



Soy Sauces of Asia

『Soy Sauce Usage in the Philippines, Thailand and Vietnam』

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1. Introduction

My co-researcher in the Philippines once said to me, “If you are eating sushi and sashimi, you have to use Kikkoman, right?” Her words stuck in my mind. It occurred to me that in the Philippines, Kikkoman is synonymous with Japanese *shoyu*. And it made me happy to know that people in the Philippines make a point of exclusively using Japanese soy sauce for pairing with Japanese dishes like sushi. It also made me think, how and in what kinds of dishes do they use Philippines-made soy sauce?

All over Asia, you can find fermented seasonings made from salt-preserved soybeans, fish, shrimp, crustaceans, or other ingredients. Though *miso* and *shoyu* are famous worldwide as Japanese fermented seasonings, few people know that we also have fish-based fermented seasonings like *shotturu* and *ishiru*. On the other hand, while *nam pla* in Thailand and *nuoc mam* in Vietnam are famous fish sauces, I learned that soy sauce and soybean-based pastes like *miso* also exist there. I started this survey with the simple question of how these fermented seasonings are used.

In English, all the soy-based seasonings in Asia fall under the simple translation of ‘soy sauce’. In the first article of the ‘Soy Sauces of Asia’ series, Food Culture No.24, I reported that Korean *Ganjang* and Japanese *shoyu* differ both in ingredients and production



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method. For this article, I focused on soy sauce usage in three countries – the Philippines, Thailand and Vietnam. The three countries are preeminent users of fish sauce in traditional cuisine, thus I wanted to see how pervasive soy sauce is and how it is used.

2. Salted Fermented Seasonings

While all containing umami, fermented seasonings come in many forms, including sour-tasting vinegars, sweet products like *mirin*, and a variety of salt-preserved and fermented seasonings that taste salty. The latter are referred to as salted fermented seasonings in this article. Table 1 below shows typical salted fermented seasonings from the Philippines, Thailand, and Vietnam, as well as Japan and Korea. Compared to grain-based sauces, including those made from soybeans, there is remarkable variety in fish sauces, which are salt-preserved and fermented, based on fish, shrimp, small crustaceans and all kinds of marine and

Table 1. Salted Fermented Seasonings in Five Asian Countries

1.Country	2. Soy Sauce	3. Soybean/ Grain-based Paste/ Solid/Liquid	4. Oyster-flavored Sauce	5. Fish Sauce in Liquid and Transparent	6. Fish Paste/Shrimp Paste/Salted Entrails (ingredients)
Japan	Shoyu	Miso,Shio-koji, shoyu-koji	Kaki-shoyu	Sakana-shoyu(Shotturu, Ishiru/Ishiri, Ikanago-shoyu)	Shiokara (Fish, Fish intestine/roe/milt/kidney, shrimp, squid, octopus, sea cucumber, ascidians, etc.)
Korea	Ganjang	Doenjang, Gochujang, Cheonggukjang	oyster sauce from China	Aekjeot	Jeotgal (Fish, Fish intestines/roe, shrimp, shellfish, oyster, squid, crab and etc.)
Philippines	Toyo	Tausi,Miso,Tahure	oyster sauce from China	Patis	Bagoong (Fish, shrimp, oyster, clams, fish roe, shrimp roe and etc.)
Thailand	Si-iw	Tao chiau	Nam mun hoi	Nam pla	Nam Budu/Pla ra, etc. (Fish), Kapi, etc.(Shrimp), Poo dong(crab), Hoi dong(mussel), etc.
Vietnam	Nuoc tuong, Xi dau	Tuong,Chao	Dau hao	Nuoc mam	Mam(Fish, Shrimp, clams, sea urchin, Echinoidea family, etc.)

freshwater species. Though fish sauces like shotturu are generally called *gyosho* in Japan, Table 1 adopts the title *sakana-shoyu* in accordance with the classification by Mr. Naomichi Ishige, honorary professor, National Museum of Ethnology.

Each country has a general term for soy sauce: *shoyu* in Japan, *ganjang* in Korea, the Tagalog word *toyo* in the Philippines, and *si-iw* in Thailand. Finally, *nuoc tuong* is the most common term for soy sauce in Vietnam, however it is said that the term *xi dau* is more typically used in northern parts of Vietnam.

It is impossible to conduct uniform comparison of soybean and grain-based pastes (in solid or liquid form), because they differ so greatly in ingredients, production method, color, and shape across countries. Oyster sauce has been included because in Thailand one of the main ingredients in oyster sauce is soybean-based sauce. Vietnam has many national brand oyster sauces, and Japan has its own *kaki-shoyu*, though the methods and resulting products vary greatly from Chinese oyster sauce. Fish sauces can be found in each country, but this table does not allow for a full listing of the different key ingredients. Pastes and salted entrails exist in countless varieties across the five countries, and they are based on fish, shrimp, small crustaceans and all kinds of marine and freshwater species. Even within a single country, the pastes differ greatly from region to region, and while in some places they are used as a seasoning in cooking, in others they are a standalone dish. There is a great deal of prior research on salted fermented seasonings in each country. It would be very interesting to integrate those studies and provide a detailed comparative report.

Given it is not possible to cover all these different seasonings at once, this article focuses on the present-day usage of soy sauce in the Philippines, Thailand and Vietnam, while also touching on the presence of Japanese *shoyu* in those three countries and the proliferation of Asian food ingredients in Japan.

