Research of Trend Gastro Diplomacy in Indonesia

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Abstract
Gastrodiplomacy, as a form of cultural diplomacy, can play a bigger and more efficient role in increasing awareness of the nation's image and building national identity through food. This article will examine the effectiveness of gastro diplomacy as part of cultural diplomacy in increasing awareness of the nation's image and forming national identity through food, as well as the extent to which research trends and patterns regarding gastro diplomacy can be mapped through bibliometric analysis to identify contributions, collaborations and research developments in the field. This research aims to determine and analyze trends in gastro diplomacy research topics in Indonesia for 2017-2022 using bibliometric studies. The method used in this research was quantitative research methods. The population was all articles with gastro diplomacy topics in Indonesia from 2017-2022. The data search process in this research used Publish or Perish in the Google database. The Vosviewer application was used to visualize the bibliometric analysis. The results showed that the highest growth in research on gastrodiplomacy occurred in 2021, reaching 31 publications (32.63%). Meanwhile, the lowest number of publications occurred in 2017, with 3 (3.16%). Bibliometric analysis based on researchers or authors was centered on "Hidayat," who was active in conducting research around gastro diplomacy, with four publications from 2017 - 2022. Developments of gastro diplomacy based on co-occurrence (keywords) from 104 articles indexed by Google Scholar can be grouped into 7 clusters such as country, South Korean gastro diplomacy, Korean cuisine, Kitcehem, gastro diplomacy case studies, Thailand, and so on.

Keywords: Gastrodiplomacy, Indonesia, Bibliometric
That gastrodiplomacy activities in the current era cannot be stopped. After Thailand was recognized as a pioneer in this regard by the British weekly magazine The Economist, many other countries followed in the footsteps of success that was achieved in that country (The Economist, 2002). Even so, in the real world, many are considered to be gastro diplomacy activities. Still, theoretically, gastro-diplomacy has not become a big topic in academic circles because gastronomy and diplomacy in the discussion or research space are still not fully resolved or still cause a lot of debate (Baskoro, 2017).

This study aims to explore and identify topics that are often researched by researchers in Indonesia, especially the topic of gastrodiplomacy. The method used in this study was a bibliometric study. The term "bibliometric" was introduced by Groos and Pritchard in 1969 as the application of mathematical and statistical methods to books and other communication media (Glanzel, 2003).

Publications on gastro diplomacy can be journals, book chapters, articles, or proceedings and serve as a means to share research results with the general public and academics, as well as a basis for further knowledge development. Studying research trends in the field of gastro diplomacy, including identifying the most productive researchers or figures in researching this topic in a certain period, is very important for the academic community.

The track record of research conducted is also important data in bibliometric analysis to understand the development of publications by institutions or research groups, the distribution of publications by year, the productivity of researchers, existing research trends, and so on. Bibliometric studies present real bibliographical data from published works along with complete metadata, enabling comprehensive analysis according to the needs of researchers. Conducting a bibliometric analysis from the perspective of the institution's entire publication can provide an overview of the institution's productivity and contribution to the development of a field of knowledge.

Based on this description, diplomacy requires a greater and more efficient approach to the national interest. One method that is gaining increasing attention is gastro diplomacy, which uses food as a tool to raise awareness of the nation's image and shape national identity. Considering that food is a concrete cultural element that is close to society, this strategy is considered effective in conveying the ideas, values, and identity of a nation. Gastro diplomacy plays an important role in increasing respect and mutual understanding and improving a country's image in the eyes of the

**Kata Kunci**: Gastrodiplomasi, Indonesia, Bibliometrik

**Introduction**

Gastro diplomacy is part of public diplomacy and cultural diplomacy, which aims to increase respect, strengthen mutual understanding, and improve the image of a nation in a subtle way (Warsito & Kartikasari, 2007). It is one of the elements in cultural diplomacy that focuses on introducing a culture of eating (Smavor et al., 2010).

Gastro diplomacy has generated a lot of debate and confusion among academics. The main source of confusion is that gastro diplomacy does not have a solid foundation as an independent concept. Some scholars realize that gastro diplomacy comes from public diplomacy and cultural diplomacy (Baskoro, 2017).

