

Jamu Brand Indonesia: Consumer Preferences and Segmentation

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ABSTRACT

Indonesia is one of the countries that develop traditional herbal medicine, which is called *Jamu*. However, *Jamu* is consumed by the poor. Meanwhile, the rich prefer to use modern health treatment. In addition, there is no sufficient confident of people to consume *Jamu* as their main medical treatment. Hence, identification of potential consumer of *Jamu* from demographic characteristics and exploration of consumer preferences of *Jamu* according to the market segments in Indonesia is important for herbal medicine industry to develop a consumer-based marketing strategy. Cramer's V-test statistical test was used for the analysis of 183 data survey. The findings are consumers of *Jamu* assumed that *Jamu* is cheap, easy to obtain, have no side effects, natural, and safe to be consumed. But, they considered herbs as an alternative medicine or therapy, and even as the last resort. *Jamu* is potential to be developed by product and pricing differentiation, and packaged as a product that emphasizes value with halal certification. In addition, the classification of *Jamu* as Phytopharmacy has not affected consumer purchasing decisions as it has not been included in the health care system. For middle up segments, *Jamu* needs a strong brand using English language and required medical professionals as an advisor.

Keywords: Jamu, consumer preference, segmentation, marketing strategy.

JEL Classification: M11, M30, M31.

INTRODUCTION

In its history, *Jamu* (Indonesian traditional herbal medicine) has been used by the royal family to enhance fitness, to cure ailments, and to maintain beauty (Zuraina et al., 1990 in Limyati & Juniar, 1998; Stevensen, 1999). Today, *Jamu* is consumed as complementary and alternative medicine (CAM) (Nissen & Evans, 2012), therapy, and even to treat severe conditions such as kidney failure and diabetes (Tuschinsky, 1995). In addition, *Jamu* provides plenty of iron, of which deficiency is a major issue in Indonesia in relation to the role of iron in productivity, child's growth, immunity, and pregnancy health (Kodyat, Kosen, & De Pee, 1998)

Jamu Brand Indonesia was initiated by President Susilo Bambang Yudhoyono on May 27th, 2008 (Purwaningsih, 2013). The government of Indonesia has also requested the UNESCO to establish *Jamu* as one of the world cultural heritage (Maruf, 2007), with "*Jamu*" as the term used instead of "herbal medicine". This branding is seen as a distinguishing mark as herbal medicine is known not only in Indonesia, but also in Malaysia, China, and India. In Malaysia, *Jamu* is known as *Malay phytopharmaceuticals*. These herbal medicines have also been used for decades and generations in Malaysia (Tuschinsky, 1995), as self-medication. Suprana (2014), a renowned humanist and *Jamu* business owner in Indonesia, emphasizes the importance of the term *Jamu* as a brand instead of *herbal medicine* in that the word shows serves as the cultural identity of an Indonesian product, much like Batik, Angklung, and Tari Saman, without

reducing the commercial value of the product.

Market acceptance towards *Jamu* product from Indonesia has been showing positive trends. On a national scale, *Jamu* product sales rose 120% in the last 5 years, from 5 trillion rupiah in 2006 to 11 trillion rupiah in 2011, and to 20 trillion rupiah in 2014, of which 2,5 trillion is obtained from export sales (INFARKES, 2013). KADIN (Indonesian Chamber of Commerce and Industry) recommends *Jamu* as flagship industrial cluster which driving job creation and reducing poverty rate on the basis of local wisdom (Muslimin et al., 2009). This positive trend is attributed towards the "back to nature" preference adopted by the global community in personal healthcare (Hill & Howell, 2014). Compared to the conventional medicines, *Jamu* is more affordable, more readily available, and has fewer side effects (Muslimin et al., 2009). However, many people consider *Jamu* is not medicine, even though herbal medications can be combined with modern medicines to add therapeutic effects. Even without additional chemical substances, *Jamu*, which is already classified as Phytopharmacy, may be considered equal with synthetic or chemically enhanced medicines (Dean & McGuire, 2005).

The Indonesian government has shown its commitment to support *Jamu* industry up to the point where *Jamu* has now become an economic pillar for the nation. One exemplary effort comes from the Ministry of Agriculture with the establishment of Spices and *Jamu* Centre, a hub for information, marketing and education for *Jamu* (Balitro, 2012). *Jamu* companies as major players in the development of *Jamu* also continuously seeks to expand its market, with prime examples such as Ny Meneer selling its products in Malaysia and Vietnam (Amirullah, 2014), Borobudur intensifying its media campaign (Kurniawan, 2015), and Sido Muncul developing standardized *Jamu* products as an effort to penetrate global market particularly in Malaysia, Australia, Europe, and the US, along with product differentiation by offering various flavours (Prima Wirayani, 2015). However, Charles Saerang and Jaya Suprana, both influential *Jamu* businessmen in Central Java, believe that much more exploration of the potential of traditional Indonesian *Jamu* has to be made before the industry reaches its full potential (Muslimin et al., 2009).

