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## UNDERSTANDING MARKET BEHAVIOR ON CORN COMMODITY: PHENOMENON IN THE YEAR END

**Surya Darma<sup>a\*</sup>**

<sup>a</sup>*Department of Agroecotechnology, Faculty of Agriculture, Universitas Mulawarman, Indonesia.*

OCID: <https://orcid.org/0000-0002-1160-0576>

**Yundi Permadi Hakim<sup>b</sup>**

<sup>b</sup>*Department of Management, Sekolah Tinggi Ilmu Ekonomi Samarinda, Indonesia.*

ORCID: <https://orcid.org/0000-0001-9315-4946>

**Erwin Kurniawan A.<sup>c</sup>**

<sup>c</sup>*Department of Economics, Faculty of Economics and Business, Universitas Mulawarman, Indonesia.*

ORCID: <https://orcid.org/0000-0003-3785-0140>

**Dio Caisar Darma<sup>b</sup>**

<sup>b</sup>*Department of Management, Sekolah Tinggi Ilmu Ekonomi Samarinda, Indonesia.*

ORCID: <https://orcid.org/0000-0002-3287-7670>

**Suparjo Suparjo<sup>d</sup>**

<sup>d</sup>*Department of Geomatics Technology, Politeknik Pertanian Negeri Samarinda, Indonesia.*

ORCID: <https://orcid.org/0000-0003-1846-6063>

\*[surya\\_darma@faperta.unmul.ac.id](mailto:surya_darma@faperta.unmul.ac.id) (Corresponding authors)

### ABSTRACT

The cause of market failure is that there is no synchronization between demand and supply or vice versa in supply and demand. Initially, corn was considered as a substitute and complementary commodity for food, but now it has turned into a basic need for people in Indonesia, especially when they celebrate the new year. An obsession of this study is to examine the interaction between the demand side and the supply side. The objectivity of the study was designed by inviting 9,850 respondents in Samarinda City to be reviewed regarding interest, tradition, taste, price, opportunity, profit, production cost, and distribution. Empirical testing practices the right and measure in interpreting the data, including correlation, reliability, and validity. We found that there is a constructive validity in the market behavior function, where the indicators of consumer demand ( $p < 0.01$ ) and produce supply ( $p < 0.01$ ) have a significant effect. Another thing that stands out is production cost and distribution, both of which have a positive channel and closely related to the other six indicators. The consistent performance of production cost and distribution supported further evidence providing stability of measurement results. Not only that, tradition and opportunity also have high coefficients in reliability testing. We can consider concrete expectations to examine empirical results by including other dimensions, such as social factors, psychological factors, and individual factors. In addition, diagnostic transformations need to be highlighted, where market trends can change along with the growth of other commodities.

**Contribution/Originality:** The orientation of this study emphasizes and focuses on the increase in the demand side and supply side of corn commodity. Although livestock commodities (such as chicken meat) and plantation commodities (coffee and tobacco) have also increased at the end of the year, the most popular commodity in Indonesia is corn, such as food crops. In addition, another feature is that we concentrate it in the case study for the Samarinda City, where the market depends not only on consumer demand but also on attractive producer offers.

**Keywords:** Demand; Supply; Corn; Samarinda; End of year.

## 1. INTRODUCTION

The ambition of this study is to look at market anomalies in the demand for corn commodities during the year-end celebrations in Samarinda City. Generally, the end of the new year is a time where people spend a lot of time gathering with family, friends, and partners. No exception for those who are busy with the work also feel happiness at the end of each period through various activities for fun. Celebrations at the end of the year or before the turn of the new year are moments that are often in the spotlight for some economists or policy makers (such as Resnik and Elliott, 2016; Aya, 1979). Anticipation of an increase in a commodity, services and goods must be or what they know as 'inflation' must be suppressed so that prices do not soar, thus causing 'hyper inflation' (Farandy, 2020). Sometimes farmers also benefit from 'inflation' from the demand aspect (Paul et al., 2021). It's just a matter of how producers package by offering goods or services at relevant prices in the market (Darma, Wijaya, and Darma, 2020).

