

# Insurance, Resilience, and Sustainable Economic Growth: A Systematic Literature Review

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## Abstract

This review examines how insurance fosters resilience and supports sustainable economic growth, drawing on recent research. A bibliometric and systematic review of 185 peer-reviewed documents from Scopus was conducted. Most studies focus on economics, econometrics, and finance, with growing attention to the social and decision sciences, reflecting broader interdisciplinary efforts.

Four key themes emerge: (1) insurance market development and economic growth; (2) firm performance and governance; (3) climate risk and sustainability; and (4) data analytics and risk assessment. Geographically, research is predominantly from the US and India, with some from Europe, China, and Oceania; Africa and Latin America are under-represented.

Evidence indicates that insurance supports market stability, risk management, and economic recovery. However, gaps remain, including limited regional data, weak links to the Sustainable Development Goals, and limited understanding of microinsurance and long-term product performance in vulnerable regions. Behavioural, cultural, and institutional factors are also underexplored.

Future research should prioritise longitudinal studies in low-income, conflict-affected areas and use mixed methods more effectively better to understand adoption and tailor products to local needs.

**Keywords:** insurance, economic resilience, sustainable growth, climate risk, bibliometric analysis, systematic literature review

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## I. Introduction

As global risks rise, sustaining economic growth and resilience has become increasingly important. The insurance sector plays a key role as a financial stabiliser by protecting households, supporting businesses, and promoting investment and entrepreneurship. This underscores the close relationship between insurance development and economic growth.

The insurance–growth nexus is commonly explained by two theoretical perspectives. The supply-leading theory holds that the expansion of insurance markets drives economic development by mobilising savings and reducing risk. By contrast, the demand-following theory argues that insurance markets grow in response to rising economic complexity and the need for risk management. However, empirical evidence across countries remains mixed, and the nature of this relationship remains unresolved.

Most existing studies adopt narrow disciplinary approaches, limiting a comprehensive understanding of the field's evolution. In response, this review employs a systematic literature review, manual content analysis, and selected bibliometric techniques to synthesise decades of research. This integrated approach helps identify methodological trends and address gaps in prior studies.

Building on this framework, the study is guided by four research objectives:

RO1. To map the current state of knowledge on the relationship between insurance sector development and economic growth.

RO2. To analyse scholarly production patterns, including publication trends, citation networks, institutional contributions, geographic distribution, subject areas, and funding landscapes.

RO3. To critically evaluate the theoretical frameworks and methodological approaches employed in prior research.

RO4. To identify key research gaps and propose a forward-looking agenda for scholars, regulators, and industry practitioners.

The research questions follow a logical progression—from mapping the literature to synthesising findings and developing recommendations. By integrating evidence, this review makes three key contributions. First, it reframes the insurance–growth relationship through the lens of economic resilience and sustainable development, highlighting how risk-transfer mechanisms influence macroeconomic stability. In this context, resilience is conceptualised as the capacity of households, firms, and economies to anticipate, absorb, adapt to, and recover from adverse shocks. Operationally, resilience is measured by indicators such as the speed of economic recovery after crises, the ability to maintain consumption or investment levels during shocks, and the continued functioning of financial systems amid disruptions. This analytical lens emphasises long-term stability and adaptive capacity beyond short-term responses. Second, it synthesises methodological trends to guide future research design. Third, it proposes a research agenda by identifying underexplored areas, including insurance for underserved populations, interdisciplinary approaches, and the role of behavioural and regulatory factors.

Overall, the study aims to advance academic discourse and inform policy decisions to support sustainable and inclusive economic growth.

## **II. Literature Review**

The intellectual roots of the insurance–growth nexus lie in financial development theory. Patrick’s (1966) framework distinguished between supply-leading and demand-following causality, in which financial institutions either drive or follow economic growth. This distinction shapes insurance markets, with causality shifting across development stages, institutional quality, and sectors (Lee et al., 2022; Nasri et al., 2024). Empirical studies confirm this complexity: many find insurance positively linked to growth (Hemrit, 2022; Mohy Ul Din et al., 2017; Singh et al., 2025), while others report neutral or negative effects when governance is weak, markets are distorted, or financialisation is excessive (Peleckienė et al., 2019). These findings highlight how institutional quality, regulation, and financial maturity moderate these outcomes (Dutton et al., 2020).

At the firm level, insurers with adequate liquidity and scale are better placed to manage costs, diversify risk, and make effective investment decisions. This strengthens their capacity to support long-term investment and innovation. However, in fragmented markets with restrictive regulations or low awareness, limited insurance penetration constrains these benefits, reducing the sector’s broader contribution to economic growth.

Insurance—particularly life insurance—plays a significant role in strengthening economic resilience and development. According to the United Nations Conference on Trade and Development (UNCTAD), well-developed life insurance systems help protect household finances, ease pressure on public budgets, and mobilise long-term savings for investment. In addition, life insurance supports the development of credit markets, facilitates employer-sponsored benefits, and generates skilled employment, all of which contribute to stronger, more sustainable financial systems.

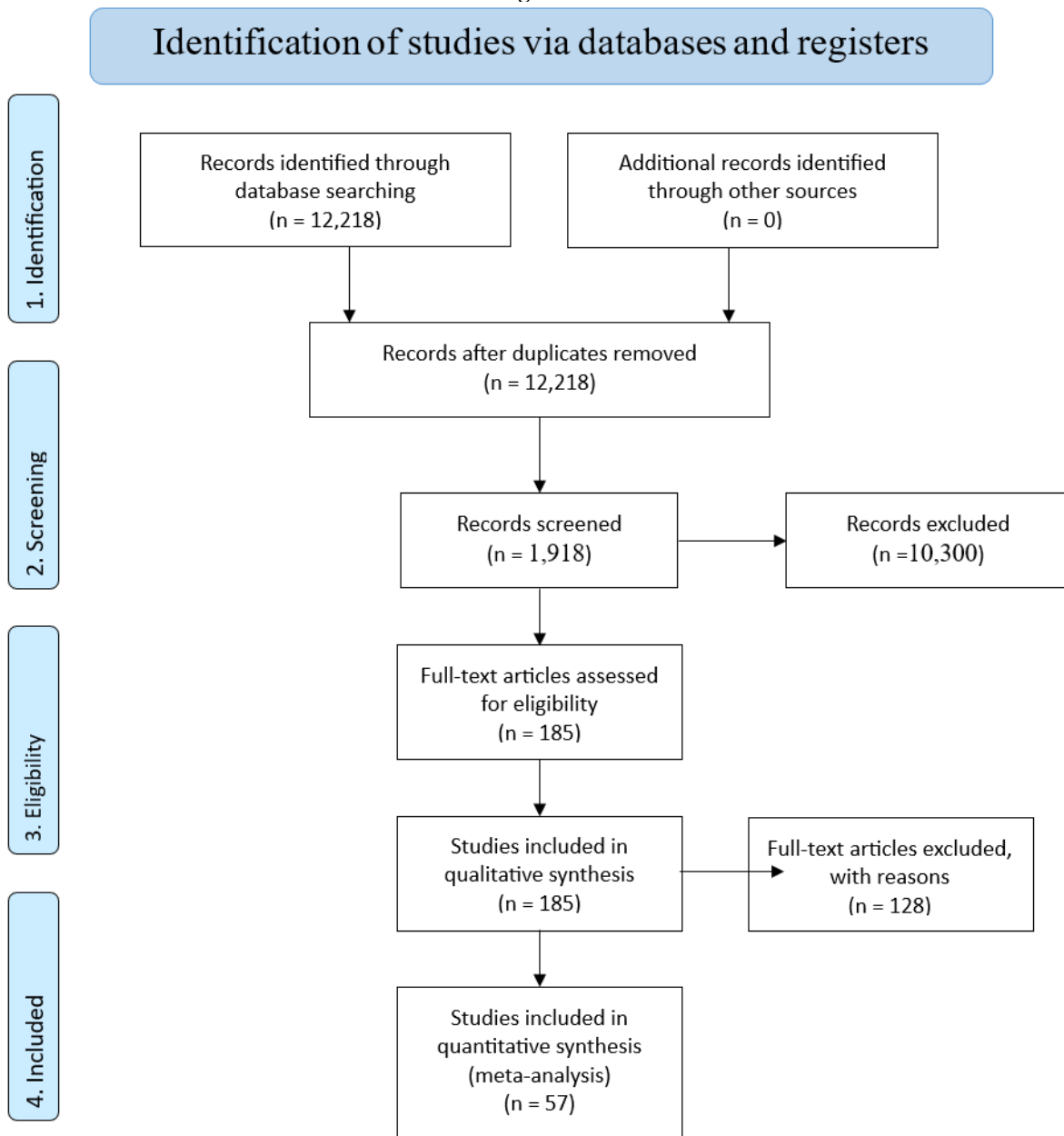
Despite these insights, the empirical research landscape remains somewhat constrained. Most studies rely on time-series or panel econometric methods, which, while rigorous, often overlook the evolution of themes and geographic diversity. Few reviews combine bibliometric mapping with qualitative content analysis, limiting the identification of emerging research areas and opportunities for collaboration. To address this gap, the present review adopts an integrative approach to capture both the quantitative footprint and the conceptual depth of the literature. By doing so, it not only synthesises existing knowledge but also provides a structured framework for tracking scholarly progress and identifying future research directions in insurance, resilience, and sustainable economic growth.

## **III. Research Methodology**

The study adopts a structured, transparent approach inspired by the PRISMA framework to ensure methodological rigour. It identifies and analyses 185 influential articles on insurance and economic growth published between January 1, 1977, and April 11, 2026. The Scopus database was selected for its broad coverage of peer-reviewed literature, strong indexing in the social sciences and economics, and robust citation analysis tools, providing a reliable foundation for the sample.

The search strategy used Boolean operators with key terms such as “insurance” and “economic growth” to maximise recall and precision. Only English-language, peer-reviewed journal articles were included to ensure consistency, while book chapters, conference papers, and working papers were excluded. Duplicates were removed through automated and manual screening. Titles and abstracts were initially reviewed to identify relevant empirical and theoretical studies on insurance–growth, resilience, and sustainability. Full texts were then assessed against the inclusion criteria, and reasons for exclusion were documented to maintain transparency. Figure 1 presents the PRISMA flow diagram outlining the systematic literature search and study selection process.

Figure 1



**PRISMA Flow Diagram: Systematic Literature Search and Selection Process (1977–2026)**

Note. This flow diagram follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The initial search was conducted in the Scopus database using the Boolean query "Insurance" AND "growth" across titles, abstracts, and keywords. Screening and eligibility criteria were applied sequentially: (a) document type restricted to peer-reviewed journal articles; (b) subject areas limited to Economics, Econometrics and Finance; Business, Management and Accounting; and related social sciences; (c) language restricted to English; (d) thematic relevance requiring an explicit examination of insurance development and economic growth, resilience, or sustainability outcomes. The final sample of 185 articles comprises the most-cited and methodologically rigorous contributions to the field published between January 1, 1977, and April 11, 2026. Citation counts reflect cumulative references indexed in Scopus as of the search date.

**Table 1**

*General Metrics: Search Results and Sample Selection by Category (1977–2026)*

Category	Count
Initial search results: "Insurance" AND "growth"	12,218
Subject area: Economics, Econometrics and Finance	2,640
Subject area: Business, Management and Accounting	1,918
Document type: Article	1,918

Publication stage: Final	1,918
Keyword refinement: "Economic growth"	373
Keyword refinement: "Insurance"	194
Source type: Journal	190
Language: English	185
Final analytical sample	185
Total citations (final sample)	3,692

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*Note.* Data were extracted from the Scopus database (search conducted on April 11, 2026). The initial search combined the terms "Insurance" AND "growth" across titles, abstracts, and keywords. Subsequent filters were applied in sequence: subject area (Economics, Econometrics and Finance; Business, Management and Accounting), document type (peer-reviewed articles only), publication stage (final published versions), keyword refinement, source type (journals only), and language (English). The final analytical sample comprises 185 articles, representing the most-cited and thematically relevant publications on the insurance–growth nexus published between January 1, 1977, and April 11, 2026. Total citations reflect the cumulative references to the final sample as indexed in Scopus.

Table 1 summarises the bibliometric filtering process used to derive the analytical sample. From an initial pool of 12,218 records, the systematic application of subject, document, language, and relevance criteria yielded a final sample of 185 peer-reviewed journal articles. These publications have collectively garnered 3,692 citations, indicating substantial scholarly engagement with the insurance–growth literature. The progressive refinement underscores the importance of targeted search strategies in systematic reviews to ensure thematic precision, methodological consistency, and citation comparability across the selected corpus.

