

Enhancing Social Science Research in Library Discovery:

**Application of Generative AI
for Contextual and Exploratory Search**

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Introduction

- **Scholarly output in social sciences is increasing and often interdisciplinary** (Levitt et al., 2011; Ling et al., 2024).
- **Traditional keyword-based search may limit exploratory, context-driven research** (Bao et al., 2015; Butavicius et al., 2019; Kroll et al., 2021; Nguyen et al., 2024).
- **Academic libraries can benefit from AI-enhanced discovery tools, specifically in searching records within their discovery services** (Bhuvaneswari & Rajakumar, 2024; Senthilkumar et al., 2024; Wildgaard et al., 2023).

Limitations of Keyword Search

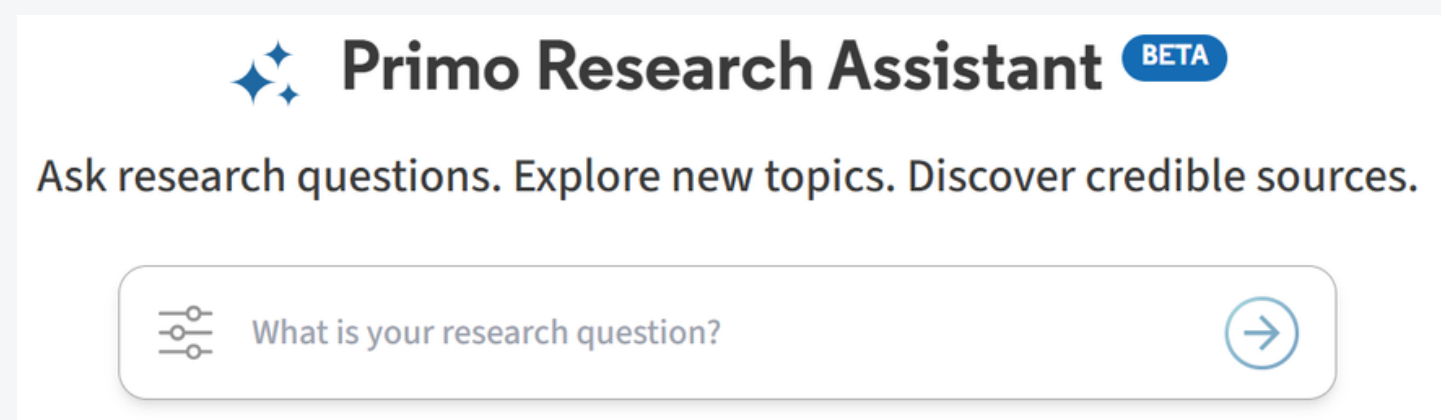
- **Exact-Match Dependency** - relies on exact keyword matches, missing content with different phrasing.
 - ('social capital in rural communities', # 'community networks in non-urban areas ')
- **Poor Support for Exploratory Questions** - Inefficient for exploratory or context-driven questions.
 - 'What theories address gender inequality in education?' (what if you are unfamiliar with jargons?)
- **Hindered Interdisciplinary Discovery** - Social science questions often span multiple domains.

Addressing Challenges in Library Discovery with Generative AI

- Natural language understanding to interpret conversational queries.
 - Example question: 'What recent studies examine social media's role in political mobilization?'
- Contextualized summaries highlight relevance of retrieved documents.
- Supports exploratory, context-driven research workflows.
- Seamless layering on existing discovery platforms like Primo VE.