Besides Christmas, New Year's celebrations have been enthusiastic since the 18<sup>th</sup> century until now (Schmidt, 1991). It is not surprising that the increase in a product, service and goods has exploded (Yijo et al., 2021). Even though the welfare of farmers is benefited, consumers can be harmed if they are not taken seriously (Darma et al., 2020). Indonesia has different cultural characteristics from other countries to celebrate the new year (eg Rianti et al., 2018). The most striking difference is the consumption of food and drinks, which are less favored by most people, where Indonesian people often process corn to be used as a main dish (Wijaya, 2019). They serve these preparations grilled, fried, or boiled. The expansion of corn commodity at the turn of the year has become a special tradition for them.

According to Rosas-Castor et al. (2014), corn, which in Latin 'Zea mays L' is a food crop. Corn contains a lot of carbohydrates, so it is one of the staple food sources in Indonesia after rice (Nuss and Tanumihardjo, 2010). Because corn is a favorite commodity in Indonesia, therefore it exists from various community groups (Arifin, 2013). Another important thing is the nature of corn easy to grow (Sandhu et al., 2020). In a global context, the average temperature to produce maize productivity ranges from 18° C – 33° C with a minimum rainfall of 800 mm per year and a maximum of 2,300 mm per year (Ferrero, Lima, and Gonzalez-Andujar, 2014; Wang et al., 2020). With relatively cheap capital, corn production is not a big constraint.

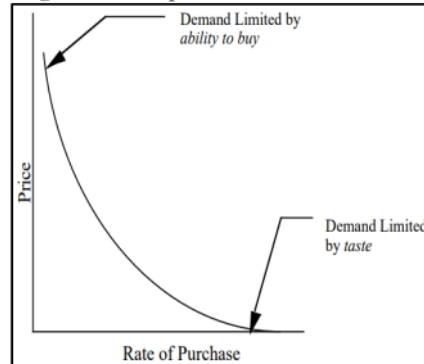
As is known, Samarinda City is the center of the East Kalimantan Province in Indonesia, which has a high level of consumptive tendencies (Wijaya, Darma, and Darma, 2020). The high level of per capita income is the major cause of the population's prosperity. They channeled most of their spending for non-food needs such as ceremonies and parties, insurance and tax collections, health and education costs (Wijaya, Zainurossalamia, and Darma, 2020; BPS of Samarinda City). However, the factor of special habits to welcome special days such as the end of the year makes the need for food such as horticultural crops also increase. Customs, traditions, and culture as a device that cannot be separated because all three have become part of history (Indriastuti et al., 2020). The complexity of the paper is demonstrated based on five plots, including the introduction, theoretical lens, methods, results and discussion, and conclusions.

## 2. THEORETICAL LENS

Moss (1974) illustrates that supply and demand are the most vital parts of market economics. 'Law of demand' and 'law of supply' are basic theories that explain the interaction between sellers and buyers for a resource (Inoua and Smith, 2020). The two laws represent the relationship between the price of a service or good, the number of people who buy it, and its availability (Parro, 2019). Both demand and supply are inversely related, which will affect the price of goods or services sold. They interpreted this condition as a 'demand curve' and a 'supply curve' (Safiullin, Oduntsova, and Safiullin, 2015).

Demand is a term for the amount of goods and services that are desired to be purchased at a certain time and price level according to the market (Mazurek, Garcíab, and Rico, 2019). The 'law of demand' applies when the price of a good or service falls, the quantity demanded increases. On the other hand, when the price of goods demanded increases, demand will decrease (Wirtz et al., 2019). The crucial factor influencing demand is consumer tastes (Harahap et al., 2019). Increased consumer tastes trigger an increase in demand (Purcell and Lusk, 2003) as with certain fruits whose stock is scarce, of course they will be priced more expensive (Hovhannisyan et al., 2020). Another factor is the price of substitute or substitute goods (Wlay et al., 2018). For example, when the price of coffee is high, people will start shifting their shopping for tea because the price is cheaper. Several factors that influence demand include the proportion of needs, prices, income levels, and population (Sorrell, 2015). Figure 1 illustrates a 'simple demand curve' that relates the general relationship between the number of consumer purchases of goods and services in a period.

