

ORIGINAL ARTICLE

Open Access



# Sawsawan: explicating the culinary heritage significance of Philippine condiments using bibliometrics (1972–2018)

Karen Grace V. Aster<sup>1</sup>, Jaime Ramir B. Castillo<sup>1</sup>, Shekaina R. Cheng<sup>1</sup>, John Paulo L. Trillana<sup>1</sup>,  
Ysabella Marie B. Varlez<sup>1</sup> and Jame Monren T. Mercado<sup>1,2,3,4\*</sup> 

## Abstract

The Philippine condiment, or *sawsawan*, comes in many forms such as *suka* (vinegar), *toyo* (soy sauce), *patis* (fish sauce), and *calamansi* (Philippine lime), to name a few. This paper aims to create a bibliographic database surrounding *sawsawan* with the goal of preserving the culture and adding information on Filipino heritage, as well as garnering attention and appreciation for Philippine condiments to further the nation's culinary heritage. The qualitative research approach was used to investigate three themes of culinary heritage significance: aesthetics, social relevance, and symbolic context. A total of 523 definitions of various *sawsawan* were categorized into seven themes: *matubig*, *durog*, *pinreserba*, *sariwa*, *mamantika*, *may kapares*, and *pinaghalo*. Through the bibliometric approach, the study showed that *sawsawan* has the potential to be more known locally and globally. About 56 references that discuss the culinary heritage significance of Philippine condiments have been found, ensuring the timeless nature of the rich Filipino culinary heritage. Some 26 publishers from four countries and 58 authors, mostly Filipinos, contributed to Philippine cuisine literature. Food enthusiasts, food writers and editors, and chefs will have a better understanding of each condiment and can choose the combinations that will work best for their dishes. This study may also be helpful as related literature to future scholars working on a related topic.

**Keywords** Bibliometrics, Intangible cultural heritage, Philippine condiments, *Sawsawan*

## Introduction

Heritage is a feature belonging to the culture of a particular society such as traditions, languages, or buildings that were created in the past and still have historical

importance [1]. An important heritage of a community is food, often defined as culinary or gastronomic heritage [2]. In a cultural group or in a specific society, culinary heritage is incorporated into the cradle of the food that defines the people living in certain places. In the last few years, there has been a flourishing discourse on the relationship between food heritage and sustainability [3]. The traditional way of passing down cultural cuisine from one generation to another replenishes the identity of a certain family or community; therefore, food is considered as an Intangible Cultural Heritage (ICH). Under the United Nations Educational, Scientific and Cultural Organization (UNESCO) ICH Convention, five domains are highlighted, namely *oral traditions and expressions, performing arts, social practices, rituals and festive*

\*Correspondence:

Jame Monren T. Mercado  
jtmmercado@ust.edu.ph

<sup>1</sup> College of Tourism and Hospitality Management, University of Santo Tomas, España Boulevard, Sampaloc, 1015 Manila, Philippines

<sup>2</sup> Research Center for Social Sciences and Education, University of Santo Tomas, España Boulevard, Sampaloc, 1015 Manila, Philippines

<sup>3</sup> The Graduate School - Center for Conservation of Cultural Property and Environment in the Tropics, University of Santo Tomas, España Boulevard, Sampaloc, 1015 Manila, Philippines

<sup>4</sup> UST Sentro Turismo, University of Santo Tomas, España Boulevard, Sampaloc, 1015 Manila, Philippines



© The Author(s) 2023. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

events, knowledge, and practices concerning nature and the universe, and traditional craftsmanship [4]. Gastronomy and culinary heritage are significantly attributed to the community's ICH value and lifestyle under the social practices, rituals, and festive events domain. Culinary heritage also amplifies the economic growth in terms of tourism provided by the recognition of traditional food in the local community. Thus, evaluating the culinary traditions and recognizing their significance in such social identities are factors to preserve heritage.

Years have passed, generations have evolved progressively, and every aspect of living advanced, too. At the same time, the advancement of culinary heritage had an impact on the significance and relevance of traditional culture. Problems continued to constrain the preservation of culinary history even as the main factors of risking the culinary heritage failures in the implementation of food heritage remains a mystery. UNESCO and the drafters of the Convention believe that ICH is truly endangered [5], but that multiple factors such as natural disasters and human-made hazards should be considered in safeguarding culinary heritage [6]. Increasingly, experts agree, there is a loss of diversity in cultural practices around the planet [7]. The current discussion explores how the elevation of food to the status of heritage can enhance the sustainability of the food system while safeguarding traditional food resources through the active participation of local communities [8].

Filipino cuisine is very resourceful because it uses almost every ingredient in the communal surroundings and turns it into a beautiful and tasty dish that the audience will appreciate [9]. One of the big factors of Filipino meal appreciation is the use of native condiments or *sawsawan*, a Filipino mix of condiments such as sauces and spices to filter unwanted taste such as gaminess of meat and to amplify the savory taste of the dish. Main courses are served with condiments in small quantities to enhance and enrich the flavor of the dish. In colonial times, the colonizers exhibited the culinary heritage of the Philippines, but the Filipinos used to complement the food with *sawsawan* instead of serving it in its original dish. Henceforth, every kind of *sawsawan* goes well with any dish, regardless of flavor.

Condiments like vinegar, soy sauce, ketchup, and fish sauces are some of the popular ingredients produced in the Philippines. Manufacturing these entails low export cost, making it competitive in both rural and urban areas [10]. Since one of the important aspects of Filipino culture and identity is food, condiments play a huge role when it comes to preserving Filipino cuisine because the combination with food creates an authentic Filipino dish. Raymond Sokolov states that the Philippines, in contrast to other cultures, was able to sustain its indigenous food

[11] where condiments are used to highlight the flavor of the type of food. It is hard to imagine not using condiments for Filipino dishes because it has been part of Philippine culture to eat them together [12].

This research paper aims to garner attention and appreciation for Philippine condiments and contribute to the enrichment of culinary heritage. The study also aims to analyze the culinary heritage significance of Philippine condiments using bibliometrics as derived from different reliable references from 1972 to 2018. Through this research, the unique products that are not seen at a usual Filipino table can be further reviewed to make them more known condiments using bibliometrics. This opens opportunities to extend the analysis to neurophysiological research in food science. At the same time, future chefs will have a deeper understanding of each condiment and learn how to identify which combination will work best for their dishes to improve as well as give each dish a whole new identity. Future researchers who intend to pursue a similar topic may use this research as related literature. By using food bibliometrics, adapting international sauces and recombining spices and condiments will result in a better output from its fusion. A growing observation is that Filipino cuisine is slowly being replaced by preference for foreign food. In many Philippine restaurants and on special occasions at home, foreign dishes—usually Spanish, American, and Continental—are more prominent *with occasionally a token of native dish*. [13]. It is therefore the researchers' desire to help elevate Philippine cuisine by understanding and recognizing the importance of *sawsawan* in the ordinary Filipino dining table.

## Literature review

### Culinary heritage and its significance

Heritage is associated with culture, legacy, and tradition. UNESCO, an organization that confirms the in-depth definition of heritage, stated that *heritage is the cultural legacy which we receive from the past, which we live in the present, and which we will pass on to future generations* [14]. Furthermore, the UMass Amherst Campus defined heritage as *the full range of our inherited traditions, monuments, objects, and culture. Most important, it is the range of contemporary activities, meanings, and behaviors that we draw from them* [15] leaving the word "heritage" as an amalgamation of both past events and its connotation to the ancestors involved.

According to the IGI Global, formerly known as Idea Group Incorporated, culinary heritage is a term that incorporates the origins of food-related activities of a certain society or cultural group. Integrating the definition of heritage with the term "culinary" involves both food as a subject matter and its historical background, needed

for future innovation. The culinary heritage in rural areas means the memory of an entire group and its roots [16], while the culinary processes of a region represent who they are and who they were. Culinary heritage gives value to a place and to people, helps to distinguish one person from another, and leads to promoting and safeguarding the history of a place [17]. As a result, a tainted culinary culture may spread from tourist to tourist, eventually leading to the establishment of ethnic restaurants all over the world. Furthermore, restaurateurs in foreign countries make use of stereotypical ethnic theming (i.e., décor, music, costumes and other stimuli associated with the culture of the cuisine served) in the sole attempt to create an “authentic” environment in restaurants [18].