There is no agreement among scholars regarding the concept of gastro diplomacy, which distorts the way of thinking about it. The problem is further complicated because there is a theoretical relationship between public diplomacy, cultural diplomacy, and 'patron-client' gastro diplomacy, which eventually creates an anomaly in contemporary diplomacy. Nonetheless, in today's real world, gastro diplomacy is becoming a trend in which every country and non-state entity tries to promote its country's distinctive culinary flavors to the international public through various strategies.

Gastrodiplomacy activities in the current era cannot be stopped. After Thailand was recognized as a pioneer in this regard by the British weekly magazine The Economist, many other countries followed in the footsteps of success that was achieved in that country (The Economist, 2002). Even so, in the real world, many are considered to be gastro diplomacy activities. Still, theoretically, gastro-diplomacy has not become a big topic in academic circles because gastronomy and diplomacy in the discussion or research space are still not fully resolved or still cause a lot of debate (Baskoro, 2017).

This study aims to explore and identify topics that are often researched by researchers in Indonesia, especially the topic of gastrodiplomacy. The method used in this study was a bibliometric study. The term "bibliometric" was introduced by Groos and Pritchard in 1969 as the application of mathematical and statistical methods to books and other communication media (Glanzel, 2003).

Publications on gastro diplomacy can be journals, book chapters, articles, or proceedings and serve as a means to share research results with the general public and academics, as well as a basis for further knowledge development. Studying research trends in the field of gastro diplomacy, including identifying the most productive researchers or figures in researching this topic in a certain period, is very important for the academic community.

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international community. Especially for developing countries, gastro diplomacy can be a strategic tool to overcome global information imbalances and gain international support and sympathy. Thus, it is important to analyze the effectiveness of gastrodiplomacy and its research trends through bibliometric studies in order to understand contributions, collaborations, and research developments in this field, as well as to better inform future diplomatic policies and strategies.

**Review of Literature**

**Gastro Diplomacy**

Gastrodiplomacy is an aspect of public and cultural diplomacy that uses soft power diplomacy to build the image of a country (Warsito & Kartikasari, 2007). The term gastronomy itself refers to the methods used in diplomacy, including aspects of food culture, food places, and all things related to culinary (Purwasito, 2016). Each country has its national interests, which can only be achieved through relations between countries and establishing relations with other countries, which is referred to as diplomacy.

Gastrodiplomacy is the link between food and foreign policy and how countries convey and communicate their culture through food. Restaurants are often used as a starting point for introducing foreign cultures. Gastrodiplomacy plays a role in introducing culture through food and achieving an understanding of culture, history, and heritage through culinary aspects (Forman, 2016). The term "gastro diplomacy" itself combines gastronomy and diplomacy, indicating food as a medium of interaction in diplomatic practices. It reflects a different presentation of diplomacy.

Gastrodiplomacy has something in common with cultural diplomacy; if cultural diplomacy emphasizes the distinctive culture of a country, then gastrodiplomacy focuses on culinary specialties to be used as a medium in carrying out diplomacy (Zhang, 2015). Gastrodiplomacy is implemented with a long-term strategy to provide an understanding of the culture of other countries to the international community because food is a symbol of a country's identity (Braden, 2014). Middle-power countries use gastro diplomacy a lot to promote and brand their countries (Rockower, 2010).

Research conducted by Dewi et al. (2022) in Korea showed that Korea's gastro diplomacy has been successful in the world of entertainment. The Food and Beverage Industries sector, which serves Korean specialties, has begun to dominate the Indonesian market, both with the dine-in concept and even instant food. Then Utomo and Sari (2022), regarding gastrodiplomacy in Thailand, stated that in response to the high demand from the global trend of halal tourism, Thailand slightly adjusted its gastrodiplomacy strategy towards halal aspects. This finding also enhances their already popular image with sex tourism.

