



# Local Agricultural Product Packaging Innovation as an Effort to Improve Branding and Sustainable Excellence of Farmer Community Products in Ciburial Village, West Bandung Regency

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**Abstract:** *The Joint Partners of Farmer Groups (Gapoktan) in Ciburial Village, West Bandung Regency, has great potential in selling horticultural agricultural products, one of the Gapoktans already has potential market demand is Cipta Mandiri. Gapoktan Cipta Mandiri has a high demand for organic vegetable products, digital media marketing increases awareness and expands the market quickly. The high demand creates new problems for Gapoktan Cipta Mandiri, namely product packaging that is not yet able to protect the product for long distance delivery, while consumer demand is not only from Bandung and its surroundings, as well as other large cities that are pretty far away, packaging innovations are needed that can protect the durability of organic vegetables, which are accessible from chemicals, where product spoilage is faster than non-organic products. Vacuum packaging innovations with cooling and anti-rotting systems need to be developed to support market demand which is already quite rapid. This innovation is expected to increase the potential for economic independence in other Ciburial village communities besides Gapoktan Cipta Mandiri. This research aims to determine the role of organic agricultural product packaging innovation in improving the branding and sustainable excellence of Gapoktan agricultural products. Ciburial Village, West Bandung Regency. A total of 100 samples were used from a population of 200 organic vegetable consumers in large cities, consisting of online consumers of organic products from Gapoktan Cipta Mandiri, Ciburial. The results of packaging innovation are proven to increase brand awareness and knowledge as well as the superiority of agricultural products by 78.25%. The branding strength formed from packaging innovation increases the product's competitive advantage by 85.16%. The indirect influence through the variable between branding has a path coefficient value that is greater than the direct influence path coefficient value. The branding strategy increases the impact of the packaging innovation strategy on the competitive advantage of Ciburial Village Gapoktan MSME products.*

**Keywords:** *Packaging Innovation; Organic Products, Gapoktan; Economic Independence; Digital Media.*

## I. Introduction

The design of a product functions to convey the meaning of the product to consumers. Consumers obtain product goals by combining the product's physical appearance, such as color, shape, and materials used.[1] Product packaging is related to the attractiveness of a product to consumers. This results in a positive response from consumers towards the product which is influenced by good packaging design and materials. [2] Activities to empower product competitive advantage are carried out through various media and forms of activity, one of which is through strengthening the quality of local product packaging itself. [3] Kotler and Keller (2018) state that brand awareness is a consumer's ability to identify a brand under different conditions, which is reflected in brand recognition or recall performance. From the explanation above, we can describe the brand recognition and brand recall schemes as

components that play a role in forming brand awareness. Consumers usually prefer something that is considered most familiar to them, and when consumers know a brand, this is not necessarily the case, consumers have a preference for that brand. [4] Regulation of the Minister of Agriculture of the Republic of Indonesia Number 44/Permentan/ OT.140 /10/2009 that packaging is made to protect products from external factors that can affect their shelf life. The following requirements must be met for packaging: 1) Non-toxic to the product 2) Can protect the product from spills, evaporation, dirt, insects and microbes. 3) Physical requirements for packaging must be resistant to cracking, abrasion, friction, changes in temperature, weather and humidity. [5] Labrecque & Milne (2012) argue that visual branding also concerns combining visual elements into a cohesive brand image, and how consumers respond when all these elements are processed simultaneously.[6]

Henderson, Geise, & Cote (2004) represent visual branding as visual brand elements that are used to represent a brand, without relying on one of them. This combination represents a brand's holistic visual style that cannot be packaged with a list of visible parts. [7] Mcquarie (2018) stated in his research that visual elements and themes in advertising that are considered positive by consumers are preferred when they agree with brand expectations visually than when they do not match. [8] Abratt and Kleyn (2012) suggest that four branding elements are important for the development of a strong brand identity. These dimensions are brand promise, brand personality, brand communication, and visual identity. [9] The Cipta Mandiri Farmer Group is a farmer group in the North Bandung area, specifically in Cibeunying village RT 05 RW 02, Ciburial Village, Cimeunyan sub-district. The farmer group was founded in 2012, with eight members. The group develops healthy, non-pesticide vegetable commodities for the consumer market in the surrounding city of Bandung. The Cipta Mandiri Farmers Group Association has experience producing fresh vegetables intended for the middle to upper class market segmentation in the city of Bandung. Through the Dago Farm brand, Gapoktan Cipta Mandiri produces and markets several types of healthy vegetables. For marketing channels for vegetable products, in collaboration with large supermarkets in Bandung for approximately three years, the Cipta Mandiri Farmers Group has also marketed through creative markets from the Agritech community in Bandung.