Ancestry connects people through food culture. Those who immigrated to a new nation brought with them culinary traditions and heritage. At the same time, travelers sought to experience cuisines outside their own countries [19]. Although it may seem paradoxical, something as short-lived as food serves as a living record of the past. According to a book written by [20] *food constitutes a basic element of the culture of a people or of a community*. The passing down of dietary customs from one generation to the next helps to create one's own identity and memories, as well as that of a community. Therefore, food can be considered an ICH due to its cultivation [21]. According to the Canadian Commission for UNESCO, traditions and living expressions that are passed on to generations are referred to as ICH. With this, ICH is defined as customs, ways of being, knowledge, and abilities that communities, groups, and in some cases, individuals acknowledge as part of their cultural heritage. This definition also includes the tools, artifacts, and spaces associated with these practices, representations, and expressions [22]. Even though it is vulnerable, ICH plays a crucial role in preserving cultural diversity in the face of accelerating globalization. The wealth of knowledge and skills passed on through ICH rather than the cultural manifestations itself makes it important. This knowledge transmission has social and economic value for both minority and mainstream social groups within a state, and it is crucial for both developed and developing countries [23].

According to [24], from private foundations to governments from regional to national levels, many groups have supported the identification and preservation of culinary heritage. The objective is not just to preserve certain foods, behaviors, or goods because they are valuable as cultural artifacts; but to also recognize culinary heritage's potential to drive rural development and tourism growth. The activities surrounding it are strongly related to other facets of public policy, ranging from education and health to nutrition and the export of agricultural products. In

fact, the popularity of a region's culinary traditions may spur interest among domestic and international consumers in the region's specialties, even in the locations where those delicacies originated from [24]. Food demonstrates the significance that adds to its individuality and difference as a component of the people's identity. These historical, artistic, social, and symbolic considerations have roles in defining food's relevance. It is crucial to consider these since they add to the narrative and significance of the neighborhood and the development of food as a cultural artifact [25]. Hence, supporting culinary traditions and recognizing their role in forming individual and societal identities are key components of heritage. An understanding of the significance of heritage in people's lives should be taken at the organizational, individual, policy, and educational levels. This should specifically consider the significance of food in relation to memory and the expression of identity, as well as various religious, political, and ethnic beliefs and customary eating practices [26].

#### Issues and constraints on culinary heritage significance

Culinary heritage plays an important role in an individual's life. It is so valuable that it becomes the reason why tourists travel to countries or provinces. As such, efforts must be made to protect culinary heritage because it is responsible for giving people a sense of belonging with its power to gather people [27]. Protection through safeguarding and creating laws for culinary heritage is needed because problems like natural and human-made hazards [6] and globalization can pose threats to heritage itself [28].

Due to the high popularity of culinary heritage, it must be safeguarded because it is a bond that transports people through time and culture [27]. Safeguarding ICH is crucial to prevent it from fading from history. This is done by preserving the pure concept of ICH so that knowledge and skills are passed on to generations [29]. The need to safeguard heritage arises from the problem of natural and human-made hazards. Natural hazards include flooding, fire, earthquakes, tsunamis, typhoons, and avalanches, while human-made hazards may include armed conflicts or wars [6]. A recent example of an event that can endanger ICH is the war in Ukraine, a human-made hazard. Due to the chaos, the country leaders of Ukraine requested to process the Ukrainian borscht—a beet-infused soup that may include fish, mushrooms, or sweet peppers—to have it enlisted on UNESCO's list of *Intangible Cultural Heritage in Need of Urgent Safeguarding*. Borscht has existed for a long time in the traditions of Ukrainians, and because of that, every household has different ways of cooking it [30].

In an international conference on globalization and ICH co-organized by UNESCO in Tokyo, Japan in 2004, discussions focused on how globalization has given humanity advancements in technology, politics, economic, and social terms. Globalization aims to give humans an easier way of life and it may be in the form of communication, transportation, and various other ways. On the other hand, the negative impacts of globalization can endanger ICH. Globalization is the reason why ICH education is needed because it is challenging to transmit knowledge in an advancing community [28]. The same problem is presented in [31], wherein one of the issues that hindered Malaysian transmission of ICH is how the young generation of Malays prefer commercialized products rather than their traditional food. They added that modernity such as unlimited access to information affects the way younger generations of Malay perceive how they eat food [31]. Globalization also affected the research by [32]. They explained how safeguarding and promoting ICH in a modernized approach contradicts each other because modernity will try to innovate traditional heritage. Another example given through another research observed the beekeeping heritage in the forest of Kenya called the Ogiek Mau. In the study, they used ethno-biological technology to increase honey production. The use of modern beehive technology cut the link to the traditional way of beekeeping because it weakened the beekeepers' link to their heritage [32].

### Overview on bibliometrics and culinary heritage

Bibliometrics plays an important role in food anatomy. It is an analysis based on quantitative information of significant previous academic articles from the bibliographic database [33]. It broadens the capacity of the past research and expands it into a significant quantity of useful information. The bibliometric methods are divided into three groups, namely review studies, relational techniques, and evaluation techniques [34]. Review studies contain a systematic review, meta-analysis, and qualitative approach while relational techniques include citation analysis, bibliographic analysis, co-wording analysis, and co-authorship analysis. Evaluative techniques contain productivity measures, impact metrics, and hybrid metrics [34].

Food and cuisine illustrate the main themes of destinations' intangible heritage which can become an international brand [35]. Based on the common claims of the two academics' articles, the Horng & Tsai bibliometrics is valuable to some food researchers and innovators because the analysis can help them distinguish the flaws and probable outcomes of the evolved dishes. However, despite a growing number of food and gastronomy studies in the hospitality and tourism

disciplines, there is a need for analysis demonstrating how food and gastronomy research have evolved and have become an emerging research area [36]. These studies project into one ground and to a greater extent, speculation of studies in culinary through bibliometrics analysis contemplating food expansion.

Several articles, studies, and research about culinary heritage and its significance using the bibliometric approach abound. For instance, [37] were able to gather 608 recipes of Filipino *kakanin*, a local rice snack that is popular in the Philippines that can be eaten and consumed daily in-between meals. The native delicacies were grouped according to name, appearance, ingredients, preparation methods, and other factors. The research showed that the *kakanin* recipe has a sentimental meaning for the locals in different regions [37]. Similarly, in the study conducted by [38], 869 local food articles found through the Web of Sciences (WoS) database showed that for over five years, the tourism and hospitality discipline focused on local foods, and that the number of studies about local food increased and grew quickly. In contrast to the study of [37–39] focused on the development of research themes, methods, potential disciplinary, and collaborations, as well as the abundance of food and gastronomy researchers in the industry. The researchers discovered that 462 articles are related to food and gastronomy and these topics became more popular after 2000 [39]. A direct connection between the macro-level point-of-view articles and food tourism has been found. The research also showed that food tourism studies about Southeast Asia are clustered into one location; thus, more studies are encouraged in this field [40].

Based on the in-depth analysis, the *kakanin* study of [37] focuses more on using bibliometrics for advanced remote evolution of the Filipino rice cake. On the other hand, [38] plotted the foundation for further research on food articles while [39] declared that the researchers in the culinary arts industry had been using the method since 2000.

The common topic among the various articles is the utilization of bibliometrics when dealing with research about culinary heritage. Doing a deep dive into culinary heritage can prove difficult if the topics chosen to feature a niche subject and destination. Culinary heritage is a big topic and further research is highly recommended [41]. Fortunately, the number of research done with bibliography and culinary heritage continues to increase [39]. While the use of bibliography in studies on the relationship between gastronomy and tourism is commonly discussed in the articles, the papers tackle different places, countries, or destinations. Since Filipino cuisine is heavily influenced by foreign cultures, attempting to find out

more about the formation of Philippine cuisine seems redundant. Filipino cuisine has its own unique characteristics, and its essence should be recognized and preserved especially in today's fast-paced world [42].

### Philippine condiments

A condiment is defined as a food element that is intended to enhance the flavor of dishes. Its primary purpose is to add flavor to a dish to help create a dining experience that is unique to a community [43]. As defined by [44], condiments are made from prepared ingredients that use one or more spices and are then served in small quantities alongside main dishes to complement the flavor of a dish. For Filipinos, condiments are partners of any meal, either eaten at home or in restaurants. It is the Philippine dipping sauce called *sawsawan* or Philippine condiments [45]. Orandain [46], a reporter from CNN Philippines, wrote that *unity has never been our (Filipinos) strong point* when it comes to Philippine cuisine because many years of colonization left the Philippines with mixed cultures. This resonates also with the Philippine condiments because these were inherited from different foreign entities, for instance, Chinese traders influenced early Filipinos to use *toyo* or soy sauce to enhance the salty flavor of the dishes. The writer also stated that *sawsawan* is not only limited to being used as a dipping sauce. Rather, it also adds texture and flavor to a dish when used as an ingredient [46]. The use of *sawsawan*, which includes dipping sauces, condiments, and relishes given in small dishes, and combined by the diner to suit the taste, is a distinct feature of Filipino cuisine [47]. As described by [48], *sawsawan* brings life to roasted, grilled, and boiled foods, brings color to the table, and enhances the enjoyment of dining. But how did the *sawsawan* make its way to Filipino dishes?

