



ARTIFICIAL INTELLIGENCE IN THE FUTURE OF BELIZE: COMMERCIALIZATION AND VISIBILITY

SMART DIGITAL STRATEGY

PROF. JOSÉ LUIS RUIZ REAL



For a long time, digital transformation in tourism has been understood primarily as a process of technological modernization:

attractive *websites*, presence on *social media*, *online campaigns* and, just in some cases, advanced and complex *big data* and *analytics systems*.

However, this is not enough to address the sector's current challenges:

- global competition to **attract high-value market** segments;
- more **informed and demanding visitors**;
- the need to demonstrate a genuine **commitment to sustainability**;
- a growing demand for **personalized experiences**.



From SEO to GEO: The New Visibility Model

During 20 years we optimized for SEO.

Now we must optimize for: **GEO – *Generative Engine Optimization***.

To conquer this space, **tourism brands must:**

- **Build digital credibility**
- **Be present in AI-driven answers**

This is the new digital positioning strategy.

The winners will be **companies that become reference sources for AI systems.**



THE NEW TOURISM BATTLEFIELD



TODAY'S TRAVELLER:

- Searches across **multiple platforms** (Google, Firefox, AI tools)
- Values **authentic experiences**
- Uses **voice search**
- Asks **AI assistants** for advice
- Seeks **instant answers**
- Expects **personalized suggestions**
- Makes decisions influenced by **digital storytelling**
- Makes **decisions faster**



THE NEW TOURISM BATTLEFIELD



Instead of browsing 40 websites, travelers now ask:

“Plan my honeymoon in La Toscana.”

“Best sustainable destinations in Europe.”

“Hidden gems in Spain for wine lovers.”

AI provides a synthesized answer.

If your product or destination is not structured to appear inside that answer — YOU DON'T EXIST!



THE NEW TOURISM BATTLEFIELD



We are moving from:

SEARCH-DRIVEN DISCOVERY → AI-CURATED DECISION MAKING

Travel decisions are now **digital-first**

- Customers expect **personalization**
- AI influences **inspiration and booking**
- **Visibility inside AI platforms** is critical



Nowadays we are not just competing with companies and neighboring destinations

We are competing with:

- Algorithms
- Attention spans
- Personalized recommendations
- **AI-generated suggestions**

The question is no longer:
“Are we visible on Google?”

The real question is:
“Are we recommended by AI?”



AI it's about **thinking, planning, and managing** tourism intelligently, using data, algorithms, and **conversational models** capable of adapting to each visitor, each context, and in real time.



