Strategy for developing Indonesian vanilla products to improve the added value

A Wahyudi*, S Sujianto and I Kurniasari

Indonesian Spice and Medicinal Crops Research Institute, Jln. Tentara Pelajar No. 3, Bogor, West Java, Indonesia

*aguswahyudi211@gmail.com

Abstract. Vanilla is a world-well-known spice product, especially as food and beverage flavoring; however, the availability of (natural) vanilla is too little (less than 1%) to meet the demand for vanilla either industry or household. So far, most Indonesian vanilla is traded as a commodity in the international (export) and domestic markets. For producers who are primarily smallholders, these conditions create business uncertainty and added value. This paper aims to review the strategy of product transformation from general commodities into certified products or branded products by utilizing digital marketing (e-commerce), which leads to the stability of the price of vanilla products (reduced uncertainty), and creates an additional value. The method used in this study is the literature review method. Product transformation requires product development, where certified products must follow particular procedures in production to obtain certification, and branded products require differentiating features in products that consumers appreciate. In addition to product development as a primary strategy is also needed supporting strategies such as proper pricing and promotion. This review implies that there is an opportunity to transform a vanilla product from a commodity to certified and branded products; hence it should become vanilla development agenda.

1. Introduction

Currently, marketing of agricultural products produced in various countries still faces structural problems, namely relatively limited buyers, particularly multinational companies, while the many similar products are offered. This condition creates an imbalance of bargaining power in a market where the seller must accept the price offered by the buyer. In addition, the characteristics of agricultural products are relatively homogeneous, making it into the international commodity market, which price of agricultural commodities tend to fall in the last 30 years [1].

One nature of the commodity market is the very high price volatility [2], while most of Indonesia's agricultural products are traded as commodities that enter the domestic market as well as exports. This condition results in production uncertainty because most producers are smallholders, so at times of high prices, farmers try to increase production and vice versa when prices are low. However, in general, the production of these commodities can continue because Indonesia has a comparative advantage with the support of natural resources; hence it can produce at a low cost. Further impact is challenging to improve farmers’ welfare in the longrun because the products are underdeveloped and limited in value-added.

Vanilla is one of Indonesia's agricultural export commodities used in the food, beverage, perfume, and pharmaceutical industries. The three primary producers of vanilla are Madagascar, Indonesia, and China, with 3,227 tons, 2,402 tons, and 662 tons per year in 2018 [3]. Other producing countries are
Mexico, Uganda, Comoros, Papua New Guinea, Turkey, Tonga, and several Asian countries such as India, Thailand, and Malaysia [4,5]. Among vanilla-producing countries, China and Indonesia are producers and importers of vanilla to meet domestic needs, while other producers are generally exporters only.

As a spice, vanilla is a high-value product because it is a scarce product. As it is known, the world vanilla needs that can be met from natural vanilla less than 1% [6]. The high growth of vanilla exports from Indonesia and other producing countries, which export mainly to Europe and the United States, is due to the high growth in natural vanilla demand by the super-premium ice cream industry. In addition, it requires more vanilla, increased consumer awareness of the use of natural vanilla is healthier than synthetic vanilla, and rising expectations of the food and beverage industries that use natural vanilla in Europe and the United States, and around the world [7].

Indonesia's vanilla export volume only ranges from 15-25% of its annual production, which means that most of the production is used to meet domestic needs, even Indonesia also imports. This condition shows that domestic vanilla needs for both industry and household are also growing as well as in Europe and the United States (Table 1). The average export value of Indonesian vanilla shows large fluctuations over the last seven years, even briefly falling in 2015, vanilla farmers face income uncertainty. Such conditions result from commodity trading, where prices are determined in the international market, so sellers and buyers can only act as price takers.

