock returns (Hendry et al., 2022).

Beyond empirical studies examining the correlation between intellectual capital and inflation, theoretical explorations have focused on the prospective application of intellectual capital within inflationary frameworks (Ziesemann, 2023). One innovative concept introduced is Intellectual Capital Money (ICM), a novel financial mechanism that enables the creation or acquisition of financial resources through the exchange of intellectual capital. This mechanism aims to facilitate unrestricted access to intellectual resources while promoting their generation and effective utilisation. The author posits that funding via ICM could serve as a precise monetary infusion aimed at bolstering the development of intellectual capital, consequently enhancing economic output from both supply and demand perspectives. In contrast to

conventional non-targeted monetary stimulus, which risks inducing inflationary pressures if production levels do not rise commensurately, an ICM injection, by fostering output growth, has the potential to alleviate or entirely negate pressures on price levels. Theoretical evaluations grounded in the quantity theory of money indicate a non-linear response of the price level to ICM injections, projecting either a modest price increase or sustained price stability, particularly in scenarios where intellectual capital is adeptly generated and preserved. Analogous conclusions emerge from analyses employing IS-LM and AD-AS models, which suggest that an ICM injection is anticipated to shift both the aggregate demand and aggregate supply curves to the right, potentially expediting economic output growth while neutralising inflationary pressures. These scholarly considerations underscore the viability of the ICM mechanism as a strategic instrument for anti-stagflationary monetary policy, capable of facilitating substantial economic growth with minimal or negligible impact on the price level (Ziesemann, 2023).

Overall, although the relationship between intellectual capital (or knowledge assets) and inflation has been examined from various perspectives, the current body of research remains relatively limited and fragmented. The diversity and occasional contradictions in empirical findings underscore the complexity of these interactions. Moreover, the emerging theoretical proposals, such as the concept of Intellectual Capital Money, suggest innovative avenues for further exploration. For public administration, this topic is equally relevant, as governments are not only regulators but also active investors in knowledge assets—through public R&D programs, digital transformation, employee training in civil service, and national innovation strategies. Consequently, a significant research gap persists regarding the specific mechanisms through which inflation impacts investment in intellectual capital and the broader economic implications. Addressing this gap could considerably enhance the understanding of how intangible assets interact with macroeconomic variables in different economic contexts.

1. Methodology

This study employs bibliometric analysis as a fundamental research methodology. The bibliometric analysis within this research domain is guided by the assessment of empirical data from published literature, emphasising key themes (Leung et al., 2017). This method utilises mathematical and statistical techniques for various types of communication (Pritchard, 1969). In our research, we utilise the standardised science mapping workflow established by Aria & Cuccurullo (2017), Cobo et al. (2011), and Zupic & Čater (2015). The standardised workflow includes 5 stages: study design, data collection, data analysis, data visualisation, and interpretation.

This study employs a bibliometric approach to examine and elucidate research trends, patterns, and evolution, as well as to identify potential gaps in the existing literature regarding the relationship between intellectual capital and inflation. The bibliometric approach is grounded in standard bibliometric techniques, including bibliographic coupling, co-authorship, co-citation, and co-word analysis. A description of these standard bibliometric techniques is provided in the following Table 1.

Table 1: Bibliometric techniques

Bibliometric technique		The unit of analysis used	Kind of relation
Bibliographic coupling	Author Document Sources	Author's oeuvres Document Journal's oeuvres	Common references among author's oeuvres Common references among documents Common references among the journal's oeuvres
Co-author	Author Country Institution	Author's name Country from affiliation Institution from affiliation	Authors' co-occurrence Countries' co-occurrence Institutions' co-occurrence
Co-citation	Author Document Journal	Author's reference Reference Journal's reference	Co-cited author Co-cited documents Co-cited journal
Co-word		Keyword, or term extracted from	Terms' co-occurrence title, abstract or document's body

Source: own proceeding

Based on this study design, we formulate the following research questions:

RQ1: What has been the trend in scientific publications on intellectual capital and inflation in the WoS database over time?

RQ2: Which countries publish the most on this topic, and how do they collaborate?

RQ3: How is the research on intellectual capital and inflation conceptually structured, and which theoretical frameworks prevail in the field?

RQ4: What does the relevance matrix represent in academic research?

RQ5: What is the distribution of authors and sources in academic publications?

Data was collected on 4 March 2025 from the Web of Science database to conduct this study. The Web of Science is a comprehensive database that offers reliable and robust qualitative publications for researchers. Published records were selected based on inclusion criteria such as keywords, document type, language, Web of Science categories, and subject area. All inclusion criteria are detailed in Table 2.

Table 2: Inclusion criteria applied for data collection in the Web of Science

Inclusion criteria	
Keywords	"intellectual capital" AND "inflation" OR "deflation" OR "intangible assets" OR "CPI" OR "HCPI"
Document type	Article
Language	English
Web of Science categories	Economics, Management, Business, Business Finance, Multidisciplinary Sciences, Political Science
Subject area	Business Economics, International Relations, Mathematical Methods in Social Sciences, Government Law, Mathematics, Public Administration
Final sample	5,920 Documents

Source: own proceeding

Duplicate documents were excluded to ensure further use of the sample. Consequently, the final sample utilised for bibliometric analysis comprised 5,704 records from 1990 to 2025 (utilising the final publication year for complete information).

Collected samples were analysed in RStudio using the "bibliometrix" package. This package provides a comprehensive approach to bibliometric analysis from various perspectives: overview, sources, authors, documents, social structure, conceptual structure, or clustering of records.

2. Results

Between 1990 and 2025 (utilising the final year's publication number), a total of 14,535 authors contributed to 5,704 publications across 1,015 sources. The annual growth rate of publications stands at 14.31%. Key information regarding the collected data is summarised in Table 3.