AI FOR MARKET INTELLIGENCE AND COMPETITIVE ADVANTAGE



AI transforms decision-making from reactive to PREDICTIVE



AI is not a single tool, but a rapidly **evolving ecosystem of technologies:**

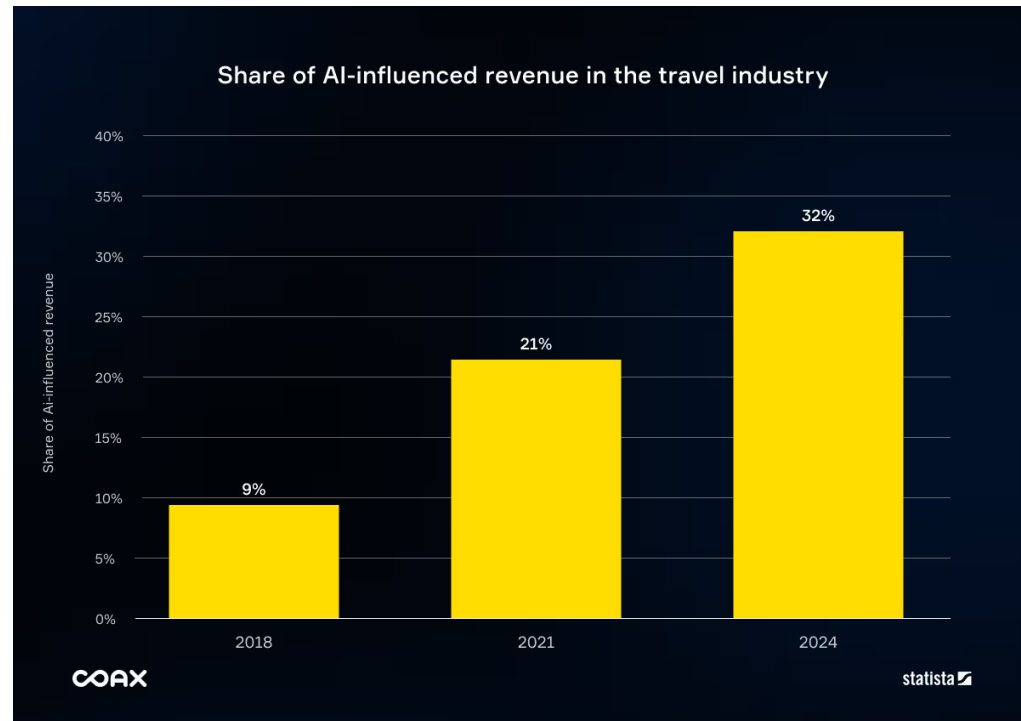
- **Generative AI:** Systems capable of creating original text, super-realistic images, and even full video previews of travel destinations.
- **Machine Learning (ML) & Deep Learning:** The “brain” controlling predictive analytics and forecasting travel demand and pricing.
- **Edge AI:** A key development in AI that brings processing from the cloud to devices to ensure faster response times and improve privacy.
- **Generative Adversarial Networks (GANs):** Used in tourism for synthetic data generation to model traveler behavior without real-world data.



Some practical applications of AI to management: **Chatbots; virtual assistants; automatic translators; sentiment and brand perception analysis.**

Destination representatives agree on the **need to train tourism workers in new digital skills.**

AI does not imply savings in human resources.



Statista. The share of AI-influenced revenue in the travel industry rised to 32% in 2024



RESEARCH ON AI IN BUSINESS



Journal of Business Economics and Management

ISSN 1611-1699/eISSN 2029-4433

2021 Volume 22 Issue 1: 98-117

<https://doi.org/10.3846/jbem.2020.13641>

ARTIFICIAL INTELLIGENCE IN BUSINESS AND ECONOMICS RESEARCH: TRENDS AND FUTURE

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Received 29 January 2020; accepted 19 August 2020

Abstract. Artificial Intelligence is a disruptive technology developed during the 20th century, which has undergone an accelerated evolution, underpinning solutions to complex problems in the business world. Neural Networks, Machine Learning, or Deep Learning are concepts currently associated with terms such as digital marketing, decision making, industry 4.0 and business digital transformation. Interest in this technology will increase as the competitive advantages of the use of Artificial Intelligence by economic entities is realised. The aim of this research is to analyse the state-of-the-art research of Artificial Intelligence in business. To this end, a bibliometric analysis has been implemented using the Web of Science and Scopus online databases. By using a fractional counting method, this paper identifies 11 clusters and the most frequent terms used in Artificial Intelligence research. The present study identifies the main trends in research on Artificial Intelligence in business and proposes future lines of inquiry.

Keywords: artificial intelligence, business, economics, bibliometrics, research trends, decision-making.

JEL Classification: A12, M21, O32.

Introduction

Artificial intelligence (AI) is a disruptive technological development that, together with robotics, is changing the operating model in companies in each and every one of its basic functions (Choi & Ozkan, 2019).

AI already has a significant impact on network marketing processes and services, through the analysis of user behavior in networks and the creation of user profiles to which product and service offerings are oriented: It affects the production departments, managing mainte-

Research of AI as a strategic pillar of business competitiveness, and as a differentiating element.

TRENDS AND FUTURE

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International context:

Where does research on the use of AI in the business environment have the greatest impact?