The final dataset comprises 185 articles selected for citation impact, methodological rigour, and thematic relevance. Citation counts were normalised by publication year to enable fair comparison. Bibliometric indicators—including citations, authorship, affiliations, countries, and journal impact—were analysed using VOSviewer and Scopus tools. This approach captures the intellectual structure, research evolution, and emerging trends in insurance, resilience, and sustainable economic growth, while ensuring transparency and replicability for future research.

#### **IV. Findings And Discussions**

Guided by a PRISMA-informed screening process and drawing on a final analytical sample of 185 peer-reviewed articles, this section synthesises the intellectual landscape, methodological evolution, and thematic trajectories of research on the insurance–growth nexus.

##### **Current State of Knowledge on the Insurance–Growth Nexus (RO1)**

This finding maps the substantive knowledge base on the relationship between insurance sector development and economic growth. The insurance sector is a critical engine of macroeconomic development, with both life and non-life insurance contributing to long-term economic growth.

Empirical evidence consistently indicates that life insurance has a stronger growth-enhancing effect than non-life insurance, largely because of its role in mobilising long-term savings, deepening capital markets, and stabilising household financial security (Drissi & Alsuhaibani, 2024; Senol et al., 2020). However, this growth trajectory is highly sensitive to broader economic and institutional conditions. During economic crises, insurers typically face a dual shock: depressed investment returns coincide with surging claim payouts, constraining capital accumulation and slowing sectoral expansion (Njegomir et al., 2010). Similarly, heightened economic policy uncertainty has been shown to suppress insurance demand, creating structural headwinds for market growth (Hemrit, 2022; Sayedi, 2024). Geopolitical disruptions further test the sector’s resilience; for instance, insurers exposed to active conflicts, such as the Russia–Ukraine war, report significantly higher losses, underscoring how systemic shocks can disrupt pricing models and impede sustainable growth (Martins et al., 2024). Even institutional factors, such as political scandals, ripple through the market, driving up premiums for Directors’ and Officers’ (D&O) liability insurance as firms price in heightened governance and litigation risks (Rensi & Carvalho, 2021).

Larger firms with robust liquidity consistently outperform, benefiting from economies of scale, diversified risk pools, and greater capacity to absorb macroeconomic shocks (Killins, 2020; Tsvetkova, 2021). Paradoxically, while large incumbents dominate profitability, smaller insurers often grow faster, highlighting a dynamic market in which agility and niche specialisation can offset scale disadvantages (Adams et al., 2014). Productivity also varies significantly across jurisdictions, with markets such as the United States and Germany achieving higher efficiency than Japan, reflecting differences in regulatory environments, technological adoption, and competitive intensity (Weiss, 1991). Corporate governance further shapes growth trajectories: studies show that an optimal balance of executive authority, reinforced by strong oversight mechanisms, significantly enhances firm productivity and organisational performance (Abdoush et al., 2022; Bahloul et al., 2013). Strategic

consolidation through mergers and acquisitions, however, yields mixed evidence on value creation, suggesting that growth through M&A requires careful integration, cultural alignment, and clear synergistic objectives to translate into sustained performance gains (Ceita et al., 2025).

Sustainable sector growth increasingly depends on expanding market penetration, leveraging digital innovation, and adapting to evolving consumer behaviours. Rapid adoption of digital technologies is a primary catalyst for premium growth, operational efficiency, and customer acquisition (Nath & Liu, 2017; Sharma & M, 2025). Product innovation and portfolio diversification further strengthen insurers' performance by addressing emerging risk profiles and reducing concentration risk (Krivokapic et al., 2017). Conversely, growth remains constrained in markets characterised by inefficient distribution channels, limited product offerings, and low consumer awareness, all of which suppress insurance penetration (Alshammari et al., 2018). Foreign direct investment (FDI) has proven instrumental in bridging these gaps by introducing capital, actuarial expertise, and competitive practices that stimulate market development and consumer trust (Alshammari et al., 2018). Regulatory frameworks also play a pivotal role: while well-calibrated policies foster healthy competition and consumer protection (Gron, 1995), fragmented or overly restrictive regulations can stifle innovation and limit cross-border expansion.

Beyond traditional coverage, specialised insurance products are increasingly vital to sectoral expansion and broader socioeconomic stability. Demographic shifts, particularly population ageing, have driven sustained demand for long-term care facilities, fuelling structural growth in long-term care insurance and related financial products (Siciliani, 2013). In the agricultural sector, crop insurance is a cornerstone of rural economic resilience. When delivered through Public–Private Partnerships (PPPs), it mitigates production risks, stabilises farmers' incomes, and complements access to credit, thereby supporting long-term agricultural viability (Jablonski et al., 2022). Meanwhile, emerging risk categories present both growth opportunities and structural bottlenecks. The cyber insurance market, for example, struggles with limited historical loss data and evolving regulatory constraints, underscoring the need for standardised risk modelling and policy frameworks to unlock its full commercial potential (Markopoulou, 2021).

### Scholarly Production Patterns and Bibliometric Trends (RO2)

This finding analyses the structural characteristics of scholarly output across publication, citation, institutional, geographic, disciplinary, and funding dimensions. This section presents a systematic overview and classification of the literature on the relationship between insurance development and economic growth. The analysis begins by examining the topic's overall research performance, including publication trends over time, influential contributors, and key bibliographic sources in the field. The dataset used for this review comprises 185 scholarly articles published between 1977 and April 2026. The earliest contribution identified in the dataset is the article "Insurance Exposure and Investment Risks: Management and Regulatory Implications" by J. P. Matthews and H. E. Thompson, published in *Omega* in 1977. This early study laid the foundation for research into the financial and regulatory aspects of insurance and risk management. Since then, the literature has expanded considerably, reflecting growing academic and policy interest in how insurance markets contribute to broader financial development and economic growth.

**Figure 2**  
*Annual Publication Trend on the Insurance–Growth Nexus (1977–2026)*



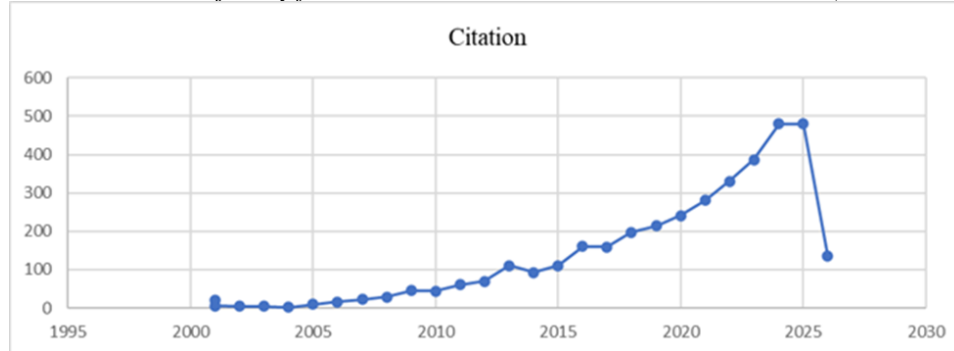
*Note.* This figure illustrates the temporal distribution of the 185 peer-reviewed journal articles in the analytical sample. Data were extracted from the Scopus database (search conducted on April 11, 2026). Publication output remained low and sporadic from 1977 through the mid-2000s, with fewer than 5 articles per year. A marked inflexion point occurred around 2008–2010, coinciding with the global financial crisis, after which publication volume grew steadily, peaking in 2023–2024. This trajectory indicates accelerating scholarly interest in examining insurance development as a determinant of economic growth, financial resilience, and sustainable development outcomes.

Figure 2 illustrates the annual publication trend in research on the insurance–growth nexus. The scholarly discourse on this topic began in 1977; however, publication output remained relatively low and sporadic through the mid-2000s. A notable inflexion point occurred around 2007–2009, coinciding with the global financial crisis, which heightened academic and policy interest in understanding insurance's role in economic stability and resilience. This crisis appears to have served as a catalyst, prompting researchers to examine more rigorously how insurance development influences growth trajectories, risk absorption, and recovery dynamics.

After 2010, publication volume increased significantly, driven by greater data availability, improved methods, heightened awareness of systemic risks, and policy focus on climate, finance, and sustainable development. This pattern indicates that research on insurance and growth adapts to economic shocks and emerging priorities.

**Figure 3**

*Annual Citation Trajectory for Publications on the Insurance–Growth Nexus (1977–2026)*



*Note.* This figure shows annual citation counts for 185 articles on the insurance–growth nexus, extracted from Scopus on 11 April 2026. Citations reflect the total number of references received up to the search date. Citations were minimal before 2000, then gradually increased, with a sharp rise around 2008–2010 amid a growing focus on financial resilience post-crisis. Peak citation counts occurred in 2024 (486) and 2025 (483), despite incomplete citation windows. The growth indicates rising scholarly interest, policy relevance, and recognition of insurance's role in economic resilience and sustainable growth. The 185 articles have 3,692 citations.

Figure 3 shows the annual citation trajectory for publications on the insurance–growth nexus. The data reveal a consistent upward trend in scholarly engagement, with cumulative citations rising steadily over time. Notably, the most recent years—2024 and 2025—record the highest citation volumes, each exceeding 480 citations despite incomplete publication windows. This pattern signals accelerating academic interest and growing recognition of insurance development as a critical determinant of economic resilience, financial stability, and sustainable growth. The heightened citation activity in recent years likely reflects both the topic's increasing policy relevance amid global uncertainties and the maturation of empirical methodologies that enable more robust causal inference.

**Table 2**

*Annual Citation Counts for Publications on the Insurance–Growth Nexus (1977–2026)*

Period	Citations Received	Percentage of Total
Through 2020	148	4.00%
2021	281	7.60%
2022	331	9.00%
2023	387	10.50%
2024	480	13.00%
2025	480	13.00%
2026	135	3.70%
Total	3,692	100.00%

*Note.* Data were extracted from the Scopus database (search conducted on April 11, 2026). Citations represent the total number of references for an 185-article sample on insurance development and economic factors. Percentages are period citations divided by 3,692 total citations; sums may not total 100% due to rounding. 2026 data are partial (Jan 1–April 11). The rise in citations from 2021 indicates growing scholarly interest and policy focus on insurance, resilience, climate risk, and sustainable development.

Yearly citations were 281 in 2021, 331 in 2022, and 387 in 2023. The numbers peaked at 480 in both 2024 and 2025, and at 135 by April 2026. Altogether, the subtotal for the period 2001–2026 is 3,692 document citations.

**Table 3**

*Top 10 Most Cited Publications in the Analytical Sample: Annual Citation Trajectory (2001–2026)*

Year	Title	2001–2020	2021	2022	2023	2024	2025	2026	Total
2021	Risk management and corporate social responsibility	0	4	15	24	46	39	18	146
2017	Information and communications technology (ICT) and services trade	23	14	20	20	26	21	7	131
2021	Application of machine learning and data visualisation techniques for decision support in the insurance sector	0	6	25	26	41	22	6	126
2023	Transformational insurance and green credit incentive policies as financial mechanisms for green energy transitions and low-carbon economic development	0	0	0	0	25	30	4	59
2018	Business failure, efficiency, and volatility: Evidence from the European insurance industry	11	5	14	6	12	9	0	57
2021	The Climate Risk Premium: How Uncertainty Affects the Social Cost of Carbon	0	3	8	9	12	14	10	56
2020	Firm-specific, industry-specific and macroeconomic factors of life insurers' profitability: Evidence from Canada	0	9	3	10	10	10	1	43
2017	Insurance effect on economic growth – among economies in various phases of development	18	5	2	8	2	7	1	43
2019	The relationship between insurance and economic growth: evidence from the European Union countries	6	9	8	4	7	5	1	40
2022	An extensive study on Internet of Behaviour (IoB) enabled Healthcare-Systems: Features, facilitators, and challenges	0	0	0	6	5	15	2	28

*Note.* Data were extracted from the Scopus database (search conducted on April 11, 2026). The table presents the 10 most-cited articles in the 185-article analytical sample examining the insurance–growth nexus, ranked by total citations. Citation counts reflect references received annually, aggregated as follows: 2001–2020 (pre-2021), then annual counts for 2021–2026. 2026 data are partial-year (January 1–April 11). Titles are abbreviated; full details are in the references. The concentration of impactful publications from 2017, with accelerated growth after 2021, reflects increased interest in digital transformation, climate risk, and resilience insurance amid global uncertainties.