**Bibliometric Concept**

Bibliometrics is a field of information research in library science that focuses on the analysis of literature or documents by applying mathematical and statistical methods. Putubuku stated that bibliometrics is one of the oldest branches of library science, which began to develop in the early 20th century with an interest in the dynamics of knowledge as reflected in the production of scientific literature (Putubuku, 2008).

The term "bibliometric" was introduced by Groos and Pritchard (1969) to refer to quantitative studies. This term was quickly accepted and widely used. Sulistyo-Basuki describes how Groos and Pritchard initially used the term "statistical bibliography" to describe written communication but later proposed the term "bibliometric" as a replacement because it was considered more descriptive and not easily confused with other terms (Basuki, 2002).

According to Groos and Pritchard, as quoted by Glanzel, bibliometrics is a mathematical and statistical method for books and other communication media (Glanzel, 2003). This term refers to the application of statistical techniques to the literature on a particular subject. Bibliometrics studies communication patterns between documented information and potential users of information (Harande, 2001). Bremholm (2004) defines bibliometrics as the study of patterns of publishing and use of
documents, while bibliometric laws define predictable relationships within these patterns. Patra (2006) argues that the bibliometric method is very useful for measuring the spread of knowledge in the natural sciences but is less effective in some applied fields, such as engineering.

Research on bibliometrics has been widely carried out. Idamokoro and Hosu (2022), in their research Bibliometric analysis of the global research trends of Klebsiella studies from 2000-2019 and the analysis shows that Antimicrobial Agents and Chemotherapy is the top journal in research on Klebsiella with an aggregate of 441 research documents, included published. Furthermore, Zhang et al. (2022), in their research Bibliometric analysis of research trends and characteristics of drug-induced gingival overgrowth, stated that a remarkable increasing trend in the number of citations has been observed since 1994

Research Method

The method used in this study is a quantitative research method using bibliometric analysis. The bibliometric analysis used is a word frequency calculation technique that produces one or more keywords from a document (Diadoto, 1994). The population in this study included articles that discuss the topic of gastro diplomacy in Indonesia in the 2017-2022 period. The sampling process used a saturated sample, meaning that the researchers took all populations as the study objects. The technique used in data processing was a bibliometric analysis technique to describe trends in gastro diplomacy research using quantitative methods. Searching for data in this study required data on the number of scientific works on the topic of gastro diplomacy using an application called Publish or Perish or PoP. This software is an application that utilizes Google Scholar publications to access data, provide information about citations, and convert them into statistical data (Aulianto et al., 2019). the Vosviewer application is used to visualize the results of the bibliometric analysis, which is an application that functions to find out and present a bibliometric map of trends in gastro diplomacy research in Indonesia from 2017-2022.

Result and Discussion

Development of Gastrodiplomacy Research Trends in Indonesia

Through Publish or Perish, 104 research documents on gastrodiplomacy were obtained from indexed journals on Google Scholar. The development of publications on the topic of gastro diplomacy research from 2017 to 2022, analyzed using the Publish or Perish software, shows fluctuations. Out of a total of 104 publications on gastrodiplomacy indexed in Google Scholar, only 95 documents have publication year information. Meanwhile, nine other publications do not include the year of publication. The highest development of gastro diplomacy research growth occurred in 2021, with a total of 31 publications (32.63%). Meanwhile, the fewest publications occurred in 2017, with only three publications (3.16%). For more complete information, the development of research trends on gastro diplomacy in Indonesia is presented in Table 1.1.

Table 1. Development of Gastrodiplomacy Research Trends in Indonesia in the 2017 – 2022 Period

<table>
<thead>
<tr>
<th>Year of Publication</th>
<th>Number of Documents</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>3</td>
<td>3.16</td>
</tr>
<tr>
<td>2018</td>
<td>8</td>
<td>8.42</td>
</tr>
<tr>
<td>2019</td>
<td>12</td>
<td>12.63</td>
</tr>
<tr>
<td>2020</td>
<td>12</td>
<td>12.63</td>
</tr>
<tr>
<td>2021</td>
<td>31</td>
<td>32.63</td>
</tr>
<tr>
<td>2022</td>
<td>29</td>
<td>30.53</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Personal Data Processing Results, 2023

In 2020, research in the field of gastro diplomacy was stagnant, with the same number of documents as the previous year, namely 12 documents (12.63%). However, there was a decrease in 2022, where the number of documents published was only 29 (30.53%), compared to the previous year, which reached 31 documents (32.63%). Even though there have been fluctuations in several years and a decrease in 2022, the quantitative development
of gastro diplomacy research shows that this topic remains in demand and continues to grow year to year in Indonesia. Further information about the growth of publications in the field of gastrodiplomacy indexed on Google Scholar can be seen in Figure 1.