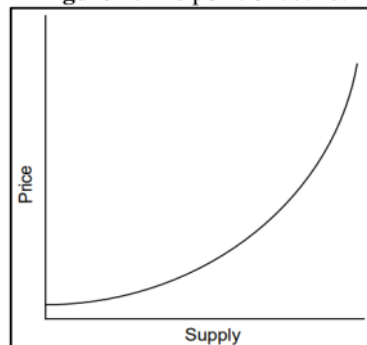
**Figure-1.** The point of consumer desire.



Source: Whelan and Msefer (1996).

In contrast to demand, the 'law of supply' occurs when the price of goods rises, encouraging an increase in the supply of a service or good. If the price increases, production will supply more goods, but when the price decreases, they are reluctant to reduce supply (Ai-Hua, 2012). The crucial factor that determines supply is the cost of production. The lower the cost of production, the cheaper the goods that can be produced, so that it can increase supply (such as the example of Aday and Aday, 2020). Future speculation is the second factor, where predictions of future price increases allow people to withhold goods or services. The last element is technology. Advances in technology will bring a product produced more efficiently.

**Figure-2.** The point of desire.



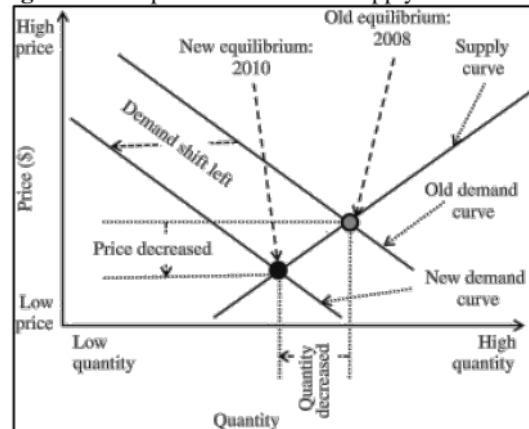
Source: Whelan and Msefer (1996).

Figure 2 shows the 'supply curve', if the slope is upward, it causes the price of goods and services to be expensive or more difficult to get because each additional unit is scarce. Then, that is often encountered is the cost of production is much more expensive, therefore the price offered is very high than normal times. Unexpectedly, when prices soar, there will be more incentives to increase production (MacDonald, 2000). In 'classical economic theory', it represents a short-run approach (Davidson, 1999).

Interestingly, supply and demand are opposites. Both will reach a point of market equilibrium when they meet each other, which is what then referred to as the 'law of demand' and 'law of supply' (Jehle and Reny, 2011). In fact, these two laws explain the harmony between the quantity and the price offered. They then connected this to a 'demand curve' and a 'supply curve'. At a certain point in time, the supply of goods brought to the market is fixed. In other words, the 'supply curve' is a vertical line, while the 'demand curve' is always downward sloping because of the diminishing law of marginal utility. When it reaches this equilibrium point, the price of a commodity and demand will be stable, even constant or not change at all (Humphrey, 1992). Sellers also can no longer raise prices borne by consumers (Alam and Uddin, 2009). However, in the long term, they can increase or decrease the stock to change the market price to the expected level (Haugen, Talmor, and Torous, 1991).

As an extra illustration, the interaction between supply and demand in controlling the market largely determined by sellers and buyers (Canon and Perreault, 1989). Both react in opposite ways to changes in the price of a commodity. When the ability, price and supply of sellers also increase, while the attention of buyers decreases, the market is clearly working (see Figure 3).

**Figure-3.** The point of balance of supply and demand.



Source: Hoekstra, Savenije, and Chapagain (2001).

Moving on to 'microeconomic theory', an obvious example of the application of 'law of demand' and 'law of supply' is the level of consumption (Lee and Keen, 2004). Within the household, they are interrelated consumption with the encouragement of income ability, savings, or individual willingness. Each household to meet very diverse. Household consumption capacity also depends on educational background, age group, occupation, and social status. Those who are classified as 'rich' certainly have a source of living eligibility, while those who are 'poor' will rethink having contemporary goods or substitutes. In essence, they classify the needs into three, namely primary needs, secondary needs, and tertiary needs. If the economy is in a stable trend, it will affect welfare and if not, what will happen is a decline in welfare. Social problems such as poverty and unemployment as the 'old face' of the transformation of development. Socio-economic status will determine the individual's success in achieving a decent living.