Stevensen (1999) finds *Jamu* has only been used by the poor and those with low income in Indonesia for the past decade. High health care cost is one of the main causes of this phenomenon. On the other hand, wealthy Indonesians often seek medical care outside of the country such as Singapore, to get medical care with better quality. It can be concluded that Indonesian consumers do not possess trust to the poorly managed and packaged *Jamu*. So far there has been no sense of pride in Indonesians for consuming *Jamu* products (Pos Sore, 2015). In addition, foreign herbal medicines take up the limelight of alternative medicines, which can be attributed to the lack of promotion and information of the potency of Indonesian *Jamu* (Elfahmi, Woerdenbag, & Kayser, 2014), while intensive campaign of Mastin, a mangoesteen peel extract product, is proven to capture the attention of many consumers (Kurniawan, 2015).

Despite all these challenges, however, *Jamu* products keep showing positive trends in sales. Still, the figure is away from where many *Jamu* industrialists hope for, considering the vast potency of *Jamu* as a genuine Indonesian product to be developed and be internationally recognized. Also, there have not been many studies conducted on the Indonesian consumer preference towards *Jamu*. In the past, studies on *Jamu* mainly concerns on its medical potency or its relationship with the wealth of floral specimens in Indonesia. Some studies in the past also made efforts to upgrade herbal medications not only as *Jamu* therapy but also as standardized practice, as far as going for Phytopharmacy. All the while, exploration of consumer preference towards *Jamu* is just as essential to conduct the appropriate marketing mix, which involves among others the required *product/service, price, place, and promotion*. Therefore, this research aims to; first, identify consumer preference towards *Jamu* according to

social demographic characteristics in order to map market potential of *Jamu*. This map of market potential will be useful to discover alternative market shares for *Jamu* products. Secondly, this research aims to discover consumer preference towards *Jamu* according to market share in an effort to identify the desired consumers' treatments which will encourage them to use *Jamu* instead of modern or foreign herbal medications.

LITERATURE REVIEW

Types of Indonesian Jamu

Jamu in its many variants is identified academically and globally as herbal medicine, phytotherapy, botanical medicine, medical herbalism, and herbalism (Nissen & Evans, 2012). In Indonesia, *Jamu* is classified based on its production process, user claims, and all of which is regulated in Decree of the Head of Indonesian Drug and Food National Agency number HK.00.05.4.2411 on Fundamental Regulation on Classification and Designation of Indonesian Natural Medicines. According to the regulation, *Jamu* is grouped into traditional *Jamu*, standardized herbal medicine, and Phytopharmacy (Badan Pengawas Obat dan Makanan, 2004).

Traditional *Jamu* products must meet safety criteria as set out in the existing regulations, go through the empirical test on its claims of efficacy, and must adhere to quality assurance standards. The efficacy and safety of traditional *Jamu* are empirically confirmed when the recipe has been used for generations. Standardized herbal medicines have to fulfill safety requirements according to present regulations, be tested scientifically/pre-clinically for claims of efficacy, and adhere to specific standards in terms of ingredients used in the end-product. Hence, standardized herbal medicine needs to fulfill quality assurance standards through a pre-clinical test such as toxicity test (safety), dosage approximation, pharmacodynamics test (efficacy) and teratogenicity test (safety towards pregnancy). All the requirements must be met by *Jamu* of Phytopharmacy category, with efficacy claims clinically tested, and its ingredients are in accordance with recognized standards, as well as meeting all the quality assurance requirements (Badan Pengawas Obat dan Makanan, 2004).

The Development of Jamu

Commercial *Jamu* sales began with *Jamu gendhong*, which is believed to be a production surplus of family medication. *Jamu gendhong* or *Jamu* women commonly have no label, are sold in liquid form, and have been used for years and generations, particularly in Java (Sri Zuraina, Sri Harti, Emi Sukarti, 1990 in Limyati & Juniar, 1998). To name some of the products of *Jamu gendhong* are *beras kencur*, *cabe puyang*, *gepyokan*, *pahitan*, and *sinom*.