The marketing obstacle so far for Dago Farm products is packaging that does not support product quality which has a high level of vulnerability and does not have brand characteristics that can increase brand awareness of Dago Farm consumers so that the level of competitive advantage is low. Good product packaging will represent the product's competitive strength, based on an initial survey of 30 respondents, 65% of respondents stated that the price that Dago Farm offers is not lower than the price offered by competitors, and 35% of respondents stated that the product that Dago Farm offers is low price lower than competing products.

From the results of interviews conducted with Gapoktan Citra Mandiri, the price offered is not lower than competitors because the quality of the raw materials used is relatively the same and not superior to competitors. Hence, the price shown is not lower than competitors. Thus, it can be concluded that the indicators of competitive advantage require improvement, because one of the indications of competitive advantage, namely product uniqueness, has not yet been achieved, where business actors, namely Gapoktan Citra Mandiri, should be able to achieve a competitive advantage, requiring supporting factors such as unique packaging and brand strength. Through this research, packaging innovation was carried out on the material, design and shape of the packaging. The results of a survey showed the influence of packaging innovation on Dago Farm branding and increasing competitive advantage. Data

was taken from consumers in the period December 2022 - March 2023 who purchased Dago Farm products via the website.

## II. Research methods

This research is quantitative research, designed descriptively and exploratively. Next, the research sample was divided into each category of respondents, determining the proportion according to the number of organic products with the highest sales studied. Responses to packaging innovation and branding of the Dago Farm brand from consumers are explained in table 1 below:

**Table 1.** Total Population and Research Sample

<b>No</b>	<b>Origin of Consumer Domicile</b>	<b>Population</b>	<b>Samples</b>
1	South Bandung	76	38
2	East Bandung	106	53
3	West Bandung	78	39
4	Middle Bandung	70	35
5	North Bandung	70	35
<b>Total Amount</b>		<b>400</b>	<b>200</b>

Source: Questionnaire Processing, 2023

The number of samples in table 1 above was obtained from formula calculations. The results obtained from each proportional random sampling for each Dago Farm consumer based on domicile are as follows:

$$\text{Domicile South Bandung} = \frac{76}{400} \times 200 = 38$$

$$\text{Domicile East Bandung} = \frac{106}{400} \times 200 = 53$$

$$\text{West Bandung Domicile} = \frac{78}{400} \times 200 = 39$$

$$\text{Domicile in Central Bandung} = \frac{70}{400} \times 200 = 35$$

$$\text{North Bandung Domicile} = \frac{70}{400} \times 200 = 35$$

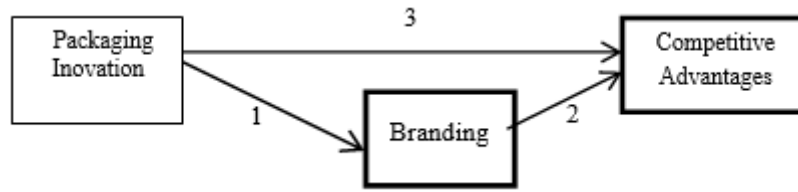
Information.

N : Number of samples for each consumer domicile

n : Total population of each consumer domicile

S: Total population in all consumer domiciles

This research uses SEM analysis in data processing. SEM analysis is able to carry out correlation analysis between latent variables by finding how far the data from each variable is spread using the bootstrap technique so that there is no need for a normal distribution. [10]. The research paradigm can be seen in the picture below:



**Figure 1.** Framework of Thought

Mcquarie (2018); Milne (2012)  
 Abratt and Kleyn (2011); Henderson, Geise, & Cote (2004)  
 Kotler and Keller (2018)

**Research Hypothesis:**

- a. Packaging Innovation has a positive and significant effect on the Competitive Advantage of Dago Farm Products
- b. Branding strategy has a positive and significant effect on the Competitive Advantage of Dago Farm Products
- c. Competitive Advantage Branding Packaging Innovation
- d. Packaging Innovation has a positive and significant influence on Dago Farm Product Branding
- e. Branding Strategy Mediates the influence of packaging innovation on the Competitive Advantage of Dago Farm Products.