As an actual illustration, the 2008 financial crisis in the US created new interests that caused consumption behavior, income distribution, and household debt to increase. This explains the dynamics of the crisis (Albayrak, 2020). The paradigm continues to flow since the 1980s, economists assume that household consumption has decreased. Debt-based consumption and a decline in actual income followed this compensatory decline. With the help of deregulation of the financial system, at least the pattern that leads to 'increased debt' and 'reduced savings' can be reduced. However, aggregate demand and their level of consumption in the private sector remain high, so that it suffices to maintain macroeconomic stability (eg relatively small unemployment).

Alp and Seven (2019) and Nelson (1998) highlight the stagnant wages of lower-middle distributed households. In today's era, the exploding financial crisis has become the focus of reducing credit bubbles. In 'consumption theory' and 'Keynesian theory', see significant correlations between consumer behavior, household debt, and inequality (Perugini, Hölscher, and Collie, 2016).

In principle, 'agricultural economic theory' focuses on cause-and-effect relationships between spatial patterns and economic decisions derived from agricultural land use. The assumption refers to farmers pursuing utility maximization in production systems (Diogo, Koomen, and Kuhlman, 2015). Then, the framework considers land use decisions (land) and alternatives in production (Kellerman, 1989).

Semerci et al. (2012) defined the production function as a physical relationship between several inputs and outputs. Then, Anderson et al. (1996) enter the production function into only a few input variables, while other inputs are constant (*ceteris paribus*) as follows:

$$Q = f(C + L + T + Rm + \dots n) \quad (1)$$

Connectivity in the Cobb-Douglas function type described, where Q = quantity (output), f = function, C = capital, L = labor, T = technology, Rm = raw materials, and n = other supporting variables.

Through the above formulation, farmers from various countries implement transactionally it. The level of demand and supply significantly influenced market orientation for agricultural commodities. Consensus between consumers and producers is dominated by financial factors (Okerenta, 2005). In fact, Dwi and Nyoman (2020) argue that the government, as a regulator, seeks to encourage and promote more local agricultural products to be absorbed by the market. They expect this enthusiasm to provide social, environmental and economic benefits for the local population (Gutman, 1959). In the theory of planned behavior (Sok et al., 2020), the buying behavior of agricultural commodities can be tested. Environmental, local economic concerns, ethnocentrism of food safety, health, quality, and consumer perceptions influence consumer intentions (Petrea, 2001).

### 3. METHODS

We applied this study with a social experiment approach in agribusiness (such as Maat, 2011; Syarifudin and Ishak, 2020; Maman et al., 2017). We focus the approach in question on a three-step-based interview technique. The first step is data collection. We collected data through the first (primary) party. Then, the second step selects the number of samples based on the population summarized in the formula below. Third, prepare a questionnaire referring to four scales including very priority (4), priority (3), moderate (2), and not priority (1). The sample size is planned into the following simple mathematical calculations (eg Susanti et al., 2019; Abdullah et al., 2015):

$$n = \frac{N}{[1 + (N \times e^2)]} \quad (2)$$

$$n = \frac{658,525}{[1+(658,525 \times 0.01^2)]} \quad (3)$$

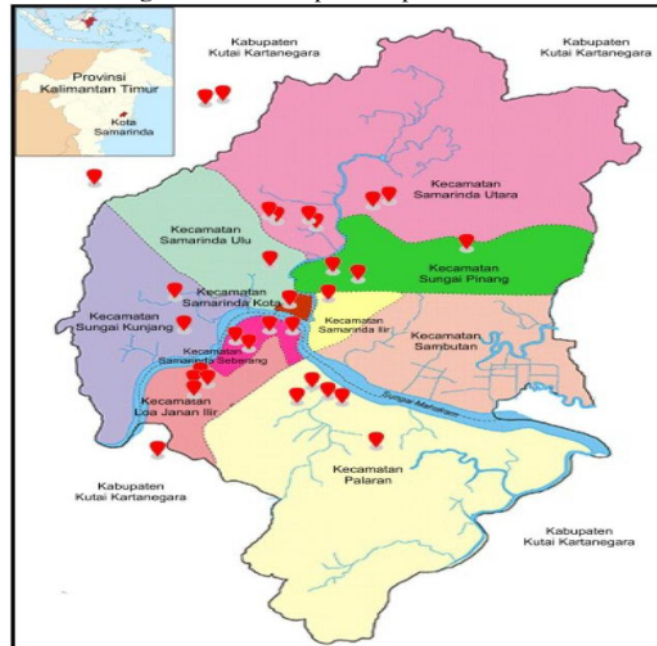
$$n = \frac{658,525}{[1+65.85]} \quad (4)$$