There are at least three known ways of producing *Jamu gendhong*, namely; boiled; dried and ground, sold in powder; and ground, boiled, and simmered into extract (Limyati & Juniar, 1998; Tuschinsky, 1995). Another variant of traditional *Jamu* is made only by sun drying (Tuschinsky, 1995). Research by Limyati and Juniar (1998) found that all samples of *Jamu gendhong* do not meet standards, and are contaminated by Coliform (due to poor hygiene), also are infested with fungus (due to poor storage) and *S. Aureus* (due to poor hygiene of producing personnel and production equipment). Moreover, *Salmonella Typhus* and *Paratyphoid* (attributed to typhoid fever in humans) are also found in the samples. Consumers doubt in consuming *Jamu* is not without reasons. One of those reasons is the quality of the raw material and end products which are questionable at best. Zhang, Wider, Shang, Li, and Ernst (2012) listed an inventory of research on herbal medicine and compiled evidence of contamination of heavy metal in the herbal medicines inquired. In addition to that fact, herbal medicines, which are lauded for its chemical additive-free nature, are proven to still contain a chemical additive in their contents.

Since the 20th century, however, *Jamu* began to be sold more intensively and began to be known as modern *Jamu* industry. The rise of modern *Jamu* in Indonesia began with brands like *Jamu Jago*, *Nyonya Meneer*, and *Air Mancur*. In 1995 alone, there were 350 big and small business companies listed as the producer of *Jamu* in Indonesia. More *Jamu* companies participated in the business as demands both local and export of *Jamu* increases. Today, *Jamu* is freely sold in the form of liquid and powder, as well as tablet, pill, and tonic (Tuschinsky, 1995). Most *Jamu* companies operate in accordance with proper industrial standards and perform a clinical test on their products, thereby putting their brands in the level of Phytopharmacy, or similar to modern medicines.

Preference

Preference has defined the disposition of an individual towards an object which is commonly reflected in explicit decision-making processes (Bettman, Luce, & Payne, 2006). In other words, preference is one's feeling of like or dislike towards an object. Preference is dynamic in nature, which means that it changes along with a shift in value, education level, perception, time, situation, and lifestyle of the respective individual.

In relation to preference towards *Jamu*, *Jamu* is perceived to have various efficacy, are divided into a number of quality classifications, and are produced by a number of companies which are perceived to make an effort to create certainty among their consumers. So far, efforts in cross-corporation strategy integration to create an image as an Indonesian brand are still found to be very limited. Therefore, preliminary studies need to be conducted to identify the consumer groups of *Jamu* and the preferences prevalent in each group or, in other words, market segmentation.

Social demographic characteristics are features which describe differences in population based on age, sex, occupation, education, religion, income, family type, marital status, and geo-location. With social demographics mapping, companies can identify market targets. Social demographic information also reflects the current trends. Demographics can also be used to observe changes in demands of various products and to evaluate marketing campaigns. After the market has been grouped based on each demographic characteristics, then the preference of each group can be identified. As an example, the identification consumer group with a preference towards *Jamu* with Arabic label, with reference to Tuschinsky (1995) who discovers that, for a market in Malaysia, it is suggested that producer labels their products with Islamic-themed packaging, orthography, or visuals, as opposed to the Javanese-themed ones. This preference is attributed to the faith-oriented view of the Muslim community which asserts stronger influence over the culture of the country of origin of the product.

According to Little (2009), six preference criteria for *Jamu* products are obtained from research in several industrious countries, all of which can enrich the consumer preference in each of the segments. These criteria are the efficacy claim that *Jamu* can relieve symptoms of sickness and that *Jamu* is perceived to give side effects. Another criterion is based on the relationship formed between clients and practitioner/professionals in herbal medicines, as well as the minimum effect that *Jamu* have on daily activities. In western countries, continuous use of herbal medicines is attributed to a strong bond between practitioners or professionals and their consumers. The practitioners retain their consumers by putting special attention to the need of consumers to be heard (Nissen & Evans, 2012). Little (2009) adds that clients seeking herbal medication treatments also enjoys chatting with other clients.

Forming brand equity in order to encourage the local community to consume *Jamu* as alternative medicines, Thai government applies community-oriented approach and clinic-oriented approach. Both approaches are applied considering *Jamu* is often sought out as medication whenever modern pharmacy is deemed insufficient by consumers in Thailand. This research finds that the adoption of clinic-based approach is more successful in Thailand private hospitals than in government-run hospitals. In addition, community-based approach is more effective in self-initiative consumption of medications, compared to initiatives from doctor's prescriptions or other professionals' suggestions. Professionals are found to have a more significant role in the consumption of *Jamu* in clinic-based approach. Therefore, the government needs to take a role in encouraging the use of *Jamu* in healthcare (Elfahmi et al., 2014). The experience from Thailand shows that recommendation is one of the key elements in promotion as a part of a marketing mix, which plays a significant part in marketing strategy compared to, for example, price point or product quality.