Table 3 highlights the citation dynamics of the most influential contributions to the insurance–growth literature. Several patterns emerge: first, recent publications (2021–2023) accumulate citations rapidly, underscoring the strong contemporary relevance of topics such as machine learning applications, climate risk pricing, and green finance mechanisms. Second, seminal works on ICT and insurance sector efficiency (published 2017–2018) maintain sustained citation momentum, indicating enduring theoretical and methodological influence. Third, the steep citation growth observed for articles published during or after the pandemic period (2020–2023) underscores the field's responsiveness to emerging global challenges, including digital transformation, climate adaptation, and systemic risk governance. Collectively, these trajectories affirm that research at the intersection of insurance innovation, sustainability, and economic resilience is gaining increasing scholarly traction and policy salience.

**Figure 4**

*VOSviewer Network Visualisation Map of Most Cited Authors in the Insurance–Growth Nexus Literature (1977–2026)*



**Table 4**

*Top 22 Publication Sources by Document Count in the Insurance–Growth Nexus Literature (1977–2026)*

Rank	Source	Documents
1	<i>The Geneva Papers on Risk and Insurance Issues and Practice</i>	8
2	<i>European Journal of Health Economics</i>	5
2	<i>Journal of Risk Finance</i>	5
4	<i>Cogent Economics and Finance</i>	4
4	<i>Economic Annals</i>	4
4	<i>Journal of Cleaner Production</i>	4
7	<i>Business History</i>	3
7	<i>Insurance Markets and Companies</i>	3
7	<i>International Journal of the Economics of Business</i>	3
7	<i>Journal of Banking and Finance</i>	3
7	<i>Journal of Environmental Economics and Management</i>	3
12	<i>Economic Research-Ekonomska Istraživanja</i>	2
12	<i>Economics Letters</i>	2
12	<i>International Journal of Economics and Financial Issues</i>	2
12	<i>International Journal of Recent Technology and Engineering</i>	2
12	<i>Investment Management and Financial Innovations</i>	2
12	<i>ISRA International Journal of Islamic Finance</i>	2
12	<i>Journal of Financial Economic Policy</i>	2
12	<i>Journal of Risk and Uncertainty</i>	2
12	<i>Montenegrin Journal of Economics</i>	2
12	<i>Omega</i>	2
12	<i>Transformations in Business and Economics</i>	2

*Note.* Data from Scopus (searched on April 11, 2026). The table lists the 22 most productive journals in the 185-article sample on insurance development and economic growth, resilience, or sustainable development. Document counts rank the journals; subsequent ranks are adjusted to break ties. Source titles follow Scopus and are italicised per APA 7th. The sample includes only peer-reviewed, English-language articles published between January 1, 1977, and April 11, 2026.

Table 4 summarises the distribution of publications across the most productive journals in the analytical sample. The Geneva Papers on Risk and Insurance Issues and Practice emerged as the leading venue, contributing 8 articles, underscoring its established role as a premier interdisciplinary forum for insurance scholarship. Two journals—European Journal of Health Economics and Journal of Risk Finance—each contributed 5 articles. Three additional sources (Cogent Economics and Finance, Economic Annals, and Journal of Cleaner Production) each published 4 articles. The prominence of journals focused on risk management, health economics, sustainability, and financial policy underscores the multidisciplinary orientation of contemporary insurance–growth research. Notably, outlets such as the Journal of Cleaner Production and the Journal of Environmental Economics and Management signal the growing scholarly integration of insurance topics with climate adaptation, green finance, and sustainable development agendas. The long tail of sources contributing 2–3 articles each indicates a moderately fragmented publication landscape, with no single journal dominating the field, thereby encouraging diverse methodological and theoretical perspectives.

**Table 5**

*Top 16 Most Prolific Authors by Document Count in the Insurance–Growth Nexus Literature (1977–2026)*

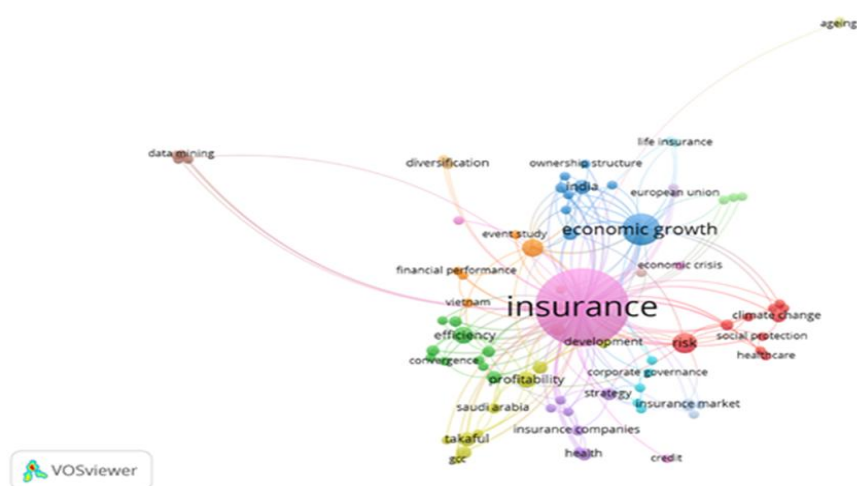
Rank	Author	Documents
1	<i>Adams, M.</i>	5
2	<i>Alhassan, A. L.</i>	3
2	<i>Ghosh, A.</i>	3
2	<i>Hemrit, W.</i>	3
2	<i>Kaushal, S.</i>	3
2	<i>Tsvetkova, L.</i>	3
7	<i>Alshammari, A. A.</i>	2
7	<i>Andersson, L. F.</i>	2
7	<i>Buckle, M.</i>	2
7	<i>Kelly, D. L.</i>	2
7	<i>Lindmark, M.</i>	2
7	<i>Nasri, I.</i>	2
7	<i>Njegomir, V.</i>	2
7	<i>Pons-Pons, J.</i>	2
7	<i>Saiti, B.</i>	2
7	<i>Vilar-Rodríguez, M.</i>	2

*Note.* Data from Scopus (searched on April 11, 2026). The table lists the 16 most productive authors in a 185-article sample analysing insurance development, economic growth, resilience, or sustainable development. Document counts rank authors; ties are broken by subsequent ranks, which are adjusted. Names follow Scopus

and APA 7th edition. The sample includes only peer-reviewed English articles published from January 1, 1977, to April 11, 2026.

Table 5 summarises authorship productivity patterns in the analytical sample. Adams, M., was the most prolific contributor, with 5 publications, reflecting sustained scholarly engagement with insurance-sector dynamics, firm-level efficiency, and growth linkages. Six authors—Alhassan, A. L., Ghosh, A., Hemrit, W., Kaushal, S., and Tsvetkova, L.—each contributed 3 articles, while an additional 10 scholars each produced 2 publications. The moderate concentration of output among a small cohort of authors, coupled with a long tail of single-publication contributors, suggests a field characterised by both established research programmes and emerging scholarly voices. Notably, the geographic and institutional diversity among top authors—spanning emerging and advanced economies—indicates growing global participation in insurance–growth research. However, further efforts to amplify contributions from underrepresented regions, particularly low-income and conflict-affected settings, remain warranted.

**Figure 5**  
*Network Visualisation of Keyword Co-occurrences Related to Insurance*



*Note.* The map shows a keyword co-occurrence network. Node size indicates frequency; proximity shows relationship strength. Colours identify themes. Created with VOSviewer.

The figure presents a bibliometric network map visualising relationships among keywords related to the central topic of "insurance." The largest node, labelled "insurance" (in pink), serves as the network's central hub. Surrounding this central node are several distinct clusters of keywords, colour-coded to represent different research themes:

1. Economic and Macro-Financial Cluster (Blue): Located in the upper centre, this cluster is anchored by economic growth. It includes related terms such as India, the European Union, life insurance, and ownership structure, indicating a focus on the macroeconomic impact of insurance and on regional studies.
2. Risk and Social Protection Cluster (Red): Situated on the right, this cluster focuses on external threats and social safety nets. Key terms include risk, climate change, social protection, healthcare, and economic crisis.
3. Performance and Regional Markets Cluster (Green/Yellow): Located in the bottom left, this cluster highlights financial metrics and specific geographic markets. It covers efficiency, profitability, convergence, Vietnam, Saudi Arabia, Takaful (Islamic insurance), and the GCC (Gulf Cooperation Council).
4. Corporate Governance and Strategy Cluster (Purple): Located at the bottom centre, this cluster focuses on the internal management of firms. Terms include corporate governance, strategy, insurance companies, health, and credit.
5. Methodology and Financial Analysis Cluster (Orange/Pink): In the upper-left quadrant, terms such as data mining, diversification, event study, and financial performance appear, indicating the methodological approaches used in the literature.
6. Additionally, peripheral nodes such as ageing (top right) and data mining (far left) connect to the broader network, highlighting emerging or specialised topics within the field.

**Table 6**  
*Top Contributing Affiliations by Document Count*

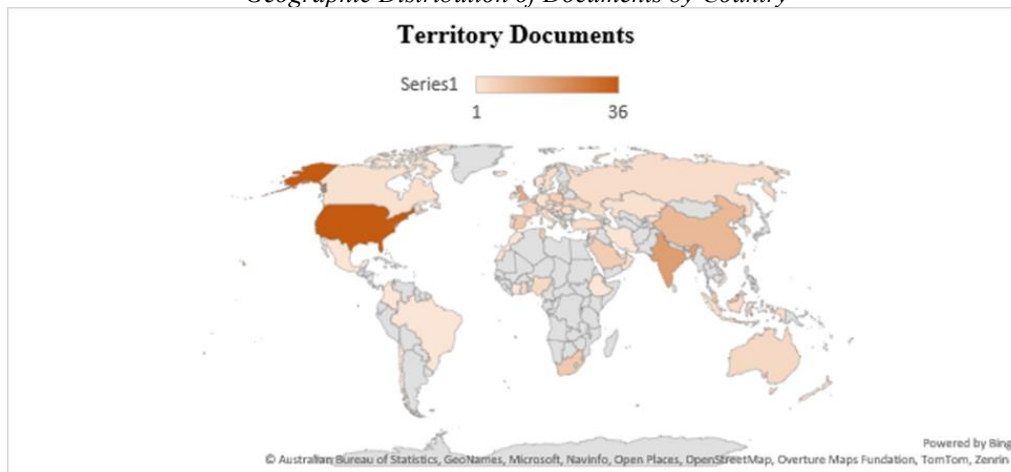
S. No	Affiliation	Documents
1	National Bureau of Economic Research	4
2	Wharton School of the University of Pennsylvania	4
3	Swansea University	3
4	Imam Mohammad Ibn Saud Islamic University	3
5	University of Pennsylvania	3
6	University of Ghana	3
7	Moscow State Institute of International Relations (MGIMO)	3
8	Université de Sousse	3
9	Amity University	3
10	National Institute of Technology, Durgapur	3
11	University of Cape Town	2
12	Yale University	2
13	Vrije Universiteit Amsterdam	2
14	University of Piraeus	2
15	Università degli Studi di Torino	2
16	École Polytechnique	2
17	University of the Witwatersrand, Johannesburg	2
18	Sumy State University	2
19	International Islamic University Malaysia	2
20	Monash University	2
21	University of California, Santa Barbara	2
22	University of Miami	2
23	University of Évora	2
24	Bournemouth University	2
25	Columbia University	2
26	University of Bath	2
27	Umeå Universitet	2
28	Politechnika Rzeszowska im. Ignacego Łukasiewicza	2
29	Financial University under the Government of the Russian Federation	2
30	Universidad de Sevilla	2
31	Université de Tunis	2
32	University of Novi Sad	2
33	Institut Supérieur de Gestion de Tunis	2
34	İstanbul Sabahattin Zaim University	2
35	Sunway University	2
36	UCLA Anderson School of Management	2
37	International Islamic University Malaysia, Institute of Islamic Banking and Finance	2
38	Birla Institute of Management Technology, Greater Noida	2
39	University of Cape Town Graduate School of Business	2
40	University of Ghana Business School	2

*Note. The data show the number of documents associated with each institutional affiliation in the bibliometric dataset. Only affiliations with  $\geq 2$  documents are shown ( $N = 40$  institutions), and the dataset was generated using VOSviewer bibliometric analysis.*

Table 6 lists the top institutional affiliations contributing to the analysed literature, ranked by document frequency. The National Bureau of Economic Research (United States) and the Wharton School of the University of Pennsylvania (United States) were the most prolific contributors, each with four documents. Eight institutions contributed three documents each, namely Swansea University (United Kingdom), Imam Mohammad Ibn Saud Islamic University (Saudi Arabia), University of Pennsylvania (United States), University of Ghana (Ghana), Moscow State Institute of International Relations (Russia), Université de Sousse (Tunisia), Amity University (India), and the National Institute of Technology, Durgapur (India).