Table 3: Main information about the collected data

Description	Result
Timespan	1990 – 2025
Sources	1,015
Documents	5,704
Authors	14,535
Available keywords	11,199
Average document age	8
Annual growth rate	14.31%
Average citations per document	27.75

Source: own proceeding

According to year-to-year changes in publication numbers, we can conclude that interest in scientific publishing is increasing. During the COVID-19 crisis, we observed a slight

decrease in publishing; however, from 2020 onward, the number of published articles increased significantly. With inflation growing worldwide, particularly after 2021, companies and policymakers started examining the role of non-physical assets, such as human and structural capital, in enhancing performance and resilience. The COVID-19 pandemic revealed the weaknesses of countries and organisations that disregarded intangible assets, negatively affecting socio-economic growth. In 2020, the global economy faced a significant downturn, resulting in higher unemployment and poverty rates worldwide, although the economic effects varied widely between nations. Countries that focused on tangible assets and traditional economic models were hit hard. Conversely, innovative nations that valued intangible assets and adopted a modern knowledge-based economy successfully weathered this crisis (Ben Hassen, 2022).

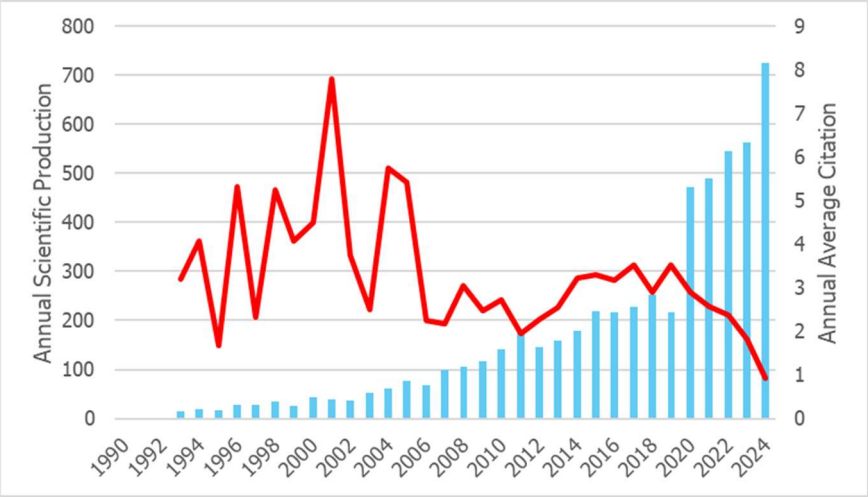

Figure 1: Annual scientific production and citations during the observed period

Source: own proceeding

Figure 2 shows the global distribution of publications on intellectual capital and inflation. The data indicate that the United States leads significantly with 3,605 publications, followed by China, which also has substantial research output. Other notable contributors are India, the United Kingdom, Germany, and Australia, each with moderate to high levels of activity. European countries and parts of Southeast Asia maintain consistent academic interest. In contrast, regions like Central Asia, parts of Africa, and the Middle East exhibit low research activity or lack representation in the dataset. This distribution suggests that research on intellectual capital and inflation is primarily found in economically advanced or rapidly developing nations, highlighting the strategic importance of intangible assets in addressing macroeconomic challenges like inflation.

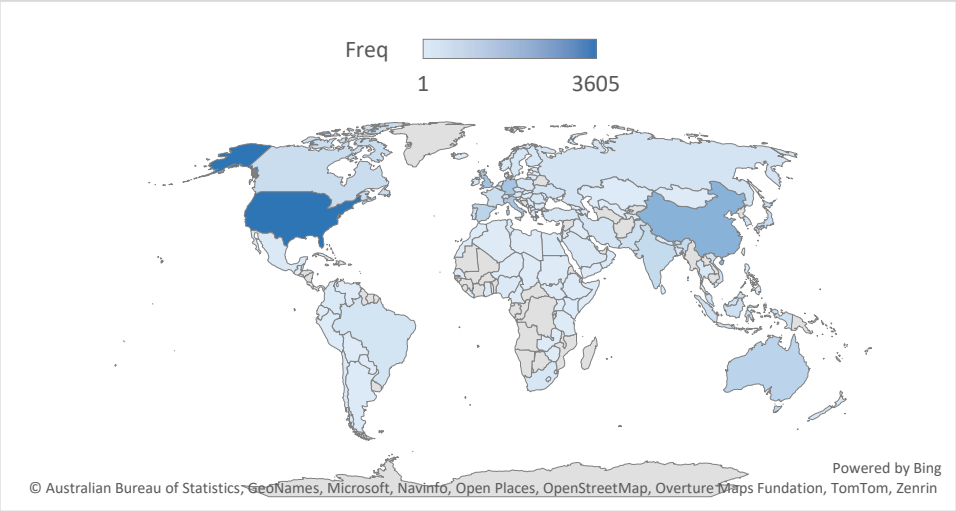

Figure 2: Country scientific production

Source: own proceeding

Additionally, from the perspective of countries, we examine whether authors from the 20 most frequent publishers publish as a single country or multiple countries, illustrating the openness to collaboration among academics. The United States leads the research landscape with the highest number of publications, primarily single-country publications (SCP). Following closely is China, which presents a strong research presence and a balanced distribution of single-country and multi-country publications (MCP), highlighting active international collaboration. Italy, the United Kingdom, and Spain are significant contributors, showcasing a robust involvement in international co-authorship. Other notable nations include Australia, Germany, India, and Japan, reflecting a geographically diverse research community. While most countries show a preference for SCPs, some — like France, Canada, and Malaysia — demonstrate a higher proportion of MCPs, indicating a willingness to engage in cross-border academic cooperation. This trend emphasises the global importance of the topic and the interplay between national research initiatives and international collaboration in enhancing scholarship in this field.