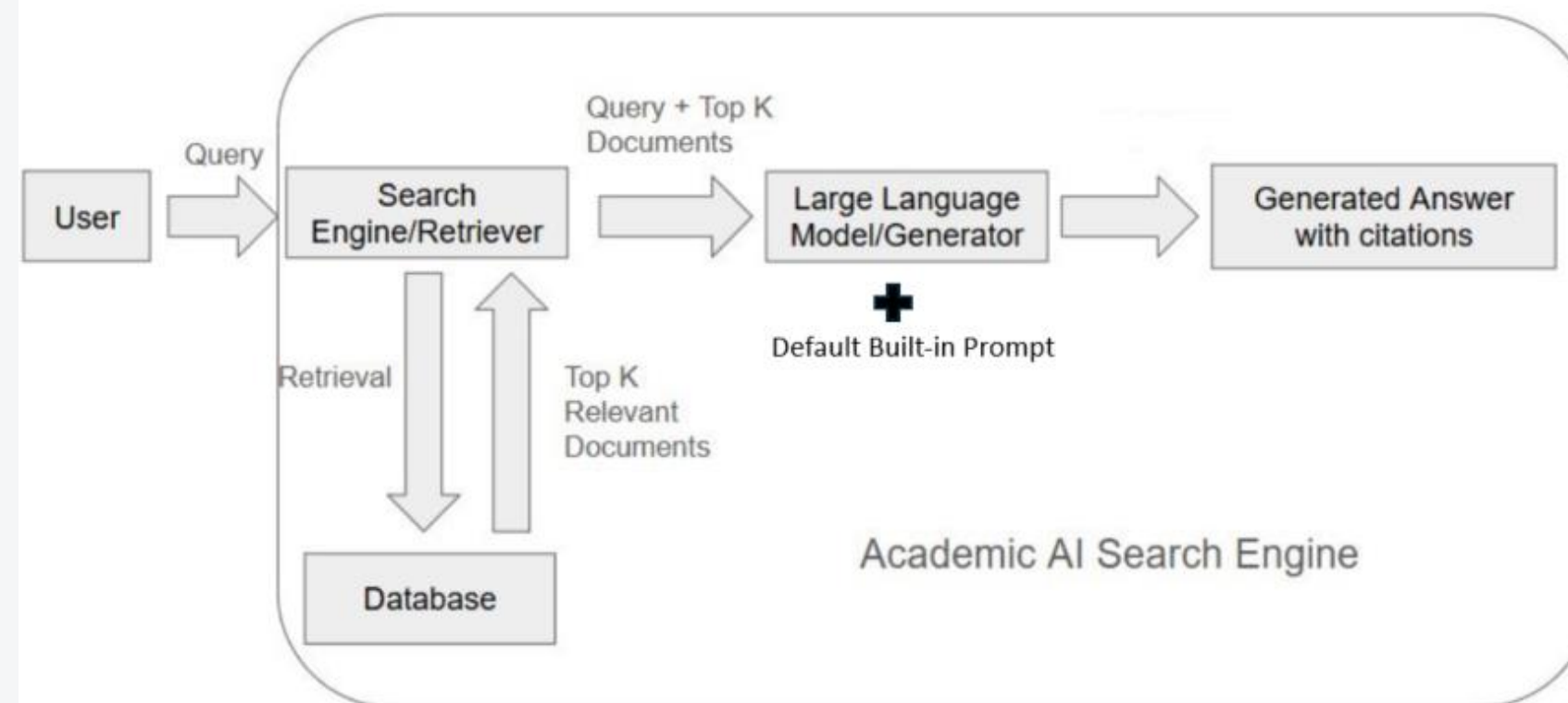
Primo Research Assistant Overview

- AI-powered tool developed by Ex Libris to enhance library discovery.
- Users enter research questions in natural language.
- Converts queries into Boolean format and searches Central Discovery Index (CDI).
- Summarizes top 5 most relevant results with inline references.



Retrieval-Augmented Generation (RAG)