In a research article written by [49], she described the inherited cuisine as *indigenized cuisine* because Filipinos developed their culture from different races. But unlike their colonizers, Filipinos use the *sawsawan* to complement food rather than just eat the served dish as is [49]. This is done as a way for Filipinos to adjust and enhance the taste of their food to their own preferences rather than having the cook make major adjustments to the dish. The *sawsawan* comes in many forms: a squeeze of a *calamansi*, *bagoong* paired with *kare-kare*, or even

a mixture of *toyo* and *suka* as a side to whatever food is being served [50]. According to [48], *patis*, *suka*, *calamansi*, and *toyo* are the basics in Filipino cuisine, stating that *There are no strict rules as to what sawsawan should go with specific dishes*. The fondness of Filipinos for adding *sawsawan* to savory dishes balances with something sweet like *atchara*, ripe mango or banana; salty dishes like grilled fish or pork with sour ones like *calamansi*, *kamias*, or *suka*; or a sweet dish with something salty like *bagoong alamang*, *itlog na maalat* (salted egg), or *patis* [48]. Garlic, onion, and ginger are aromatics that enhance flavor. For a unique twist, fruits and juices, particularly the sour varieties, are also added to these simple sauces [51]. In a book by [51], she listed a wide-ranging guide to *sawsawan*. *Calamansi*, *kamias*, tomatoes, chili, guava, ginger, mango, and *dayap* are all included in this handbook. Even the botanical components of *wansuy* (coriander leaf) and *kinchay* (Chinese parsley) are included, stating as well that various *atchara* or pickle relishes can be added to the *sawsawan* or served on their own as a flavor contrast to the main meal.

### Materials and methods

#### Design

To source data on the culinary heritage significance of Philippine condiments, the qualitative research method was used [52]. The bibliometrics approach was primarily used in this study to tabulate, organize, and analyze the data gathered from the references [53]. A repertory grid was used to document the definitions of *sawsawan* and where the *sawsawan* originated from. The grid also contained elements that defined the culinary heritage significance of *sawsawan*. At the same time, a tabular presentation of the details gathered from references such as title and year of publication, author, and other relevant information was made. Table 1 shows the different methods of data organization used in this study.

#### Subject and study site

The subject of the research is Philippine condiments, also known as *sawsawan*. The study sites are located within Metro Manila and in Pampanga. The researchers visited three university libraries, two local libraries, and one culinary museum. The researchers gathered data from University of Santo Tomas' Miguel de Benavides Library,

**Table 1** Tabular representation of research methods

Design	Approach	Measurement	Instrument	Ethical consideration	Mode of analysis
Qualitative	Bibliometrics	Documentary analysis	Tabular reconnaissance or literature review matrix	Communication and approval Proper in-text citation and referencing	Thematic network analysis— Mixed development (Kuchartz, 2019)

Ateneo de Manila University's Rizal Library, Holy Angel University's Central Library, The National Library of the Philippines, Angeles City Library and Information Center, and Museo Ning Angeles in Angeles City, Pangasinana. They found 147 references from 1972 to 2018, but they only collected data from 56 of these materials. Of these reference materials, 34 are cookbooks mostly written by Filipino authors, while 13 are academic books. Three are culinary magazines published and distributed in the Philippines in hard copy format and two are encyclopedias. The researchers also used a dictionary, a journal, a thesis paper, and text engraved in a glass display at the Museo Ning Angeles.

### Data measure

The study used documentary analysis which entails systematic approaches to gather information needed in the research [54]. The measurement system used has allowed the researchers to gather information from the published references, determining what Philippine condiments are, and supporting its culinary heritage significance. The use of a Repertory Grid and Data Tracker as the Literature Review Matrices has enabled the researchers to easily identify similarities and differences in information from both the data and references. Through these matrices, the researchers were able to categorize the different kinds of Philippine condiments.

### Data collection procedure and ethical consideration

To enable them to conduct research in various libraries, the researchers first requested the University's Central Library for an endorsement letter. It was then emailed to the librarian-in-charge of the different universities and approval for onsite research was secured. Once inside the libraries, the researchers were assisted by librarians from the different institutions by directing them to the right references. The researchers were first led to the library's online database to search for the needed books. They then gave the list of references they needed to the librarian-in-charge of specific sections. These references would either be picked up from the counter or be brought to their table. Third, information from the reference would then be placed in the repertory grid. The researchers created a different set of Excel sheets to document and track the data gathered from the libraries. First sheet was for documentation of references while the next sheet was created to document and highlight the definitions and statements on *sawsawan*. From these sheets, the researchers derived the different objectives and studies that were tracked based on the culinary heritage significance. The last procedure entailed the creation of a table for the repertory grid that contains the categories,

themes, and the statements. Terms and phrases of *sawsawan* and its variations were taken from the references and placed in the repertory grid. The research narratives were written by the team members in their respective homes since there were no face-to-face classes in the University yet.

Among the ethical considerations of this study was the need to seek permission from authorities before proceeding with data-gathering to ensure that courtesy was properly extended. In addition, the use of in-text citation of sources of the literature was observed, following the recommended academic standards, to ensure proper attribution of information.

### Mode of analysis

In this paper, the researchers used a repertory grid to analyze the data gathered using bibliometrics. It is a structure wherein individuals review and identify the different representations to organize as well as to record the responses through a form of grid [54]. The researchers created a three-column grid to list down all the references for *sawsawan*, significant terms for Philippine condiments, as well as the culinary heritage significance. Also, it highlighted the similar terms, words, and statements from different books, cookbooks, dictionaries, encyclopedias, magazines, and articles that are recognized in six libraries.

### Findings

#### Philippine condiments, references, and sources

After gathering data from different libraries, the researchers were able to identify 56 references that contained important data about the culinary heritage significance of Philippine condiments and their different varieties. The researchers were able to find references from 1972 to 2018. The references gathered were published by four different countries, namely Philippines, China, Singapore, and the USA. Out of the four countries Philippines had the most number references that were published. A total of 26 publishers and 58 different authors were identified. The authors represented four nationalities which are Australian, Filipino, Filipino–American, and Filipino–Australians, wherein the most common nationality represented were Filipino. The researchers were able to extract significant data from references that were published from 1972 to 2018. At least two references were gathered from 1974, 1977, 1986, 1993, 1999, 2000, 2001, 2003, 2006, 2008, 2010, 2013, 2015, 2016, and 2018. The oldest reference found was from 1972, a cookbook titled “Filipino Family Cookbook” [55] and published by New Day Publishers in the Philippines. The latest published references were gathered from 2018. These consisted of three books, the first being an academic book titled “I am a Filipino

and This is How we Cook” [56] which was published by the Workman Publishing Company. The second reference is a cookbook titled “*Pulutan! Filipino Bar Bites, Appetizers and Street Eats*” [57]. The third reference used is another cookbook titled “*The World of Filipino Cooking: Food and Fun in the Philippines*” [58] one of two Australians from the reference list that have written books about the Philippines. Both cookbooks were published by Tuttle Publishing. The researchers found the greatest number of references from 1999 with six sources. Most of the references were found in 1999 [59]. Figure 1 presents the number of references found in each year.

From the numerous references that were used, the researchers were able to identify 26 different publishers. Anvil Publishing published 21 of these references that the researchers were able to gather significant data from. Both ABS-CBN Publishing Inc. and The Bookmark Inc. had three references gathered from their publications, while Periplus Editions and Tuttle Publishing contained two each. The rest of the publishers had one reference that had significant data about Philippine condiments.