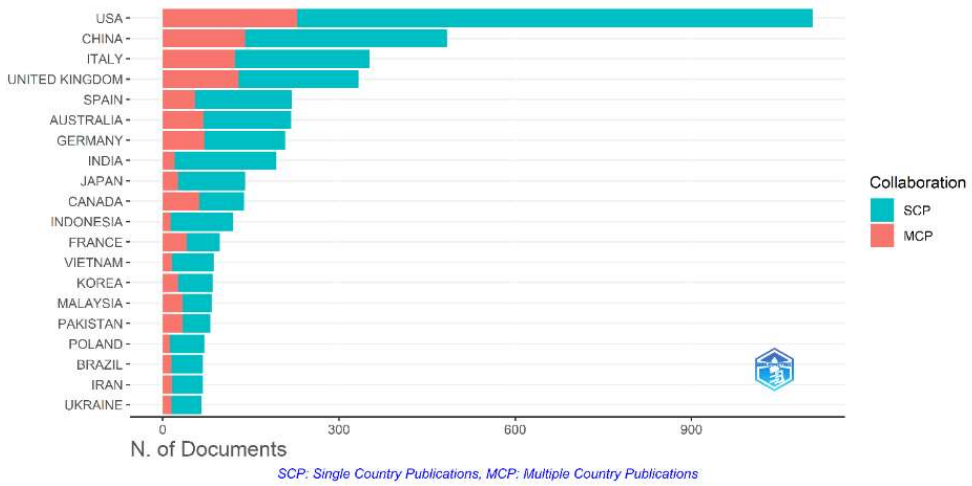

Figure 3: Country collaboration ratio

Source: own proceeding

To enhance understanding of cross-country cooperation, we present Figure 4, which visualises the international collaboration network. This map illustrates a dense web of co-authorship links among countries, with darker lines indicating more frequent collaborations. The United States emerges as a central hub in the global research network, showcasing robust collaborative ties with both developed and developing nations across all continents. Significant transnational links are noted among European countries, particularly the United Kingdom, Italy, and Germany, and various partners in Asia, including China, India, and Malaysia. Moreover, Australia exhibits extensive global connectivity, particularly with Asian and European counterparts.

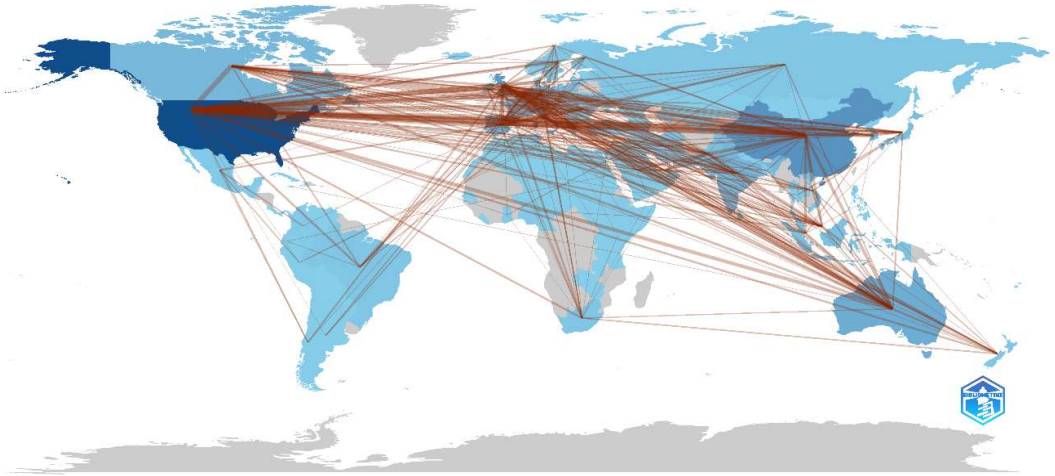

Figure 4: Country collaboration map

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Figure 5 presents a Conceptual Structure Map generated through Multiple Correspondence Analysis (MCA), illustrating the intellectual structure of the analysed corpus. This map was generated using factor analysis, a statistical technique used to explore and identify underlying relationships among variables. This method reduces data by grouping related items into distinct factors, simplifying complex datasets for more effective analysis. Numerous sources emphasise that factor analysis proves particularly beneficial in diverse fields such as psychology, marketing, and finance. It aids in uncovering latent constructs that influence observed behaviours and trends. Researchers can identify common factors that drive various outcomes by examining the correlations among variables, enhancing insights and decision-making processes (Radanliev & De Roure, 2021; Valderrama et al., 2022; Vasquez-Torres, 2018). MCA effectively transforms complex bibliometric or textual data into a low-dimensional space while maintaining the relational proximities between terms. In this instance, the two primary dimensions—Dim 1 (46.45% of the variance) and Dim 2 (20.87%)—collectively elucidate a significant portion of the variation in term usage across documents, thus providing a substantial two-dimensional conceptual framework. The analysis of term distribution uncovers multiple research clusters that are thematically distinct yet interrelated. In the top-right quadrant, the predominance of keywords such as "market value," "empirical evidence," "financial performance," "firm performance," "corporate governance," and "disclosure" is noted. This quadrant reflects a body of literature that predominantly addresses corporate finance, governance mechanisms, and their implications for firm-level outcomes, indicating a robust tradition of empirical and performance-oriented research. In the lower-right quadrant, terminologies such as the resource-based view, competitive advantage, capabilities, strategy, and knowledge management are shown to be closely interconnected. These concepts manifest a theoretical framework grounded in strategic management and organisational competencies, highlighting the significance of internal resources and knowledge as determinants of sustainable competitive advantage. The proximity of innovation, technology, and performance management suggests the existence of a subcluster that associates the development of strategic capabilities with performance driven by innovation. The top-left quadrant encompasses terms such as earnings, valuation, value relevance, and returns, which are clustered within the realm of financial accounting and capital market research. These terms underscore the scholarly inquiry into the impact of accounting information on valuation and investor decision-making, frequently rooted in value relevance theory and empirical capital markets research. In the bottom-left quadrant, one finds terms such as monetary policy, inflation, prices, dynamics, tests, and time series. This cluster is characterised by its distinctly macroeconomic and econometric focus, reflecting research that utilises quantitative methodologies to investigate policy effects and economic variables' behaviour over time. The inclusion of models, panel data, and growth variables further underscores the methodological