The remaining 30 listed affiliations each contributed two documents, representing a geographically diverse set of institutions across North America, Europe, Africa, Asia, and Oceania. Notable examples include Yale University and Columbia University (United States), Vrije Universiteit Amsterdam (Netherlands), University of Cape Town (South Africa), Monash University (Australia), and International Islamic University Malaysia (Malaysia). This distribution suggests broad international engagement with the research topic, with no single institution dominating the output and a notable presence of both Western and Global South academic centres.

**Figure 6**  
*Geographic Distribution of Documents by Country*



*Note.* The map shows the geographic distribution of documents, with colour intensity indicating publication volume by country. The scale ranges from 1 document (lightest) to 36 (darkest). The U.S. has the highest concentration. The map was created using Bing Maps data.

The United States leads with 36 documents, followed by India with 19, the United Kingdom with 15, and China with 12. Malaysia contributed 9 documents, while South Africa and Spain each produced 8. Saudi Arabia added 7, and Poland and Taiwan each contributed 6. France, Tunisia, and Ukraine each accounted for 5 documents.

**Table 7**  
*Distribution of Documents by Subject Area*

S. No	Subject Area	Documents
1	Economics, Econometrics and Finance	135
2	Business, Management and Accounting	105
3	Social Sciences	34
4	Decision Sciences	16

*Note.* Data represent the number of documents classified within each subject area in the bibliometric dataset (N = 290 documents). Categories follow the Scopus subject classification schema. Generated using VOSviewer for bibliometric analysis.

The largest share of documents comes from Economics, Econometrics and Finance with 135, followed by Business, Management and Accounting with 105. Social Sciences contributed 34 documents, while Decision Sciences accounted for 16.

**Table 8**  
*Funding Sponsors Associated with Analysed Documents*

S. No	Funding Sponsor	Documents
1	European Commission	2
2	European Regional Development Fund	2
3	Fundamental Research Funds for the Central Universities	2
4	Ministerio de Economía y Competitividad	2
5	Ministry of Education of the People's Republic of China	2
6	National Office for Philosophy and Social Sciences	2
7	National Science Foundation	2
8	World Bank Group	2
9	American Economic Association	1

*Note.* Data represent the number of documents acknowledging support from each funding sponsor in the bibliometric dataset (N = 17 document-sponsor associations). Multiple sponsors may be associated with a single

document. Categories follow the Scopus funding data schema. Data were generated using VOSviewer for bibliometric analysis.

Table 8 summarises the funding sponsors acknowledged in the analysed literature. Eight sponsors were each associated with two documents, indicating a relatively even distribution of institutional support across the dataset. These include supranational bodies (European Commission; European Regional Development Fund), national government agencies from China (Fundamental Research Funds for the Central Universities; Ministry of Education of the People's Republic of China; National Office for Philosophy and Social Sciences), Spain (Ministerio de Economía y Competitividad), and the United States (National Science Foundation), as well as an international financial institution (World Bank Group). The American Economic Association was the only sponsor associated with a single document.

The geographic diversity of funders—spanning Europe, Asia, and North America—suggests that a broad range of public and international institutions support research on this topic. The prominence of government-funded agencies and multilateral organisations indicates that the topic aligns with policy-relevant priorities in economics, finance, and development. Notably, the relatively low frequency of funding acknowledgements overall may reflect either limited reporting of funding sources in the indexed publications or a research area that frequently draws on unfunded or internally supported scholarly work.

### **Theoretical Frameworks and Methodological Approaches (RO3)**

This finding critically evaluates the conceptual and analytical tools used across the literature. The theoretical landscape is structured around dominant paradigms, with Patrick's (1966) supply-leading and demand-following framework remaining the most widely used.

A review of 57 studies reveals a diverse yet fragmented methodological landscape in research on insurance, resilience, and sustainable economic growth. The field draws on various theories—from classical financial development to behavioural and institutional frameworks—but their use varies across regions and questions. Econometric modelling, especially panel data and causality tests, dominates empirical work, indicating a focus on hypothesis testing and policy. This quantitative focus sometimes limits theoretical depth, nuance, and methodological variety. Below, we assess key theories and methods used, highlighting their contributions and limitations for understanding the insurance–growth relationship with resilience in mind.

Grounded in Patrick's seminal work, Financial Development Theory remains foundational, employing econometric techniques such as VAR/VECM, Granger causality, and ARDL/NARDL models to test relationships between insurance expansion and economic growth. Studies by Si et al. (2018), Kaushal and Ghosh (2017), Drissi and Alsuhaibani (2024), Senol et al. (2020), and Mohy Ul Din et al. (2017) use these methods to establish causality, enable cross-country comparisons, and inform policy recommendations for financial sector reform. However, this approach often assumes linearity and stationarity, overlooks institutional differences, and struggles with nonlinear resilience dynamics. Nonetheless, it remains relevant to sustainable growth, guiding how insurance development influences or responds to economic expansion, a crucial factor for policy in emerging economies. Complementing this, Efficiency & Productivity Theory uses Data Envelopment Analysis (DEA), translog cost functions, Divisia indices, and panel regression to measure operational performance and relate firm efficiency to economic outcomes. Works by Hao (1991), Weiss (1991), Nguyen and Lam (2025), Tsvetkova (2021), and Killins (2020) identify best practices and show how insurer efficiency scales with macroeconomic performance.

At the organisational and microeconomic levels, Corporate Governance & Agency Theory utilises cost function estimation, TFP decomposition, lifecycle analysis, and regression to link executive incentives to firm productivity and clarify how governance structures mediate risk-taking. Studies by Abdoush et al. (2022), Bahloul et al. (2013), and Cole and Eastman demonstrate the framework's utility for M&A evaluation and strategic decision-making. However, its firm-level focus may obscure systemic implications, endogeneity concerns persist in power–performance linkages, and ESG or sustainability metrics remain under-integrated, yielding only moderate relevance to macro-resilience without stronger linkages to long-term value creation. Similarly, Behavioural & Consumer Decision Theory applies Structural Equation Modelling (SEM), conjoint analysis, multinomial logit, and survey regression to explain adoption gaps and demand-side constraints. Works by Haque and Sultan (2019), Usman et al., Noordewier et al., and González-Nuñez et al. rigorously capture the roles of awareness, trust, and social influence at the micro level.

Looking towards emerging frontiers, Innovation & Digital Transformation Theory draws on bibliometric and trend analyses, case studies, and machine learning to assess the impact of InsurTech, AI, and big data on sectoral growth and productivity. Represented by Didenko and Sidelnik, Sharma and M (2025), Rawat et al., and Klapkiv and Kedra, this forward-looking literature highlights how digitalisation reshapes risk assessment, distribution, and claims processing. However, it remains largely descriptive or exploratory, with limited causal evidence on innovation–growth linkages and underdeveloped theoretical grounding. It is highly relevant, given digitalisation's role as a key lever for scalable, resilient insurance solutions. Finally, Sustainability & Systems Resilience Theory explicitly links insurance to the SDGs, climate adaptation, and the circular economy,

emphasising long-term systemic stability over short-term profitability through interdisciplinary methods such as case studies, policy analysis, generational accounting, and integrated assessment.

#### **Research Gaps and Forward-Looking Agenda (RO4)**

Building on the systematic synthesis of 57 studies, this section identifies critical knowledge gaps that constrain a comprehensive understanding of how insurance development contributes to resilience and sustainable economic growth. Rather than merely cataloguing limitations, this analysis seeks to illuminate pathways for future research to advance theoretical clarity, methodological rigour, and practical relevance. The gaps are organised thematically—spanning conceptual, methodological, contextual, and emerging risk dimensions—and are followed by a structured, stakeholder-oriented research agenda to guide scholars, regulators, and industry practitioners towards more impactful inquiry.

A first cluster of gaps concerns conceptual and theoretical foundations. Despite the growing prominence of "resilience" in policy and academic discourse, the construct remains under-theorised in insurance-growth research. Few studies explicitly define, operationalise, or measure resilience as a distinct outcome, often conflating it with stability, risk mitigation, or short-term GDP growth. This conceptual ambiguity limits the field's capacity to assess whether insurance truly enhances adaptive capacity, recovery speed, or transformative potential in the face of systemic shocks. Similarly, Patrick's (1966) seminal supply-leading/demand-following framework, while foundational, is often applied in a static, binary manner that overlooks nonlinear dynamics, threshold effects, or context-dependent reversals of causality.

Moreover, although sustainability paradigms such as the SDGs, climate adaptation, and circular economy principles are increasingly cited, they remain peripheral to core theoretical models. Insurance is rarely framed as a mechanism for just transition or planetary boundary management, limiting its potential to contribute to transformative rather than incremental development. Methodologically, the field exhibits several persistent limitations. First, there is an over-reliance on aggregate macro-indicators, such as national insurance penetration or premium density, as proxies for "insurance development." This approach obscures critical heterogeneity across product lines (e.g., life versus non-life, microinsurance versus corporate coverage), distribution channels, and consumer segments, thereby masking differential growth impacts and resilience contributions. Second, although econometric techniques such as VAR, ARDL, and panel regression dominate empirical investigations, few studies employ robust causal identification strategies, such as instrumental variables, natural experiments, or quasi-experimental designs, to address endogeneity, reverse causality, or omitted-variable bias. This weakens confidence in policy recommendations derived from correlational findings.

Third, there is a scarcity of mixed-methods and process-oriented research. The dominance of quantitative econometrics has come at the expense of qualitative insights that could unpack how insurance mechanisms translate into resilience outcomes through behavioural, institutional, or contextual mediators. To address this gap, future research should incorporate specific qualitative and mixed-methods approaches, such as in-depth case studies of insurance interventions across diverse settings, semi-structured interviews with stakeholders to capture lived experiences and local practices, and process tracing to examine how policy or organisational changes affect resilience at different levels. Comparative field studies and participant observation could also add valuable nuance by revealing cultural and institutional factors that shape insurance adoption and effectiveness. Integrating these methods alongside econometric analysis will foster methodological pluralism and yield richer, more context-sensitive insights.

Contextually, the literature reveals significant geographic and sectoral imbalances. Research is heavily concentrated in OECD economies, China, India, and select emerging markets. By contrast, studies on low-income countries, conflict-affected states (e.g., Ukraine, Yemen), and small island developing states remain scarce. This under-representation hinders the development of context-sensitive insurance solutions for populations most vulnerable to climate, health, and economic shocks. Furthermore, few studies examine insurance's role in managing interconnected, systemic risks—such as the climate-health-finance nexus—or its spillover effects on other sectors, including agriculture, infrastructure, and public finance. This narrow focus underestimates both the potential and the limitations of insurance as a tool for systemic risk governance.

Finally, emerging thematic areas reveal critical evidence gaps. While digital transformation through InsurTech, AI, and big data is widely heralded as a growth driver, rigorous evidence on its impact on inclusion, efficiency, or resilience remains scarce. Many studies lack counterfactuals or long-term evaluation, raising concerns about uncritical technology adoption that may exacerbate digital divides or create new systemic vulnerabilities. Similarly, despite growing exposure to climate and catastrophe risks, few studies integrate physical risk modelling, adaptation finance, or equity considerations (e.g., affordability, accessibility) into insurance-growth analyses. This limits the sector's capacity to support climate-resilient development without reinforcing inequality. Lastly, while behavioural factors such as awareness and trust are frequently cited as adoption barriers, few studies examine how cultural norms, gender dynamics, and informal risk-sharing

institutions interact with formal insurance markets, thereby constraining the design of inclusive products aligned with local preferences.

To address these gaps, several concrete research questions can guide future empirical work: How does adopting InsurTech solutions affect insurance access and inclusion in rural or underserved communities? What are the effects of integrating advanced physical risk modelling on the affordability and effectiveness of climate-related insurance products in vulnerable regions? In what ways do cultural norms, gender roles, and informal risk-sharing networks influence uptake and outcomes of formal insurance across different social contexts? By focusing on these questions, future research can generate actionable insights to advance understanding and practice in insurance-driven resilience and sustainable growth.