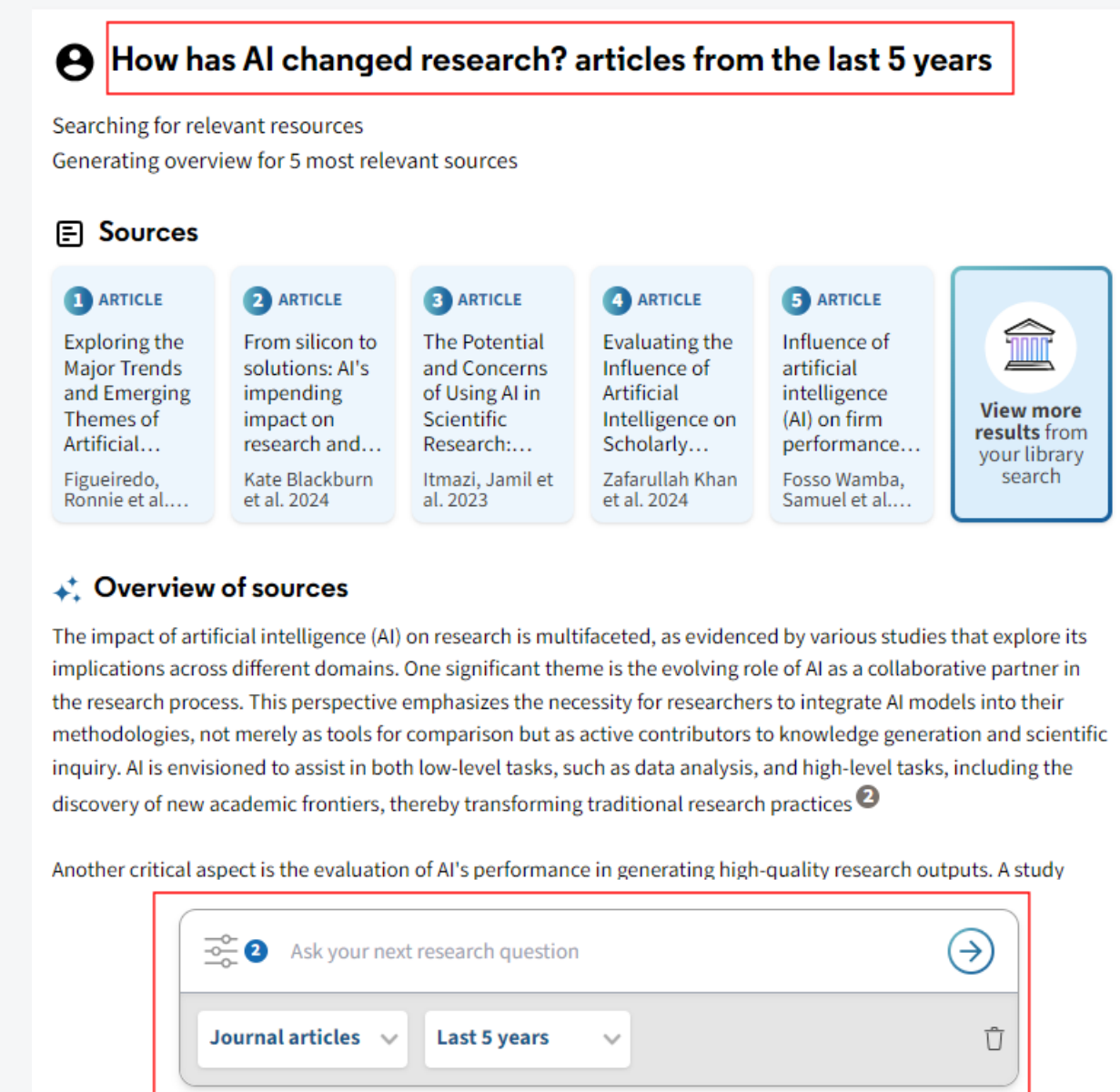
Primo Research Assistant uses **Retrieval Augmented Generation (RAG)** architecture to combine the language capabilities of the LLM (Large Language Model) with the knowledge from material indexed in the Central Discovery Index (CDI).



(Tay, 2025)

Primo Research Assistant Features

- Semantic Search - Understands natural language queries.
- AI-Powered Summaries - Highlights key findings with source links.
- Search Suggestions - Prompts users to explore related content.
- Multilingual Support - Enables research in multiple languages.



How has AI changed research? articles from the last 5 years

Searching for relevant resources
Generating overview for 5 most relevant sources

Sources

- 1 ARTICLE**
Exploring the Major Trends and Emerging Themes of Artificial...
Figueiredo, Ronnie et al....
- 2 ARTICLE**
From silicon to solutions: AI's impending impact on research and...
Kate Blackburn et al. 2024
- 3 ARTICLE**
The Potential and Concerns of Using AI in Scientific Research:...
Itmazi, Jamil et al. 2023
- 4 ARTICLE**
Evaluating the Influence of Artificial Intelligence on Scholarly...
Zafarullah Khan et al. 2024
- 5 ARTICLE**
Influence of artificial intelligence (AI) on firm performance...
Fosso Wamba, Samuel et al....