In modern *Jamu* industry, various promotional campaigns through advertisements in printed and broadcast media have been intensively pursued. Even so, word-of-mouth (WOM), which is a type of recommendation, is a part of promotional media which still possesses a significant influence (Tuschinsky, 1995). So far, *Jamu* producer companies have been using *house-to-house seller*, in which the reseller also acts as a healthcare or beauty consultant. Ready-to-drink *Jamu* counters are vastly spread all over urban areas in Indonesia and Malaysia. In this scheme, house-to-house sellers, resellers, and ready-to-drink *Jamu* counters take up the role of *Jamu* consultants for end-consumers. However, product knowledge of these people is perceived to be limited on what is written in the packages of the *Jamu* they sell. On the other hand, consumers expect more information from the *Jamu* products that they consume (Tuschinsky, 1995).

METHODOLOGY

This research uses positivism paradigm with survey so that findings can be generalized (Cooper, D. R., & Schindler, 2013) as Collis, J., & Hussey (2009, p. 76) say that a survey has the purpose of collecting "primary and secondary data from a sample with a view to analyze them statistically and to generalize the results to a population". In this research, the survey aimed to obtain primary data of the *Jamu* consumption behaviour of Indonesian. In addition, the survey included questions to gather both descriptive and analytical data. Descriptive questions were used, particularly to assess consumers' perception and comprehension of *Jamu* about the price, packaging, side effects, and also the classification. Analytical survey questions determined the relationship between consumers' segmentation and their perception and comprehension towards *Jamu*.

This is an exploratory study considering that studies relevant to the *Jamu* consumption behaviour, particularly in Indonesia, are limited. Most papers on *Jamu* mainly discuss the exploration of various botanical products in Indonesia for healthcare. Meanwhile, social studies concerning the consideration and how consumers consume *Jamu* as alternative medication are few. This study can be a representation of Indonesian consumers towards *Jamu* referring to social demography segmentation.

The questions were measured in the form of grades or rates by a Likert scale using 6 scales, ranging from strongly disagree (scale number 1) to strongly agree (scale number 6). Thus, referring to Cooper and Schindler (2013, p. 312), the data were included as an interval scale because there is "classification, order, and distance, but no natural origin". An even number was chosen as Mitchell (1999 in McGorry, 2000) mentions that Asian respondents tended to prefer the middle value of an odd-numbered scale. In addition, according to Kulas &

Stachowski (2009, p. 489), the middle response has the potential to be the "dumping ground", thereby showing the respondents' "uncertain, indifferent or ambivalent response orientations".

The population of this research is actual and potential *Jamu* consumers from all across social demographic strata in Indonesia, which the views were collected by convenience sampling. Self-administered questionnaires are distributed by door-knocking, along with an online survey which is widely distributed to respondents through Google form during November 2015. Data analysis is performed by basic statistics of frequency distribution and Cramer's V-test to identify the relationship between variables involved for 2-by-2 or more tables on nominal data (Pallant, 2007). In addition, to gain goodness criteria of the data collection, the respondents were those who have a minimum age of 17 years old and must be those who have a role in decision-making related to health and stamina issues in their respective families. This study involved 183 samples as according to Fink (1995), in order to obtain standard error of less than 10%, the sample size has to be more than 100 units, while Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham (2006) mention that to increase precision, there should be a sample of between 150 to 200.

FINDINGS

General description of a respondent is made to understand the characteristic of the respondent, who have given answers to the questions listed in the questionnaires. That the answers given by a respondent are affected by his social and economic background is always a possibility. This brief description of a respondent includes the identification of age, education, religion, and other social statuses.

The respondents participating in this research comprise of 183 Indonesian nationalities that are mostly Muslim and come from Javanese ethnicity. Respondents come from various age ranges, from 18 to more than 61 years old, which are then grouped into five age ranges. The majority of the respondents are women, married, and holding a university degree or similar qualification. Respondents with more than IDR 2.5 million in a month make up 56.3% of the population. The detail of respondents' demographics profile is the following:

Table 1 Demographics profile of the respondents

Demographics	Categories	Frequency	%
Age	≤30 y.o	72	39,3
	41 - 50	39	21,3
	31 - 40	36	19,7
	51 - 60	25	13,7
	≥61 y.o	11	6,0
Religion	Muslim	161	88,0
	Non-Muslim	22	12,0
Race	Javanese	148	80,9
	Non-Javanese	35	19,1
Marital status	Single	111	60,7
	Married	72	39,3
Education	less than higher degree	80	43,7
	higher degree	103	56,3
Spending	≤ Rp2,5 mill	80	43,7
	> Rp 2,5 - 5 mill	68	37,2
	> Rp 5 - 10 mill	33	18,0