Ranking	Country	Articles	Citations	TC/A	h-index	Patent results
1	U.S.	943	22,230	23.57	65	241
2	UK	313	5,389	17.22	38	18
3	China	289	3,925	13.58	50	34
4	Spain	140	2,115	15.11	24	1
5	Canada	136	1,933	14.21	25	47
6	India	130	1,535	11.81	20	1
7	Australia	127	2,107	16.59	26	21
8	Germany	124	1,612	13.00	22	4
9	France	118	1,595	13.52	24	109
10	Hong Kong	103	2,513	24.40	26	187

Note: TC/A: Total citations/Articles.

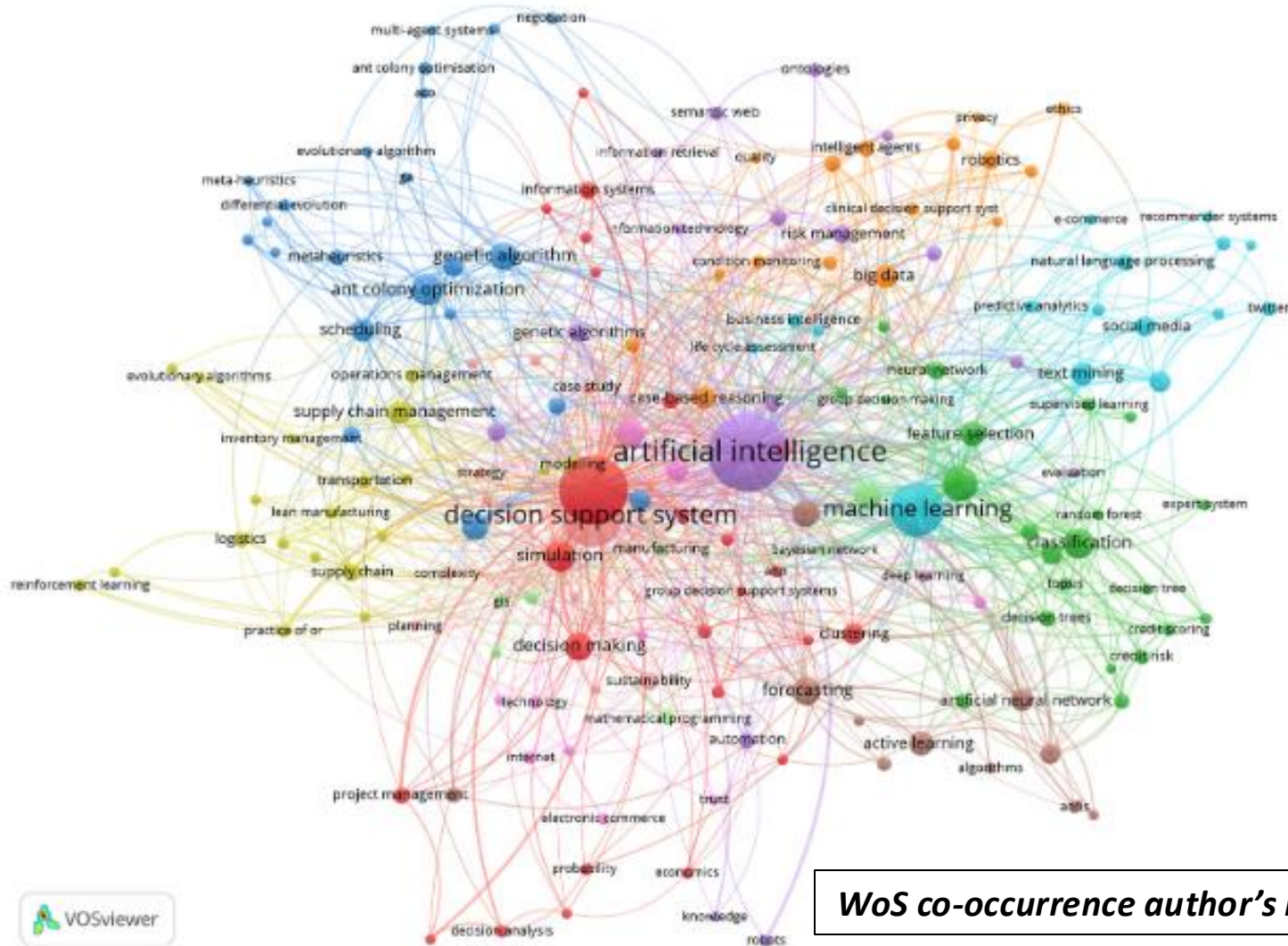
*Table shows countries with greatest number of **patents** and greatest concentration of **researchers**.*