### **Implications**

This review has significant theoretical, policy, and practical implications. Theoretically, it calls for moving beyond static supply-leading/demand-following models towards dynamic, integrative frameworks that combine macroeconomic finance with behavioural, institutional, and sustainability perspectives to explain better how insurance enables resilient, inclusive growth.

For policymakers, priorities include evolving regulatory frameworks to address emerging risks through proportionate supervision and sandboxes; expanding inclusive coverage through public–private partnerships, digital channels, and targeted subsidies; and strengthening macroprudential oversight to monitor systemic interlinkages. Policy sequencing matters: supply-leading interventions may catalyse growth in emerging economies, whereas demand-following strategies suit mature markets.

For practitioners, strategic imperatives centre on developing parametric and impact-linked products for climate adaptation and sustainability; leveraging InsurTech and alternative data to enable smarter risk assessment while ensuring ethical safeguards; and aligning investment portfolios with SDG outcomes to strengthen societal trust.

Societally, insurance functions not merely as a financial intermediary but as a foundational pillar of sustainable development—stabilising consumption, protecting assets, and reducing fiscal burdens when designed inclusively. Realising these benefits requires coordinated action across governments, regulators, industry, and civil society to ensure that market expansion translates into tangible improvements in human security, equity, and intergenerational resilience. Ultimately, this review positions insurance as an active catalyst for transformative growth amid compounding uncertainties.

### **Recommendations**

A proposed research agenda targets three key groups to address gaps. For scholars, focus on operationalising resilience as a measurable construct and on developing composite indices of adaptive capacity and recovery across levels. Investigate how institutional conditions affect insurance dynamics and identify threshold effects that maximise growth. Employ mixed methods that combine econometrics and qualitative analysis to understand causal pathways. Integrating climate econometrics with distributional analysis and scenario stress testing could deepen understanding of the climate–insurance–development relationship.

For regulators and policymakers, research should support the development of inclusive, sustainable markets through evidence-based innovation. Key questions include how to use regulatory sandboxes to enable responsible InsurTech adoption, how to govern emerging risks such as cyber threats and climate perils, and how to design subsidies or mandatory coverage to expand access without distorting markets. Evolving macroprudential oversight is needed to monitor insurance’s links to banking, capital markets, and public finance, and to develop early-warning indicators of financial instability.

For industry practitioners, focus on innovation and impact. Explore how insurance can incentivise climate adaptation, circular economy, or social outcomes, possibly through impact-linked premiums or parametric triggers. Assess how alternative data sources, such as satellite imagery and IoT, can enhance risk assessment in data-scarce markets while safeguarding against algorithmic bias in AI underwriting. Research partnerships should optimise governance for public–private–community collaboration and align insurer investments with SDG outcomes.

## **V. Conclusion**

This review synthesises scholarly discourse on insurance, resilience, and sustainable growth, highlighting an interdisciplinary research landscape centred on macroeconomic policies, firm-level practices, and emerging issues such as climate adaptation and digital transformation. Research is largely from the US and India, with less from Africa and Latin America, indicating regional biases. Promoting international collaboration, targeted funding, and knowledge exchange can increase regional diversity. The literature is predominantly quantitative, with limited qualitative insights, and there is a need for more longitudinal, cross-national studies, especially those linking insurance to the SDGs. Future work should adopt interdisciplinary, diverse, and mixed-methods approaches, examine the distributional effects of insurance, and leverage new data and AI techniques. Policymakers should

foster innovation, digital inclusion, and public-private partnerships to address systemic risks. Overall, insurance is vital for economic resilience and sustainable growth, and ongoing research and equitable participation are required to maximise its potential.

## References

- [1]. Adams, M., Andersson, J., Andersson, L.-F., & Lindmark, M. (2009). Commercial Banking, Insurance, and Economic Growth in Sweden Between 1830 and 1998. *Accounting, Business and Financial History*, 19(1), 21–38. <https://doi.org/10.1080/09585200802667139>
- [2]. Adams, M., Andersson, L. F., Hardwick, P., & Lindmark, M. (2014). Firm Size and Growth in Sweden's Life Insurance Market Between 1855 and 1947: A Test of Gibrat's Law. *Business History*, 56(6), 956–974. <https://doi.org/10.1080/00076791.2013.848341>
- [3]. Alhassan, A. L., Addisson, G. K., & Asamoah, M. E. (2015). Market Structure, Efficiency, and Profitability of Insurance Companies in Ghana. *International Journal of Emerging Markets*, 10(4), 648–669. <https://doi.org/10.1108/IJOEM-06-2014-0173>
- [4]. Alhassan, A. L., & Biekpe, N. (2015). Efficiency, Productivity, and Returns to Scale Economies in the Non-Life Insurance Market in South Africa. *Geneva Papers on Risk and Insurance: Issues and Practice*, 40(3), 493–515. <https://doi.org/10.1057/gpp.2014.37>
- [5]. Alhassan, A. L., & Fiador, V. (2014). Insurance-Growth Nexus in Ghana: An Autoregressive Distributed Lag Bounds Cointegration Approach. *Review of Development Finance*, 4(2), 83–96. <https://doi.org/10.1016/j.rdf.2014.05.003>
- [6]. Alshammari, A. A., Alhabshi, S. M., & Saiti, B. (2019). The Impact of Oil Prices and the Financial Market on Cost Efficiency in the Insurance and Takaful Sectors: Evidence from a Stochastic Frontier Analysis. *Economic Systems*, 43(4), Article 100716. <https://doi.org/10.1016/j.ecosys.2019.100716>
- [7]. Alshammari, A. A., Syed Jaafar Alhabshi, S. M., & Saiti, B. (2018). A Comparative Study of the Historical and Current Development of the GCC Insurance and Takaful Industry. *Journal of Islamic Marketing*, 9(2), 356–369. <https://doi.org/10.1108/JIMA-05-2016-0041>
- [8]. Autor, D. H., & Duggan, M. G. (2006). The Growth in the Social Security Disability Rolls: A Fiscal Crisis Unfolding. *Journal of Economic Perspectives*, 20(3), 71–96. <https://doi.org/10.1257/jep.20.3.71>
- [9]. Bahloul, W., Hachicha, N., & Bouri, A. (2013). Modelling the Effect of CEO Power on Efficiency: Evidence from the European Non-Life Insurance Market. *Journal of Risk Finance*, 14(3), 266–285. <https://doi.org/10.1108/JRF-11-2012-0077>
- [10]. Barkur, G., Varambally, K. V. M., & Rodrigues, L. L. R. (2007). Insurance Sector Dynamics: Towards Transformation into a Learning Organisation. *The Learning Organisation*, 14(6), 510–523. <https://doi.org/10.1108/09696470710825123>
- [11]. Baranauskas, G. (2021). Application of Customisation and Personalisation in Digital Solutions of the Non-Life Insurance Market: A Case Study of Lithuanian, Latvian and Estonian E-Sales Platforms. *Engineering Management in Production and Services*, 13(2), 68–82. <https://doi.org/10.2478/emj-2021-0013>
- [12]. Baicker, K., & Chandra, A. (2005). The Consequences of the Growth of Health Insurance Premiums. *American Economic Review*, 95(2), 214–218. <https://doi.org/10.1257/000282805774670121>
- [13]. Benlagha, N., & Hemrit, W. (2020). Internet Use and Insurance Growth: Evidence from a Panel of OECD Countries. *Technology in Society*, 62, Article 101289. <https://doi.org/10.1016/j.techsoc.2020.101289>
- [14]. Benoît, C. (2026). Industrial Policy in Disguise: The French Treasury and the Reregulation of the European Insurance Sector. *Journal of Common Market Studies*, 64(1), 194–213. <https://doi.org/10.1111/jcms.13742>
- [15]. Berry, K., Fenichel, E. P., & Robinson, B. E. (2019). The Ecological Insurance Trap. *Journal of Environmental Economics and Management*, 98, Article 102251. <https://doi.org/10.1016/j.jeem.2019.102251>
- [16]. Biagini, L. (2025). The Unintended Consequences of Farm Insurance: A Causal Investigation of Income, Productivity and Input Dynamics. *Journal of Agricultural Economics*, 76(3), 499–530. <https://doi.org/10.1111/1477-9552.12640>
- [17]. Browning, M., & Crossley, T. F. (2008). The Long-Run Cost of Job Loss as Measured by Consumption Changes. *Journal of Econometrics*, 145(1–2), 109–120. <https://doi.org/10.1016/j.jeconom.2008.05.005>
- [18]. Călin, H.-C., & Izvoranu, A.-M. (2018). Public-Private Partnership and Its Influence on Agricultural Insurance. *Quality - Access to Success*, 19(S1), 135–138.
- [19]. Carter, M. R., & Janzen, S. A. (2018). Social Protection in the Face of Climate Change: Targeting Principles and Financing Mechanisms. *Environment and Development Economics*, 23(3), 369–389. <https://doi.org/10.1017/S1355770X17000407>
- [20]. Ceita, L., Amado, C., & Vidigal Da Silva, J. (2025). Mergers and Acquisitions in the Insurance Sector: A Systematic and Bibliometric Analysis of Research Trends, Determinants, and Future Directions. *Insurance Markets and Companies*, 16(2), 141–156. [https://doi.org/10.21511/ins.16\(2\).2025.11](https://doi.org/10.21511/ins.16(2).2025.11)
- [21]. Cervini-Pla, M., & Vall Castelló, J. (2018). The Earnings and Employment Losses Before Entering the Disability System. *European Journal of Health Economics*, 19(8), 1111–1128. <https://doi.org/10.1007/s10198-018-0960-8>
- [22]. Chakraborty, K. (2020). Development of Financial Market Activities and Economic Growth: A Cross-Country Evidence. *Applied Econometrics*, 60, 26–47. <https://doi.org/10.22394/1993-7601-2020-60-26-47>
- [23]. Chen, W.-Y., Liang, Y.-W., & Lin, Y.-H. (2016). Is the United States in the Middle of a Healthcare Bubble? *European Journal of Health Economics*, 17(1), 99–111. <https://doi.org/10.1007/s10198-015-0668-y>
- [24]. Cheng, S.-H., Jin, H.-H., Yang, B.-M., & Blank, R. H. (2018). Health Expenditure Growth Under Single-Payer Systems: Comparing South Korea and Taiwan. *Value in Health Regional Issues*, 15, 149–154. <https://doi.org/10.1016/j.vhri.2018.03.003>
- [25]. Chetioui, Y., El Bouchikhi, Y., Lebdaoui, H., Ennassiri, M., Jannah, H., Yunsi, G., Zhar, I., & Ghamas, A. (2024). Modelling the Socio-Economic Factors Affecting Islamic Insurance Adoption: A Structural Equation Modelling Analysis. *International Journal of Economics and Financial Issues*, 14(3), 106–114. <https://doi.org/10.32479/ijefi.16047>
- [26]. Chodokufa, K. (2016). Risk Management Practices and the Purchase of Insurance by SMEs. *Risk Governance and Control: Financial Markets and Institutions*, 6(3), 100–104. <https://doi.org/10.22495/rcgv6i3c2art13>
- [27]. Choi, P. M. S., Chae, W. Y., Choi, J. H., & Han, Y. B. (2017). Does Insurance Hedge Macro Volatility? Global Evidence. *Investment Management and Financial Innovations*, 14(2), 307–315. [https://doi.org/10.21511/imfi.14\(2-2\).2017.02](https://doi.org/10.21511/imfi.14(2-2).2017.02)
- [28]. Chowdhry, B., Roll, R., & Saxena, K. (2013). Development and Freedom as Risk Management. *Finance Research Letters*, 10(3), 103–109. <https://doi.org/10.1016/j.frl.2013.07.001>
- [29]. Cole, C. R., & Eastman, E. M. (2026). Risk Management and Corporate Lifecycles: Evidence from Reinsurance Purchases. *Journal of Corporate Finance*, 98, Article 102961. <https://doi.org/10.1016/j.jcorpfin.2026.102961>
- [30]. Concha, Á., & Taborda, R. (2014). Insurance Use and Economic Growth in Latin America: Some Panel Data Evidence. *Lecturas de Economía*, (81), 31–55. <https://doi.org/10.17533/udea.le.n81a2>