$$n = \frac{658,525}{66.85} \quad (5)$$

$$n = 9,850 \quad (5)$$

Where; n = sample, N = population, and 0.01 = margin of error. Regarding the total population, it is the accumulation of the total population of various age groups (+15 years). Launching from BPS of Samarinda City (2021), the population in Samarinda City is 827,994 people, of which 658,525 people are those with the status of the head of the family. Figure 4 displays the sample distribution model. The distribution of the sample comprises ten sub-districts in Samarinda City (64.72), including Pinang River (64.72.08), Kunjang River (64.72.06), Sambutan (64.72.07), North Samarinda (64.72.05), Samarinda Ulu (64.72). .03), Samarinda Seberang (64.72.02), Samarinda Kota (64.72.09), Samarinda Ilir (64.72.04), Palaran (64.72.01), and Loa Janan Ilir (64.72.10). Therefore, each sub-district will be divided and represented by 985 respondents.

**Figure-4.** Road map of sample distribution.



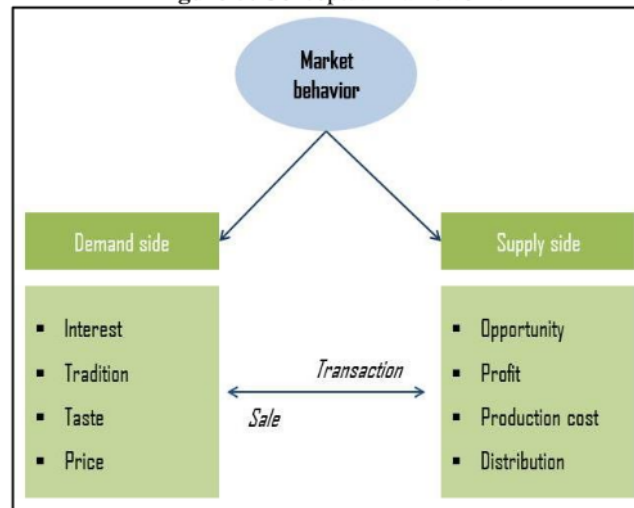
Source: Susanto, Wulandari, and Rujito (2019).

It carried the identification of the interview time out during the full December 2021. This is important to remember that the respondents are concerned about the celebration of the new year. The right instrument to make it easier for researchers to collect samples through 'Google Form' which is promoted with social media such as WhatsApp and Facebook.

We limited the research model to the variables of consumer demand and produce supply. These two components are factors that influence market behavior. Each variable comprises four items. The

demand side includes interests, traditions, tastes, and prices, while items such as opportunity, profit, distribution, and production costs supported the supply side (see Figure 5).

**Figure-5.** Conceptual framework.



Source: adapted from Naumova, Bilan, and Naumova (2019); Roufagalas (1994); Li et al. (2012); Xie, Gao, and Xie (2020); Sanchez (2003).

We developed the data process [163](#) structure with the feasibility of testing correlation, reliability, and validity (eg. Dewi et al., 2021; [de Barros Ahrens, da Silva Lirani, and de Francisco, 2020](#)). SPSS software calculates research findings.

#### 4. RESULTS AND DISCUSSION

Exploration referring to the respondent's profile is presented in Table 1. The sample sourced [174](#) m household groups is divided into five units. Following up on this, of the 9,850 household heads, [55.3 percent](#) of them are [male](#) and [44.7 percent](#) are [female](#). From this number, 26 percent of those who are single, 52.7 percent married, 18.4 percent divorced (divorced and dead), and the remaining 2.8 percent are widows/widowers.

Intensely, 40 percent of respondents belonging to the age group of 16-26 years are those who consume the most corn on New Year's Eve. For extra information, 9.8 percent of respondents (49–59 years) is the lowest score when compared to other groups. When viewed based on their occupational background, those classified as in the labor force (already working and openly unemployed) are far above those classified in the non-labor force (attending school, taking care of the household, and other activities). After an in-depth analysis, the figure is 55.3 percent compared to 34.7 percent. The logical reason is that from the frequency of buying corn as much as 3–6 kg or 41.5 percent, 41 percent is used and processed to become regular corn to accompany the turn of the new year.