	> Rp 10 mill	2	1,1
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Consumer Preference

The majority of *Jamu* consumers in Indonesia perceive *Jamu* prominently as an affordable product (95.6%) and widely available (89,1%), with both perceptions scoring at an average of 5.1. This means that *Jamu* is perceived as convenience goods in Indonesia. Consumers also perceive *Jamu* as a natural product (93.4%). On the other hand, the perception that *Jamu* is safe to consume, without side effects and the chemical additive is not as prevalent as that of the availability and affordability of *Jamu*. As many as 78,7% of consumers believe that Indonesian *Jamu* is safe to consume, 63.9% of consumers think that *Jamu* is without side effects, and only 57.9% of consumers believe that *Jamu* is made without chemical additives, scoring a mean of 3.7.

As a consequence, there is reluctance among the consumers to use *Jamu* as a primary choice for medication, leading them to opt for a modern pharmacy to help cure sickness or to be used in therapy. This research discovers that only 62.1% of consumers who use *Jamu* as a primary choice for medication. As a treatment for more severe illnesses, only 65.6% consumers choose *Jamu* as an alternative medication. There is even tendency to make *Jamu* as a last resort in medication, as stated by 67.8% of consumers.

Even when it is found that there are many consumers who make *Jamu* as their first choice of medication, the finding is not surprising since the majority of the respondents involved in this research, as much as 80.3%, spend ≤ IDR 5 million monthly. This finding is consistent with what Stevensen (1999) found which states that from a decade ago until today, *Jamu* is a medication mainstay for people with little or no income at all. In addition, *Jamu* consumers with considerably higher income only use *Jamu* to treat mild sickness.

Reference or media group perceived giving the most significant influence on *Jamu* consumption in Indonesia by 62.6 % of the consumers are professionals, namely medical doctors and healthcare consultants. In addition, friends and colleagues are also perceived to influence the consumption behavior of *Jamu*.

This research finds that almost all *Jamu* consumers in Indonesia, as many as 95%, prefer to consume *Jamu* with the *halal* label, even those who do not adopt Islam as their religion. On the other hand, a citation from the *sunnah* book on the *Jamu* package is not a prominent preference for consumers. Another non-prominent preference determinant is the *Jamu* brand. Consumers do not seem to show a strong preference for specific *Jamu* brands, such as Arabic, Indonesian, or English branding of the product. As many as 80.9% of the consumers even disagree with Arabic branding as a preference and choose *Jamu* as the brand instead. Consumers also do not seem to show a preference for modern packaging. 88.5% of consumers do not make foreign *Jamu* brand as a preference, with a mean score of 2.0. In detail, the Indonesian consumers' perception, behaviour, reference, and preference is the following:

Table 2 Consumers' perception, behaviour, reference, and preference

Indicator	Disagree	Agree	%	Mean score
Perception				
Cheap	4.4%	95.6%	100%	5,1
Easy to obtain	10.9%	89.1%	100%	5,1
Natural	6.6%	93.4%	100%	4,8
Safe	21.3%	78.7%	100%	4,4
No negative effect	36.1%	63.9%	100%	4,0
No chemical substance	42.1%	57.9%	100%	3,7
Behaviour				
Main medicine	38.8%	61.2%	100%	3,8
Alternative medicine	34.4%	65.6%	100%	3,9
Last resort	32.2%	67.8%	100%	3,9
Reference group				
Friend	38.8%	61.2%	100%	3,5
Waiter	45.9%	54.1%	100%	3,2
Professional	37.2%	62.8%	100%	3,7
Social media	60.7%	39.3%	100%	2,8
Commercial ad.	54.6%	45.4%	100%	3,0
preference				
Halal	4.4%	95.6%	100%	5,4
Prophet sunnah	59.6%	40.4%	100%	3,2
Foreign herbal medicine	88.5%	11.5%	100%	2,0
Modern packaging	56.8%	43.2%	100%	3,5
Arabic brand	80.9%	19.1%	100%	2,6
Indonesian brand	55.2%	44.8%	100%	3,3
English brand	54.1%	45.9%	100%	3,5

Only 55% of Indonesian *Jamu* consumers are aware that *Jamu* products are grouped into several classifications, with each classification logo is printed on the packaging. However, most consumers do not know of the existing classifications, the form of the logo used for each classification, especially those belonging to Phytopharmacy *Jamu*. Therefore, consumers do not take *Jamu* classification into consideration when consuming *Jamu*. Although consumers are not aware of *Jamu* classifications and know the logo of the classifications, the majority of them believe that traditional *Jamu* and standardized herbal medicine is chemical additive-free.