| Year | Production Volume (ton) | Import Volume (ton) | Export Volume (ton) | Export Value (K US$) | Average Value US$/kg |
|------|------------------------|-------------------|--------------------|---------------------|----------------------|
| 2014 | 2.000                  | 38.38             | 235.32             | 58.400              | 248                  |
| 2015 | 2.000                  | 15.86             | 410.40             | 17.340              | 42                   |
| 2016 | 2.330                  | 10.24             | 626.80             | 80.120              | 128                  |
| 2017 | 2.480                  | 105.91            | 274.10             | 86.980              | 317                  |
| 2018 | 2.360                  | 139.5             | 194.13             | 72.510              | 374                  |
| 2019 | 2.330                  | 104.32            | 248.10             | 67.210              | 271                  |
| 2020 | 2.400*                 | 6.78              | 332.50             | 65.500              | 197                  |

*Estimated

So far, most vanilla produced in producing countries is traded as a commodity (generic product) in vanilla beans. Actually, consumers of vanilla products consist of household and industrial consumers, who have a different pattern in making purchases. Household consumers usually make purchases of final vanilla products such as vanilla beans, extracts, or pasta in retail, while the industry tends to make purchases of vanilla as an ingredient in the form of vanilla beans only with large units. Thus, industrial consumers are more likely to purchase vanilla beans as a commodity, while final products (certified or branded) are more likely to be purchased by household consumers.

Increasing the added value and reducing the uncertainty of Indonesian vanilla products required a strategy for developing the products and changing the target market. This paper aims to review strategies for developing vanilla products to increase added value and reduce price uncertainty by transforming vanilla products from commodity to certified and branded products and changing the target market from commodity to niche market, either international or domestic ones.

2. Materials and methods
To find the strategies for developing vanilla products, we have searched and reviewed literature from publications related to vanilla, marketing, certification, branding, and digital marketing. Sources of literature used in the form of journals, books, proceedings and websites. The first search was the literatures published in the last five years then the last 10 years and then all years. There were collected
98 literatures from all years, but mostly from the last 10 years, then filtered into 32 literatures which were more conical to the topic.

The logical framework used to review value-added improvements through product development is the product value pyramid that constructed from Figure 1. In marketing, based on its market value, the product can be distinguished into three levels: generic products (commodity), certified products, and branded products. The commodity is a relatively homogeneous product either with or without standardization and traded in bulk in the absence of brands. Market mechanisms determine the price. Certified products are products produced with procedures established by a certification body with specific purposes, such as organic certification and sustainable production certification. The price of a certified product depends on an agreement with the buyers who recognize the certificate in question. Branded products are products accompanied by the brand as the identity of the guarantor of the product with the qualifications listed and generally has differentiated features with other brand products. The prices of branded products are determined by the marketer and become an essential part of the strategy.

The constructed product value pyramid [1,33,34]

3. Results and discussion
3.1. Current condition of vanilla marketing
The commonly available vanilla commodity marketing chain at this time is from farmers who produce vanilla sold to local collecting traders in the form of green vanilla pods after harvesting. Local collectors sell to prominent collectors or distributors of vanilla in the form of vanilla beans. Large collectors sell vanilla in the form of graded vanilla beans to exporters or the food and beverage industry, while distributors sell vanilla beans in retails to household consumers (Figure 2).

The role of the farmers' vanilla marketing chain in Indonesia is still limited to sell vanilla in the form of green vanilla beans (wet pods) because vanilla requires lengthy processing (3-6 months). It is relatively costly, and the mastering of processing techniques are too complicated for them. Only farmers
who can access capital and master processing techniques can do vanilla processing. Thus, it can be ensured that the added value that farmers can enjoy is relatively limited, while farmers in vanilla production face high natural and economic risks. Strengthening farmers to improve the technical capabilities of vanilla processing and access to capital should be programmed to open opportunities for farmers to develop products and create added value.

Technically farmers can process green vanilla beans to become quality vanilla beans by caring for critical factors. Quality vanilla bean products depend on the level of maturity, length of pods on green vanilla before processing, and processing methods applied such as Mexican process and Bourbon process and Peruvian process and Guyana process [8]. Punctuality of green vanilla harvest after pollination becomes a determining factor in the accumulation of dry matter and aromatic components. It depends on the environmental conditions of the plant, especially temperature [9]. Vanilla quality standards are different in each country, resulting in Indonesian vanilla exported often lower up to 20% than bourbon vanilla [4].