3. Soy Sauce Usage in the Philippines

3-1. Philippine Cuisine featuring *Toyo*

One dish representative of Philippine cuisine is *Adobo*, in which meat or seafood is marinated in vinegar and then simmered until tender. There are countless varieties of *Adobo* in terms of ingredients and seasonings, but the most typical kind, popular in restaurants of Philippine cuisine, is pork or chicken cooked with soy sauce, known as *toyo*. In one specialty cookbook featuring almost 200 *Adobo* recipes, close to 70% of the recipes called for *toyo*, showing clearly that *toyo* is a frequently used seasoning for *Adobo*.

Toyo is found not only in *Adobo*, but also in many home-style simmered dishes. *Patatim*, an established Chinese-style Philippine dish, is made of bone-in pork or pork belly simmered in *toyo* and oyster sauce. *Tapa*, a dish always available on Philippine breakfast menus, is popular for its salty-sweet flavors. Fresh pork or beef marinated in salt and spices, or cured meat, is cut into slices, seasoned and cooked in a combination of sugar and *toyo*, then served with steamed rice and a fried egg.



Pork Adobo

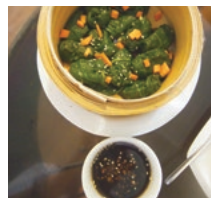


Pork Patatim



Beef Tapa

Sawsawan, meaning dipping sauce in Tagalog, is one of the most important elements of Philippine food culture. The idea is that the seasoning of a dish should be completed at the table by each individual, using the *sawsawan* available, according to their preferences. *Sawsawan* often start with a base of *toyo* or *patis* (fish sauce) and add either *kalamansi* or vinegar for acidity, tamarind for sweet and sour flavors, or chopped garlic and onion, for accompanying roasted meats, steamed fish, and other dishes. *Kalamansi*, the quintessential Philippine citrus fruit, is a good match for *toyo*, and this combination is readily available at restaurants all over the Philippines. The dipping sauce can be poured on to stir-fries, meat dishes, and steamed rice, and is so popular that a large selection of manufactured products is available on the market.



Toyo based dipping sauce with a steamed dish



Toyo kalamansi served at a restaurant



Commercially available products combining toyo with kalamansi juice

3-2. Soy Sauce Consumption and Varieties in the Philippines

The 2008 Philippines National Nutrition Survey shows that the daily consumption frequency of soy sauce and three different types of fermented fish/shrimp products is essentially the same, at once a day. However, the percentage of all families that consume soy sauce is more than 30%. From this we can conclude soy sauce is more commonly used in home cooking than fish sauces in the Philippines. The soy sauce shelves in large-scale supermarkets are lined with varieties from 60mL small plastic packages to 1 gallon (3.785L) containers, made by the three biggest makers – Silver Swan, Datu Puti and Marca Piña – as well as products from three to four other brands. The shelves stock a much larger selection than those of fermented fish products nearby.

The labels classify the sauces into three types: soy sauce, Chinese soy sauce, and seasoning sauce. Philippine

Table 2 Seasonings in the Philippines: frequency of consumption and percentage of households consuming such foods; Philippines 2008

Food Item	Frequency (per day)	% of Consuming Households
Sugar	1.3	81.1
Coconut oil	1.5	70.5
Salt, coarse	1.0	64.9
Soy sauce	1.0	30.8
Iodized salt	1.0	14.6
Vinegar, coconut	1.0	14.3
Vinegar, pineapple	1.0	14.2
Coconut cream	1.2	13.9
Bagoong isda, ginamos	1.0	10.1
Patis	1.0	6.1
Shirimp paste, alamang	1.0	4.7
Mayonnaise	1.1	2.2

* Sample Households n=36,634
 * Food and Nutrition Research Institute, Department of Science and Technology, Facts and Figures 2008, 2010

toyo is known to be darker in color and saltier than Japanese *shoyu* and thus is best suited for use in dipping sauces and as a seasoning in cooking. Chinese soy sauce is also used for cooking; and seasoning sauce, led by the Maggi brand, is used as an all-purpose seasoning on the table to pour on fried eggs and steamed rice.

According to the Philippine National Standards (PNS) from the Department of Trade and Industry (DTI) Bureau of Product Standards (BPS), soy sauce is classified into three types: fermented, hydrolyzed and blend (Table 3). Table 4 shows the ingredients as recorded on the labels of the major brands. Though soy sauce in the Philippines was once prepared in pots, in the traditional Chinese style, in recent years, the Philippines has seen the introduction of Japanese *shoyu*-making techniques and industrialization of the production process, according to Dr. Sanchez.*1

I had the chance to taste *toyo* produced by Philippine brands with five Philippine students, including my co-researchers. The varieties we tried are represented by numbers 1, 2, 3, 5, 8, and 9 in Table 4. To summarize our evaluation of the six varieties: numbers 1, 3, and 5 have rich saltiness, and 5 especially has a strong saltiness similar to *patis*, almost giving it a fishy flavor; number 3 has a chemical flavor, which we did not find agreeable, but it should be noted that this brand is typically used in cooking; the saltiness of numbers 2 and 8 is subtle and the good balance of flavor with pleasant sweetness makes it good as a straight table sauce, such as for pouring on steamed rice. Number 9

really stood out in terms of both taste and aroma, and we felt that with its strong soybean flavor and subtle saltiness, it would be a great accompaniment to sashimi and sushi. Though I sensed rich umami flavor in varieties 2, 8 and 9, there were no comments from the Philippine participants regarding umami.