- [31]. Conte, M. N., & Kelly, D. L. (2018). An Imperfect Storm: Fat-Tailed Tropical Cyclone Damages, Insurance, and Climate Policy. *Journal of Environmental Economics and Management*, 92, 677–706. <https://doi.org/10.1016/j.jeeem.2017.08.010>
- [32]. Creedon, J. (1988). Inside Met Life's Growth Strategy: An Interview with CEO John Creedon. *The Journal of Business Strategy*, 9(1), 23–27.
- [33]. Cummins, J. D., Lewis, C. M., & Wei, R. (2006). The Market Value Impact of Operational Loss Events for US Banks and Insurers. *Journal of Banking and Finance*, 30(10), 2605–2634. <https://doi.org/10.1016/j.jbankfin.2005.09.015>
- [34]. Ćurak, M., Lončar, S., & Poposki, K. (2009). Insurance Sector Development and Economic Growth in Transition Countries. *International Research Journal of Finance and Economics*, (34), 29–41.
- [35]. Dankiewicz, R., & Simionescu, M. (2020). The Insurance Market in Romania: A Macroeconomic and a Microeconomic Approach. *Transformations in Business and Economics*, 19(1), 248–261.
- [36]. Didenko, I., & Sidelnik, N. (2021). Insurance Innovations as a Part of Financial Inclusion. *Business Ethics and Leadership*, 5(1), 127–135. [https://doi.org/10.21272/bel.5\(1\).127-135.2021](https://doi.org/10.21272/bel.5(1).127-135.2021)
- [37]. Dong, J., Jing, Y., He, Z., & Dong, C. (2024). How to Empower Commercial Satellite Supply Chain: Insurance, Government Subsidy, or Blockchain Adoption? *Omega*, 127, Article 103083. <https://doi.org/10.1016/j.omega.2024.103083>
- [38]. Drissi, R., Alsuhaibani, E., & Bahloul, W. (2024). Asymmetric Effects of Life and Non-Life Insurance on Economic Growth in Saudi Arabia: A Nonlinear Analysis. *Insurance Markets and Companies*, 15(2), 26–34. [https://doi.org/10.21511/ins.15\(2\).2024.03](https://doi.org/10.21511/ins.15(2).2024.03)
- [39]. Dua, P., & Sahay, N. (2017). Impact of Service Quality Dimensions on Customer Satisfaction in Banc-Assurance Channel. *International Journal of Economic Research*, 14(15), 279–298.
- [40]. Dutton, L., Pantelous, A. A., & Seklecka, M. (2020). The Impact of Economic Growth on Mortality Modelling for Selected OECD Countries. *Journal of Forecasting*, 39(3), 533–550. <https://doi.org/10.1002/for.2640>
- [41]. Eggink, E., Woittiez, I., & Ras, M. (2016). Forecasting the Use of Elderly Care: A Static Micro-Simulation Model. *European Journal of Health Economics*, 17(6), 681–691. <https://doi.org/10.1007/s10198-015-0714-9>
- [42]. Eid, M. S., El-Adaway, I. H., & Coatney, K. T. (2015). Evolutionary Stable Strategy for Postdisaster Insurance: Game Theory Approach. *Journal of Management in Engineering*, 31(6), Article 04015007. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000357](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000357)
- [43]. Eling, M., & Jia, R. (2018). Business Failure, Efficiency, and Volatility: Evidence from the European Insurance Industry. *International Review of Financial Analysis*, 59, 58–76. <https://doi.org/10.1016/j.irfa.2018.07.007>
- [44]. Ertl, M. (2017). Insurance Convergence and Post-Crisis Dynamics in Central and Eastern Europe. *Geneva Papers on Risk and Insurance: Issues and Practice*, 42(2), 323–347. <https://doi.org/10.1057/s41288-017-0043-6>
- [45]. Gaspar, K., Portrait, F., Van Der Hijden, E., & Koolman, X. (2020). Global Budget Versus Cost Ceiling: A Natural Experiment in Hospital Payment Reform in the Netherlands. *European Journal of Health Economics*, 21(1), 105–114. <https://doi.org/10.1007/s10198-019-01114-6>
- [46]. Gentilini, U., & Omamo, S. W. (2011). Social Protection 2.0: Exploring Issues, Evidence, and Debates in a Globalising World. *Food Policy*, 36(3), 329–340. <https://doi.org/10.1016/j.foodpol.2011.03.007>
- [47]. Ghosh, A., & Magotra, A. (2025). Deposit Insurance Structure and Deposit Growth Dynamics: A Cross-Country Empirical Exploration. *Cogent Economics and Finance*, 13(1), Article 2483865. <https://doi.org/10.1080/23322039.2025.2483865>
- [48]. Giordino, D., Ballesio, E., Alshaghdali, N., & Galgotia, D. (2026). The Relationship Between Organisational Focus on AI, Financial Growth, and Sustainable Development: Evidence from Europe. *Technological Forecasting and Social Change*, 224, Article 124499. <https://doi.org/10.1016/j.techfore.2025.124499>
- [49]. González-Fernández, A. I., Rubio-Misas, M., & Ruiz, F. (2023). Multi-Objective Reference Point Techniques to Optimise Profitability, Growth, and Risk in the Non-Life Insurance Industry: International Analysis. *International Transactions in Operational Research*, 30(5), 2546–2570. <https://doi.org/10.1111/itor.13155>
- [50]. González-Núñez, J., Domínguez, S., & Zimmermann, K. J. (2025). Characterising the Uninsured Population in Mexico: A Multinomial Analysis. *Review of Behavioural Finance*, 17(1), 83–99. <https://doi.org/10.1108/RBF-11-2023-0313>
- [51]. Gron, A. (1995). Regulation and Insurer Competition: Did Insurers Use Rate Regulation to Reduce Competition? *Journal of Risk and Uncertainty*, 11(2), 87–111. <https://doi.org/10.1007/BF01067679>
- [52]. Groh, M., & McKenzie, D. (2016). Macroinsurance for Microenterprises: A Randomised Experiment in Post-Revolution Egypt. *Journal of Development Economics*, 118, 13–25. <https://doi.org/10.1016/j.jdeveco.2015.08.003>
- [53]. Greyson, J. (2007). An Economic Instrument for Zero Waste, Economic Growth, and Sustainability. *Journal of Cleaner Production*, 15(13–14), 1382–1390. <https://doi.org/10.1016/j.jclepro.2006.07.019>
- [54]. Gunning, J. W. (2014). Risk, Shocks, and Development. *Revue d'Économie du Développement*, 22(HS01), 35–49. <https://doi.org/10.3917/edd.hs01.0035>
- [55]. Hao, J. C. (2007). Efficiency Test on Taiwan's Life Insurance Industry Using the X-Efficiency Approach. *International Journal of Information and Management Sciences*, 18(1), 37–48.
- [56]. Harissis, H. F., Merikas, A., Mutenga, S., & Staikouras, S. K. (2009). Universal Banks and Stock-Market Reaction: Some Evidence from Major Announcements. *Journal of Risk Finance*, 10(3), 244–260. <https://doi.org/10.1108/15265940910959375>
- [57]. Hemrit, W. (2022). Does Insurance Demand React to Economic Policy Uncertainty and Geopolitical Risk? Evidence from Saudi Arabia. *Geneva Papers on Risk and Insurance: Issues and Practice*, 47(2), 460–492. <https://doi.org/10.1057/s41288-021-00229-3>
- [58]. Hemrit, W., & Nakhli, M. S. (2021). Insurance and Geopolitical Risk: Fresh Empirical Evidence. *Quarterly Review of Economics and Finance*, 82, 320–334. <https://doi.org/10.1016/j.qref.2021.10.001>
- [59]. Hodula, M., Janků, J., Časta, M., & Kučera, A. (2023). On the Macrofinancial Determinants of Life and Non-Life Insurance Premiums. *Geneva Papers on Risk and Insurance: Issues and Practice*, 48(4), 760–798. <https://doi.org/10.1057/s41288-021-00249-z>
- [60]. Horvey, S. S., & Odei-Mensah, J. (2025). Re-Examining the Microeconomic and Macroeconomic Determinants of Nonlife Insurers' Profitability in South Africa: Insights from Linear and Threshold Analysis. *Journal of Innovation and Entrepreneurship*, 14(1), Article 461. <https://doi.org/10.1186/s13731-024-00461-w>
- [61]. Hsieh, C.-R., Liu, Y.-M., & Chang, C.-L. (2013). Endogenous Technological Change in Medicine and Its Impact on Healthcare Costs: Evidence from the Pharmaceutical Market in Taiwan. *European Journal of Health Economics*, 14(2), 287–295. <https://doi.org/10.1007/s10198-011-0370-7>
- [62]. Hudakova, M., & Adamko, J. (2017). Technical Reserves in Insurance and the Slovak Insurance Market. *Economic Annals-XXI*, 162(11–12), 98–103. <https://doi.org/10.21003/ea.v162-20>
- [63]. Irac, D. M., & Minoiu, C. (2007). Risk Insurance in a Transition Economy: Evidence from Rural Romania. *Economics of Transition*, 15(1), 153–173. <https://doi.org/10.1111/j.1468-0351.2007.00275.x>
- [64]. Javid, M., Haleem, A., Singh, R. P., Khan, S., & Suman, R. (2022). An Extensive Study on Internet of Behaviour (IoB) Enabled Healthcare-Systems: Features, Facilitators, and Challenges. *BenchCouncil Transactions on Benchmarks, Standards and Evaluations*, 2(4), Article 100085. <https://doi.org/10.1016/j.tbench.2023.100085>