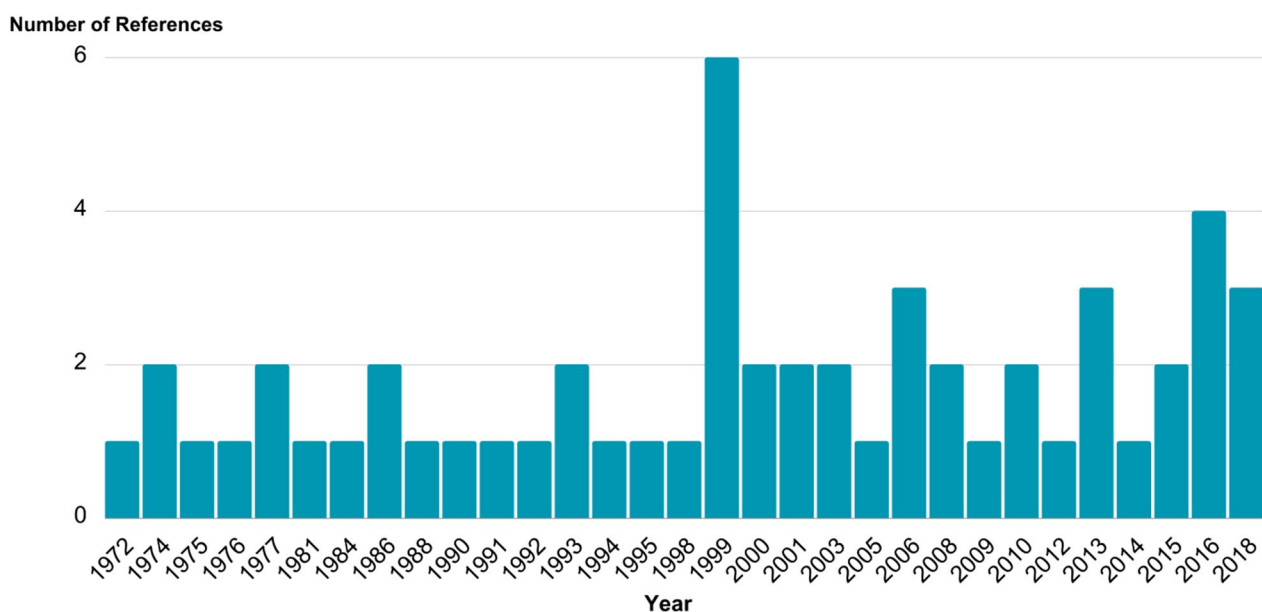
The researchers were able to identify 56 references that contained significant data about Philippine condiments. Some 58 authors were identified from these references, with some of the authors working together on other references. The researchers found only one reference from most of the authors but there were a few authors that had two or more relevant materials used as references. These

included Gene R. Gonzales, Doreen G. Fernandez, and Myrna D. Segismundo, who are all Filipinos. Gonzales contributed the greatest number of sources, authoring eight references that were used in this study.

#### ***Iba’t Ibang Uri ng Sawsawan sa Pilipinas: different types of condiments in the Philippines***

From the 56 references, the researchers were able to come up with 18 categories of Philippine condiments and these were grouped into seven themes according to their similarities. The condiments were grouped according to the following themes: *matubig*, for sauces that are fluid in nature; *durog* for pulverized condiments such as rock condiment/spices used as additives for some dishes; *asin* or salt and *asukal* as plain sugar; and *pinreserba* for condiments that have been fermented and pickled. In addition, *sariwa* was used for sauces that can be picked from nature and used directly, while *mamantika* referred to condiments with oil as base. *May kapares* was the theme for sauces that have specific pairings, while *sawsawan* that were mixed and matched are called *pinaghalo*. The common combinations are *toyomansi*, *patismansi*, and *suka’t bawang*.

*Matubig*’ theme includes ketchup, a commercial product that adds a touch of sweet-spicy flavor specially to fried dishes. One of the commonly used varieties is banana ketchup. Another is *patis*, a Filipino fish sauce extracted from heavily preserved fish and is a highly



**Fig. 1** The figure shows the representation of the publication years of references gathered. The digits on the left represent the number of references. The characters on the bottom of the chart represent the years which the references were published in. Based on the findings, the highest number of published works related on Sawsawan was during the year 1999. The oldest reference was published in 1972, and the current published works were from the year 2018

fermented condiment used in different dishes or as a *sawsawan* on its own. Next is *toyo* or soy sauce which is commonly mixed with chili and/or *calamansi*, and finally, *suka* or vinegar which is a sour liquid resulting from fermentation. Based on the given sample size plotted in the statistical bar graph in this study, *suka* is the second most habitual condiment used, based on the authors' references. Its strong flavor varies depending on its age of fermentation. For example, *sukang Ilocos* takes about a year to ferment in clay jars.

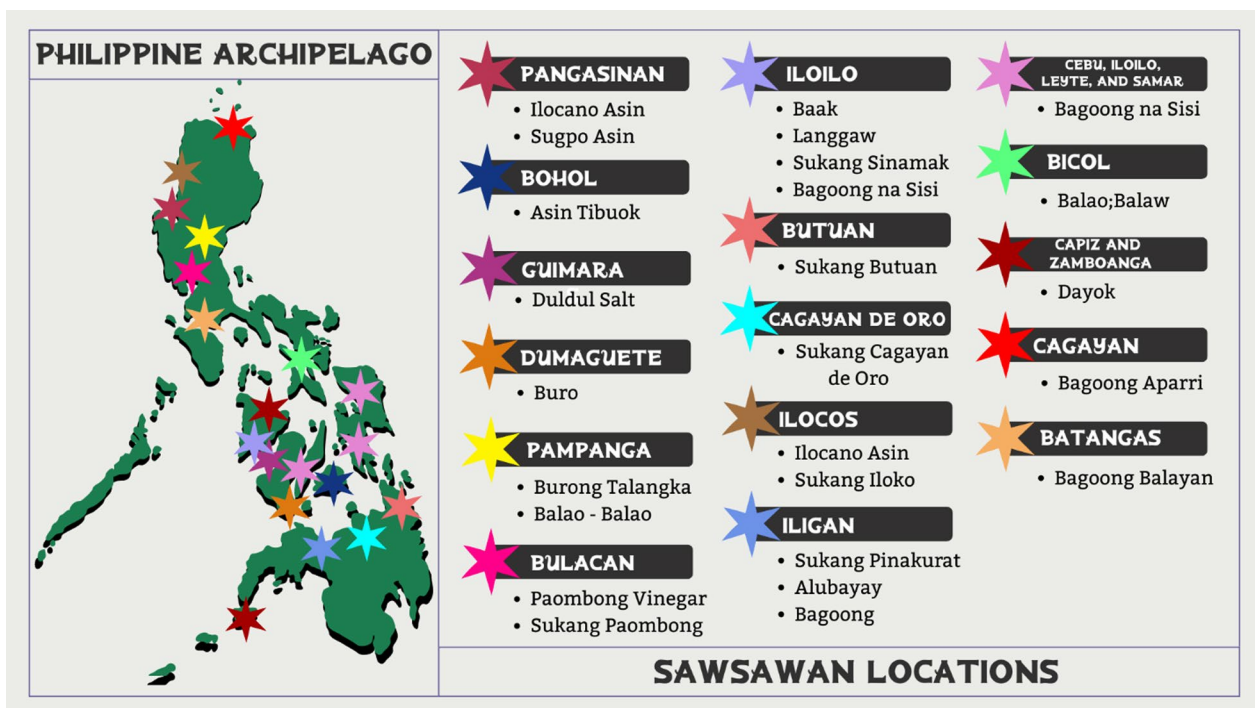
In *pinreserba* goes *bagoong*, the commonly preferred *sawsawan* based on this study's references. It is a species of tiny shrimps which is made into a salty paste. Another fermented product which is made from meat, fish, or even rice is called *buro*. In Bicol, *balaw* is a signature *buro* as *sawsawan*, the third recurrent *sawsawan* all over the country. Another is *atsara*, a Philippine dish made with pickled vegetables such as grated green papaya, carrots, red bell pepper, and raisins in vinegar and brine. *Sariwa* includes *bakhaw*, a variety of mangrove trees. Its bark is used as a condiment. In Cebuano, *kinilaw* is called *binakhaw*, one of the uncommon condiments based on the authors' statistics due to its low popularity. *Mamantika* includes chicken and *atsuete* oil and are commonly used for chicken *inasal* and other fried or grilled dishes. On its downside, chicken oil is uncommon among

the references. In *may kapares*'-themed *sawsawan*, *agredulce*, a Filipino-style sweet and sour *sawsawan*, is *sarsa* made originally from its meat's dish and made part of its ingredient. Fishball sauce, a street food sauce that has a rich sweet flavor, is also one of the least favorite sauces based on the overall statistics due to its taste. It is best for street foods alone.