Other than product attribute preference, *Jamu* consumers in Indonesia do not show a strong preference for *Jamu* products from a certain country of origin. Not one preference for each country of origin criterion obtains more than 50% mark from the consumers. So much so that only 19.1% of the consumers make Arabic *Jamu* as their preference. Today, the most consumed *Jamu* products are modern *Jamu* Tolak Angin and *Jamu gendhong*, such as Beras Kencur and Kunir Asem. This research finds a trend that *Jamu* consumers are not aware of *Jamu* classification, nor do they consider those classifications in making the decision to consume *Jamu*. Only 40% to 55% of all the consumers are aware of *Jamu* classifications and the different logos representing those classifications. Almost all of the consumers know the logo for traditional *Jamu*, yet only 24.6% and 15.3% of the consumers know the logos for standardized herbal medicines and Phytopharmacy respectively. There is an interesting finding in which consumers perceive the higher classification of a *Jamu* is, the more chemical additives in its contents.

Table 3 Consumers comprehension of Jamu classification and chemical substance

Indicator	Disagree	Agree	%	Mean score
Classification				
Number of classes	59,6%	40,4%	100%	3,0
Logo of classes	44,8%	55,2%	100%	3,4
Logo of traditional <i>Jamu</i>	51,4%	48,6%	100%	3,5
Logo of standardized herbal	75,4%	24,6%	100%	2,6
Logo of Phytopharmacy	84,7%	15,3%	100%	2,3
Classes consideration in the consumption	51,4%	48,6%	100%	3,4
Chemical substance				
Traditional <i>Jamu</i> without chemical	39%	61%	100%	3,8
Standardized herbal without chemical	42%	58%	100%	3,6
Phytopharmacy without chemical	56%	44%	100%	3,2

In determining their purchase or consumption of *Jamu* products, consumers directly and indirectly obtain their reference from colleagues, mass media, social media, as well as other reference groups. For *Jamu* companies, identifying the most potential media as sources of product information and recommendation for consumers is very important, so that the companies can maximize the role of such reference media in marketing their products.

Table 4: Consumers' reference groups

Variable	Cramer's V
Age vs Friend/colleague	,230*
Age vs Shop waiter	,240*
Age vs Professional	,223*
Age vs Social media	,236*
Age vs Commercial ad	,248*
Religion vs Friend/colleague	,147
Religion vs Shop waiter	,123
Religion vs Professional	,134
Religion vs Social media	,229*
Religion vs Commercial ad	,172
Spending vs Friend/colleague	,145
Spending vs Shop waiter	,187
Spending vs Professional	,199
Spending vs Social media	,392*
Spending vs Commercial ad	,224*
Education vs Friend/colleague	,177
Education vs Shop waiter	,191
Education vs Professional	,219*
Education vs Social media	,175
Education vs Commercial ad	,196

This research has found that, first, there are significant differences in the age group to make friend/colleague, shop waiter, professional, social media, and commercial advertisement as media references of *Jamu* consumption. Second, there is a significant difference in the religion group to make social media as media references of *Jamu* consumption. Third, there are significant differences in the spending group to make social media and commercial

advertisement as media references of *Jamu* consumption. Fourth, there is a significant difference in the education group to make professional as media references of *Jamu* consumption.

Consumer Segmentation

In this research, *Jamu* consumers in Indonesia are grouped based on their demographic aspects, namely age, religion, education, income, ethnicity, marital status, and sex. This research identifies how the difference in each demographic class influences preferences in a certain attribute of *Jamu* products.

According to their age, consumers from different age groups have their own preferences in specific *Jamu* products. Older consumers prefer *Jamu* with Indonesian brand over those with Arabic brand. In addition, consumer age and preference in Indonesian *Jamu* brand show lateral correlation. On the other hand, consumer age and awareness of the 3 classifications of *Jamu* shows inverse correlation, with older consumers being less aware of and do not take these classifications into consideration when purchasing and consuming *Jamu* products. Different preferences are also found among Muslim and Christian consumers and Catholic consumers. Muslim and Christian consumers have a higher preference in *Jamu* with *halal* label compared to those with Catholic as religion. However, citations from the *sunnah* book do not seem to give significant influence towards the preferences of *Jamu* consumers across the segments. Only Muslim consumers show positive preference in *Jamu* with a citation from the *sunnah* book on its package. Educational background of consumers does not show significant influence towards their consumption of *Jamu* products. However, education level of consumers shows a positive relationship with awareness of the consumers of *Jamu* classifications and their logos. Income level does not seem to influence consumer preference in *Jamu* products packaging. There is a positive tendency, however, that the higher the income of the consumers, the more likely that they prefer to consume *Jamu* with modern packaging and Indonesian brand.