The U.S., UK and China are the most influential countries in this topic.

5 of the top universities promoting research on AI in **Business and Economics** are from U.S.
Hong Kong Polytechnic University: main university in this field, research in AI on many fields.

The interest of the **U.S., Hong Kong** and **France** in the practical application of the results obtained, leading the number of **patents**.

THE MOST INTERESTING TOPICS. AI in Business



WoS co-occurrence author's keyword map



11 groups identified



– **Cluster 1** (25 items): **Decision support system**, simulation, decision making, clustering, information systems, project management, decision analysis, probability, economics, decision making, Analytic Hierarchy Process (AHP), multi-criteria analysis.

– **Cluster 2** (22 items): **Classification, feature selection, artificial neural networks**, group decision making, supervised learning, credit risk, credit scoring, decision tree, bankruptcy prediction, expert system, prediction, random forest, logistic regression, discriminant analysis, data mining.

– **Cluster 3** (22 items): **Ant colony optimization (ACO)**, genetic algorithm, scheduling, meta-heuristics, differential evolution, negotiation, multi-agent system, computational intelligence, evolutionary algorithm.

– **Cluster 4** (20 items): **Supply chain management**, transportation, logistics, operations management, modelling, evolutionary algorithms, reinforcement learning, inventory management, lean manufacturing, vehicle routing.

– **Cluster 5** (17 items): **Artificial intelligence, risk management**, genetic algorithms, automation, semantic web, information technology, knowledge, robots, ontologies, information retrieval, Decision Support System (DSS).



– **Cluster 6** (16 items): **Machine learning, text mining**, social media, Twitter, natural language processing, business intelligence, predictive analytics, e-commerce, recommender systems, life cycle assessment, opinion mining, sentiment analysis.

– **Cluster 7** (16 items): **Big data**, case-based reasoning, robotics, intelligent agents, condition monitoring, clinical decision support system, privacy, ethics, quality, Internet of the things, cloud computing.

– **Cluster 8** (11 items): **Forecasting**, active learning, artificial neural network, algorithms, Adaptive Neuro-Based Fuzzy Inference System (ANFIS), support vector machine, fuzzy logic.

– **Cluster 9** (11 items): **Knowledge management, deep learning**, electronic commerce, marketing, Internet, trust, technology, tourism, pattern recognition.

– **Cluster 10** (11 items): **Sustainability**, planning, complexity, case study, strategy, product development, risk assessment.

– **Cluster 11** (7 items): **Mathematical programming**, manufacturing, Bayesian network, Geographic Information System (GIS), knowledge-based system.