**Table-1.** Demographic of samples (n = 9,850).

Units	N	%
<b>Sex</b>		
▪ Female	4,403	44.7
▪ Male	5,447	55.3
<b>Status</b>		
▪ Single	2,565	26
▪ Married	5,192	52.7



▪ Divorce	1,816	18.4
7 ▪ Widow/widower	277	2.8
<b>Age group</b>		
▪ 16 – 26 years	3,940	40
▪ 27 – 37 years	1,189	12.1
▪ 38 – 48 years	2,258	22.9
▪ 49 – 59 years	961	9.8
▪ +60 years	1,502	15.2
<b>Main activity</b>		
▪ Economically active	6,431	65.3
▪ Economically inactive	3,419	34.7
<b>Purchase frequency</b>		
▪ 2 kg	1,001	10.2
▪ 3 – 6 kg	4,086	41.5
▪ 7 – 10 kg	3,846	39
▪ +11 kg	917	9.3
<b>Diversification of corn</b>		
▪ Fried corn	2,594	26.3
▪ Roasted corn	3,217	32.7
▪ Boiled corn	4,039	41

Source: survey recapitulation.

The first model describes the value of descriptive statistics and correlations. Table 2 summarizes the output mean, standard deviation (SD), and Pearson correlation. As a result, the largest mean score is for the interest factor ( $M = 3.738$ ) and the lowest is the production cost factor ( $M = 2.667$ ). In SD calculation, the highest is the price factor ( $SD = 0.735$ ), while the production cost is the lowest ( $SD = 0.046$ ). Considering that causality between factors is very important, the calculation based on SPSS estimates all of them in the positive path, although not all factors have a significant effect ( $p < 0.01$ ).

The results of further investigations also concluded that the two-way relationship of interest to distribution ( $C = 0.429$  and  $p = 0.000$ ), tradition to taste ( $C = 0.574$  and  $p = 0.000$ ), taste to profit ( $C = 0.991$  and  $p = 0.000$ ), price with distribution ( $C = 0.478$  and  $p = 0.000$ ), opportunity to production cost ( $C = 0.437$  and  $p = 0.001$ ), profit to taste ( $C = 0.981$  and  $p = 0.000$ ), production cost to opportunity ( $C = 0.437$  and  $p = 0.001$ ), and distribution with production cost ( $C = 0.155$  and  $p = 0.000$ ). Production costs and distribution as factors that are considered the most dominant than other factors.

6

**Table-2.** Descriptive statistics and correlation matrix.

	Mean	SD	1	2	3	4	5	6	7	8
Interest	3.738	.114	1	.011 (.473)*	.071 (.321)*	.305 (.021)*	.167 (.136)*	.056 (.358)*	.064 (.337)*	.429 (.000)*
Tradition	3.597	.545	.011 (.473)*	1	.574 (.000)*	.099 (.258)*	.136 (.186)*	.543 (.000)*	.325 (.015)*	.201 (.391)*
Taste	3.602	.396	.071 (.321)*	.574 (.000)*	1	.174 (.126)*	.092 (.275)*	.991 (.000)*	.122 (.212)*	.656 (.157)*
Price	3.713	.735	.305 (.021)*	.099 (.258)*	.174 (.126)*	1	.281 (.031)*	.166 (.137)*	.300 (.023)*	.478 (.000)*
Opportunity	3.498	.112	.167 (.136)*	.136 (.186)*	.092 (.275)*	.281 (.031)*	1	.103 (.251)*	.437 (.001)*	.513 (.417)*
Profit	3.606	.287	.056 (.358)*	.543 (.000)*	.981 (.000)*	.166 (.137)*	.103 (.251)*	1	.098 (.261)*	.772 (.106)*
Production cost	2.667	.046	.064 (.337)*	.325 (.015)*	.122 (.212)*	.300 (.023)*	.437 (.001)*	.098 (.261)*	1	.180 (.097)*
Distribution	3.574	.204	.272 (.013)*	.166 (.032)*	.293 (.145)*	.317 (.289)*	.345 (.167)*	.470 (.047)*	.155 (.000)*	1

Source: SPSS output, Noted: \*p-value <0.01.