emphasis of this particular thematic area. In the central area of the map, terms such as investment, risk, market, behaviour, assets, and productivity indicate interconnected concerns that integrate macro- and micro-level analyses. These central terms function as conceptual bridges, linking diverse research domains and demonstrating the multidisciplinary essence of the literature under examination. The convex hull, represented in red, encapsulates all the plotted terms and visually defines the conceptual boundary of the field, thereby highlighting the diversity of themes and the extent of interconnections among them. In summary, the conceptual structure map provides a sophisticated perspective of the intellectual landscape, illustrating the organization of core research topics and integrating theoretical and empirical contributions across various thematic domains.

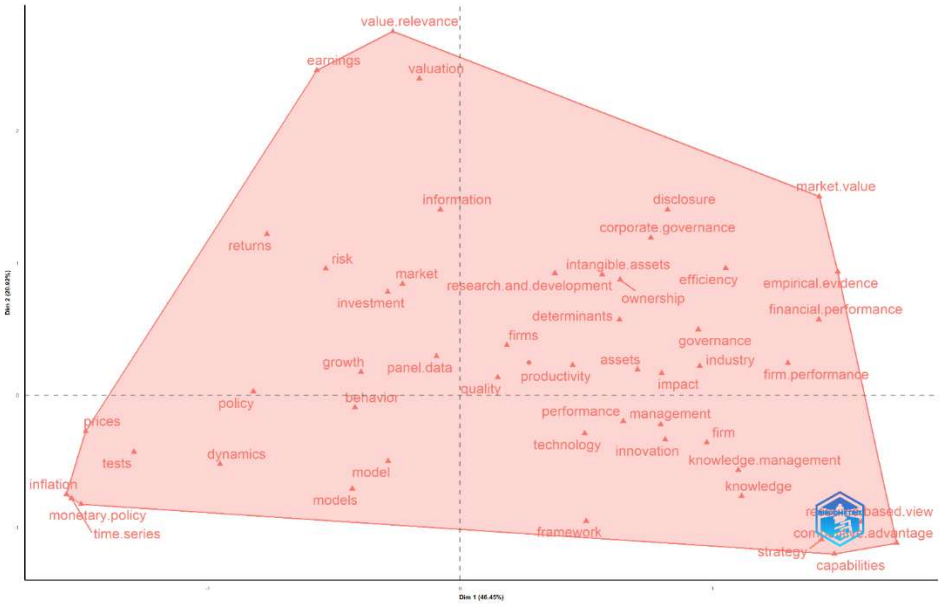

Figure 5: Conceptual structure map - MCA

Source: own proceeding

Figure 6 presents a detailed dendrogram resulting from a hierarchical clustering analysis, which organises keywords within the analysed corpus based on their co-occurrence patterns. This hierarchical algorithm systematically creates nested groupings by progressively merging the most similar clusters. This procedure enables the identification of meaningful thematic groupings at varying levels of granularity. The height of each node in the dendrogram reflects the dissimilarity (or distance) between merged clusters, with lower branches indicating stronger associations among terms. At the base of the dendrogram, individual keywords—highlighted in red—are arranged into smaller subclusters according to their conceptual relationships. As one ascends the tree, these subclusters progressively merge into larger thematic clusters. For instance, terms such as "resource-based view," "capabilities," and "competitive advantage" cluster closely, symbolising a theoretical framework oriented towards

strategic management. Similarly, terms like "corporate governance," "firm performance," and "financial performance" form a cluster that denotes empirical studies in corporate finance and governance. In contrast, on the opposite side of the dendrogram, concepts including "monetary policy," "inflation," and "time series" are grouped together, reflecting a focus on macroeconomic and econometric research. This hierarchical arrangement also underscores the role of certain terms (e.g., "innovation," "technology," "productivity") as thematic connectors, emerging at junctions where various clusters converge, thereby suggesting their importance across multiple disciplines.