Figure 1. Trend chart of gastrodiplomacy research in Indonesia in the period 2017-2022
Source: Personal Data Processing, 2023

**Bibliometric Study of Gastrodiplomacy Research Topics in Indonesia for the 2017-2022 Period**

**Map of the Development of Gastrodiplomacy Research in Indonesia Based on Authors (Co-authorship)**

Co-authorship analysis is a method used to identify relationships between various studies based on research documents produced by researchers. The co-authorship network is a tool used to reveal the direction of collaboration and identify researchers and institutions who play a role in leading research (Fonseca et al., 2016). Co-authorship network analysis has the potential to make a significant contribution to the development of knowledge (Morel et al., 2009). By visualizing the results of the co-authorship network analysis, we can see that the trend of gastro diplomacy research in Indonesia in the 2017-2022 period can be seen in Figure 2.

Figure 2 displays a visualization of the co-authorship network marked with nodes (circles) representing authors or researchers and edges (networks) representing relationships between authors or researchers. The collection of nodes connected by these edges indicates a correlation or relationship between researchers in research on the topic of gastrodiplomacy. Bibliometric analysis based on researchers or authors focuses on "Hidayat, a" who is active in conducting research in the field of gastro diplomacy with a total of 4 publications in the period 2017 - 2022. This network shows that there is a relationship or collaboration between Hidayat's author and five other authors, such as Munir, Safitri, Juniarti, Naim, and Bustami. Furthermore, the overlay visualization maps the author's historical footprint in research in the field of gastrodiplomacy, which can be seen in Figure 3.

Figure 2. Network visualization on co-authorship
Source: Vosviewer, 2023

Figure 3. Visualization Overlay on co-authorship
Source: Vosviewer, 2023
Figure 3 is a visualization overlay that depicts the historical footprint of researchers in the field of gastrodiplomacy. This visualization is characterized by nodes that have color variations and edges that connect one researcher to another. Darker node colors indicate research that was conducted at an earlier time than a predetermined period. For example, in the figure, the darkest node color (purple) reflects research that was conducted earlier in 2021, while the darkest color, bright (yellow), reflects research conducted in 2022. The results of this visualization can be explained as follows:

a. Hidayat cited the results of the research conducted by Juniarti and Safitri because the color visualization from Juniarti and Safitri's research is darker than the color visualization from Hidayat's research.

b. Naim, Bustami, and Munir cited the results of research conducted by Hidayat because the color visualization from Hidayat's research was darker than the color visualization from Naim, Bustami, and Munir's research.

Furthermore, the visualization of density, called density or emphasis on nodes, is presented in Figure 4.

![Figure 4. Density visualization on co-authorship](source: Vosviewer, 2023)

From the results of the density visualization shown in Figure 4, there are groups of researchers who have relationships with each other in research in gastro diplomacy. The saturation level of the nodes in the density visualization also indicates the number of studies involving other researchers by citing the authors. For example, Hidayat's research shows the brightest node density color, which indicates that this writer often conducts research citing several other studies, demonstrating close research collaboration in the field of gastrodiplomacy.

Map of the Development of Gastrodiplomacy Research in Indonesia Based on Keywords (Co-occurrence)

Co-occurrence analysis is a method that can be used to reveal statistical research topics. In simple terms, Co-occurrence analysis involves counting pairs of data in collection units. The more often two keywords appear together, the closer the relationship between them. In order to reveal the structure and developments in the field of research, several methods of analyzing words can be applied based on the matrix of words. These methods include factor analysis, cluster analysis, multivariate analysis, and social network analysis. These methods are very useful for researchers in understanding the general picture of a research field and play an important role in identifying the value of an academic discipline (Buzydowski, 2015; Chen, Chen, Wu, Xie, & Li, 2016). The keywords in this study represent the topic or area of research being explored. Based on the keyword analysis carried out by the author, then the data was analyzed using VOSviewer. The results of the co-occurrence network visualization analysis are presented in Figure 5.