The gathered data from 56 references resulted in 523 terms which were grouped according to themes and categories. The *matubig* category has ten terms for ketchup, 43 for *patis*, 18 for *toyo*, and 83 for *suka*. The *durog* category has 13 terms for *asin* and 14 for *asukal*. The *pinreserba* category has 35 terms for *atsara*, 146 for *bagoong*, and 61 for *buro*. The *sariwa* category has 43 terms for *calamansi*, one for *bakhaw*, and 12 for *sili*. The *mamantika* category has five terms for *atsuete* oil, and one for chicken oil. The *may kapares* category has two terms for *agredulce*, and one for fishball sauce. The last theme, which is the *pinaghalo* category, has eight terms for the *toyo* mixtures, 19 for the *suka* mixtures, and two for the *patis* mixtures. The highest category from the theme comes from the *pinreserba* column, and the lowest category is the *mamantika* theme. For the condiments, *bagoong* has the greatest number of terms, while *bakhaw*, chicken oil, and fishball sauce tied for the lowest counts. This information can be further seen in Fig. 2.



**Fig. 2** The figure shows a creative representation of the thematic identities of Philippine Condiments based on Bibliometrics. The gathered data from 56 references resulted in 523 terms which were grouped according to themes and categories. The highest category from the theme comes from the *pinreserba* column, and the lowest category is the *mamantika* theme



**Fig. 3** The figure provides the varieties of Philippine Sawsawan based on location. The legend is divided into location and the Sawsawan that is present in the mentioned area. Based on the creative interpretation, the presence of traditional Sawsawan of the Filipinos can be significantly seen and experience in different parts of the country, from Luzon, Visayas, and Mindanao

*Sawsawans* and where these are located can be seen in the Philippine archipelago illustrated in Fig. 3. The legend is divided into location and the *sawsawan* that is present in the mentioned area. In Pangasinan, the common *sawsawan* products are salt-related condiments. The Ilocano *asin* and *sugpo asin* are both salt-based condiments and are used in specific dishes. Another salt-based *sawsawan* is present in Bohol which is *asin tibok*, while in Guimaras, there is *duldul salt*.

Fermented *sawsawan* is found in several places. For instance, in Dumaguete, *buro* comes in various kinds such as *burong isda*, *hipon* and even rice. Meanwhile, in Pampanga, there is fermented shore crab or *burong talangka* and a different type of *burong isda* named *bilao-bilao*.

Vinegar is a special condiment that is commonly used in most Filipino dishes. For example, in Iloilo they have *baak*, *langgaw*, and *sukang sinamak*. On the other hand, Bulacan is famous for *sukang paombong*. Other places have their own flavors of vinegar that represent their community such as *sukang Butuan*, *sukang Cagayan de Oro*, and *sukang Iloko*. In Cagayan, a different kind of lime called *suwa*, a variant of *dayap*, represents their area. Finally, one of the signatures *sawsawan* in the Philippines, the *bagoong*, has been largely used all over the country in dishes, snacks, street foods, and even fruit condiments.

Ilocos has *alubayay*, *bagoong Iloko*, and *bagoong terong*. They differ in terms of age of fermentation and the recipe used in the process. The Visayas provinces, particularly Cebu, Iloilo, Samar, and Leyte, are known for *bagoong na sisi*, a traditional Visayan *sawsawan* which is enriched with oysters. Furthermore, in Capiz and Zamboanga, *dayok*, which is a paste made from fresh fish intestine, is used. Bicol has its own unique *bagoong* which is *balaw* or *balao* for its unfermented *bagoong na alamang*. Other *bagoong* varieties represent other places such as *bagoong Balayan* of Batangas and *bagoong Iligan*.

The researchers also gathered the foremost condiment-food pairings found in various references. Per Philippine condiments, *asin*, natively called *sugpo asin*, is best partnered with green mango. Next is *achuete* oil which originated from Iloilo and is used to enhance the savory *chicken inasal*. The *atsara*, commonly a side dish which is an Indian-influenced relish, is best paired with *silog* (*sinangag* and *itlog*) dishes such as *tapsilog*, *tosilog*, *longsilog*, and many others. The most prominent condiment that was gathered by the researchers is the *bagoong* which comes in various kinds. It is based on fermented shrimp or fish and is notably common across all regions. It can be partnered with any course dishes, side dishes, and street foods. *Bakhaw*, which is a bark used as a condiment in Cebu, is commonly used with *kinilaw*. Aside

from fermented shrimp, Filipinos also ferment catfish and *aligi*, which is a seafood paste derived from crabs. These are called *burong kanduli* and *burong talangka* and are flavor-rich with vegetables and pasta. Street foods are popular in the Philippines. These come with various kinds of *sawsawan* such as ketchup, a spice condiment; fishball dipping sauce, and *sarsa* or meat gravy. Among the liquid-based condiments is the *patis*, a fish sauce that enriches Filipino dishes and which can also be a condiment for tomato alone and sweet potato shoots. *Patis* and calamansi, a combination condiment, is popular with *sinigang*, *tinola*, fried meats, grilled and *paksiw* dishes. Vinegar or *suka* is a condiment for lechon as it enriches the juiciness of the dish. Lastly, *toyo* or soy sauce is usually combined with calamansi, salt, chili pepper, and *suka* and is best paired with grilled or fried dishes.

#### Culinary heritage significance of Philippine condiments

*Sawsawan* is a flavoring that is not only added in cooking but also made into dipping sauces with edibles dunked as desired in vinegar, fish or shrimp sauce, fish or shrimp paste, and a host of other vegetable or fruit-based relishes [60]. *Sawsawan* is essential to every Filipino dish and is also a staple in every meal. In addition, [61] states that *sawsawan* can be traced to the tribal communities of the Philippines' past, where communal dining reigned. The use of intense flavors to give oomph to simple dishes,

such as seafood or soups, is also reflective of indigenous practices and native ingredients.

The researchers identified three themes, namely aesthetic, social relevance, and symbolic context around which the significance of culinary heritage revolves. First is aesthetic, to understand the appeal of the different condiments based on their packaging; second is social relevance, to identify why *sawsawan* is important to the community; and third is symbolic context, to see what symbolic references *sawsawan* has. Under these themes, categories were created to further define the elements that make the *sawsawan* indispensable in the Filipino dining experience. Figure 4 presents the categories identified under the three themes to fully understand the culinary heritage significance of *sawsawan*.

Philippine condiments or *sawsawan* have their own characteristics that people can easily recognize, especially through colors. According to [48], the striking color of Filipino food comes in part from a wide variety of sauces and condiments that are part of a cuisine. Also, condiments are prepared to complement various dishes that every Filipino table always has. Different condiments like *calamansi*, *itlog na maalat*, *siling labuyo*, green mangoes, and *atchara* usually bring an exciting color palette to the table when served with food. *Sawsawan* livens up roasted, grilled, and boiled dishes that makes the table colorful [48].



**Fig. 4** The figure provides a creative interpretation of themes and categories of Culinary Heritage Significance based on data gathered. The researchers identified three themes, namely aesthetic, social relevance, and symbolic context around which the significance of culinary heritage revolves. For each theme, it provides categories that concentrate on the provided references

Under social relevance, making Philippine condiments is described as a communal activity often done during festivals or special gatherings. According to [47], food is a product of the community, its activities, and its foodways which is why *sawsawan* is said to be an expression of the communal nature of food. This also highlights an individual's preference on how to make *sawsawan*. This allows them to customize the *sawsawan* according to their taste. According to [56], no Filipino dish is perfectly seasoned until it is right in front of a person, whichever flavors will make it perfect for a person. In the Philippines, many culinary traditions merely originated in the homes of elite and landed families. These households developed their own specialties and have since passed them down to the next generation. Therefore, *lutong-bahay*, or home cooking, has the best Filipino food rather than those found in restaurants. Families treasure the comforting meals from their childhood and courtship, whether they were prepared at home, in a relative's kitchen, or in restaurants of various sizes. Filipinos carry a flavor of who they are or who wants to be with them [58]. Lastly, the conservation of culinary traditions signifies the origins of culinary heritage as well as preserving it. Panlilio and Maria [62] state that appreciating and conserving Philippine culinary traditions protect the uniqueness of regional and historic flavors and local customs that give communities and families so much pride and pleasure. With this, slow cooking develops as a way of life wherein it fosters a sense of community so that cooks are closely intertwined with the people who grow or produce the food, and mothers and fathers strengthen the bond of family life around the dinner table [62].