In the Philippines, umami is most typically linked to monosodium glutamate (MSG), so it is not an aspect of flavor that people are cognizant of when evaluating flavor in ingredients and seasonings. A French food science researcher once told me the same thing. Despite being one of the five basic flavors, I was surprised to learn how little understood the concept of umami is around the world. I really feel we need to raise awareness of the true meaning of umami and improve the understanding of one of the most important aspects of Japanese food culture.

3-3. *Shoyu* in the Philippines

In Makati, the central business district of Manila, many people dine at all-you-can-eat buffets, where it costs approximately 600-700 peso per meal (1 USD = 44 Peso) (Source: Oanda Corporation, oanda.com, April 10, 2015). At one such buffet called YakiMIX, there is a corner dedicated to Japanese dishes, presenting favorites like sushi, tempura, and sukiyaki.

Apart from the traditional wasabi and *shoyu* combination, a dipping sauce of *shoyu* and juice from a citrus fruit called *kalamansi* is often served with sushi in the Philippines. Takeout sushi purchased at a food court was also accompanied by fresh *kalamansi*. Tokyo Sushi Academy is an institute based in Shinjuku that trains sushi chefs. It has a sister school in Singapore and has also started a sushi course in Manila in cooperation with a local cooking school. Mr. Takahashi, a lecturer at the school who is very familiar with sushi trends in Asia, said that rolled sushi is the most popular variety in the Philippines, and that you will often find a topping of mayonnaise on *nigiri sushi* (the oblong-shaped pressed vinegared rice topped with fish). I tried Philippines-style sushi and dipping sauce, and the acidity of the *kalamansi* juice in the *shoyu* was actually really delicious - a good contrasting refreshing flavor to the oiliness of the fish. In Japan, we often use *ponzu*, a citrus flavored *shoyu* sauce for seasoning, but when it comes to sushi, it is only used with limited ingredients, such as white fish. If in the future there is a

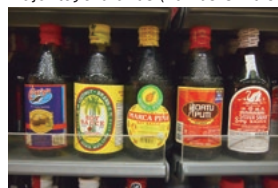


National brands of soy sauce on supermarket shelves

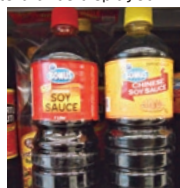


One gallon bottles of *toyo*

Major *toyo* brands (numbers indicate brands displayed in table 4)



Brands 1~5



Brands 6 and 7



Brand 8

Table 3 Types of Soy Sauce in the Philippines

Soy Sauce			
■ Total Nitrogen (BAFPS PNS*)	0.4%, minimum		
■ 3MCPD** (MC***4s. 2002)	1ppm, maximum		
■ (PNS 274:1993, DTI-BPS****)	Fermented	Hydrolyzed	Blend
pH	4.3 - 5.0		
Salt as NaCl, %, (m/m)	15 - 25		
Total solids (excluding NaCl), %(m/m), min	5		
Total nitrogen, %, (m/m), min	0.6	0.4	0.6
Amino nitrogen, %, (m/m), min	0.20	0.14	0.20
Total halophilic yeast count, cfu/mL, max	20		

* BAFPS PNS: Bureau of Agriculture and Fisheries Standards Philippine National Standards
 ** 3MCPD: 3-monochloropropane-1,2-diol
 *** MC4s. 2002:
 **** DTI-BPS: Department of Trade and Industry - Bureau of Product Standard

Table 4 Ingredients of Soy sauce in Philippine

Brand name	item name on label	Ingredients
1 Silver Swan	Soy Sauce	Water, Soy Bean Extract, Flour, Iodized salt, Caramel and less than 0.1% Sodium Benzoate
2 Datu Puti	Soy Sauce	Water, Hydrolyzed Soybean Protein, Iodized Salt, Caramel Color, Monosodium Glutamate, Acidulant, Potassium Sorbate, Flavor and Artificial Color
3 Marca Piña	Soy Sauce	Water, Soy Beans, Iodized Salt, Caramel, Wheat & Sodium Benzoate
4 Coconut Brand	Soy Sauce, Fermented	Water, Salt, Flour, Naturally Hydrolyzed Protein, Concentrated soy sauce and Caramel Color
5 Carp	Premium Soy Sauce, Naturally Fermented, All-Purpose Seasoning	Soy Bean, Salt, Caramel, Flour and other spices
6 SM Bonus	Premium Soy Sauce	Soy Beans, Wheat, Sugar, Iodized Salt, Water and 0.1% sodium benzoate as preservative
7 SM Bonus	Chinese Soy Sauce	Hydrolyzed Protein Extracted from Wheat Flour, Soy Beans, Water, Salt, Caramel Color
8 Sure Buy	Seasoning (All-Purpose)	Soy Beans, Wheat, Sugar, Iodized Salt, Water, 0.1% Sodium Benzoate as a preservative
9 Kikkoman (imported from Singapore)	Naturally Brewed Soy Sauce	Water, Soybeans, Wheat, Salt, Sodium Benzoate as preservative

*1 Chinte-Sanchez, Priscilla. Philippine Fermented Foods: Principles and Technology. Diliman, Quezon City, Philippines: The University of the Philippines Press, 2008.

trend to eat sushi with citrus flavored *shoyu*, it is probably safe to say it is the Philippines style!