![Figure 5. Network visualization on co-occurrence](source: Vosviewer, 2023)

Figure 5 is a visualization of the Co-occurrence network, which illustrates the relationship between various terms or keywords in research on the topic of gastro diplomacy in
Indonesia from 2017 to 2022. Out of 104 articles registered on Google Scholar, they can be grouped into 7 clusters, which color nodes can identify for each keyword.

After identifying the mapping and clustering of gastro-diplomacy research topics using network visualization, the next step is to map and cluster gastro-diplomacy research trends based on historical traces or years of research publication.

By using bibliometric analysis and importing metadata from Publish or Perish into Vosviewer software, Overlay visualization has been obtained. In this visualization, the colors at the nodes (dots) represent the year the keywords were published in the research articles. For example, the keyword "gastro diplomacy" has a green node, indicating that articles containing that keyword were published the most in 2020. Similarly, the term "Dutch" in the Overlay visualization has a dark blue node, indicating that the term "Dutch" was widely discussed by researchers in 2019 in the context of gastro diplomacy research topics.

Another example is the keyword "food," which has a yellow node color. The term "food" is an important element in the topic of gastro-diplomacy research and is often used to indicate a system of organizing and navigating the topic—the most researched keyword "food" in 2021 in gastrodiplomacy. Furthermore, bibliometric analysis was performed using density visualization or density visualization, as shown in Figure 7.

From the visualization shown in Figure 4.7, it can be identified areas that are dense or have high density between one node and another. These areas show a degree of saturation in the number of keywords that have been researched and indexed in Google Scholar, such as "gastro diplomacy" and "Indonesia," which are highlighted in yellow. Conversely, nodes marked with dark colors indicate that these topics are rarely researched. It provides an opportunity to conduct further research on these topics, such as "Indonesian" and "Dutch" diplomacy strategies that are connected to the topic of gastro diplomacy. Through bibliometric analysis on density visualization, research on gastro diplomacy related to Indonesian and Dutch gastro diplomacy strategies is still relatively low. Research on this topic is still very broad to be researched and provides an opportunity for researchers to explore this field further.

**Conclusion**

From bibliometric analysis using Vosviewer with network, overlay, and density visualization, during 2017-2022, gastro diplomacy research experienced fluctuating developments. In the bibliometric analysis based on researchers or authors, "Hidayat, a" is a researcher who was actively conducting research in gastro diplomacy, with four publications in the 2017-2022 period. There is a relationship or collaboration between the author "Hidayat" and five other authors, namely Munir, Safitri, Juniarti, Naim, and Bustami, which can be seen from the network (edge) that connects them.
Furthermore, the mapping of the field of gastro diplomacy based on co-occurrence (keywords) shows that out of a total of 104 articles indexed on Google Scholar, they can be grouped into 7 clusters.

**Implications**

Using data from Google Scholar alone does not cover all research on gastro diplomacy, so the analysis may not be comprehensively representative. Future research should utilize various other data sources such as Scopus, Web of Science, and the Directory of Open Access Journals for broader and in-depth coverage. Then, in addition to state diplomacy, research needs to involve the role of non-governmental actors such as restaurants, famous chefs, or culinary communities in gastro diplomacy. Focusing on specific case studies from certain countries or types of cuisine that have not been widely researched can also open up new perspectives in this field.

Analysis shows collaboration between researchers and patterns of co-occurrence of keywords that indicate dominant research themes. However, a deeper understanding of the publication's content and findings is necessary to obtain a more comprehensive picture. In addition, exploratory research regarding the real impacts of gastro diplomacy, such as its influence on tourism, trade, or diplomatic relations between countries, is an interesting topic that can provide practical and applicable insights in this field.

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