View more results from your library search

Overview of sources

The impact of artificial intelligence (AI) on research is multifaceted, as evidenced by various studies that explore its implications across different domains. One significant theme is the evolving role of AI as a collaborative partner in the research process. This perspective emphasizes the necessity for researchers to integrate AI models into their methodologies, not merely as tools for comparison but as active contributors to knowledge generation and scientific inquiry. AI is envisioned to assist in both low-level tasks, such as data analysis, and high-level tasks, including the discovery of new academic frontiers, thereby transforming traditional research practices²

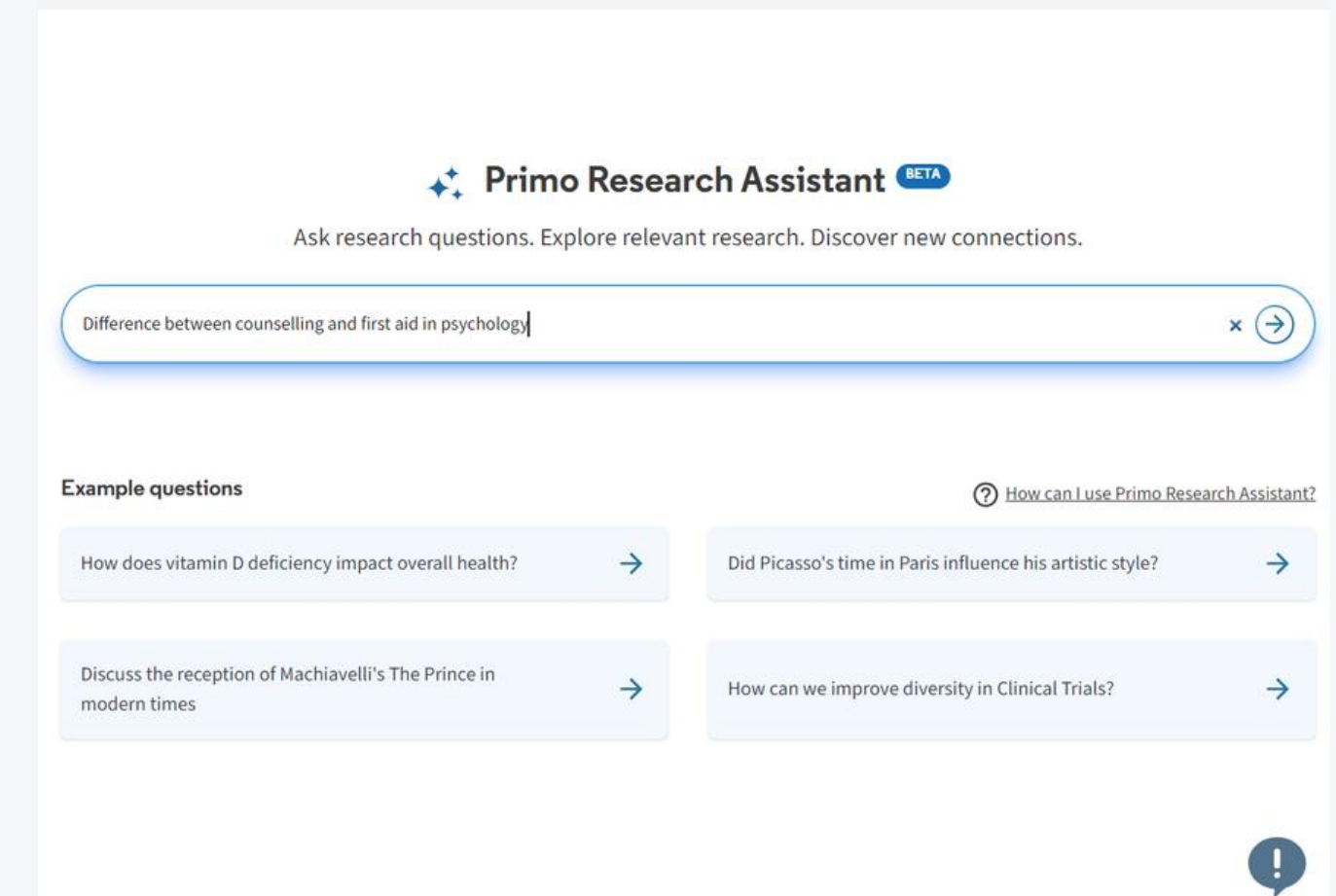
Another critical aspect is the evaluation of AI's performance in generating high-quality research outputs. A study