Sushi corner at YakiMIX



Food court takeaway sushi package



Mr. Hideyuki Takahashi teaching sushi-making

4. Thailand

4-1. Thai Dishes Using *Si-iw*

Well-known Iron Chef Chumpol, who promotes traditional Thai cuisine, seldom uses *si-iw* (soy sauce) at his restaurant. His assertion is that traditional Thai dishes should be made with fermented fish products such as *nam pla* (fish sauce) and *kapi* (shrimp paste). A dish he recommended I eat for lunch looked like Chinese stir-fried morning glory, but instead of being seasoned with soy sauce, it was cooked with *kapi*.



Iron Chef Chumpol Jangprai



Thai dishes at Siam Wisdom: Thai curry, Tom Yum Goong and stir-fried green vegetables

However, my Thai co-researcher was quick to name several popular Thai dishes in which *si-iw* is indispensable. *Pad thai* is a typical noodle dish in Thailand. Medium width rice noodles are stir-fried and seasoned usually with both *si-iw* and *nam pla*, though sometimes only one or the other. *Khao Pad Kaprao* is a stir-fried dish featuring Thai basil (*kaprao*) seasoned with *si-iw*, and made with various ingredients such as pork, chicken, beef, intestines or seafood.

Kuai-tiao Pad Si-iw is a soy-sauce flavored stir-fried dish containing *Kuai-tiao* rice noodles, said to have been brought in from Chiuchow, China. The broad category includes *senyai* wide flat noodles, *senlek* thin noodles, and *senmee* very fine noodles. A dish called *Kuai-tiao Moo Nam*, noodles with pork (*moo*) in soup (*nam*), that we found at a food court, was also seasoned with *si-iw*. It is interesting to note that while the name *Pad Si-iw* is often thought to exclusively indicate a noodle dish, in fact, *pad* simply means 'stir-fried', thus any dish in which ingredients are stir-fried with soy sauce can be referred to as *Pad Si-iw*.

Given *si-iw* is so commonly used in Thai daily cooking, there appears to be very little distinction drawn between Thai and Chinese cuisine. However, there are a few really traditional Thai dishes on the one hand, just as there are several that clearly stand out as Chinese-style. Good examples of the latter are *Pad Pak Boong Fai Daeng* (Stir-fried Morning Glory) and *Koong Ob Woon Sen* (Clay-pot Stir-fried Glass Noodles with Prawns). Both are cooked and seasoned with a combination of *si-iw* and *nam mun hoi* (oyster sauce).

I took a cooking class at Blue Elephant, which



Pad thai, rice noodle



Khao Pad Kaprao, Stir-fried dish featuring Thai basil



Kuai-tiao Moo Nam, Rice Noodle Soup with Pork

manages Thai restaurants and cooking schools in Thailand and overseas. My teacher, Ms. Charles Burana, said that in Thailand they combine *si-iw-khao* (light soy sauce) to give the dish a salty flavor, with *si-iw-dam* (dark soy sauce), which adds sweetness and rich color. In Japan, we use either *koikuchi shoyu* (literally, thick-flavored soy sauce) or *usukuchi shoyu* (light soy sauce) depending on the dish, not both together. In the Philippines, they seldom combine the different types of soy sauce because there are no great differences in color or taste. In contrast, in Thailand, light and dark *si-iw* are combined in one dish to control the saltiness, sweetness, and color.

It is also really common in Thailand to use *si-iw*, *nam pla* and *nam mun hoi* in different ratios to make Chinese-style Thai dishes, and many Thai home-cooking cookbooks include recipes that call for that combination of sauces. It seems that the addition of *nam pla* to dishes originating from Chinese cuisine has been a way of adjusting the flavor to suit local tastes.

4-2. Soy Sauce Consumption and Varieties in Thailand

Looking at statistics on the consumption of table sauces in Thailand, it is clear that only 15% of total consumption volume is accounted for by soy sauce and sauces containing soybean paste (see Figure 1). However, such soy-based sauces constitute 31% of the market in terms of value, which shows that soy-based sauces are more expensive than *nam pla* fish sauces. Looking more specifically at consumption of soy-based sauces in 2014, the estimated market value was 5.8 billion Thai Baht, more than half going to the purchase of seasoning sauces, as shown in Figure 2 below. This was followed by purchases of light soy sauce (*si-iw-khao*) at 21.5%, with the remainder spread fairly evenly across sweet soy sauce (*si-iw-whan*), dark soy sauce (*si-iw-dam*) and soybean paste (*tao-chiau*).



Three different seasonings: light soy sauce, dark soy sauce and oystersauce.