The identities are tackled under the symbolic context to show the characteristics of condiments that are paired with different dishes. As stated by [48], the individuality expressed by mixing one's own dipping sauces to complement the dishes is characteristically Filipino. *Sawsawan*, both dipping sauces and condiments, served in small plates at home or in restaurants, is a way to define and enhance the uniqueness of Filipino food. Also, the Filipino way of adding *sawsawan* to foods like grilled fish or pork with something sour like *calamansi*, *kamias* or *suka*; or to savory dishes with something sweet like *atchara*, or a ripe mango or banana; or, to sweet dishes with salt-like *bagoong alamang*, *itlog na maalat* (salted eggs), or *patis* makes for good balance to create flavorful dishes [48]. Lastly, the purpose of *sawsawan* is to adjust or individualize the food according to the diner's preference to achieve a tasteful dish [47].

## Discussion

### Theoretical implication

This paper employed a qualitative approach to gather data from resources that include cookbooks, theses,

articles, magazines, and encyclopedias. A qualitative approach was used because the data were arranged systematically via the bibliometric table. A similar study was conducted by [37] wherein they also used bibliometrics to analyze data on Filipino *kakanin*. Like this study, their study also entailed going to libraries to complete the bibliometric table [37]. Şahin and Yılmaz [38] also made a similar study which includes local food research with a bibliometrics review. They also highlighted the themes, authors, journals, and institutions [38].

This paper diverges from other sources in terms of the data collection method and its research topic. The bibliometric approach to analyze information is what differentiates this paper from other research works. It also focuses specifically on the Philippine condiments and not on the Philippine culinary culture. In contrast, Doreen G. Fernandez listed in her work the numerous influences of other countries and talked about how Filipinos made the dish their own [49]. This paper is also different from foreign research on related topics like Nor et al.'s work wherein they compared the commercialized products with traditional Malaysian food. Their study analyzed which type of food the younger generations of Malay would prefer [31]. Thai *nam pla* or fish sauce aside from dipping sauce is used as marinade, and seasoning such as springs rolls, jasmine noodles and skewers [63]. *Chanh* or Vietnamese lime is used as a condiment in Vietnamese pho to add richness to the broths [64]. And Indonesian *terasi* is produced similarly like *bagoong* in a way that it also has a fermentation process [65].

The researchers came up with seven themes to classify different condiments in the Philippines based on various references and recognized 20 types of *sawsawan* under these themes: *matubig*, *durog*, *prineserba*, *sariwa*, *mamantika*, *may kapares*, and *pinaghalo*. A study conducted by [66] discussed the Filipino food *pancit*, or Philippine noodles. It is similar to this paper because the goal of his research was to also preserve ICH, and the researcher used a tabular representation or repertory grid to classify the dishes [66]. However, this paper differs from Mercado's through the themes that categorized the different *sawsawan* in the Philippines because the *pancit* dishes he studied were limited to places in Luzon Island only.

This paper contributes to the body of knowledge on the different kinds of *sawsawan* and distinguishes its uses as well as its origins. A similar study was done by [27] wherein the authors studied the culinary heritage significance of Filipino food *sisig*. They also used a repertory grid to collect their data about different *sisig* recipes [27]. It differs from this paper, however, because the authors focused on the common characteristics as well as the culinary tradition of *sisig* in Angeles City, Pampanga,

while this study covered the different *sawsawan* found in various parts of the Philippines.

### Practical implication

The use of condiments is a big part of Philippine culinary traditions since this allows people to appreciate, conserve, and protect the uniqueness of regional and historic flavors and local customs that give communities and families so much pride and pleasure [62]. Based on the results and analysis, the researchers have found definitions of the different kinds of Philippine condiments; however, only a few of the references discussed the culinary heritage significance of these condiments.

Based on the research, people can easily distinguish the differences in Philippine condiments, or *sawsawan*, through color. These condiments are usually present in family and other social gatherings which are communal activities that express the social relevance of *sawsawan* [67]. This is described by [48] as *an expression of the communal nature of food*. These gatherings also bring out the symbolic context of the *sawsawan* through creative pairings with dishes that are commonly served during social and family gatherings in typical Filipino communities. Whether they were made at home, in a relative's kitchen, or in restaurants of various sizes, comforting meals from childhood and courtship are treasured by families. Filipinos bring a distinct flavor of who they are or who they want to be [62]. It was mentioned throughout this research paper that *sawsawan* highlights an individual's preference. Based on the research findings, while there are numerous definitions of *sawsawan*, most of these definitions did not come from textbooks, but from cookbooks that did not have discussions on the *sawsawan's* culinary heritage significance.

*Sawsawan* has a significant role in Filipino cuisine and culture despite being presented in tiny servings [68]. According to [69], even though other types of *sawsawan* allow people to express their individual tastes, there is still a strong sense of community, even though the *sawsawan* celebrates individual differences. With this, the paper aims to prompt food writers to write more about the cultural importance and significance of *sawsawan*. More pages should be devoted to highlighting *sawsawan*, and editors of food and culinary magazines as well as editors of the food sections of the top national publications should do the same. This will help the Filipinos understand and appreciate *sawsawan*, which should not only be viewed as a key component on the Filipino plate but also as a complement to other foods. Filipino chefs may also use this research as they innovate dishes that may include new pairings with *sawsawan* that can evolve from several possible combinations of condiments.

### Conclusion

*Sawsawan* is an indispensable part of Filipino food tradition and cuisine and is one of the native compositions in a full meal. Therefore, *sawsawan* is sentimental in the matter of aesthetic, social, and symbolic aspects of the Filipino cultural heritage. It has been a traditional component of the table settings of Filipinos that includes the practice of sharing the condiment with each other. Having the condiments in dish presentation is a signature of Filipino culture, enhancing the flavor of the food and amplifying the basic taste. The intention of this study is to construct a bibliographic database on *sawsawan* to safeguard the culture as well as to provide knowledge regarding Filipino culinary traditions. Furthermore, this study is meant to showcase the nation's culinary identity and promote awareness of Filipino condiments that are integral to Filipino culture.

The researchers have established that the potential of *sawsawan* to contribute to culinary heritage is significant as found in references listed using bibliometrics. With at least 56 references available tackling the culinary heritage significance of the Philippine condiment, the timelessness of the Filipino food heritage is ensured. With 26 publishers and 58 authors, the field of Philippine food literature is promising.

This study gives rise to more possibilities of analyzing and examining other ways of mixing components of spices and condiments that are plotted in the bibliometrics. The culinary heritage significance of Philippine condiments is based on vast and reliable references from the year 1972 to 2018. This will serve as a reliable reference for future researchers, chefs, and food enthusiasts and will help promote Philippine condiments. The researchers have arrayed the major themes of the *sawsawan* along with its origin and embodiment composition. Portraying the significance of the published works, previous research, and reliable bibliometric sources help people to expand their knowledge on the condiments of the native places in the Philippines. It is a component of life constantly subjected to unrecorded improvisation, the stress of market supply with its introduction of new ingredients, the rivalry of changing social indices, and the development of a new *common taste* conditioned by convenience food and cooking ingredients for mass consumption. The researchers have organized and produced the themes of *sawsawan* acquainted by their classification and composition [60]. The food sector will be able to unlock unique condiments that Filipinos do not usually know of but are present in our culture and increase the total number of sauce choices as an explicit result of this academic investigation. The food enthusiasts will have a better grasp of each condiment and will be able to decide

which combination will work best for their dishes to enhance and give the cuisine a whole different persona. Future researchers engaged in a similar issue may find this study useful as related literature.

#### Acknowledgements

The researchers would like to sincerely express their deepest gratitude and appreciation to the National Library of the Philippines, University of Santo Tomas' Miguel de Benavides Library, Ateneo de Manila's Rizal Library, Holy Angel University's Central Library, Museo Ning Angeles and Angeles City Library and Information Center for opening their doors to them in conducting this study. The researchers also extend their appreciation toward Dr. Kristy Aileen G. Reamillo, the course facilitator in Research in Hospitality Management for her guidance and support throughout this study.