- [65]. Jia, J., Adams, M., & Buckle, M. (2012). Insurance and Ownership Structure in India's Corporate Sector. *Asia Pacific Journal of Management*, 29(1), 129–149. <https://doi.org/10.1007/s10490-009-9190-z>
- [66]. Jia, J. Y., Adams, M., & Buckle, M. (2011). The Strategic Use of Corporate Insurance in China. *European Journal of Finance*, 17(8), 675–694. <https://doi.org/10.1080/1351847X.2011.554281>
- [67]. Johannsdottir, L. (2014). Transforming the Linear Insurance Business Model to a Closed-Loop Insurance Model: A Case Study of Nordic Non-Life Insurers. *Journal of Cleaner Production*, 83, 341–355. <https://doi.org/10.1016/j.jclepro.2014.07.010>
- [68]. Kang, D., & Park, J. (2026). Adverse Selection in Reverse Mortgages: Evidence from South Korea. *Economics Letters*, 259, Article 112776. <https://doi.org/10.1016/j.econlet.2025.112776>
- [69]. Katan, L., Dobrovolska, O., & Espejo, J. M. R. (2018). Structural Modelling of the Financial Support for the Ukrainian Agrarian Sector. *Investment Management and Financial Innovations*, 15(3), 199–211. [https://doi.org/10.21511/imfi.15\(3\).2018.17](https://doi.org/10.21511/imfi.15(3).2018.17)
- [70]. Kaushal, S., & Ghosh, A. (2016). Financial Institutions and Economic Growth: An Empirical Analysis of the Indian Economy in the Post-Liberalised Era. *International Journal of Economics and Financial Issues*, 6(3), 1003–1013.
- [71]. Kaushal, S., & Ghosh, A. (2017). Economic Growth and the Development of Banking and Insurance Sector in the Post-Liberalised India: An Empirical Analysis. *International Journal of Social Economics*, 44(12), 2187–2207. <https://doi.org/10.1108/IJSE-04-2016-0121>
- [72]. Kaushal, S., & Ghosh, A. (2018). Banking, Insurance, and Economic Growth in India: An Empirical Analysis of the Relationship from the Regulated to the Liberalised Era. *Journal of Financial Economic Policy*, 10(1), 17–37. <https://doi.org/10.1108/JFEP-03-2017-0022>
- [73]. Kelly, D. L., & Tan, Z. (2015). Learning and Climate Feedback: Optimal Climate Insurance and Fat Tails. *Journal of Environmental Economics and Management*, 72, 98–122. <https://doi.org/10.1016/j.jeem.2015.05.001>
- [74]. Kessler, D. (2008). Insurance Market Mechanisms and Government Interventions. *Journal of Banking and Finance*, 32(1), 4–14. <https://doi.org/10.1016/j.jbankfin.2007.09.007>
- [75]. Kim, S., Lee, G., & Kang, H.-G. (2021). Risk Management and Corporate Social Responsibility. *Strategic Management Journal*, 42(1), 202–230. <https://doi.org/10.1002/smj.3224>
- [76]. Klapkiv, L., & Kedra, A. (2022). Is Demand for Technologies Determined by Production Costs? The Case of Insurance Companies. *Engineering Economics*, 33(3), 275–290. <https://doi.org/10.5755/j01.ee.33.3.25610>
- [77]. Kohlscheen, E., & Taylor, M. P. (2008). International Liquidity Swaps: Is the Chiang Mai Initiative Pooling Reserves Efficiently? *International Journal of Finance and Economics*, 13(4), 323–332. <https://doi.org/10.1002/ijfe.381>
- [78]. Kolstad, J. T., & Kowalski, A. E. (2012). The Impact of Health Care Reform on Hospital and Preventive Care: Evidence from Massachusetts. *Journal of Public Economics*, 96(11–12), 909–929. <https://doi.org/10.1016/j.jpubeco.2012.07.003>
- [79]. Kondovski, H. (2021). The Innovative Impact of Insurance on Economic Growth: Evidence from New EU Member States. *ECONOMICS - Innovative and Economics Research Journal*, 9(2), 109–122. <https://doi.org/10.2478/eoik-2021-0024>
- [80]. Krivokapic, R., Njegomir, V., & Stojic, D. (2017). Effects of Corporate Diversification on Firm Performance: Evidence from the Serbian Insurance Industry. *Economic Research-Ekonomska Istraživanja*, 30(1), 1224–1236. <https://doi.org/10.1080/1331677X.2017.1340175>
- [81]. Kunreuther, H. (1996). Mitigating Disaster Losses Through Insurance. *Journal of Risk and Uncertainty*, 12(2–3), 171–187. <https://doi.org/10.1007/BF00055792>
- [82]. Laffey, D., & Gandy, A. (2009). Applying Stabell and Fjeldstad's Value Configurations to E-Commerce: A Cross-Case Analysis of UK Comparison Websites. *Journal of Strategic Information Systems*, 18(4), 192–204. <https://doi.org/10.1016/j.jsis.2009.10.002>
- [83]. Lazar, D., & Denuit, M. (2011). New Evidence for Underwriting Cycles in US Property-Liability Insurance. *Journal of Risk Finance*, 13(1), 4–12. <https://doi.org/10.1108/15265941211191903>
- [84]. Lemoine, D. (2021). The Climate Risk Premium: How Uncertainty Affects the Social Cost of Carbon. *Journal of the Association of Environmental and Resource Economists*, 8(1), 27–57. <https://doi.org/10.1086/710667>
- [85]. Leverty, J. T., Lin, Y., & Zhou, H. (2009). WTO and the Chinese Insurance Industry. *Geneva Papers on Risk and Insurance: Issues and Practice*, 34(3), 440–465. <https://doi.org/10.1057/gpp.2009.12>
- [86]. Li, C., & Yang, X. (2025). The Impact of Financial Agglomeration and the Transformation of the Energy Consumption Structure on Regional Green Innovation. *Clean Technologies and Environmental Policy*, 27(10), 5439–5453. <https://doi.org/10.1007/s10098-025-03165-1>
- [87]. Liu, H., Liu, Z., Zhang, C., & Li, T. (2023). Transformational Insurance and Green Credit Incentive Policies as Financial Mechanisms for Green Energy Transitions and Low-Carbon Economic Development. *Energy Economics*, 126, Article 107016. <https://doi.org/10.1016/j.eneco.2023.107016>
- [88]. Lu, Z. J., Comanor, W. S., Cherkas, E., & Phillips, L. (2020). U.S. Pharmaceutical Markets: Expenditures, Health Insurance, New Products, and Generic Prescribing from 1960 to 2016. *International Journal of the Economics of Business*, 27(1), 1–26. <https://doi.org/10.1080/13571516.2019.1651150>
- [89]. Macleod, G. K. (1974). Health Maintenance Organisations in the United States. *International Labour Review*, 110(4), 335–350.
- [90]. Madiyev, G., Kerimova, U., Yespolov, A., Bekbossynova, A., & Rakhimzhanova, G. (2018). Macroeconomic Aspects of Innovation-Driven Growth of Agribusiness in the Republic of Kazakhstan. *Journal of Advanced Research in Law and Economics*, 9(2), 561–569. [https://doi.org/10.14505/jarle.v92\(32\).20](https://doi.org/10.14505/jarle.v92(32).20)
- [91]. Majid, M. S. A., Hamid, A., & Faradilla. (2017). Assessing the Productivity of Insurance Companies in Indonesia: A Non-Parametric Approach. *Journal of Applied Economic Sciences*, 12(6), 1593–1605.
- [92]. Maráková, V., Lament, M., Křištofik, P., & Bukowski, S. (2025). Climate Change as a Socio-Economic Challenge for the Tourism Sector: An Econometric Analysis of Countries with the Highest Economic Losses. *Technological and Economic Development of Economy*, 31(5), 1644–1664. <https://doi.org/10.3846/tede.2025.24870>
- [93]. Markopoulou, D. (2021). Cyber-Insurance in EU Policy-Making: Regulatory Options, the Market's Challenges and the US Example. *Computer Law and Security Review*, 43, Article 105627. <https://doi.org/10.1016/j.clsr.2021.105627>
- [94]. Martins, A. M., Correia, P., & Gouveia, R. (2024). The Impact of the Russia-Ukraine War on the World's Largest Listed Insurance Firms. *Geneva Papers on Risk and Insurance: Issues and Practice*, 49(4), 779–803. <https://doi.org/10.1057/s41288-023-00305-w>
- [95]. Masud, M. M., Rana, M. S., Mia, M. A., & Saifullah, M. K. (2019). How Productive are Life Insurance Institutions in Malaysia? A Malmquist Approach. *Journal of Asian Finance, Economics and Business*, 6(1), 241–248. <https://doi.org/10.13106/jafeb.2019.vol6.no1.241>
- [96]. Matthews, J. P., & Thompson, H. E. (1977). Insurance Exposure and Investment Risks: Management and Regulatory Implications. *Omega*, 5(1), 23–34. [https://doi.org/10.1016/0305-0483\(77\)90018-4](https://doi.org/10.1016/0305-0483(77)90018-4)
- [97]. Mayers, D., & Smith, C. W., Jr. (2002). Ownership Structure and Control: Property-Casualty Insurer Conversion to Stock Charter. *Journal of Financial Services Research*, 21(1–2), 117–144. <https://doi.org/10.1023/A:1014377819009>

- [98]. Mildenhall, S. J. (2017). Actuarial Geometry. *Risks*, 5(2), Article 31. <https://doi.org/10.3390/risks5020031>
- [99]. Mierzejewski, F. (2012). The Optimal Liquidity Principle and the Aggregate Money Demand. *IMA Journal of Management Mathematics*, 23(3), 241–264. <https://doi.org/10.1093/imaman/dpr019>
- [100]. Mitra, A. (2017). Influencers of Life Insurance Investments: Empirical Evidence from Europe. *Australasian Accounting, Business and Finance Journal*, 11(3), 87–102. <https://doi.org/10.14453/aabfj.v11i3.7>
- [101]. Mohy Ul Din, S., Regupathi, A., & Abu-Bakar, A. (2017). Insurance Effect on Economic Growth – Among Economies in Various Phases of Development. *Review of International Business and Strategy*, 27(4), 501–519. <https://doi.org/10.1108/RIBS-02-2017-0010>
- [102]. Moreno, I., Parrado-Martínez, P., & Trujillo-Ponce, A. (2020). Economic Crisis and Determinants of Solvency in the Insurance Sector: New Evidence from Spain. *Accounting and Finance*, 60(3), 2965–2994. <https://doi.org/10.1111/acfi.12424>
- [103]. Msomi, T. S., & Nzama, S. (2023). Analysing Firm-Specific Factors Affecting the Financial Performance of Insurance Companies in South Africa. *Insurance Markets and Companies*, 14(1), 8–21. [https://doi.org/10.21511/ins.14\(1\).2023.02](https://doi.org/10.21511/ins.14(1).2023.02)
- [104]. Müller-Fürstenberger, G., & Schumacher, I. (2015). Insurance and Climate-Driven Extreme Events. *Journal of Economic Dynamics and Control*, 54, 59–73. <https://doi.org/10.1016/j.jedc.2015.03.002>
- [105]. Murray, S. (2023). Threats to the ACA Associated with a Temporary Increase in Long-Acting Reversible Contraception. *Applied Economics Letters*, 30(11), 1428–1436. <https://doi.org/10.1080/13504851.2022.2058695>
- [106]. Narayana, M. R. (2016). India's Proposed Universal Health Coverage Policy: Evidence for Age Structure Transition Effect and Fiscal Sustainability. *Applied Health Economics and Health Policy*, 14(6), 671–690. <https://doi.org/10.1007/s40258-016-0270-1>
- [107]. Nasri, I., Bouzir, A., Benhadj Mbarek, M. H., & Benammou, S. (2024). The Determining Factors of Demand for Life Insurance: PLS Method Applied to the Case of OECD and MENA Countries. *Journal of Risk Finance*, 25(5), 870–893. <https://doi.org/10.1108/JRF-10-2023-0270>
- [108]. Nasri, I., Ghannouchi, I., & Ammou, S. B. (2025). Exploring the Dynamic Nexus Between Life Insurance, Governance, and Economic Development in OECD and MENA Countries: A System-Generalised Method of Moments Analysis. *World Development Perspectives*, 40, Article 100745. <https://doi.org/10.1016/j.wdp.2025.100745>
- [109]. Nath, H. K., & Liu, L. (2017). Information and Communications Technology (ICT) and Services Trade. *Information Economics and Policy*, 41, 81–87. <https://doi.org/10.1016/j.infoecopol.2017.06.003>
- [110]. Nektarios, M., & Barros, C. P. (2010). A Malmquist Index for the Greek Insurance Industry. *Geneva Papers on Risk and Insurance: Issues and Practice*, 35(2), 309–324. <https://doi.org/10.1057/gpp.2010.2>
- [111]. Nevondwe, L., & Odeku, K. O. (2014). Access to Quality Health Services for All South Africans Through the National Health Insurance Scheme: Lessons from Singapore. *Mediterranean Journal of Social Sciences*, 5(23), 2722–2731. <https://doi.org/10.5901/mjss.2014.v5n23p2722>
- [112]. Njegomir, V., Marović, B., & Maksimović, R. (2010). The Economic Crisis and the Insurance Industry: The Evidence from the Ex-Yugoslavia Region. *Economic Annals*, 54(185), 129–162. <https://doi.org/10.2298/EKA1085129N>
- [113]. Noordewier, T. G., Rogers, D., & Balakrishnan, P. V. (1989). Evaluating Consumer Preference for Private Long-term Care Insurance. *Journal of Health Care Marketing*, 9(4), 34–40.
- [114]. Pan, G., Chen, S.-S., & Chang, T. (2012). Does Gibrat's Law Hold in the Insurance Industry of China? A Test with the Sequential Panel Selection Method. *Panoeconomicus*, 59(3), 311–324. <https://doi.org/10.2298/PAN1203311P>
- [115]. Pauly, M. V. (2018). The Business of Healthcare and the Economics of Healthcare: Shall Ever the Twain Meet? *International Journal of the Economics of Business*, 25(1), 181–189. <https://doi.org/10.1080/13571516.2017.1395241>
- [116]. Peleckienė, V., Peleckis, K. K., & Dudzevičiūtė, G. (2019). The Relationship Between Insurance and Economic Growth: Evidence from the European Union Countries. *Economic Research-Ekonomiska Istraživanja*, 32(1), 1138–1151. <https://doi.org/10.1080/1331677X.2019.1588765>
- [117]. Pointer, L. V., & Khoi, P. D. (2019). Predictors of Return on Assets and Return on Equity for Banking and Insurance Companies on the Vietnam Stock Exchange. *Entrepreneurial Business and Economics Review*, 7(4), 185–198. <https://doi.org/10.15678/EBER.2019.070411>
- [118]. Pons Pons, J., & Gutiérrez González, P. (2024). Distribution Channels and Growth Strategies in Spanish Insurance: From Networks of Agents to Branch Offices (1870–1940). *Business History*, 66(2), 510–528. <https://doi.org/10.1080/00076791.2021.1979516>
- [119]. Pons-Pons, J., & Vilar-Rodríguez, M. (2019). The Genesis, Growth, and Organisational Changes of Private Health Insurance Companies in Spain (1915–2015). *Business History*, 61(3), 558–579. <https://doi.org/10.1080/00076791.2017.1374371>
- [120]. Prokopchuk, O., Prokopchuk, I., Mentel, G., & Bilan, Y. (2020). Parametric Insurance as an Innovative Development Factor of the Agricultural Sector of the Economy. *Agris On-Line Papers in Economics and Informatics*, 12(3), 69–86. <https://doi.org/10.7160/aol.2020.120307>
- [121]. Qazi, M. A., & Binti, M. (2025). Blockchain Revolutionising Insurance and Takaful Sector: Possibilities, Challenges, and Policy Roadmap for Pakistan. *Journal of Research, Innovation and Technologies*, 4(2), 225–244. [https://doi.org/10.57017/jorit.v4.2\(8\).07](https://doi.org/10.57017/jorit.v4.2(8).07)
- [122]. Raji, S. A. (2019). Insurance and Technical Education in National Development – A Wakeup Call. *International Journal of Recent Technology and Engineering*, 8(2 Special Issue 9), 290–297. <https://doi.org/10.35940/ijrte.B1065.0982S919>
- [123]. Rawat, S., Rawat, A., Kumar, D., & Sabitha, A. S. (2021). Application of Machine Learning and Data Visualisation Techniques for Decision Support in the Insurance Sector. *International Journal of Information Management Data Insights*, 1(2), Article 100012. <https://doi.org/10.1016/j.ijimei.2021.100012>
- [124]. Rensi, R. T., & Carvalho, J. V. F. (2021). Operation Car Wash: Impacts on the Executives' Liability Insurance Market. *Revista de Administração Contemporânea*, 25(2), Article E190386. <https://doi.org/10.1590/1982-7849rac2021190386.en>
- [125]. Sahakian, J., & Benmahmoud Jouini, S. (2023). Building Design as a Dynamic Capability: A Model for Design Integration. *Journal of Product Innovation Management*, 40(5), 733–758. <https://doi.org/10.1111/jpim.12674>
- [126]. Saham, M. (2024). Diffusion of Mobile Technologies in the Area of Financial and Insurance Activities in Poland. *Statistika*, 104(1), 16–26. <https://doi.org/10.54694/stat.2023.47>
- [127]. Salamaga, M. (2024). Diffusion of Mobile Technologies in the Area of Financial and Insurance Activities in Poland. *Statistika*, 104(1), 16–26. <https://doi.org/10.54694/stat.2023.47>
- [128]. Sare, Y. A., Agyemang, A. O., Ayamba, E. C., Bawuah, B., & Gyaawa Koranteng, A. (2023). Insurance and Sectoral Growth Nexus: Evidence from a Developing Economy. *Cogent Economics and Finance*, 11(2), Article 2228096. <https://doi.org/10.1080/23322039.2023.2228096>
- [129]. Senol, Z., Zeren, F., & Canakci, M. (2020). The Relationship Between Insurance and Economic Growth. *Montenegrin Journal of Economics*, 16(4), 145–155. <https://doi.org/10.14254/1800-5845/2020.16-4.12>
- [130]. Sharma, A. D., & Muthumeenakshi, M. (2025). Do GDP Growth and Insurance Penetration Affect Insurtech Funding in the Indian Scenario? *International Journal of Accounting and Economics Studies*, 12(2), 1–9. <https://doi.org/10.14419/apd8zn09>