Koong Ob Woon Sen Clay-pot Stir-fried Glass Noodles with Prawns



Ms. Charles Burana, Lecturer of Blue Elephant cooking class in Bangkok



Pad Pak Boong Fai Daeng Stir-fried Morning Glory

Figure 1. Table Sauce Consumption by Volume, and Proportion of Market by Value, 2013 Results

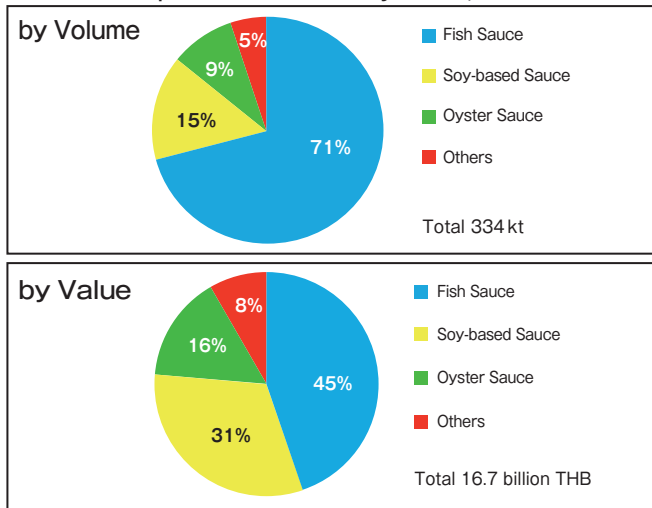
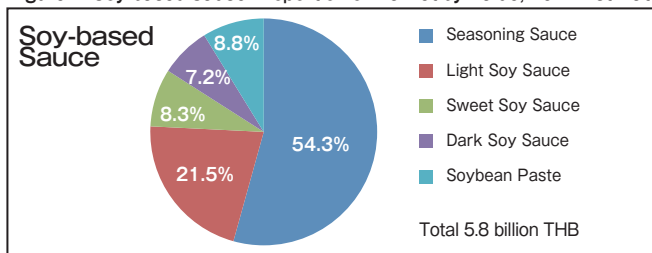


Figure 2. Soy-based Sauce Proportion of Market by Value, 2014 Estimate



Source: Euromonitor International, 2014. Sauce, dressing and condiments in Thailand.

The Thai Industrial Standards Institute (TISI) classifies soy-based sauces into three broad categories (see Table 5). Fermented soy sauce is further subdivided into four varieties: light, dark, sweet, and salt dark soy sauce (*si-iw-dam-kem*). While the market share is very small for the richer, thicker *si-iw-dam-kem*, professional chefs consider one local brand to be the perfect finishing sauce for *Khao Pad Kaprao*. Dark or black soy sauce is made from light soy sauce with added sweeteners, colors, flavors and viscosity, and brings slightly salty and sweet flavors as well as darker color to dishes. Sweet soy sauce contains a very low ratio of light soy sauce, and because its main ingredient is some kind of sweetener like molasses, it is mainly used for sweetening and coloring. One additional variety on the market is a kind of intermediate product called black sweet soy sauce. Each soy sauce company creates their own mixture to provide the perfect combination of salty and sweet flavors, as well as color. Chemical soy sauce is displayed as seasoning sauce

(sauce-prung-rot) and sold in packaging with green caps. Comparing prices of the two main categories sold by Healthy Boy, one of the largest sauce companies in Thailand, 300mL of first press, premium fermented light soy sauce costs 24 THB, compared to just 19.5 THB for the same volume of seasoning sauce. Semi-chemical soy sauce is also referred to with the Japanese technique name *shinshiki shoyu*, despite being made differently to the original mixed brewing method approved by the Japan Agricultural Standard (JAS). This variety is only produced experimentally at present, with a view to expanding production in the future.

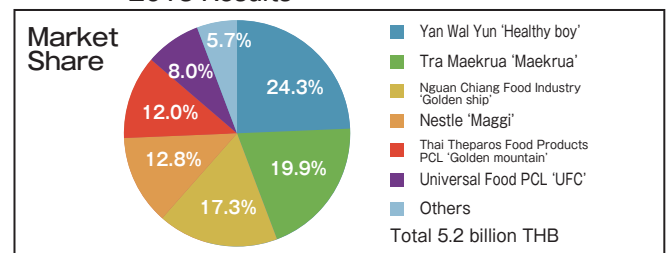
4-3. Taste for Japanese *Shoyu* Expanding in Thailand

We are currently in the midst of a worldwide *ramen* boom. Especially popular is *tonkotsu ra-men*, with its thick and cloudy soup made from pork bones. In the Philippines, where people are accustomed to eating a lot of pork, Hakata-style *tonkotsu ramen* shops are experiencing great success. On the other hand, the most popular ramen company in Thailand is Hachi-ban Co., Ltd., originating nearly 50 years ago in Ishikawa Prefecture, Japan. Having opened its first Hachi-ban restaurant in Bangkok in 1992, it now has a total of 110 locations, and ‘Hachi-ban’ has become synonymous with ramen in Thailand, just like it is for Ishikawa residents. The most popular dish on the menu is Ramen



Various sauces from the biggest brand Healthy Boy (from left, first press Light Soy Sauce / Black Soy Sauce / Sweet Soy Sauce / Black Sweet Soy Sauce / Seasoning Sauce) Seasoning sauces with green caps Nguan Chiang brand, with its golden ship logo, founded in 1912 as the first soy sauce maker in Thailand

Figure 3. Soy-based Sauce Market Share by Value, 2013 Results



Source: Euromonitor International, 2014. Sauce, dressing and condiments in Thailand