1 The second parameter is validity testing, as measured by Confirmatory Factor Analysis (CFA). Kaiser Meyer Olkin Measure of Sampling (KMO-MSA) is interpreted as an index of the distance comparison between the correlation coefficient and its partial correlation coefficient. If the sum of the squares of the partial correlation coefficients from all pairs of variables is small compared to the sum of the squares of the correlation coefficients, it will produce a KMO-MSA value close to 1. The KMO-MSA gain is sufficient if  $<0.5$  (Hair et al., 2006). Another projection from Bartlett's test shows that there is a sufficient correlation between the variables to apply, provided that the p-value must be  $<0.01$  (such as Melati, 2018).

Assumptions in construct validity are based on Bartlett's test of sphericity and content validity is determined by KMO achievement. Table 3 explains that the achievement of the correlation between indicators for the consumer demand variable is high ( $KMO = 0.632$  and *Bartlett's test* = 0.000), so the factor analysis process is workable to continue.

**Table-3.** Construct validity and content validity in the first element.

Measurements	
KMO-MSA	.632
Approx. Chi-square	315.11
df	9,849
Prob.	.000

Source: SPSS output.

**Table-4.** Construct validity and content validity in the second element.

Measurements	
KMO-MSA	.580
Approx. Chi-square	207.69
df	9,849
Prob.	.000

Source: SPSS output.

9 Overall, the achievement on the significance of Bartlett's test resulted in a p-value of 0.000 and a KMO-MSA of 0.580. This shows that both requirements meet the requirements because KMO-MSA has a value of  $> 0.5$  and a significance of  $<0.01$ , so it is prioritized for the next process (see Table 4).

In the third session, identification of the assumptions that must be met is reliability. We packed reliability testing with Cronbach's Alpha (CA) coefficients. Classification in the CA acceptably is possible if the coefficient value  $> 0.7$  means that the reliability is met. It also makes sense if the coefficient is  $> 0.8$ , which suggests that all items are reliable, and all tests are internally consistent because they have strong reliability (Peterson, 1994; Hoekstra, 2018). Table 5 summarizes the CA coefficient gains.

**Table-5.** Cronbach's Alpha for all indicators.

	CA	Remark
Interest	.587	Moderate reliability
Tradition	.749	High reliability
Taste	.687	Moderate reliability
Price	.682	Moderate reliability
Opportunity	.705	High reliability
Profit	.934	Almost perfect reliability
Production cost	.820	High reliability
Distribution	.717	High reliability

*Source: SPSS output.*

It can be interpreted that if the alpha coefficient is low, it is possible that one or more indicators are not reliable, so it makes sense to investigate with per item analysis procedures. This test is a continuation of the previous series to see certain indicators that do not meet the requirements. With this process, unreliable indicators can be discarded, so that other alphas can further support their value (Tavakol and Dennick, 2011).

The advancement of people's perspectives and ways of thinking to determine what food is worth consuming at an affordable price? They are selective towards relatively cheap prices, without neglecting the practical side and nutritional composition. The other side is the level of need that is increasing along with accessibility. The importance of corn commodity, gives a signal to farmers that this type of plant is also easy to grow from narrow land, open space, all seasons with sufficient light intensity, soil fertility level, and rainfall level, as shown in Figure 6.

**Figure-6.** Corn cultivation.



*Source: authors own.*

With the harvest period in intervals of 2-3 months, it is very possible for corn farmers to achieve maximum productivity. They certainly see the ratio of market demand that is so enthusiastic, especially towards the end of the year. Each period, consumption of corn soars sharply, so preparation for farming is carried out at least in September or October.

In the context of economic development and food security, the agricultural industry has played a key role for decades (Zyl, 1989). Directly, the best options are in rural areas, where a large part of the world's population also depends on this sector for their livelihood (Udemezue and Osegbue, 2018). As the migration of people to cities and the world's population explodes, it has a systematic impact on the proportion of growth in food production.