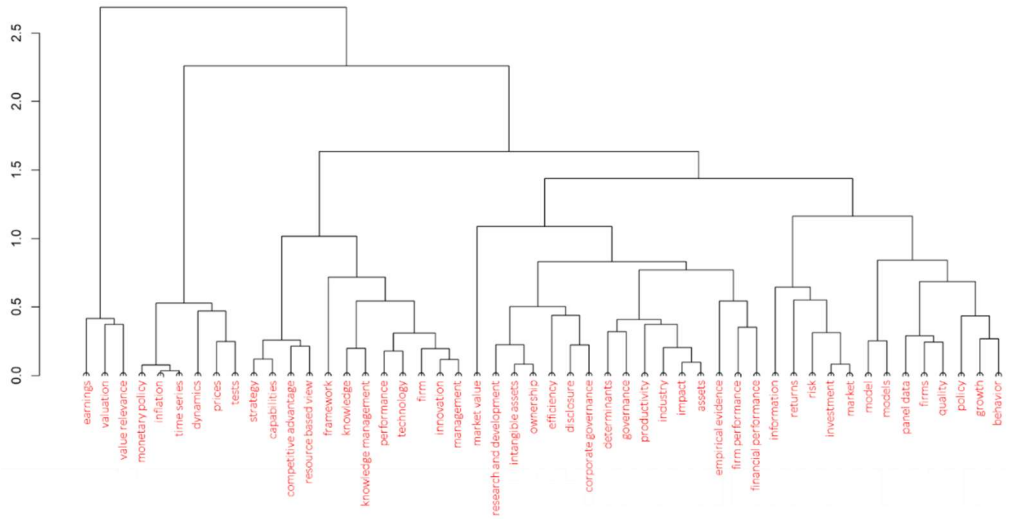

Figure 6: Dendrogram

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The keyword co-occurrence network map illustrates the intellectual structure of academic literature at the intersection of intellectual capital and inflation. This visualisation reveals three main thematic clusters, each representing a unique stream of research. The dominant green cluster includes studies that focus on the firm-level implications of intellectual capital, particularly regarding performance, innovation, management, and knowledge creation. This cluster emphasises a strategic management and organisational performance viewpoint, demonstrating how intellectual resources play a critical role in competitive advantage and value creation. In contrast, the red cluster relates to financial economics and comprises keywords such as investment, valuation, earnings, and returns. This suggests a research area that explores how intellectual capital influences financial outcomes and market behaviour, often through empirical modelling and the use of panel data methodologies. Although smaller, the blue cluster addresses the macroeconomic context, characterised by terms like inflation, monetary policy, and prices. This thematic area aims to understand the broader economic environment in which firms operate, specifically the effects of inflationary trends on financial

decision-making and the valuation of intellectual capital. Key bridging concepts such as performance, impact, and information connect these clusters, hinting at a growing interdisciplinary integration of micro- and macro-level analyses. Overall, the map depicts the complex and evolving research landscape linking intellectual capital and inflation, covering key domains of strategic management, finance, and economics.

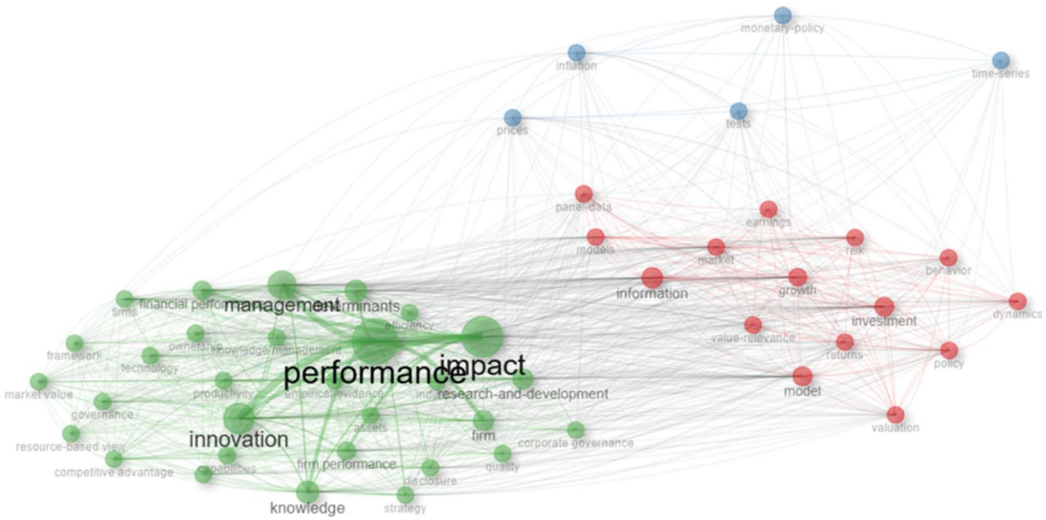

Figure 7: Co-word network

Source: own proceeding

The keywords representing the principal topics are also delineated in the thematic map. This thematic map serves as a comprehensive illustration of the conceptual landscape within the literature on intellectual capital, elucidating the relative development and significance of key research themes. In the upper-right quadrant, we identify what are termed "motor themes," which include intangible assets, research and development (R&D), and productivity, as well as macroeconomic concepts such as inflation, monetary policy, and deflation. These themes are characterised by a high level of development and centrality within the field, indicating their crucial role in shaping the research agenda. Inflation refers to the general increase in the price level of an economy, which erodes the purchasing power of money; monetary policy denotes the set of central bank measures (e.g., interest rates or regulation of the money supply) aimed at ensuring price stability; and deflation represents the opposite of inflation, namely a decline in the price level, which may lead to economic stagnation. Their inclusion among the "motor themes" highlights their key significance in linking economic and intellectual capital. These themes are characterised by a high level of development and centrality within the field, indicating their crucial role in driving the research agenda. They are viewed as key pillars that support and integrate various strands of research, reflecting a mature and interconnected body of work. Conversely, the lower-right quadrant highlights "basic themes," such as intellectual

capital, human capital, and innovation. Although these themes are foundational concepts and are frequently cited throughout the literature, their comparatively low density suggests that there remains substantial room for further theoretical elaboration and methodological innovation. The lower-left quadrant represents "emerging or declining themes," which encompass topics like the consumer price index, exchange rate, and policy. These themes currently occupy a peripheral position within the discourse, indicating they may either represent nascent areas of inquiry with potential for growth or signify areas of waning interest within the literature. Finally, the central-left zone includes what can be classified as "intermediate themes," such as China, economic growth, and COVID-19. These topics are moderately developed and do not yet command the central focus of mainstream academic discourse, suggesting they are in a transitional phase of research relevance. Overall, the thematic structure reveals a field anchored in core constructs while simultaneously evolving to incorporate broader economic and policy dimensions. This dynamic interplay between established and emerging themes underscores the ongoing evolution of intellectual capital research and its responsiveness to changes in the broader socio-economic context.