Due to the development of the products is carried out by farmers or farmers' institutions who are small or medium enterprises, which will penetrate the market with the main target in a particular segment, it needs a particular strategy [10]. To develop a strategy, the marketer requires household data of prospective consumers based on the results of the survey. The E-commerce platform is a digital marketing infrastructure available that can successfully penetrate domestic and global markets, based on the China experience [11], and currently in Indonesia.

3.2. Strategies for certified product development

Developing certified vanilla products aims to empower vanilla farmers in facing price uncertainty problems by producing highly appreciated products by specific consumers through environment-friendly, profitable, and prosperous production. The strategy used to develop certified products is a collaboration with suitable local or global certification bodies that allow farmers to meet their requirements.

The public or end consumers are now more intelligent in shopping for their products, so they prefer the products they will use. They will choose a product based on its quality and spend more money buying a quality product. One of the producers' efforts to ensure the quality of their products is through certification. So quality assurance is essential. Certified products have quality assurance and give confidence to consumers.

Certification can be in the form of product, process, and management system certification. Product certification can be carried out by laboratory testing, and process certification is seen during the production process. Following particular standards, certification management system is seen as a whole of production management whether it is in accordance with certain standards and can produce sustainably and with continuity. The certification of the three shows that the company can claim that the products produced are of high quality [12].

Consumer demand for organic products is increasing, driven by increasing awareness of health [13]. Organic products are produced from cultivation to become final products that follow organic requirements [14]. Consumers can know the product is an organic product can be seen from the presence of an organic label on the packaging [15]. Organic certification bodies in Indonesia include Sucofindo, BioCert Indonesia, and INOFICE. Meanwhile, organic certification bodies abroad include ECOCERT, Rainforest Alliance, and USDA Organic. Farmers or companies need an organic certificate if they want to sell their products labeled organic. Foreign companies that will sell their products in Indonesia must also have an organic certificate from certification bodies in Indonesia, and vice versa. Indonesian companies that will export their products abroad, must have an international organic certificate. The procedure for obtaining an organic certificate at Sucofindo is: first, submitting an application for organic certification by attaching the necessary documents such as company legal documents and certificate documents from the country of origin for outside companies (application form); second, document verification; third, field inspection, and taking samples to be tested; forth, technical review; fifth, a
certificate issued; sixth, supervision audit. The process to get an organic certificate takes more than one month. The certificate is valid for up to 3 years [16].

Companies that sell vanilla and have international organic certificates include Nielsen-Massey, Thrive, McCormick, and Lochhead Vanilla. Various kinds of vanilla products are sold in the form of gourmet vanilla beans: Tahitian; Madagascar bourbon; Mexican vanilla extract, vanilla paste, vanilla powder, and vanilla sugar. They package their products well and attractively with the certification label they have.

Improving farmers’ ability is basically an increase in the added value and competitiveness of the commodities cultivated. Agribusiness activities that become superior in the region can be developed into the final products with precision treatment [17]. One of the value-added improvement chains that require precision treatment is the commodity marketing chain [34].

3.3. Strategies for branded product development

Branding strategy for new products depends on the suitability or fit of the product with the product category that is already on the market (parent brands). New products developed must determine a positioning against the parent brands [18]. Thus, brand development of products is part of a marketing strategy, known as a marketing mix consisting of product mix, pricing mix, promotion mix, and place mix (omnichannel distribution) [19] or often referred to as "The Four Ps." In addition, in executing the marketing mix, stick to the consumers in the targeted segment and positioning the product against other parent products that become competitors.

Effective marketing has to achieve "brand equity," that is, the added value gained from consumers' changing attitudes who increasingly appreciate the brand. The achievement of a marketing strategy is indicated in achieving the hierarchy of brand equity levels consisted of three levels, namely brand awareness, brand association, and brand loyalty as the highest level. It also indicates the achievement of brand relationship management [20]. The development of branded products from commodities is an effort that can be made to increase the added value. Brands for processed food products require strengthening with the development of product variants, attractive packaging, and eco-bags [21].