2 Ask your next research question

Journal articles **Last 5 years**

Primo Research Assistant Limitations

- **Search Functionality**
 - No follow-up queries supported; each query must be self-contained.
- **Content and Source Restrictions**
 - Uses only metadata and abstracts from CDI.
 - Excludes content from APA, Elsevier, JSTOR, DataCite, etc.
 - No access to external web sources.
- **User Experience and Interface**
 - Sign-in required to access the tool.
 - Limited language support.
 - No current search limits, but future restrictions may apply.



USE CASES

- Preliminary literature scanning with synthesized overviews.
- Clarifying unfamiliar topics.
- Associative discovery to surface interdisciplinary connections.
- Refining research questions based on initial results.



USE CASES EXAMPLES

**Preliminary literature scanning with
synthesized overviews.**

Preliminary literature scanning with synthesized overviews

 What are the current debates around climate migration?

Sources

1 ARTICLE

Climate Change and Migration: Developing Policies to Address the Growing Challenge of Climate-Induced Displacement

Poddar, Arup Kumar 2024

2 BOOK

Climate Change, Migration and Human Rights

Manou, Dimitra et al. 2017

3 BOOK

Climate Change and Displacement

McAdam, Jane 2010

4 ARTICLE

How Climate-Induced Migration Entered the UN Policy Agenda in 2007–2010: A Multiple Streams Assessment

Jakobsson, Elin 2021

5 ARTICLE

DEBATING ENVIRONMENTAL MIGRATION: SOCIETY, NATURE AND POPULATION DISPLACEMENT IN CLIMATE CHANGE

Oliver-Smith, Anthony 2012



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Overview of sources

Current debates around climate migration center on the complex interplay between climate change, human rights, and policy responses. Climate-induced migration is increasingly recognized as a significant consequence of climate change, with implications that extend beyond ecological impacts to encompass social, economic, and legal dimensions. Scholars emphasize the need for a nuanced understanding of human dignity, human rights, and human security in the context of climate change and migration, highlighting the theoretical and practical challenges faced by policymakers in protecting human rights amidst displacement. ²


The phenomenon of climate-induced displacement is characterized by various forms of migration, including internal displacement and cross-border movement. The literature suggests that the increasing frequency and severity of climate events, such as storms and sea-level rise, are likely to exacerbate human movement, necessitating a reevaluation of existing legal frameworks and policy responses. ³ There is a call for the development of robust policies that recognize climate migrants and integrate climate-induced migration into national climate change and development plans. ¹


Moreover, the historical trajectory of climate migration on the international policy agenda reveals a shift in recognition and urgency, particularly following the 2010 Cancún Adaptation Framework. This shift underscores the importance of understanding the mechanisms that elevate climate-induced migration within policy discussions. ⁴ The debates also highlight the need for interdisciplinary approaches that consider ecological and social theories to inform effective policy responses to environmental displacement. ⁵


In conclusion, the discourse surrounding climate migration is evolving, with a focus on human rights implications, the necessity for policy innovation, and the integration of diverse academic perspectives to address the challenges posed by climate-induced displacement.


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
Related research questions

 What are the socio-economic impacts of climate migration on host communities?

 How do policy frameworks address the challenges of climate-induced displacement?

 What role do international organizations play in managing climate migration?

 What are the psychological effects of climate migration on displaced individuals?