**III. Results and Discussion**

The results of data processing can be seen in the table below: The measurements of this research were divided into 2 (two) stages using the partial least squares-SEM method carried out with XLSTAT software. The results are shown in tables 2 and 3 below, from these results it can be assumed that the indicators To test the hypothesis, the variable x packaging innovation is met with the variable z branding strategy, H2 is accepted: Branding Strategy Increases Competitive Advantage by 77.75%.

**Table 2.** Inner Measurement for Branding

R <sup>2</sup>	F	Pr > F	R <sup>2</sup> (Bootstrap)	Standar error	Critical ratio (CR)
0.777	688.551	0.000	0.7825	0.0184	42.2919
5	9	0			

(Source: questionnaire run by XL STAT, 2023)

**Table 3.** Inner Measurement for Competitive Advantages

R <sup>2</sup> (Competitive Advantages / 1):							
R <sup>2</sup>	F	Pr > F	R <sup>2</sup> (Bootstrap)	Standard error	Critical ratio (CR)	Lower bound (95%)	Upper bound (95%)
0.8493	1110.0791	0.0000	0.8516	0.0138	61.4205	0.8171	0.8744

(Source : questionnaire run by XL STAT, 2023)

The indicator for the accepted hypothesis is fulfilled. Namely, the t table is smaller than the t-test, and the probability value p is lower than 0.05; for test F, also mark the probability as smaller (0.000) from 0.05. Table 4 following describes the results of hypotheses 1 (one) and 3 (three); the results indicated by the strategy branding and strategy innovation packaging increased the superiority of competing products Dago Farm by as big as 77.75%.

**Table 4.** Inner Measurement for Competitive Advantages

<b>R<sup>2</sup></b>	<b>F</b>	<b>Pr &gt; F</b>	<b>R<sup>2</sup></b> (Bootstrap)	<b>Standard</b> <b>error</b>	<b>Critica</b> <b>l ratio</b> (CR)	<b>Lower</b> <b>bound</b> (95%)	<b>Upper</b> <b>bound</b> (95%)
<b>0.8493</b>	1110.0791	0.0000	0.8516	0.0138	61.4205	0.8171	0.8744

(Source: questionnaire which executed by XL STAT, 2023)

**Table 5.** Path Analysis for Competitive Advantages  
Path coefficients (Competitive Advantages / 1):

<b>Latent</b> <b>variables</b>	<b>Value</b>	<b>Standard</b> <b>error</b>	<b>t</b>	<b>Pr &gt;</b> <b> t </b>	<b>f<sup>2</sup></b>	<b>Value</b> (Bootstrap)
<b>Packaging</b> <b>Innovation</b>	0.2232	0.0038	3.0551	0.0024	0.7115	0.2339
<b>Branding</b>	0.3468	0.0364	9.5171	0.0000	0.2299	0.3574

(Source: questionnaire Which runs by XL STAT, 2023)

The results shown in tables 4 and 5 show that H1 and H3 are accepted, the indicator criteria are met by variable, probability test t is lower than 0.05 And test t is taller from the t table. Strategy packaging increase branding and strategy branding improves superiority compete. Table 6 in lower this illustrates that branding strategy mediates the impact of packaging innovation strategy. Graphic design, design structure and product information increase the impact of efficiency, effectiveness and even distribution of Dago product branding farm to superior compete for product.