Table 5. Soy Sauce Varieties in Thailand

Type	Thai name	the meaning of Thai	Description
1. Fermented soy sauce	Si-iw	Soy sauce	Soy sauce with the process of naturally fermentation
1.1 Light soy sauce	Si-iw-khao	White soy sauce	Fermented soy sauce with or without addition of flavoring or color. A base for 1.2, 1.3, 1.4, 3, 4
1.2 Salt dark soy sauce	Si-iw-dam-kem	Salty black soy sauce	Continue fermenting 1.1 for darker and thicker sauce
1.3 Dark soy sauce	Si-iw-dam	Black soy sauce	Blend 1.1 with sweeteners until reaching desirable color, thickness and flavor
1.4 Sweet soy sauce	Si-iw-whan	Sweet soy sauce	Blend small amount of 1.1 with sweeteners until reaching desirable sweetness
2. Chemical soy sauce	Sauce-prung-rot	Seasoning sauce	Acid-hydrolyzed soybean sauce
3. Semi-chemical soy sauce	Shinshiki shoyu	(the term and technique originally came from Japan but different from Japanese Shinshiki)	Sauce combined the process of fermented and acid-hydrolyzed to shorten the production time while maintaining flavor and aroma

Source: Thai Industrial Standards Institute (TISI)



The most popular ramen dish at Hachi-ban



Japanese seasonings section at a major supermarket

with mixed vegetables, seafood and meat in a soy sauce-based soup. I think it is great that the flavor behind the Thais' favorite Japanese food is based on Japanese-style soy sauce.

When visiting a major supermarket in Bangkok, I was amazed at the selection of seasonings in the Japanese ingredients section. In addition to the imported brands, there was a whole row of locally-produced shoyu and shoyu-based dipping sauces. I will be really interested to see from here how the taste of Japanese *shoyu* is received and gains popularity in Thailand, which until now has been so strongly influenced by Chinese soy-based sauces.

5. Vietnam

5-1 Vietnamese Cuisine using *Nuoc Tuong*

In Vietnam, the four most typical kinds of noodles are *bun*, *pho*, and *hu tieu* (all rice noodles), and flour-based Chinese noodles known as *mi*. *Nuoc mam* (fish sauce) is often used to flavor noodle soups, and *nuoc tuong* (soy sauce) is typically found in dishes containing *mi* flour noodles or western-style pasta. At a café, I spotted a dish named 'Chinese spaghetti', which was seasoned with *nuoc tuong*. In Japan, when we cook pasta dishes with *shoyu* to give them a distinctly Japanese flavor, we call them *wafu*-pasta -*wafu* meaning 'Japanese style'. In Vietnam, or at least in Ho Chi Minh, it seems that the use of *nuoc tuong* conveys the image of Chinese-style flavors.

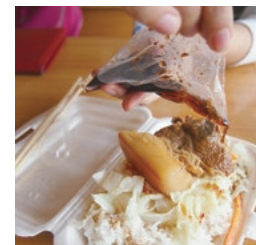
Thit Kho Trung, a typical Vietnamese dish of boiled pork and egg, available at local cafeterias and delis everywhere, uses *nuoc tuong* in its seasoning. The name means 'meat', 'boil', and 'egg', respectively, and the dish is typically served with a dipping sauce of *nuoc tuong* mixed with water and sugar. Vegetable and rice dishes are also usually accompanied by a mixture of *nuoc tuong* with slices of fresh red chili peppers to be poured over the food before eating. This style, in which the diner pours a soy sauce or seasoning sauce-based sauce over rice before eating, is found in common across the Philippines, Thailand, and Vietnam.

Dishes similar to *Thit Kho Trung* exist in the Philippines and Thailand, and the Japanese version is called *Buta no kakuni*, or *Raftee* in Okinawa. These kinds of foods provide the link to China as the originator of *jiang*, made from fermented soybeans, and represent the incorporation of Chinese cuisine into the various local cuisines of Asia. It is one dish that has probably not evolved much from its original form.

However, I found it interesting to hear that *Thit Kho Trung*, the Vietnamese version, is sometimes seasoned with *nuoc mam*. Ms. Shinobu Itoh, researcher of Vietnamese cuisine and owner/coordinator of "an com" Vietnamese cooking school in Japan, told me that in Ho Chi Minh and southern Vietnam in general, people often season with *nuoc mam*. This contrasts greatly with central and northern Vietnam where *xi dau* (soy sauce; called *nuoc tuong* in southern Vietnam) is the predominant seasoning. With the country stretching so far from north to south, the history, relationships with neighboring countries and acceptance of Chinese influences over time in central and northern Vietnam



Lunch set of boiled pork and boiled egg with *nuoc tuong* dipping sauce



Deli version of *Thit Kho Trung*

has differed significantly to that of the south.

At an eatery in Ho Chi Minh, I ordered a fish dish. Based purely on appearance, I was sure that it had been simmered in soy sauce, but when I tasted it, I found that it had been seasoned with *nuoc mam*, not *nuoc tuong*.

It seems that a lot of Vietnamese dishes are salted with *nuoc mam*, but unlike Thailand where there are also thick, dark varieties of soy sauce to add color to a dish, in Vietnam, those qualities come from caramel or burnt sugar. Traditional Vietnamese caramel seasoning is made from boiled down coconut water. The price of the caramel varieties available on the market today differs according to whether the product actually contains coconut water, and if so, in what proportion.