#### Authors information

Ms. Karen Grace V. Aster, Mr. Jaime Ramir B. Castillo, Ms. Shekaina R. Cheng, Mr. John Paulo L. Trillana, and Ms. Ysabella Marie B. Varlez are 4th Year Bachelor of Science in Hospitality Management major in Culinary Entrepreneurship from the University of Santo Tomas, City of Manila, Philippines. Mr. Jame Monren T. Mercado, MACHS is an Academic Staff from the Department of Tourism Management, College of Tourism and Hospitality Management and the Graduate School—Cultural Heritage Studies Program of the University of Santo Tomas. In the same University, he is an Academic Researcher under the Research Center for Social Sciences and Education and an Associate Researcher of the Graduate School—Center for Conservation of Cultural Property and Environment in the Tropics. He is a Member, Board of Directors of the Philippine Association of Researchers for Tourism and Hospitality, Inc. and Associate Member under Division VIII (Social Sciences) of the Department of Science and Technology—National Research Council of the Philippines.

#### Author contributions

All authors read and approved the final manuscript.

#### Funding

Not applicable.

#### Availability of data and materials

Not applicable.

#### Declarations

#### Competing interests

The authors declare that they have no competing interests.

Received: 9 February 2023 Accepted: 6 June 2023

Published online: 01 July 2023

#### References

- Cambridge English Dictionary. Heritage. Cambridge: Cambridge University Press & Assessment; 2022. <https://dictionary.cambridge.org/us/dictionary/english/heritage>. Accessed 7 Oct 2022.
- Mercado JM, Zerrudo EB. Pamanang kulinarya: developing a safeguarding plan for culinary heritage using the statement of significance—the case of lomi in Lipa City, Batangas, Philippines. *SPAFA J*. 2018. <https://doi.org/10.26721/spafajournal.v2i0.584>.
- Ramshaw G. Heritage cuisines: traditions, identities and tourism. In: Timothy DJ, editor. London: Routledge; 2015. <https://doi.org/10.4324/9781315752525>.
- UNESCO. Text of the convention for the safeguarding of the intangible cultural heritage. UNESCO - Text of the Convention for the Safeguarding of the Intangible Cultural Heritage. 2003. <https://ich.unesco.org/en/convention>. Accessed 7 Oct 2022.
- Bedjaoui M. The convention for the safeguarding of the intangible cultural heritage: the legal framework and universally recognized principles. *Mus Int*. 2004;56(1–2):150–5. <https://doi.org/10.1111/j.1350-0775.2004.00469.x>.
- Stovel, H. Risk preparedness: a management manual for world cultural heritage. ICCROM; 1998.
- Kurin R. Key factors in implementing the 2003 convention. *Int J Intang Herit*. 2007;2:10–20.
- Barriónuevo CA, Bernat EE, Velarde IJ. We recovered food heritage, and then? Value enhancement and promotion of local agri-food products in Argentina and Spain. *Br Food J*. 2019;121(12):3168–80. <https://doi.org/10.1108/bfj-10-2018-0711>.
- Zappia C. Filipino: the five-step plan. *Gastronomica*. 2015;15(2):57–64. <https://doi.org/10.1525/gfc.2015.15.2.57>.
- Department of Trade and Industry, Board of Investments. Condiments. Securing the Future of Philippine Industries. <https://industry.gov.ph/industry/condiments/>. Accessed 7 Oct 2022.
- Besa A, Dorotan R. Memories of Philippine kitchens. Harry N. Abrams; 2006.
- Tucker RP. Insatiable appetite: the United States and the ecological degradation of the tropical world. University of California Press; 2000.
- Fernandez DG. Tikim: essays on Philippine food and culture. Manila: Anvil Publishing; 1994.
- UNESCO. Cultural heritage. UNESCO. 2022 <https://en.unesco.org/field-office/santiago/cultura/patrimonio>. Accessed 7 Oct 2022.
- Center for Heritage and Society, University of Massachusetts Amherst. What is heritage? UMass Amherst. 2022. <https://www.umass.edu/chs/about/whatisheritage.html>. Accessed 7 Oct 2022.
- Bessiere J. Local development and heritage: traditional food and cuisine as tourist attractions in rural areas. *Sociol Rural*. 1998;38(1):21–34. <https://doi.org/10.1111/1467-9523.00061>.
- Bessiere J, Tibere L. Traditional food and tourism: French tourist experience and food heritage in rural spaces. *J Sci Food Agric*. 2013;93(14):3420–5. <https://doi.org/10.1002/jsfa.6284>.
- Ebster C, Guist I. The role of authenticity in ethnic theme restaurants. *J Foodserv Bus Res*. 2005;7(2):41–52. [https://doi.org/10.1300/j369v07n02\\_04](https://doi.org/10.1300/j369v07n02_04).
- XYUandBEYOND. UNESCO intangible cultural heritage – food. XYUandBEYOND. 2016. <https://xyuandbeyond.com/unesco-intangible-cultural-heritage-food/>. Accessed 7 Oct 2022.
- Maffei MC. Chapter 4 food as a cultural choice: a human right to be protected? In: Cultural heritage, cultural rights, cultural diversity. vol 4. Studies in Intercultural Human Rights; 2012. pp. 83–106. [https://doi.org/10.1163/9789004228382\\_005](https://doi.org/10.1163/9789004228382_005).
- Vadi V. Food wars: food, intangible cultural heritage and international trade. In: The common good and ecological integrity. London: Routledge; 2016.
- The National Heritage Council of Namibia. Intangible cultural heritage. The National Heritage Council of Namibia. <https://www.nhc-nam.org/intangible-cultural-heritage>. Accessed 7 Oct 2022.
- UNESCO. What is intangible cultural heritage? - Intangible heritage - culture sector - UNESCO. Intangible Heritage. <https://ich.unesco.org/en/what-is-intangible-heritage-00003>. Accessed 7 Oct 2022.
- Parasecoli F. Food heritage: is it there or do we make it? Fabio Parasecoli. 2019. <https://fabioarasecoli.com/food-heritage-do-we-find-it-or-do-we-make-it/>. Accessed 7 Oct 2022.
- Mercado JM, Andalecio AB. Ysla de panciteria: a preliminary study on the culinary heritage significance of pancit using the heritage documentation approach—the case of Luzon Island, Philippines. *J Ethn Foods*. 2020. <https://doi.org/10.1186/s42779-020-00057-1>.
- Kapelari S, Alexopoulos G, Moussouri T, Sagmeister KJ, Stampfer F. Food heritage makes a difference: the importance of cultural knowledge for improving education for sustainable food choices. *Sustainability*. 2020;12(4):1509. <https://doi.org/10.3390/su12041509>.
- Cadiogan DJ, Dy SC, Opaco CJ, Rodriguez RD, Tan JT, Villanueva KA, et al. Manyisig: the culinary heritage significance of sisig in Angeles City, Pampanga, Philippines. *Int J Gastron Food Sci*. 2021;24:100347. <https://doi.org/10.1016/j.ijgfs.2021.100347>.
- UNESCO. Globalization and intangible cultural heritage. United Nations University. 2005. <https://unesdoc.unesco.org/ark:/48223/pf0000140090>. Accessed 7 Oct 2022.