**Table 6.** Intervening Measurements

<b>Variables</b> <b>Exogenous</b>	<b>Variables</b> <b>Endogenous</b>	<b>Intervening</b> <b>Variables</b>	<b>Impact</b>	
			<b>Direct</b>	<b>Indirect</b>
Packaging Innovation	Competitive Advantages	Branding	0.2232	(0.4774 x 0.9889) = 0.4721

(Source: questionnaire run by XL STAT, 2023)

From the test results depicted in Table 6, it can be seen that the impact test results are not directly through the variable between packaging innovation and branding has a greater path coefficient value from the direct influence path coefficient value. It can be assumed that branding strategies increase impact strategy innovation packaging to superiority compete product Dago Farm. These results support previous research from Camilleri (2018) [11]; Lekhanya (2014)[12]; Mongkol (2014)[13] researched integrated marketing communications (IMC). They state that IMC is the coordination and integration of all marketing communications tools and resources in a company designed to maximize impact on customers and other end users at minimal cost. Likewise, Janiszewska (2013) [14], in her research focuses on the importance of consumer insight in determining the identity and positioning of a place brand. He stated that consumers have important insights into changing consumer needs and

behavior, which determines their decisions. The segmentation process based on demographic data in the context of postmodernism is no longer sufficient to differentiate brands. Brand managers focus more on consumer behavior, attitudes, values, needs and expectations when looking for competitive advantage. Additionally, Forek (2013) [15] studied local commercial brands. He stated that it is considered a vehicle to build the image of the place from which these brands originate. Local products, services, or companies are perceived through their brand values, personality, and approach to marketing communications that influence how their place of origin is perceived.

A study of marketing communication strategies was used by Belch et al., (2003) [16] . They say that after the dominant days of high-powered Madison Avenue agencies, the world of advertising and promotion continues to undergo drastic shifts. Marketers must look beyond conventional media to achieve success. Advertisers must also use various resources to communicate with customers, such as public relations, advertising, sales promotions, personal selling, direct marketing and interactive/internet marketing. Furthermore, Castronovo and Huang (2012) [17] have researched social media as an alternative model for marketing. Their research combines all communication strategies, namely customer relationship management, brand communities, event-based marketing, word of mouth (WOM) marketing, search engine optimization, viral marketing, and guerrilla marketing. Social media reaches out individually to develop an integrated communication strategy model.

Packaging innovation has been proven to increase branding and competitive advantage, this supports research by Kumar (2006) [18] that the importance of packaging is now increasingly recognized in the export and marketing of various consumer goods and industrial products domestically. Goods damaged in transit or arriving at their destination in an unacceptable condition tarnish the good name of the manufacturer as well as the country, in addition to being a huge waste of scarce economic resources. Bell (2001) [19] stated that packaging is increasingly recognized as an important factor in promoting a country's exports. Efforts should be made to understand the importance of packaging there to avoid loss and damage costs incurred during transportation and delivery. Remember that conscious efforts on the part of marketing managers can increase sales volume and there by improving the reputation of the product and the organization.

There are various materials/materials that can be used to improve the packaging of Dago Farm food products with the consideration of maintaining the product's useful life, however, using the wrong material can also speed up the product's useful life. This result is based on the permeability test, which is the ability of water vapor to pass through a certain areas at certain temperatures and humidity. The water vapor permeability of PP plastic is lower than PE plastic, so the amount of water vapor that can pass through PE plastic packaging is greater than PP plastic packaging. The results of trials with Gapoktan partners and the Unpas Food Lab are that the permeability of different polypropylene and polyethylene plastic packaging materials causes different effects on the weight, color, smell and texture of each organic vegetable. Meanwhile, storage at cold temperatures inhibits the absorption of water vapor, thereby providing a better effect. So, for packaging materials, polypropylene plastic is better than polyethene when used as packaging material for Dago Farm products.

## IV. Conclusion

Strategy branding is important in mediating innovation packaging And superiority competition. Gapoktan Citra Mandiri must innovate packaging so that the product can increase its superiority and compete and attract consumers who are interested in buying a product when the product packaging is attractive and of good quality. Of the 200 respondents, the majority agreed that packaging quality is the most important thing for organic vegetable products, in accordance with the provisions of the regulations of the Minister of Agriculture of the Republic of Indonesia, that the products are interested in Dago farm is Which own : protection product from spill, evaporation, dirt, insects, and microbes, resistant to cracking, abrasion, friction, temperature changes, weather, and humidity. Remember product Which for sale is vegetables organic, so immediacy and quality is matter main.