EMERGENT TOPICS of AI in Business

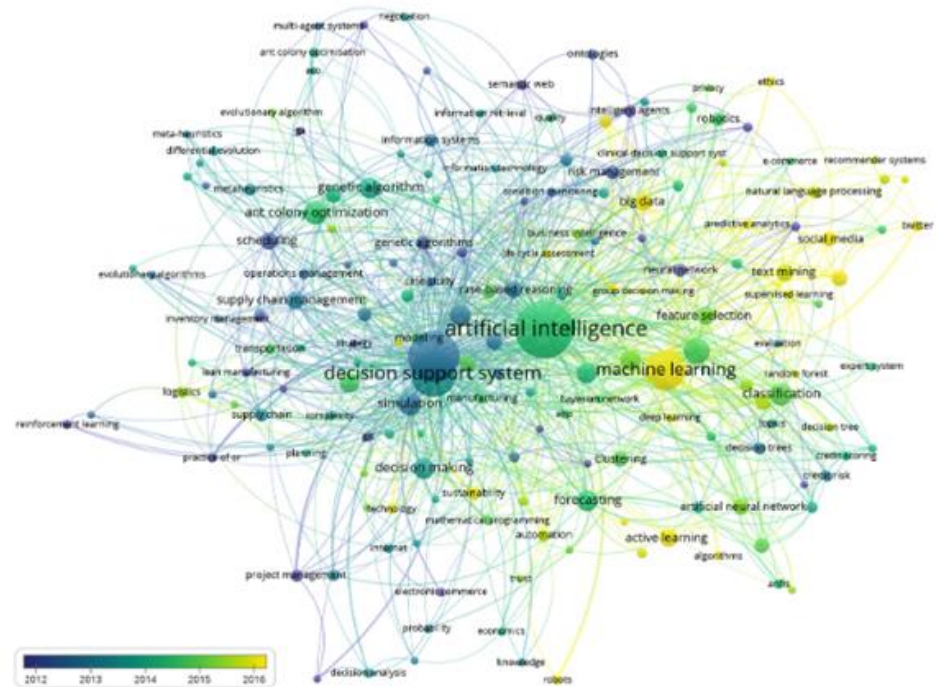
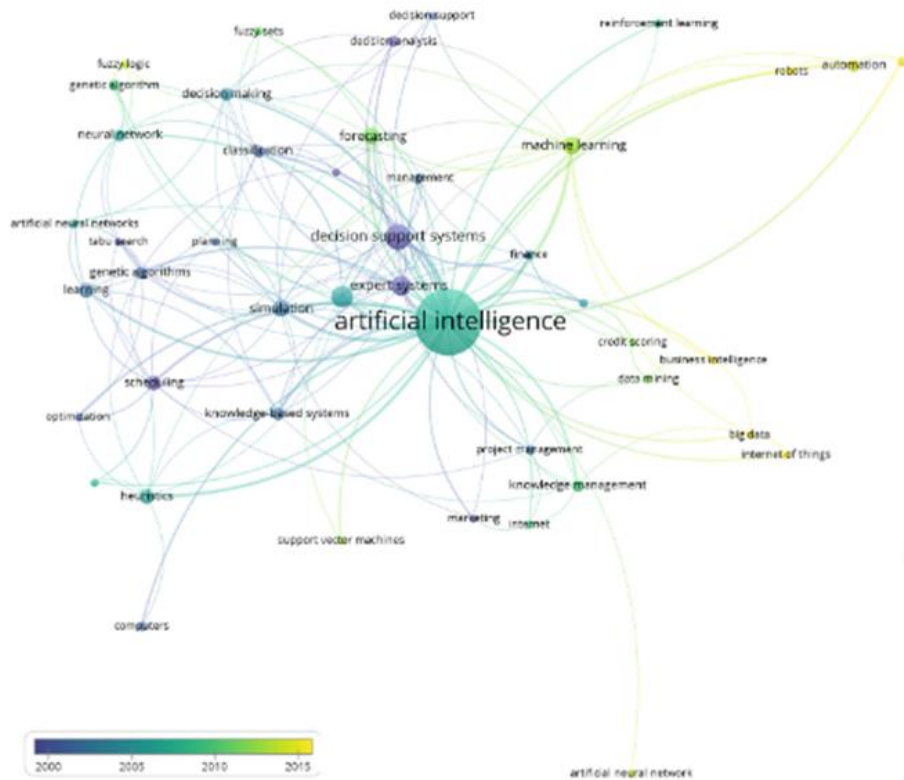


Figure 2. Co-occurrence evolution map (WoS and Scopus)