- [131]. Sheehan, B., Humberg, C., Shannon, D., Fortmann, M., & Materne, S. (2023). Diversification and Solvency II: The Capital Effect of Portfolio Swaps on Non-Life Insurers. *Geneva Papers on Risk and Insurance: Issues and Practice*, 48(4), 872–905. <https://doi.org/10.1057/s41288-022-00269-3>
- [132]. Shams Esfandabadi, H., Ghamary Asl, M., Shams Esfandabadi, Z., Gautam, S., & Ranjbari, M. (2022). Drought Assessment in Paddy Rice Fields Using Remote Sensing Technology Towards Achieving Food Security and SDG2. *British Food Journal*, 124(12), 4219–4233. <https://doi.org/10.1108/BFJ-08-2021-0872>
- [133]. Siciliani, L. (2014). The Economics of Long-Term Care. *B.E. Journal of Economic Analysis and Policy*, 14(2), 343–375. <https://doi.org/10.1515/bejeap-2012-0063>
- [134]. Singh, D., Srivastava, A. K., Malik, G., Yadav, A., & Jain, P. (2025). Insurance and Economic Growth Nexus: A Comprehensive Exploration of the Dynamic Relationship and Future Research Trajectories. *Journal of Economic Surveys*, 39(3), 841–876. <https://doi.org/10.1111/joes.12627>
- [135]. Singhal, N., Goyal, S., & Singhal, T. (2022). Demand Following Hypothesis: Empirical Evidence from the Insurance Sector of Emerging Asian Markets. *Finance India*, 36(2), 777–798.
- [136]. Siregar, R. Y., & Serpina, N. (2024). Socio-Demographic Determinants of Insurance Literacy Among University Students in Indonesia. *Journal of Indonesian Economy and Business*, 39(3), 237–255. <https://doi.org/10.22146/jieb.v39i3.9389>
- [137]. Spriggs, G. M. (2016). Knowledge and Behaviour Regarding Takāful Among Non-Muslim Consumers in the United Arab Emirates. *ISRA International Journal of Islamic Finance*, 8(1), 9–34.
- [138]. Sun, F., & Li, Y. (2025). The Role of Combinatorial Green Finance Policies in Improving Total Factor Energy Efficiency: Evidence from Chinese Cities. *Journal of Cleaner Production*, 526, Article 146681. <https://doi.org/10.1016/j.jclepro.2025.146681>
- [139]. Sun, G.-Z., & Ng, Y.-K. (2009). The Age-Dependent Value of Time: A Life Cycle Analysis. *Journal of Economics/Zeitschrift für Nationalökonomie*, 97(3), 233–250. <https://doi.org/10.1007/s00712-009-0063-1>
- [140]. Szüle, B. (2017). Solvency Effects of Taxation: A Comparison of Hungarian Banks and Insurance Companies. *Acta Oeconomica*, 67(1), 63–75. <https://doi.org/10.1556/032.2017.67.1.4>
- [141]. Tanjung, M., & Cahyanti, M. (2025). Demand for Life Insurance and the Influence of Consumers' Financial Literacy, Risk Aversion, and Trust. *International Journal of Pharmaceutical and Healthcare Marketing*, 19(4), 1142–1163. <https://doi.org/10.1108/IJPHM-01-2024-0002>
- [142]. Terina Grazy, L., Parimalarani, G., & Rathi Meena, M. (2019). Foreign Direct Investment in the Insurance Sector: A Key to Better Insurance Penetration. *International Journal of Recent Technology and Engineering*, 8(3 Special Issue), 358–362. <https://doi.org/10.35940/ijrte.C1076.1083S19>
- [143]. Tsvetkova, L. (2020). Total Quality Management in an Insurance Company: Use of Balanced Scorecards to Meet the Interests of Stakeholders. *Journal of Corporate Finance Research*, 14(1), 39–54. <https://doi.org/10.17323/j.jcfr.2073-0438.14.1.2020.39-54>
- [144]. Tsvetkova, L., Bugaev, Y., Belousova, T., & Zhukova, O. (2021). Factors Affecting the Performance of Insurance Companies in the Russian Federation. *Montenegrin Journal of Economics*, 17(1), 209–218. <https://doi.org/10.14254/1800-5845/2021.17-1.16>
- [145]. Tsvetkova, L., Orłaniuk-Malitskaia, L., Khuzhamov, L., & Ermolaeva, A. (2024). Rebalancing Tools for Comprehensive Real Estate Management: Modelling the Demand Function for Mortgage Buyers. *Studies in Business and Economics*, 19(3), 5–29. <https://doi.org/10.2478/sbe-2024-0041>
- [146]. Ugbunta, D. O., & Ugwuanyi, U. B. (2019). Insurance Development and Economic Growth: An Examination of the Non-Bank Financial Institutions in Nigeria. *International Journal of Financial Research*, 10(2), 16–26. <https://doi.org/10.5430/ijfr.v10n2p16>
- [147]. Ulbinaite, A., Kucinskiene, M., & Le Moullec, Y. (2014). The Complexity of the Insurance Purchase Decision-Making Process. *Transformations in Business and Economics*, 13(3), 197–218.
- [148]. United Nations Conference on Trade and Development (UNCTAD). (2007). *Trade and Development Aspects of Insurance Services and Regulatory Frameworks*. Geneva: UNCTAD.
- [149]. Upreti, V., & Adams, M. (2015). The Strategic Role of Reinsurance in the United Kingdom's (UK) Non-Life Insurance Market. *Journal of Banking and Finance*, 61, 206–219. <https://doi.org/10.1016/j.jbankfin.2015.09.010>
- [150]. Usman, A., Bagudu, S. N., Hassan, A., Lawal, M. K., & Sayedi, S. N. (2024). Determinants of Intention to Adopt Auto Insurance (Takāful) Business Among Vehicle Owners in Nigeria. *Journal of King Abdulaziz University: Islamic Economics*, 37(1), 101–115. <https://doi.org/10.4197/islec.37-1.6>
- [151]. Valinkevych, N., Polchanov, A., & Kovalenko, Y. (2020). A Strategy of Insurance Market Development in Conditions of Latent Military Conflict in Ukraine. *Economic Annals-XXI*, 182(3–4), 15–24. <https://doi.org/10.21003/ea.v182-02>
- [152]. Vdovenko, L. (2013). Credit Risks in the Bank Lending System. *Economic Annals-XXI*, (3–4), 79–85.
- [153]. Vencappa, D., Fenn, P., & Diacon, S. (2013). Productivity Growth in the European Insurance Industry: Evidence from Life and Non-Life Companies. *International Journal of the Economics of Business*, 20(2), 281–305. <https://doi.org/10.1080/13571516.2013.782979>
- [154]. Vilar-Rodríguez, M., & Pons-Pons, J. (2024). The Emergence of Financial Capital in the Health Insurance Business in Europe: The Case of Spain in the Last Fifty Years. *Revista de Historia Económica - Journal of Iberian and Latin American Economic History*, 42(2), 217–242. <https://doi.org/10.1017/S0212610924000016>
- [155]. Vdovenko, L. (2013). Credit Risks in the Bank Lending System. *Economic Annals-XXI*, (3–4), 79–85.
- [156]. Walter, I. (2009). Economic Drivers of Structural Change in the Global Financial Services Industry. *Long Range Planning*, 42(5–6), 588–613. <https://doi.org/10.1016/j.lrp.2009.09.003>
- [157]. Weiss, M. A. (1991). International P/L Insurance Output, Input, and Productivity Comparisons. *The Geneva Papers on Risk and Insurance Theory*, 16(2), 179–200. <https://doi.org/10.1007/BF02386306>
- [158]. Williams, C.-A. N., Khanfar, N. M., Harrington, C., & Loudon, D. (2011). Marketing Retail Health Clinics: Challenges and Controversies Arising from a Health Care Innovation. *Health Marketing Quarterly*, 28(3), 270–285. <https://doi.org/10.1080/07359683.2011.595648>
- [159]. Wisner, R., O'Shaughnessy, E., Barbose, G., Cappers, P., & Gorman, W. (2025). Factors Influencing Recent Trends in Retail Electricity Prices in the United States. *The Electricity Journal*, 38(4), Article 107516. <https://doi.org/10.1016/j.tej.2025.107516>
- [160]. Wyszowska, Z., & Janowski, A. (2013). Insurance as a Significant Factor of Economic Development in Organisations. *Economic Annals-XXI*, (10), 71–75.
- [161]. Yao, S., Han, Z., & Feng, G. (2007). On Technical Efficiency of China's Insurance Industry After WTO Accession. *China Economic Review*, 18(1), 66–86. <https://doi.org/10.1016/j.chieco.2006.10.005>
- [162]. Yang, W., Wang, L., & Zhang, X. (2025). Online or Not Online: The Impact of Business Owners' Risk Preference on the Adoption of E-Business. *Electronic Commerce Research*, 25(3), 1375–1394. <https://doi.org/10.1007/s10660-023-09755-9>
- [163]. Yi, C., Chen, Z., & Chen, H. (2023). Opportunity Knocks, But Just Once: The Impact of Infrastructure Investment Decisions on Climate Adaptation to Flood Events. *Omega*, 121, Article 102934. <https://doi.org/10.1016/j.omega.2023.102934>

- [164]. Yuan, S.-T. (2008). The Trade Card Financial Supply Chain Solution. *Journal of Cases on Information Technology*, 10(1), 14–31.  
<https://doi.org/10.4018/jcit.2007010103>