 Ask your next research question...





USE CASES EXAMPLES

Clarifying unfamiliar topics.

Clarifying unfamiliar topics

what is critical discourse analysis?

Sources

1 BOOK

The practice of critical discourse analysis: an introduction
Bloor, Meriel et al. 2013

2 BOOK

Methods of Critical Discourse Analysis
Wodak, Ruth, Professor et al. 2001

3 ARTICLE

Exploring Critical Discourse Analysis's Renowned Studies: Seeking for Aims and Approaches
Salma, Nurul Fathia 2019

4 ARTICLE

ON COGNITIVE CRITICAL DISCOURSE ANALYSIS: A SYNTHESIS OF CRITICAL DISCOURSE ANALYSIS AND COGNITIVE LINGUISTICS
Gao, Jingsi 2025

5 ARTICLE

A General Critical Discourse Analysis Framework for Educational Research
Mullet, Dianna R. 2018



View more results from your library search

Overview of sources

Critical discourse analysis (CDA) is a qualitative analytical approach that focuses on the ways in which language constructs, maintains, and legitimizes social inequalities. It operates on the premise that language use is purposeful, whether the choices made are conscious or unconscious. CDA encompasses various methods and approaches that are tailored to specific research goals and theoretical perspectives, allowing for a nuanced exploration of discourse in different contexts, such as political speeches, marketing texts, and educational materials. ^{1 5}





The field of CDA is informed by several key theories and figures, with a strong emphasis on the relationship between discourse and power dynamics in society. ³ For instance, the work of Michel Foucault is often referenced, highlighting how language can be a tool for asserting power and dominance. ³ This perspective encourages researchers to examine how language reflects and shapes social hierarchies and relationships.

Moreover, CDA is characterized by its interdisciplinary nature, drawing from linguistics, sociology, social psychology, and other social sciences. ^{1 2} This broad foundation allows for a variety of analytical methods, including frequency analysis, transitivity, and figurative language, which can be applied to diverse texts. ^{1 2} The integration of cognitive linguistics with CDA has also been proposed, suggesting that a synthesis of these fields could enhance the understanding of the interplay between cognition, discourse, and societal factors. ⁴

In summary, critical discourse analysis serves as a vital framework for examining the intricate connections between language, power, and social structures, providing insights into how discourse shapes and is shaped by societal dynamics.

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Related research questions

-  What are the key principles of critical discourse analysis?
-  How is critical discourse analysis applied in social research?
-  What are the differences between critical discourse analysis and traditional discourse analysis?
-  What role does power play in critical discourse analysis?

 Ask your next research question... 






USE CASES EXAMPLES

**Associative discovery to surface
interdisciplinary connections.**

Associative discovery to surface interdisciplinary connections

 Give background on food security in Vietnam

Sources

1 ARTICLE

State management of the national food security in Vietnam
Tran, Minh Duc 2020

2 ARTICLE

Food System Governance in the Cambodian Mekong Delta: Food Production, Food Security, Migration, and Indebtedness
Sithirith, Mak et al. 2024

3 BOOK

Food Anxiety in Globalising Vietnam
Ehlert, Judith et al. 2019

4 ARTICLE

Impact of Climate Change on Agricultural Production and Food Security: A Case Study in the Mekong River Delta of Vietnam
Phuong, Tran Trong et al. 2024

5 ARTICLE

Does Agricultural Commercialization Affect Food Security: The Case of Crop-Producing Households in the Regions of Post-Reform Vietnam?
Linderhof, Vincent et al. 2019



View more results from your library search



Overview of sources

Food security in Vietnam is a multifaceted issue influenced by various factors, including agricultural practices, climate change, and socio-economic conditions. The country has made significant strides in rice production, achieving surpluses; however, a considerable portion of the population continues to experience food insecurity. This paradox arises from the disconnect between increased production and the accessibility and utilization of food, exacerbated by rising production costs, indebtedness, and migration patterns that affect local food systems. ²