Martin, Groenewegen, and Pidgeon (1980) detect that the uniqueness of market characteristics highly depends on the specifics of corn commodity in Southwestern Ontario (Canada). Corn farmers see a tremendous opportunity to create welfare value. Global corn prices influenced Rattray (2012) reports that retail corn-based products in the manufacturing sector. This is a determinant of price policy by major food companies. High global corn prices have affected final retail and consumer products. Even though the market conditions for agriculture and food companies were fluctuating, they could still benefit them. Sibanda, Mushunje, and Mutengwa (2016) highlight valuable steps adopted by small-scale maize farmers in O.R. Tambo and Amatole (Eastern Cape, South Africa). Samples from



households were interviewed to review their response to maize. The findings confirm that planning and decision-making in the maize market highly depend on seed availability, farmer perceptions, land area, income, access to credit, and access to extension services. The application of superior seeds and the absorption of corn commodities has played an important role in the productivity of corn farmers.

During the period 1948-1970, the supply of maize acreage in the US underwent a significant change from the government's program of price intervention and acreage control. Government policies allow for the future. Empirical analysis examines area restrictions, transfers, support, and lending rates for maize farmers. Houck and Ryan (1972) suggest policy variables to be selected and applied to maize as part of government priorities.

Production and land management decisions strongly influenced land conservation and crop. Farmers in the Liandaowan area (Northeast China) decide based on motivation as a key factor in implementing government policies. Most of the farmers there insist on growing maize despite facing various obstacles, such as striking comparative advantage, farmer preferences, age and education, low temperature, drought, technical help, low income, and availability of machinery. The experimental results by Liu et al. (2019) emphasized that they need to carry out promotions to adjust for corn diversity because the level of demand is stable.

The theoretical justification for this finding, in line with the investigations of Miščečka et al. (2019). They emphasized that agricultural commodity prices are driving consumer attention. On an international scale, behavior towards agricultural products, such as corn, is permanently and causally connected to the demand factor. Corn prices confirm both relationships.

Other aspects, such as campaigns against 'green consumption', brands, channels, prices and marketing strategies, can stimulate agricultural products in Wuhan (China). Yi (2017) revealed that the safety of people's lives there for agricultural products depends not only on stability but also towards sustainable agricultural development. They investigated their perception and level of knowledge based on purchasing behavior, work background, income level, region, age, and gender.

The causality highlighted by Gao et al. (2013) and Horská et al. (2021) regarding the sale of local agricultural products is not only influenced by the behavior of farmers, but also by the driving forces of the market. In China, in 16 villages in Anhui, Jiangsu, and Shanghai, households earn higher profits. They see economic developments in the agricultural market, thus shifting from food crops to cash crops. Aspects of capital and production costs are the more dominant input factors, where they know that if they want to get a large output, then the production input becomes a big defense. In this way, agricultural products gain market enthusiasm because the selling price is more significant than government subsidies. Market sales orientation supported the independence of agricultural households based on product quality improvement strategies (Hunt, 2007). Unlike the case with local farmers in Slovakia. Sales of agricultural products depend on the supply chain. A short distribution route, so that the product can go directly to consumers, stimulated this. Customer loyalty is very concerned about locality, freshness, and quality factors. That way, the marketing approach is a surefire technique to save time, cost, and effort.

## 5. CONCLUSION

This study aims to analyze the influence of the demand side and supply side on the behavior of the corn commodity market in Samarinda City. In fact, the two are closely related, where both consumers and producers respond to each other to the quantity of corn commodity. Towards the end of the year, demand from consumers increased in line with the supply of producers, in this case corn farmers with residents of Samarinda City. However, the supply side variable determines the market the most because the two indicators (production cost and distribution) get the highest coefficient with a positive path.

The study invention contributes to the theoretical aspect. Extension services to seasonal corn farmers in Samarinda City, at least not only based on certain moments (such as New Year's celebrations and certain festivals), but also follow market patterns that follow demand trends. For the



future agenda, they needed policies in distributing training, extension, knowledge, and promotion services to corn farmers. We expect the implications for industry practitioners and academics to invite attention to highlight and expand knowledge regarding the factors that influence market behavior for corn commodities, besides supply and demand factors.

The weakness of this study is that it may expand the design of variables, sample range, and observation period in order to produce more extensive findings. In order to support socio-economic sustainability in agriculture, these findings require scientific references and foundations based on a more constructive scale.

3

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