Women have a stronger perception that *Jamu* in Indonesia is chemical additive-free. Contrary to this fact, more men are shown to consider *Jamu* classification prior to product purchase or consumption than women. Consumers who were married or are currently married prefer Indonesian *Jamu*, have no significant preference in *Jamu* package with *sunnah* citation, and tend to purchase *Jamu* with modern packaging. On the other hand, these consumers are shown to have low awareness of *Jamu* classifications and their logos. Therefore, consumers who were or are currently married do not make *Jamu* classifications and their logos as a preference when purchasing or consuming *Jamu* products. This following table describes the influence of demographic characteristics towards consumers' perception, behaviour, reference, and preference of Indonesian *Jamu*.

Table 4 Cramer's V-test significance

Perception	Age class	Religion	Education	Spending	Race	Marital status	Sex
1. Cheap	0,023*	0,526	0,118	0,263	1,000	0,154	0,053
2. Easy to obtain	0,003*	0,922	0,299	0,863	0,948	0,001*	0,207
3. No negative effect	0,031*	0,423	0,099	0,393	0,811	0,030*	0,259
4. No chemical substance	0,005*	0,196	0,358	0,267	0,720	0,024*	0,014*
5. Safe	0,661	0,490	0,059	0,151	0,780	0,470	0,831
6. Natural	0,203	0,142	0,970	0,503	0,000*	0,310	0,770
7. Main medicine	0,906	0,921	0,590	0,338	0,681	0,030*	0,994
8. Alternative medicine	0,412	0,202	0,445	0,111	0,407	0,000*	0,064
9. Last resort	0,309	0,898	0,593	0,237	0,523	0,262	0,592
10. Foreign herbal medicine	0,197	0,522	0,314	0,965	0,000*	0,086	0,658
11. Prophet sunnah	0,377	0,000*	0,853	0,286	0,686	0,095	0,144
12. Halal	0,643	0,001*	0,709	0,667	0,000*	0,363	0,065
13. Modern packaging	0,381	0,679	0,159	0,006*	0,886	0,027*	0,095
14. Arabic brand	0,006*	0,198	0,437	0,672	0,955	0,490	0,747
15. Indonesian brand	0,000*	0,618	0,081	0,009*	0,773	0,000*	0,052
16. English brand	0,052	0,285	0,187	0,107	0,286	0,009*	0,536
17. Number of classes	0,000*	0,666	0,076	0,260	0,588	0,001*	0,141
18. Logo of classes	0,000*	0,121	0,024*	0,569	0,974	0,000*	0,187
19. Classes consideration in the consumption	0,005*	0,721	0,059	0,057	0,118	0,000*	0,041*

*significant

DISCUSSION

Studies related to consumer preferences are crucial, particularly nowadays, when technological advances have provided consumers with more options of products. At the same time, products and services are getting shorter lifetimes. Moreover, value trade-offs in commerce make preference construction more complex and dynamic (Bettman et al., 2006). In medical world, *Jamu* is still situated in a less competitive market. Even when there are various product options, one product does not have significant advantage over another. Moreover, low market price of *Jamu* makes switching cost low. This fact accounts for low consumer loyalty. Despite all that, *Jamu* companies need to build preferences, since customer preference is context sensitive, and it is built and is determined by target, cognitive constraints, and experience.

One of the most significant factors in building consumer preference in *Jamu* is *halal* product certification, which has been proven as the main indicator for consumers in the purchase and consumption of herbal medicines. This finding is notable since the study of El-bassiouny (2014) shows that today there are as many as one billion Muslims, yet they are still marginalized by limited studies about them. Meanwhile, proper application of marketing strategy promises a significant boost in sales through products which emphasize value and morality, namely *halal* products (Matin, 2011 in El-bassiouny, 2014). It is interesting to note that preference for *halal* products is also held by consumers with religion other than Islam. Moreover, Yusuf and Yajid (2015) in their research, which is conducted in five Asian countries, show that there is an increasing awareness of a *halal* product and its logo. *The halal* label has become a priority in choosing a product, which is followed by quality, brand, and price factors.