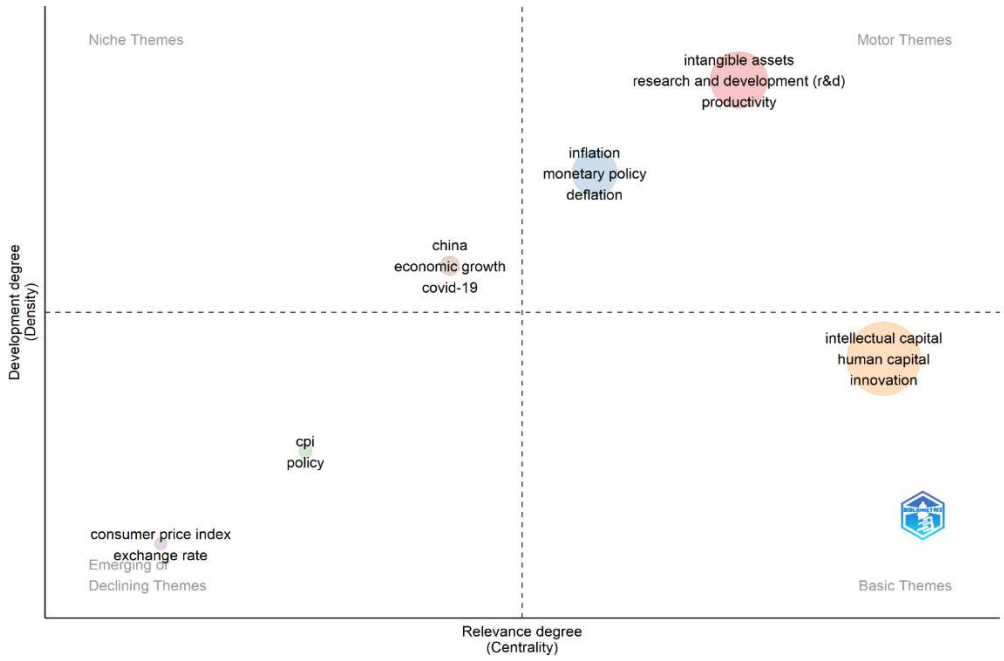

Figure 8: Thematic map

Source: own proceeding

To understand the distribution of publications between authors and sources, we use Lotka's and Bradford's laws. Lotka's law is a fundamental informetrics law for analysing the authors (similar to Bradford's law for sources). Lotka's law, named after Alfred J. Lotka, is a special application of Zipf's law that describes the frequency of publication by authors in any

given field. Let's define X as the number of publications, Y as the number of authors with X publications, and k as a constant that depends on the specific field. Lotka's law states that Y ∝X^(-k). Lotka initially claimed that k = 2, but subsequent research has shown that k varies depending on the discipline. Alternatively, Lotka's law can be expressed as Y^'∝X^(-(k-1)), where Y' is the number of authors with at least X publications. These two expressions can be proven equivalent by taking the derivative (Qiu et al., 2017).

Figure 9 illustrates the author productivity distribution based on the theoretical framework of Lotka's Law, a cornerstone principle in bibliometrics. Lotka's Law suggests that the count of authors publishing papers is roughly proportional to the number of those who publish just a single paper; in other words, a small number of authors produce a significant number of publications, while a large majority contribute only one piece of work. The figure contains two lines: a solid line indicating the empirical distribution of author productivity derived from the dataset and dashed line denoting the theoretical distribution as predicted by Lotka's Law. The Figure markedly displays a steep left-skewed distribution, reflecting that over 75% of authors have authored just one publication, aligning with the fundamental concept of Lotka's Law. As the number of authored documents rises, the share of prolific authors diminishes significantly. For example, fewer than 10% of authors have published more than 3 documents, with the proportion continuing to decline with each additional publication. The close correspondence between the solid and dashed lines points to a robust empirical fit to Lotka's theoretical model. This relationship indicates that the publication patterns in the dataset follow a power-law distribution, a typical characteristic across numerous scientific domains. Specifically, a small cohort of highly productive authors contributes a disproportionate share of the overall research output.

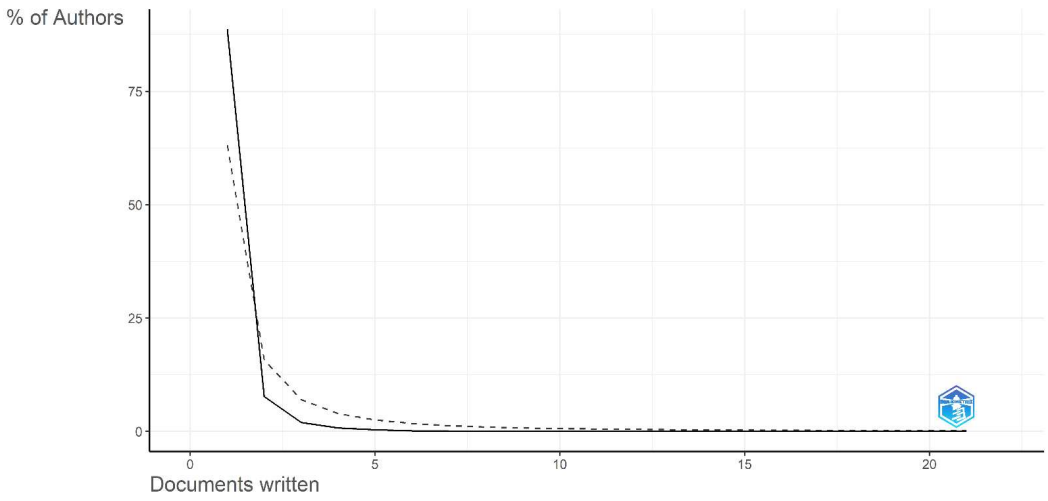

Figure 9: Lotka's Law

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The main journal bibliometric analysis tool is Bradford's law (similar to Lotka's law for authors). Bradford's law is a pattern first described by Samuel C. Bradford in 1934 that estimates the exponentially diminishing returns of searching for references in science journals. According to the law, if the number of articles sorts journals in a field into three groups, each with about one-third of all articles, then the number of journals in each group will be proportional: 1:n:n^2 (Naranan, 1970). In many disciplines, this pattern is called a Pareto distribution.