The impact of climate change poses a significant threat to agricultural production and food security in Vietnam, particularly in vulnerable regions such as the Mekong River Delta. Projections indicate that climate change will lead to increased temperatures, altered rainfall patterns, and rising sea levels, which could result in flooding and degradation of soil quality. These environmental changes threaten to diminish agricultural productivity and, consequently, the country's food supply capacity, although they may not immediately compromise national food security. ⁴ The Vietnamese government has initiated various measures aimed at transforming agriculture towards sustainability and resilience, focusing on ecological practices and international cooperation to address these challenges. ⁴

Additionally, the relationship between agricultural commercialization and food security remains complex. While commercialization is often pursued to enhance food security, evidence suggests that its effects vary significantly across different regions and indicators. In some areas, commercialization has not led to improved caloric intake or dietary diversity, indicating that the benefits of such strategies are not uniformly experienced. ⁵

Overall, food security in Vietnam is shaped by a combination of agricultural policies, environmental challenges, and socio-economic dynamics, necessitating a nuanced understanding of these interrelated factors to develop effective solutions.

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Related research questions

? What are the key factors affecting food security in Vietnam?

? How has climate change impacted food security in Vietnam?

? What policies has the Vietnamese government implemented to improve food security?

? What role do agricultural practices play in ensuring food security in Vietnam?



Ask your next research question...





USE CASES EXAMPLES

**Refining research questions based on
initial results.**

Refining research questions based on initial results

How is gender equality reflected in political representation in ASEAN countries?

Sources

1 ARTICLE

Gender Inequality: Concept and Measurement (A Study of Indonesia on ASEAN)

Bangun, Wilson 2018

2 ARTICLE

Effort to gender equality in Indonesia, compared on ASEAN

Bangun, Wilson et al. 2024

3 BOOK CHAPTER

Promotion of Women's Rights in ASEAN: Myanmar Women's Organisations for Sustainable Unity in Diversity

Takeda, Makiko et al. 2020

4 ARTICLE

Promotion of human rights by providing equal employment opportunities for the disadvantaged workers in ASEAN

Furuoka, Fumitaka et al. 2020

5 ARTICLE

Former UN CEDAW chair lauds RP for closing gender gap

2008



View more results from your library search

Overview of sources

Gender equality in political representation within ASEAN countries is characterized by notable disparities and ongoing challenges. The representation of women in parliament across ASEAN member states remains low, with Indonesia exemplifying this issue. Despite some progress, the country has not reached the target of 30 percent female representation in parliament, indicating a significant gender gap in political empowerment.

The situation in Indonesia reflects broader trends observed in the region, where many ASEAN countries struggle with low female political representation. The research highlights that while there has been an increase in the number of women in parliament, the overall figures remain insufficient to achieve gender parity. This underrepresentation is further compounded by traditional societal roles that often prioritize women's responsibilities in the domestic sphere over political engagement.

In contrast, the Philippines has been recognized for its efforts in closing the gender gap, maintaining a rank above many developed countries in terms of gender equality in political representation. The country has made significant strides through gender mainstreaming strategies initiated in 1987, which have contributed to its higher ranking in the Global Gender Gap Index.

Moreover, the promotion of women's rights and political participation is a focal point of various initiatives within ASEAN, aimed at addressing the economic and political rights of women. However, despite these initiatives, the gap between international standards and local realities persists, indicating that further efforts are necessary to enhance women's political representation across the region.

In summary, while there are efforts to improve gender equality in political representation within ASEAN, significant challenges remain, particularly in countries like Indonesia, where traditional roles and systemic barriers continue to hinder progress.

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Related research questions

? What are the barriers to women's political participation in ASEAN countries?

? How does political representation of women in ASEAN compare to other regions?

? What impact does gender equality in political representation have on policy outcomes in ASEAN nations?

? How have recent electoral reforms in ASEAN countries affected gender representation in politics?

⚙️ Ask your next research question...



Preliminary Observations

- Valued for Summarization and Efficiency
- Effective for Early-Stage Research
- Reported Time Savings
- Increased Confidence in Topic Development
- Positive User Reception
- Noted Limitations (No follow-up questions, occasional latency in response time, missing methodological details).



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Thank you very much!



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