29. Canadian Commission for UNESCO. Understanding intangible cultural heritage. Canadian Council for the Arts. 2019. <https://en.ccunesco.ca/blog/2019/10/understanding-intangible-cultural-heritage>. Accessed 7 Oct 2022.
30. Kuntz LI. Culture of Ukrainian borscht cooking inscribed on the list of intangible cultural heritage in need of urgent safeguarding. UNESCO. 2022. <https://www.unesco.org/en/articles/culture-ukrainian-borscht-cooking-inscribed-list-intangible-cultural-heritage-need-urgent>. Accessed 7 Oct 2022.
31. Nor NM, Sharif SM, Zahari MS, Salleh HM, Isha N, Muhammad R. The transmission modes of Malay traditional food knowledge within generations. *Procedia Soc Behav Sci*. 2012;50:79–88. <https://doi.org/10.1016/j.sbspro.2012.08.017>.
32. Zocchi DM, Fontefrancesco MF, Corvo P, Pieroni A. Recognising, safeguarding, and promoting food heritage: challenges and prospects for the future of sustainable food systems. *Sustainability*. 2021;13(16):9510. <https://doi.org/10.3390/su13179510>.
33. Omerzel D. A systematic review of research on innovation in hospitality and tourism. *Int J Contemp Hosp Manag*. 2016;28(3):518–58. <https://doi.org/10.1108/IJCHM-10-2014-0510/>.
34. Koseoglu MA, Rahimi R, Okumus F, Liu J. Bibliometric studies in tourism. *Ann Tour Res*. 2016;61:180–98. <https://doi.org/10.1016/j.annals.2016.10.006>.
35. Horng J, Tsai CS. Culinary tourism strategic development: an Asia-Pacific perspective. *Int J Tour Res*. 2012;14(1):40–55. <https://doi.org/10.1002/jtr.834>.
36. Bjork P, Kauppinen-Raisanen H. Local food: a source for destination attraction. *Int J Contemp Hosp Manag*. 2016;28(1):177–94. <https://doi.org/10.1108/IJCHM-05-2014-0214>.
37. De Villa BD, Domingo TM, Ramirez RJ, Mercado JM. Explicating the culinary heritage significance of Filipino kakanin using bibliometrics (1934–2018). *Int J Gastron Food Sci*. 2022;28:100522. <https://doi.org/10.1016/j.jigfs.2022.100522>.
38. Şahin A, Yılmaz G. Local food research: a bibliometric review using CiteSpace II (1970–2020). *Libr Hi Tech*. 2021;40(3):848–70. <https://doi.org/10.1108/lht-07-2021-0227>.
39. Okumus B, Koseoglu MA, Ma F. Food and gastronomy research in tourism and hospitality: a bibliometric analysis. *Int J Hosp Manag*. 2018;73:64–74. <https://doi.org/10.1016/j.ijhm.2018.01.020>.
40. Naruetharadhol P, Gebbsombut N. A bibliometric analysis of food tourism studies in Southeast Asia. *Cogent Bus Manag*. 2020. <https://doi.org/10.1080/23311975.2020.1733829>.
41. Sta. Maria FP. GAMBILA: a preliminary framework for the study of Philippine culinary history with multidisciplinary impact on contemporary social reality. *J Hist*. 2005;51(1–4). <https://ejournals.ph/article.php?id=5263>. Accessed 7 Oct 2022.
42. Florendo JG. Colonizing the Filipino palate [master's thesis]. Metro Manila: De La Salle University; 2019. <https://www.dlsu.edu.ph/wp-content/uploads/pdf/conferences/arts-congress-proceedings/2019/FAC-03.pdf>. Accessed 7 Oct 2022.
43. Minnicks M. Condiments, herbs, spices & seasonings: what's the difference? *Delishably*. 2022. <https://delishably.com/spices-seasonings/Condiments-Herbs-Spices-and-Seasonings-What-Are-the-Differences>. Accessed 7 Oct 2022.
44. Farrell KT. *Spices, condiments and seasonings*. New York: Springer; 1998.
45. Tayag C. 'Sawsawan': dip it good. *Philippine Star*. 2012. <https://www.philstar.com/lifestyle/food-and-leisure/2012/03/22/789272/sawsawan-dip-it-good>. Accessed 7 Oct 2022.
46. Orandain AC. How the 'sawsawan' culture has defined us. *CNN Philippines*. 2016. <https://www.cnnphilippines.com/life/leisure/food/2016/06/28/sawsawan.html>. Accessed 7 Oct 2022.
47. Fernandez D, Best J. *Palayok: Philippine food through time, on site, in the pot*. Makati: Bookmark; 2000.
48. Barreto G, Calalang C, Fores M, Segismundo M, Sincioco J, Tayag C. *Kulinarya, a guidebook to Philippine cuisine*. 2nd ed. Tuttle Publishing; 2016.
49. Fernandez DG. Culture ingested: notes on the indigenization of Philippine food. *Philipp Stud*. 1988;36(2):219–32.
50. Enriquez VG. *Philippine world-view*. Singapore: Institute of Southeast Asian Studies; 1986.
51. Fernando GC. *Philippine food & life: Luzon*. Metro Manila: Anvil Publishing; 1992.
52. Wilson JR, Sharples S, editors. *Evaluation of human work*. 4th ed. Boca Raton: CRC Press; 2015. <https://doi.org/10.1201/b18362>.
53. Ellegaard O, Wallin JA. The bibliometric analysis of scholarly production: How great is the impact? *Scientometrics*. 2015;105:1809–31. <https://doi.org/10.1007/s11192-015-1645-z>.
54. Frey BB. *The SAGE encyclopedia of educational research, measurement, and evaluation*. SAGE Publications; 2018.
55. Villanueva ES. *Filipino family cookbook*. New Day Publishing; 1972.
56. Ponseca N, Trinidad M. *I am a Filipino and this how we cook*. Artisan; 2018.
57. Gapultos M. *Pulutan! Filipino bar bites, appetizers, and street eats*. Tuttle Publishing; 2018.
58. Urbano C. *The world of Filipino cooking: food and fun in the Philippines*. Tuttle Publishing; 2018.
59. Gonzales GR. *The little adobo book*. Anvil Publishing; 1999.
60. Sta. Maria F. *The governor-general's kitchen: Philippine culinary vignettes and period recipes, 1521–1935*. Pasig: Anvil Publishing; 2006.
61. Newman Y. *7000 islands: cherished recipes and stories from the Philippines*. Hardie Grant; 2019.
62. Panlilio EE, Sta. Maria SM. *Slow food: Philippine culinary traditions*. Anvil Publishing; 2005.
63. Garnjanagoonchorn W. *Thai fish sauce: a traditional fermented sauce*. 2016. [https://doi.org/10.1007/978-1-4899-7671-0\\_11](https://doi.org/10.1007/978-1-4899-7671-0_11). Accessed 23 May 2023.
64. Prihanto A, Muyasyaroh H. The Indonesian fermented food product terasi: history and potential bioactivities. *Syst Rev Pharm*. 2021;12:378–84. <https://doi.org/10.31838/srp.2021.2.52>.
65. Corwell, J. A study of Vietnamese pho. *We Are Chefs*. 2020. <https://wearechefs.com/the-history-of-food/>. Accessed 23 May 2023.
66. Mercado JM. Pancit: explicating the culinary safeguarding culture of Philippine noodles—the case of Luzon Island. *J Culin Sci Technol*. 2021;20(5):1–25. <https://doi.org/10.1080/15428052.2020.1871146>.
67. Fernandez D, Best J. *Palayok: Philippine food through time, on site, in the pot book*. The Bookmark, Inc; 2000.
68. Merez A. Sawsawan is forever: why patis, toyomansi outlasted the pandemic. *spot.ph*. 2022. <https://www.spot.ph/newsfeatures/the-latest-news-features/90670/filipino-sawsawan-culture-explained-a4736-20221003>. Accessed 7 Oct 2022.
69. Uy SL. The importance of sawsawan in Filipino culture. *Food Philippines*. 2021. <https://foodphilippines.com/story/the-importance-of-sawsawan-in-filipino-culture/>. Accessed 7 Oct 2022.

## Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

**Karen Grace V. Aster** is 4th Year Bachelor of Science in Hospitality Management major in Culinary Entrepreneurship from the University of Santo Tomas, City of Manila, Philippines.

**Jaime Ramir B. Castillo** is 4th Year Bachelor of Science in Hospitality Management major in Culinary Entrepreneurship from the University of Santo Tomas, City of Manila, Philippines.

**Shekaina R. Cheng** is 4th Year Bachelor of Science in Hospitality Management major in Culinary Entrepreneurship from the University of Santo Tomas, City of Manila, Philippines.

**John Paulo L. Trillana** is 4th Year Bachelor of Science in Hospitality Management major in Culinary Entrepreneurship from the University of Santo Tomas, City of Manila, Philippines.

**Ysabella Marie B. Varlez** is 4th Year Bachelor of Science in Hospitality Management major in Culinary Entrepreneurship from the University of Santo Tomas, City of Manila, Philippines.

**Jame Monren T. Mercado** MACHS is an Academic Staff from the Department of Tourism Management, College of Tourism and Hospitality Management and the Graduate School—Cultural Heritage Studies Program of the University of Santo Tomas. In the same University, he is an Academic Researcher under the Research Center for Social Sciences and Education and an Associate Researcher of the Graduate School—Center for Conservation of Cultural Property and Environment in the Tropics. He is a Member, Board of Directors of the Philippine Association of Researchers for Tourism and Hospitality, Inc. and Associate Member under Division VIII (Social Sciences) of the Department of Science and Technology—National Research Council of the Philippines.

**Ready to submit your research? Choose BMC and benefit from:**

- fast, convenient online submission
- thorough peer review by experienced researchers in your field
- rapid publication on acceptance
- support for research data, including large and complex data types
- gold Open Access which fosters wider collaboration and increased citations
- maximum visibility for your research: over 100M website views per year

**At BMC, research is always in progress.**

Learn more [biomedcentral.com/submissions](https://biomedcentral.com/submissions)