Product branding is a step to create customers' value, that is, the value of the product for customers both in the form of basic value derived from the performance of the product itself and psychological value as a result of using the brand in question compared to the brand of the competitor's product. Based on the concept, customers' value can be formulated as an accumulation of value from three factors: product value, differentiating feature value, and brand value [22]. The performance value of the product develops the essential value, which is the accumulation of value from the quality of the product, brand logo, size, packaging design, and label. The value of differentiating features is an addition to the basic value and psychological value because of customers' appreciation of differentiating features against similar products from brands that have been in the market (parent products). It can be the determining factor in winning the competition, so differentiating features must be through research of competitors in the targeted segment. Brand value is a psychological value created because of the achievement of the brand as in brand equity.

In Indonesia, most of the vanilla production is used for domestic consumption, especially for the food and beverage industry and household consumption; even to meet the needs, it has to be supplied with imported vanilla beans. As explained earlier, the need for export and industry is met from vanilla beans as a commodity while filling household needs supplied in part with branded products. Developing branded vanilla exports in various forms should compete with established companies. However, it does not mean closed possibilities, because, through digital marketing that is currently developing, market access to various countries is very open, moreover if the quality and price can compete, in addition, to lead to the personalization of tastes [23].

To enter the digital market, marketers require a digital marketing survey consisting of a survey of customers and a survey of competitors that become the basis of digital marketing planning to obtain maximum benefits for digital marketing [24]. Consumer surveys (audiences) must make consumer segmentation and determine the right target segments [25]. Digital consumer behavior surveys can be
done through three dimensions: mobile apps, social media platforms, and electronic word-of-mouth [26]. The digital survey uses digital footprints from consumers to buy and use vanilla in households located in all three digital dimensions, so it can be easier and faster to obtain new and complete data. In Indonesia, the use of digital marketing by small and medium businesses is still limited but growing mainly in the online transaction process, while the use for management is very rare [27].

The vanilla product that can be directly marketed without a complex process is vanilla beans, so this product is used as an example to be developed into a new branded product that penetrates the niche market. As a new product that integrates the market, the product must have an adequate base value, meaning the performance and features of the product must be adequate because the basic value of the brand is introduced to obtain the value of the brand supported by the proper promotion [28]. The performance of vanilla bean products should be clearly displayed on the label, and product features can be added to improve the performance value of the product, such as packaging strength to increase the expiration time or simply add recipes to produce the desired aroma in food or beverages. According to the target segment, the suitable product variants are mainly related to the size, weight, or number of vanilla beans for each package. Even an attractive brand logo can also be an adequate product feature. Product features are only effective for increasing product value if they are sufficient in product performance value.

Product pricing becomes an important factor in digital marketing strategy because the first step prospective consumers will compare the price of similar products from competitors. Consideration in competitive pricing is the price of competitor products in addition to production costs because penetration pricing has a significant favorable influence on consumer behavior [29]. Market penetration should also be supported by promotions that are most widely accessed by consumers, namely social media. Research shows that social media marketing (SMM) with attributes that refer to trendiness, customization, and word-of-mouth can directly affect brand loyalty and indirectly brand equity by brand trust [30].

By applying digital marketing that is currently developing, which easy consumer access, the opportunity to penetrate the market both certified products and new branded products become more open. Digital marketing using media, data, and digital technology makes it possible to identify, anticipate and satisfy consumers through reciprocal communication, thus increasing the chances of achieving marketing objectives [31]. Through digital marketing, consumers can obtain more data to increase ‘purchase intention’ ortendency to make purchases [32].

4. Conclusion
Most of Indonesia’s vanilla production is still traded as a commodity both in the local and international market, so farmers should face price instability and obtain relatively small added value. Product development from commodities to certified and branded products is a strategy to solve the problems.

Certified products can be developed through collaboration between farmers or farmer organizations with local or global certification bodies recognized by buyers, both organic and sustainable production certification bodies. Branded products can be developed by setting the right target segment and best positioning with competitor products. In addition, branded products are designed to obtain customer value that is formulated as an accumulation of the value of product performance and features and recognition of the brand. The development of this product is very prospective in line with the opening market access through digital marketing such as e-commerce. It should become a priority agenda in vanilla development programs.

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