Simmered mackerel with *nuoc mam*



Soup, which appears to be flavored with soy sauce, but in fact used *nuoc mam*

While *nuoc mam* appears to dominate in Vietnamese cuisine, there is one genre of Vietnamese restaurants, however, in which *nuoc tuong* is indispensable -vegetarian eateries adjacent to Buddhist temples. Soy sauces, soybean pastes, and peanut sauces are typically used instead of *nuoc mam* or shrimp pastes, called *mam tom*.



Caramel sauce; bottle in center contains caramel made from 100% coconut water



Dishes at a restaurant adjacent to a Buddhist temple



Vinh Nghiem Temple in central Ho Chi Minh City

5-2. 'Soya Sauce' Varieties in Vietnam

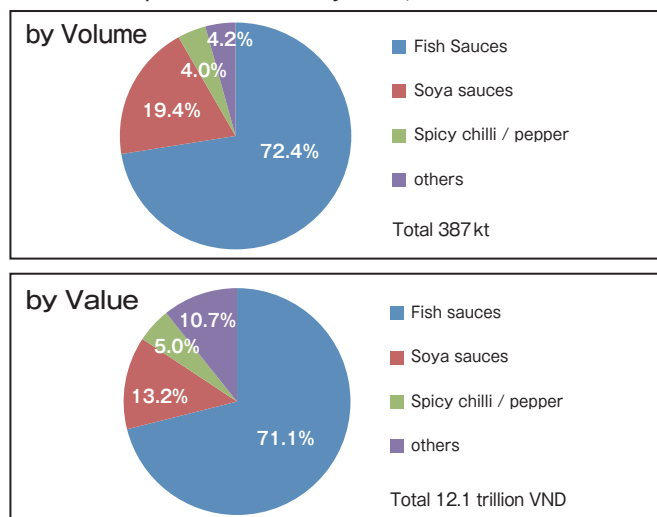
In Vietnam, *nuoc tuong* is generally written and pronounced as 'soya sauce', not 'soy sauce'. Though the pronunciation differs, soy can be written as 'soja' or 'soya' in both Spanish and French, and the continued use of the word 'soya' is thought to be an indication of enduring European, and particularly French influences, from when Vietnam came under French rule.

Research on the consumption of sauces and seasoning condiments in Vietnam shows that *nuoc mam* fish

sauces occupy over 70% of the total, in both volume and value, compared to soya sauces, which make up less than 20% of the total.

Masan, which with 78% has the largest market share in soya sauces by value, has expanded its share by selling high-end products with a focus on food safety. The company's research shows that soya sauce consumption value per capita in Vietnam is lower than Thailand and it feels there are very good prospects for increasing sales, thus it is currently working on expanding the market.

Figure 4. Table Sauce Consumption by Volume, and Proportion of Market by Value, 2013 Results in Vietnam



Euromonitor International 2014, Sauce, dressing and condiments in Vietnam

At two major supermarkets in Ho Chi Minh City, we found a total of 23 varieties of soya sauce from seven different makers. In addition to soybeans as the key ingredient, many contain peanuts, a unique feature of Vietnamese soya sauces.

In both Thailand and Vietnam, soy sauce is typically produced in the traditional Chinese style using pots. A majority of producers distinguish the first press liquid, which drips down naturally during the mash filtration process, from the second or subsequent liquids that are extracted with brine to draw out nitrogen. In contrast, Japanese *shoyu* makers conduct filtration just once, in a process that applies pressure to the sack containing the mash. You find the following three types on label descriptions of soya sauce products in Vietnam: 1) standard, with no description or described as *thanh vi*, meaning light; 2) dark, thick and concentrated varieties known as *dam dac* or *hao vi*; and 3) seasoning sauces.

From the descriptions, it would seem that types 1) and

Table 6. Standards of Soy Sauce in Vietnam

Type	Vietnamese name	Description
Naturally brewed soy sauce	Nước tương lên men	Fermented or brewed soybean or mixture of soybean and cereals by <i>Aspergillus oryzae</i> and/or <i>Aspergillus sojae</i> ; bacteria and/or molds and/or yeasts with salt added and with/without sweeteners.
Non brewed soy sauce; Hydrolyzed soy sauce	Nước tương thủy phân	Acid hydrolysis or enzyme hydrolysis of soybean and/or defatted soybean, defatted peanut with salt added and with/without sweeteners..
Mixed soy sauce	Nước tương lên men kết hợp thủy phân	Combine fermented and acid/enzyme hydrolysis of soybean or mixture of soybean and cereals

2) equate to the Japanese *usukuchi* and *koikuchi*, respectively, but that is not the case. While the flavors are slightly different, I did not notice much of a difference in the appearance or thickness between the two types. However, what I did hear is that the standard type is popular among restaurants owing to its affordability. Also, because it is not too strong, it can be poured directly on to a dish. *Hao vi*, in contrast, is too strong to be used straight, and is therefore typically used as a base for dipping sauces adding water or vinegar.



Variety of sauces showing the many makers and products available on the market



Top 3 brands from Masan: (left) Chin Su, marketed for its natural fermentation and brewing processes; (middle) a first-press variety with a brand name meaning 'elder son'; (right) a second-press variety called 'second son'



Bottles from the big three brands each displaying their thanh vi variety (on left) and dam dac variety (on right)

I was interested to see that iodine-added seasonings are found everywhere in Vietnam, and *nuoc tuong* made with iodized salt clearly states so on the label with the addition of the characters I-OT.