Figure 10 illustrates the distribution of academic sources according to Bradford's Law of Scattering, a principle frequently employed in bibliometric analysis to determine the most significant journals within a given research field. The figure depicts the number of articles published by each source plotted against the logarithmic rank of the source, effectively highlighting the concentration of academic output among a select group of journals. The curve showcases a pronounced decline from left to right, indicating that a limited number of journals are responsible for a disproportionately high volume of articles. This trend aligns with Bradford's Law, which asserts that scholarly articles in any domain are not uniformly distributed across all journals; rather, a few key journals account for a substantial portion of publications, followed by a larger cohort of journals that contribute progressively fewer articles. The shaded area on the left side of the graph marks the "core sources", representing journals with the highest concentration of relevant literature. These core journals constitute the nucleus of the research domain and are critical for any thorough literature review or bibliometric study. Among the journals frequently found in this core group are the Journal of Intellectual Capital, PLOS ONE, Applied Economics, Scientific Reports, and Economic Modelling. These figures indicate that these journals have published the most articles pertinent to the subject and thus serve as primary venues for scholarly communication in this area. Outside of this core zone, the number of articles per journal decreases significantly, leading to the 'periphery' of the distribution. This area encompasses a diverse array of journals, which, while potentially relevant, are often more specialized and diffuse in their coverage. The curve's long tail indicates that valuable contributions may still be present in non-core sources; however, the probability of encountering high-density thematic content diminishes markedly outside the core region. Applying Bradford's Law in this context fulfils multiple crucial functions. Firstly, it facilitates the identification of the most pertinent journals for researchers aiming to remain updated in their field or undertake systematic reviews. Secondly, it offers strategic guidance for authors in deciding where to submit their manuscripts for publication. Thirdly, it enhances the understanding of knowledge structures and dissemination patterns within the studied domain. The observed distribution affirms the validity of Bradford's Law in this research area, underscoring the idea that scholarly productivity is highly concentrated among a select number of

journals. Acknowledging and prioritizing these core sources significantly improves the efficiency and depth of academic inquiry.

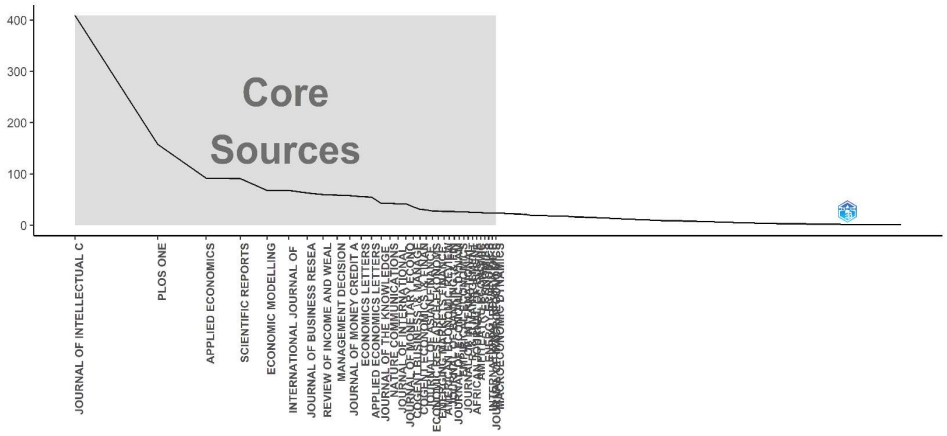

Figure 10: Bradfors's Law

Source: own proceeding

Conclusion

Over the past decade, the topic of inflation has re-emerged as a central focus within economic discourse, underscoring its complexity beyond merely being a price-related issue. Inflation now plays a significant role in influencing not only individual purchasing power but also corporate behavior and strategic decision-making processes across various sectors. Recent analyses presented in a multitude of academic studies, such as those conducted by Evers et al. (2020) and Kassouri (2024), suggest that inflation should be viewed as a multifaceted phenomenon, its impacts reverberating through various aspects of the economy. Its effects reach far beyond traditional monetary policy frameworks, affecting critical areas such as investment flows, the dynamics of the labour market, innovation trajectories, and overall productivity levels within economies. In the current economic landscape, characterised by persistent inflationary pressures, understanding the multifarious effects of inflation is crucial, especially regarding its influence on the allocation of resources towards intangible assets.

This study undertakes a comprehensive bibliometric investigation of the scholarly literature concerning two pivotal economic concepts: inflation and intellectual capital. Using bibliometric analysis as the methodological framework, the research seeks to map and uncover how these two areas are addressed and connected within the academic discourse. While both inflation and intellectual capital have attracted significant scholarly attention individually, their interrelationship remains vastly underexplored within the academic literature. This study offers a comprehensive literature review and the bibliometric connections of these two significant topics. With the help of fulfilling the research question, we provide a detailed bibliometric analysis.