Co-occurrence evolution map



EMERGENT TOPICS of AI in Business



Research and trends are focused on:

- **machine learning, active learning and supervised learning**
- **big data, intelligence agents and business intelligence**
- **social media**
- **the Internet of Things, technology and robots (automation)**
- **ethics and sustainability**
- **predictive analytics, group decision making, life cycle assessment, algorithms, modelling and fuzzy logics**

A future of Smart Digital Strategy focus on:

- **Emergence of specific hardware for implementation of AI solutions.**

The current supply of this hardware is concentrated in a few companies, such as Google (*TensorFlow* technology acceleration units), or NVIDIA (*Tensor Cores*) to accelerate the training processes of neural networks.

- **Standardization of the internal structures of neural networks.**

That make up the *Deep Learning algorithms* to be used and implemented more broadly and efficiently.

- **Development of realistic simulations of behaviours and attitudes considered to be human to improve the perception of AI applications in processes of interaction with clients (Customer Service Systems in natural language, modulated with emotional input).**

Some early examples of this would be the *Google duplex service* for telephone support, or the *Magic Leap* development of augmented reality with interactive AI.



FINDINGS FROM THIS RESEARCH



AI is important for the new kind of business-client relationship.
Incorporation of AI in more and more departments.

A company immersed in digital transformation is a business focused 24 hours a day on customers' needs, with the **ability to analyse the data that comes from its constant interaction with customers** who are also immersed in the digital world.

Many high-level technical tasks that are currently carried out by specialized personnel will be left to AI.

It's the case of the **exchange of information** and **automation tasks that involve a significant volume of time and cost and don't generate real value to the company** (accounting, operations management with suppliers, financial services...).

Incorporation of AI in decision making at the highest level.

Companies (e.g., *Deep Knowledge Ventures*) already incorporate AI services in their **Boards of Directors**, which make investment decisions. In some cases, these services have the status of a member of the BoD.



Future Trends in AI Tourism Marketing

- Voice and AI assistants dominance
- Immersive AI-driven experiences
- Predictive travel planning
- AI-driven sustainable tourism management

Predictive Sales Optimization



- Forecast demand by segment
- Adjust pricing dynamically
- Identify upselling opportunities
- Improve conversion rates

AI for Market Expansion



- Detect emerging international markets
- Analyze competitor positioning
- Adapt messaging per culture
- Launch data-driven campaigns



DATA STRATEGY

1. Integrate CRM systems
2. Centralize customer data
3. Analyze visitor behavior
4. Track content performance
5. Use predictive analytics

Destinations with integrated data ecosystems outperform fragmented organizations.

DATA IS YOUR STRATEGIC ASSET



SMART DIGITAL STRATEGY ACTIONS

1. Define a Clear AI Strategy

AI must align with revenue objectives.

2. Invest in Content Authority

Become a trusted thematic reference.

3. Implement Conversational AI

Capture and convert instantly.

4. Use Predictive Analytics for Pricing

Maximize revenue per segment.

5. Train Your Team

AI literacy is competitive advantage.

Destinations that adapt quickly will dominate visibility and demand



CONCLUSIONS...

Artificial Intelligence is not about technology. It is about **COMPETITIVE POSITIONING**

It is about:

- Being *discovered*
- Being *recommended*
- Being *chosen*
- Being *booked*

Tourism has always been about **emotion**.

AI allows us **to connect that emotion with precision and scale.**



CONCLUSIONS...

AI IS NOT OPTIONAL—IT IS STRATEGIC

- Adopt early to dominate visibility
- Integrate AI across marketing and sales
- Conquer the market through intelligence

**SELLING SMARTER IS MORE IMPORTANT
THAN SELLING MORE!!!**

**THE FUTURE OF TOURISM MARKETING BELONGS
TO THOSE WHO MASTER AI STRATEGICALLY**



**THANK YOU
FOR YOUR ATTENTION!**

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