On the other hand, preference is not always a precursor for purchasing decision. Therefore, producers must understand the cognitive processes which the consumers go through in making their decision. In the Search for Dominant Structure (SDS) theory (Montgomery, 1983 in Crozier & Ranyard, 1997), when consumers are faced with multiple alternatives, they go through stages of pre-edition, finding a promising alternative, dominance testing, and dominance structuring. In purchasing and consuming *Jamu*, consumers select one product among the many kinds of *Jamu* products, they will then narrow down their selection to a number of products which are most relevant.

Jamu products are seen by many Indonesian consumers as convenient goods, which mean consumers do not need high effort and consideration in obtaining the products. Convenience goods do not have strong characteristics which distinguish them from their competing brands (John F. Tanner & Raymond, 2012). Therefore, *Jamu* products need to be designed as such that they are widely available, particularly affordable and practically packaged in order to allow high purchase frequency. This is due to the fact that *Jamu* has had 'crystallized' values (Schuman and Presser 1981 in Bettman, 1999), of which consumers are very familiar with the products or services and value them based on the common assumption of the said products or services. Based on this finding, *Jamu* classification is not an urgent matter and is a somewhat "wasted" effort.

On the other hand, Indonesian government adopts Indian Ayurveda which includes the use of herbal medicines in healthcare services (Shrivastava, Shrivastava, & Ramasamy, 2015), and makes classification and enrichment of *Jamu* into Phytopharmacy, under the management of Department of Healthcare, as an important objective. A government regulation which includes *Jamu* as primary medication in public health care services and which gives more access to the testing of *Jamu* and its *halal* certification is much needed. Moreover, as people gets more and more educated, they demand *Jamu* companies come up with safe-to-consume *Jamu* products. It is found that the higher the income of the consumers, the more they desire products with modern packaging. Therefore, *Jamu* companies can make product differentiation between those for the low-income, middle-income, and high-income consumers as consumers are social groups that undergo dynamic changes (Moss, 2006). In addition, Moss (2006) also states that consumers adapt more easily to new products through differentiation rather than radical change. In light of this finding, *Jamu* companies may create differentiation on their line of products, in which one product is labeled "better" when compared to the other. Thus, branding takes a crucial place in this effort. When further developed, *Jamu* will eventually turn into a shopping product from its current perception as a convenience product.

Consumers from middle to high-income groups also tend to choose herbal medicines or *Jamu* with labels in English. Hence, it is most appropriate that *Jamu* products intended for lower income consumers are labeled in a local language and be sold at the lowest possible price point. Contrary to the preceding step, products designated for middle to high-income consumers should be offered in a more modern branding and packaging, as it will express images of high-quality, exclusive, and long-lasting products (Moss, 2006). Packaging must always take the utmost concern of *Jamu* companies, as packages do not only function as product containers, but also determine quality and safety of the product as well as a preventive measure from chemical, biological, and physical damage to the products (Trinetta, 2016). Although the direct consequence of better product packaging is better quality assurance of the products, it also adds the price point of the product. To handle this, *Jamu* companies may adjust the price point of better-packaged products for appropriate consumers in certain income groups and social class, the products being a status symbol (Moss, 2006), consumers from higher income groups and social class deserve a special treatment.

Professional advisers in herbal medicines, for instance, are demanded by consumers with higher educational level. These consumers trust the opinion of professionals as reference media, rather than social media and commercial advertisements, particularly for healthcare products. The access to professional advisers is intended so that consumers can comfortably consult in determining which product is suitable for their personal needs. This deserves attention since, in Indonesia, professional consultants in herbal medicines are not commonly found. On the other hand, *Jamu* depots can still play their role in consulting consumers from the lower income groups. However, depot sellers should have the necessary skills and product knowledge. Depot sellers should not only serve the consumers as far as providing the requested products, but they also need to be aware of and have sufficient knowledge in the variants of the products that they sell.

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CONCLUSION

Jamu has been specifically referred to by consumers as an Indonesian product with potential development, considering its vast market and its compatibility with characteristics of many communities. Using the findings in this research, *Jamu* companies can appropriately make product differentiation according to the perception and preference of the consumers in the proper market segments. Findings in this research can be combined with marketing strategies of *Jamu* companies so that they can accurately identify a target market and determine the most effective promotional design. However, the development of *Jamu* industry requires the support from the government, particularly in realizing *Jamu* consumption as an Indonesian culture. The realization of *Jamu* consumption as Indonesian culture is expected to increase consumer trust towards *Jamu*. *Jamu* is not just as supplements and last resort medications, but as primary medications acceptable in the medical world, not just limited to the poor. Research centre also need to expand their capacity from finding to construct consumer preference.

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