In addressing the first research question, we conducted a thorough examination of the evolving trend in the publication of studies related to the connection between inflation and intellectual capital. Our findings indicate a significant increase in scholarly interest starting around the year 2020, coinciding with the global economic disruptions caused by the COVID-19 pandemic. This period marked a pivotal moment in which numerous firms began to reassess their operational frameworks, further leading to a heightened focus on understanding the implications of inflationary pressures on intellectual capital. Such a surge in research efforts underscores the critical need for organizations to navigate the complexities of economic shifts while leveraging their intangible assets to maintain competitive advantages. During that time, firms with a higher intangibles ratio managed to address macroeconomic problems more effectively than those that were entirely focused on tangible assets.

Reflecting on second research question, we explored which countries are the leaders in research and which cooperation networks and connections they have. The research findings underscore the significant disparity in publication outputs among countries, with the United States leading the way, followed by China and other prominent nations. The emphasis on intellectual capital and inflation research primarily within economically advanced and rapidly developing countries highlights the essential role of intangible assets in navigating macroeconomic issues. Moreover, the analysis of authorship reveals a tendency towards single-country publications, particularly in the United States, while also illustrating a noteworthy level of international collaboration, especially among European and Asian nations. This indicates a growing recognition of the importance of cross-border academic cooperation in enriching scholarship in the field. The international collaboration network further illustrates these dynamics, showcasing the United States as a pivotal hub in global research, facilitating connections that enhance knowledge sharing across various geographical regions. Overall, this study emphasises the vital role of research on intellectual capital and inflation in fostering global scholarly engagement and the collaborative spirit that underpins contemporary academic inquiry.

The factorial analysis and the keywords analysis (also mentioned as key-word network) fulfil the third research question. This study provides a comprehensive analysis of the intellectual structure surrounding the interplay between intellectual capital and inflation. The findings reveal three distinct yet interconnected research streams: the impact of intellectual capital on firm performance and innovation, the relationship between intellectual capital and financial economics — particularly in terms of investment and valuation —and the implications of macroeconomic factors, notably inflation and monetary policy, on financial decision-making. By integrating these themes, the study underscores the significance of intellectual capital as a critical determinant of competitive advantage and performance in varying economic contexts.

This multidimensional approach enhances our understanding of how intellectual capital not only drives firm-level outcomes but also interacts with broader economic dynamics.

Regarding the fourth research question, the thematic landscape of intellectual capital research delineates a nuanced interplay among various topics, revealing a vibrant field that is both solidly grounded in established concepts and responsive to emerging trends. The identification of motor themes highlights the core areas that drive the discourse, such as intangible assets and productivity, which are crucial for advancing the research agenda. Meanwhile, the basic themes, although foundational, indicate opportunities for further exploration and methodological innovation. The emerging or declining themes suggest areas where future research could either thrive or has begun to diminish, reflecting the dynamic nature of academic inquiry. Lastly, intermediate themes signify transitional topics that are gaining traction but have yet to achieve prominence. Collectively, these findings underscore the importance of continuously adapting research efforts to address evolving economic and policy aspects, ensuring that the discourse around intellectual capital remains relevant and impactful in today's rapidly changing environment.

In addressing the last fifth research question, the author and source distributions analyses reveal significant insights into academic publishing dynamics. The findings demonstrate that author productivity follows Lotka's Law, with a small percentage of authors producing the majority of publications. Specifically, over 75% of authors contribute only a single publication, indicating a stark power-law distribution in scholarly output. Conversely, the evaluation of journal contributions through Bradford's Law highlights that a limited number of journals are primarily responsible for the bulk of publications in a given research field. The identification of core journals is crucial for researchers, as these sources represent the nucleus of relevant literature. Overall, these results emphasize the concentration of both authorship and academic output, reinforcing the importance of strategic source selection for enhanced research effectiveness and knowledge dissemination.

By delving into the nexus between intellectual capital and inflation, this investigation presents substantial scholarly significance, alongside notable practical implications for businesses. In an era marked by chronic inflation coupled with rapid technological advancements, it becomes imperative for enterprises to grasp how they can strategically leverage their intangible assets—including knowledge, innovation, and human capital — to maintain competitiveness and enhance resilience in an unstable economic environment. Intellectual capital serves as a vital component in driving enhanced productivity and adaptability within organisations. It acts as a stabilising force amid economic turbulence, allowing firms that effectively cultivate and manage their intellectual resources to thrive. In parallel, inflation influences organisational investment strategies and resource allocation

decisions, thereby shaping the broader economic ecosystem necessary for fostering and developing intellectual capital. Thus, this exploration of the relationship between inflation and intellectual capital is essential from a macroeconomic perspective. It serves as a critical determinant of long-term economic growth and sustainable development, highlighting the need for both policymakers and business leaders to consider these dynamics in their strategic frameworks and operational strategies. Understanding how inflation interacts with intellectual capital unlocks pathways for resilient economic growth in an increasingly complex economic landscape.

Our research presents several notable limitations that warrant acknowledgement in the context of literature analysis. Firstly, the data lag issue poses a significant challenge. In our effort to maintain the most current information, we have chosen not to exclude data from the year 2025. This decision was made to enhance the relevance of our findings. However, while the foundational information is likely to remain stable, fluctuations in the number of publications could impact our conclusions drawn from this dataset. Secondly, there exists a coverage bias due to the inherent limitations of the databases utilised in our study. These databases do not provide uniform coverage across all languages, leading us to primarily emphasise English literature, the predominant language of scientific dissemination. Consequently, the data representing publications in less commonly represented languages may lack reliability, thereby limiting the overall comprehensiveness of our findings. These limitations highlight the necessity for caution when interpreting our results. Researchers should exercise restraint in drawing conclusions about the currency of the data and consider the language bias that is intrinsic to our database selection. In summary, it's crucial to approach our findings with an awareness of these limitations, which may influence the generalizability and applicability of our research outcomes.

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