The choice of materials for Dago Farm products is improved by using plastic bag type plastic Polypropylene (PP) or Polyethylene (PE). Plastic bags have holes on the surface for air circulation. Its uses are: Reducing excessive evaporation to extend shelf life , reducing the possibility of cross-contamination. The results of packaging product innovation are adapted to initial research survey, namely innovation for product durability and maintaining quality, laboratory tests in collaboration with food lab at Pasundan University, Bandung, lab test results suggest that the use of packaging is better using PP or PE plastic accompanied by product vacuum.

Recommendations for future research are to increase the number of research samples and increase the number of gapoktans studied with a more diverse variety of agricultural products. Adding other marketing variables that can increase the competitive advantage of MSMEs in a sustainable manner. It is hoped that these results will provide guidance for MSMEs on how to package products to improve their brands and win the competition as well as adding concern in improving packaging quality to maintain product quality which ultimately increases the position of MSMEs to move up to a higher market class.

## References

- Abratt, R., & Kleyn, N. (2012). Corporate identity, corporate branding and corporate reputation: Reconciliation and integration. *European Journal of Marketing*, 46(7), 1048–1063.
- Belch, G. E., & Belch, M. A., (2003). *Advertising and promotion: An integrated marketing communications perspective*. The McGraw– Hill.
- Bell, J. (2001). Redesigning new product packaging takes a scientific approach', in *Columbus Business Post*.
- Camilleri, M.A., (2018). *Travel marketing, tourism economics and the airline product: An introduction to theory and practice*. Springer.
- Castronovo, C., Huang, L., (2012). Social media in an alternative marketing communication model. *Journal of marketing development and competitiveness*, 6(1), 117-134.
- Florek, M., (2013). Building the image of a place brand with the support of local commercial brands. Poznan Brand Consortium case study. *Journal of International Studies*, 6(1).
- Hakim, L., Susianti & Ujito. 2017. Influence of customer relationship management, brand equity, perceived product quality, perceived price on customer value and purchase intention (Studies Philips light bulb in Batam). *Demandia*, Vol. 4. No. 1 (March 2019) *International Journal of Economics and Finance*; Vol. 9, No. 7. Published by Canadian Center of Science and Education.

- Henderson, PW, Giese, J. L., & Cote, J.A. (2004). Impressions management using typeface design *Journal of Marketing*, 68,. 60-72.
- Janiszewska, K., (2013). The strategic importance of consumer insight in defining place brand identity and positioning. *Journal of International Studies*, 6(2), 9-19.
- Kotler, Philip and Keller, Kevin Lane. 2018. *Marketing Management*. Edition 12. Vol. 2. Jakarta: PT Index.
- Kumar DM (2006). Role of Packaging in Marketing Products and Organizations. Africa Business School, White Paper Series 2 Mohammed VI Polytechnic University, Morocco.
- Labrecque, LI and Milne, GR (2012) Exciting Ed and Competent Blue The Importance of Colour in Marketing. *Journal of the Academy of Marketing Science*.
- Lekhanya, L.M., (2014). The role of integrated marketing communications in enhancing SMEs growth in South Africa. *Journal of economics and behavioral studies*.
- Macquarie Group. 2018. Annual Reports .  
<https://www.macquarie.com/assets/macq/about/disclosures/us-investors/mbl/extracts-from-the-macquarie-group-limited-2018-annual-report.pdf>
- Malhotra Naresh, K. and Dash, S. (2015) *Marketing Research, An Applied Orientation*. 7th Edition, Pearson, India.
- Mongkol, K., (2014). Integrated marketing communication to increase brand equity: The case of a Thai beverage company. *International Journal of Trade, Economics and Finance*, 5(5), 445.
- Mufreni, NF 2016. The influence of product design, packaging form and packaging materials on purchasing interest consumer (studies tea case green powder tocha). *Journal Economy Management*, Vol. 2, No.2
- Prabhowo, A. 2018. Analysis of the influence of unique product packaging design on purchasing decisions impulsive (studies on product Coffee Good Day in Yogyakarta). UII.
- Regulation. Minister. Agriculture. Number. 48/Permentan/OT.140/10/2009 about Guidelines. Cultivation Fruit And Vegetable Which Good (Good Agriculture).