Iodized salt sold at a convenience store

5-3. Stronger Fish Sauce Culture in Vietnam

As mentioned earlier, the dipping sauce culture, seen in the Philippines and Thailand, is also very strong in Vietnam. *Mam* (fish/crustacean-based pastes), *nuoc mam*, *tuong* (soybean paste), and *nuoc tuong* are combined with vinegar, aromatic and acidic citrus fruit juices or other fruits, sugar, peanuts and other ingredients in different combinations to create a variety of dipping sauces, which are lined up at the dining table. Among the three countries I visited this time, the ratio of soy sauce usage compared to fish sauce is the highest in the Philippines, followed by Thailand and then Vietnam. Fish sauce culture was felt to be the strongest in Vietnam, especially in the South.

As shown in Table 1, each country has a large variety of fish pastes and fermented fish and seafood products. However, my observation from visiting large supermarkets in the major cities of Manila, Bangkok and Ho Chi Minh, is that the widest variety of fish and shrimp pastes and the largest number of brand labels of such products can be found in Vietnam. No less than ten kinds and fifteen different brands of bottled

fermented fish, shrimp and other crustacean-based paste products lined the shelves of a supermarket in Ho Chi Minh. At a local fresh market selling handmade products, nearly ten different kinds were found in either solid or paste form. More than thirty kinds of dried fish and shrimp were being sold at a dried fish specialty store. The enormous variety in marine and freshwater produce simply amazed me. It may support the argument that *nam pla* spread rapidly in Thailand during the 20th



Dipping sauces at a hotel breakfast buffet



Bottles of table seasonings at a deli

century thanks to the influence of Vietnamese *nuoc mam*, as reported by Mr. Arashiyama in Food Culture No.6.

The above is a summary of my observations on the research I conducted focusing on the salted fermented seasonings of three countries I visited in Southeast Asia. My research always reveals to me just how much more there is to learn!

6. Asian Ingredients in Japan

Where in Japan can we buy all these Asian products, ingredients, and spices? In Chinatowns all over Japan, you can find a large variety of Chinese ingredients, table wares, and variety goods. In Tokyo, Ameyoko in Ueno is well-known as the place to go for ingredients from all over the world. The underground mall there is filled with Asian condiments, spices, dried ingredients, as well as fresh fish. Grocery stores in Kinshicho stock a rich assortment of Asian ingredients, especially from Thailand, Vietnam, the Philippines, and India. Korean restaurants and groceries are concentrated in the area of Shin-Okubo, which I introduced in detail in my previous report.



Ameyoko Center



Assortment of seasonings from around the world, sold at the underground mall

To give a sense of the accessibility in Japan to these Asian flavors: *pho* is a staple amongst instant noodles available at convenient stores; Thai-style green and red curry and Indian Keema curry are sold in the ready-to-eat food corner of every 100-yen shop; and chic Asian cafe menus typically include Vietnamese coffee and *che* (shaved ice). Until recently, we clumped all Asian cuisines into a broad category called ‘ethnic cuisine’, but more and more Japanese are getting to eat these foods every day and getting to know the unique characteristics of each cuisine. We also have the opportunity to learn about imported ingredients and spices at cooking classes. I am certain that, going forward, Asian food culture will be classified into more refined groupings and that knowledge of and love for the cuisines will spread further and more deeply all around the world.

Against that backdrop, what is the best way for us to transmit Japanese food culture to the world? Some say Japanese food culture, known as *washoku*, was registered as a UNESCO intangible cultural asset because it is an endangered food culture. What we must do is educate the younger generations about Japanese

food culture and have them experience the tastes of their hometowns, to develop their interest in and knowledge of the diversity of *washoku*. We need them to become food ambassadors, in a way, sharing information on the value of Japanese cuisine with the rest of the world. We should also continue research on the commonalities and differences among all the ingredients, seasonings and spices found in Asian cuisine to gain deeper cross-cultural understanding.

7. Conclusion

I would like to thank my fellow researchers in the Philippines, Thailand, and Vietnam for their tremendous cooperation in writing this article. Field research is essential to understanding the food culture of a region; the culture can only be intricately understood after learning the language and living together with research subjects in the field. In that sense, it was not sufficient to base this article on information collected during my brief visits to these countries privately and as a researcher. The article came together thanks to the key information and insight provided by my local collaborators.

As yet unresolved is the issue of how to standardize notation for words from the local languages in English alphabetical format and Japanese characters. The official national standards for food in Thailand and Vietnam are not recorded in English, so the English notations found in this article are those translated by my colleagues. I am very grateful to Ms. Phattraphan Bunnag, who completed her study on Thai-Japanese food terms at Ochanomizu University, for her advice on translating Thai terminology into katakana for the Japanese version of this article, and to so many others who gave their precious time and kind cooperation.

There are so many challenging topics to cover when it comes to cross-cultural comparison of ingredient usage or multi-lingual comparison of food-related terms and expressions, but I truly find this work fascinating. The expertise gained while conducting research for this article raised more hypotheses, planting the seeds for many possible future research projects. Going forward, I hope to help build a solid network of local collaborators so that together we can conduct research in and further develop the field of international comparison of food cultures.



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