THE IDENTIFICATION OF THE STRUCTURE AND BEHAVIOUR TRANSACTION OF TOBACCO MARKET ON THE FARMER LEVEL

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ABSTRACT

The aims in this research : (1) analyze tobacco market structure and (2) detect consequence from tobacco market structure towards price negotiation/transaction between farmer with tradesman. This research is determined according to purposively at Pakong Village, Pakong District, Pamekasan Regency with consideration that region be centre of tobacco production at Madura. Data is collected from as much as 45 farmer respondents, while sample consists of 30 mount tune farmer good farmers, bon irigated dry field tune and rice field tune with 15 tradesmans that buy tobacco. Insides answer the aim is used the connection descriptive analysis with transaction/negotiation between farmer with tradesman and simple mathematic analysis shaped monopoly index (MPI) the connection with competition or tradesman intergroup market rivalry. The result shows that tobacco market structure at Pakong Village, Pakong District, Pamekasan Regency fulfil perfect rivalry market feature because amount of farmer and tobacco tradesman many, farmer and tradesman same detect tobacco market price information and farmer can sell the tobacco to tradesman exist inside or outside village and operative on the contrary. Tobacco market structure describes highest monopoly degree is on cutting tradesman with value MPI 3,81 and 5,55 for both types of tobacco that is mount tobacco and rice field. While has only highest monopoly degree in purchasing one tobacco kind, that is bon irigated dry field tobacco with value MPI 2.91, it means imperfect rivalry market degree height (imperfect market competition) tradesman intergroup. Tobacco market structure consequence at Pakong Village, Pakong District, Pamekasan Regency show farmer and tradesman same beneficialed and market rivalry shows collectors tradesman most beneficialed, because buy farmer tobacco by using weigher, so that farmer with felt safe sells the tobacco without necessary take a speculation.

Key word: market structure, farmer and tobacco

INTRODUCTION

Tobacco plants has a big commodities for Indonesia economics as producer or resource of stock-exchange. East java is the the biggest producer of tobacco in Indonesia, that is 22 Billion from beaç products is from cigarette tax result and according to only 27 Billion National. This number is the biggest income for goverment. So, tobacco will be get more income if we compare with another farm products (Anonymous, 2002)

Maduranesq tobacco as the specially, knowing have a good quality such as have specific quality who needed by cigarette factory as their main ingredient, especially that smell who become the characteristic from cigarette kretek. The marketing compete in regional market, national, even internasional. But since a few years ago the quality of Maduranesq tobacco has not match for crowned to them because the coming of wet tobacco from Java who combined with Maduranesq tobacco. The effect is the quality of tobacco get decrease and the factory side feel doubt to buy tobacco from seller, so the factory awaiting that buyness. So the price get declined and the good name of Maduranesq tobacco become a bad name caused by broker who mix the tobacco.

In fact tobaccos farmer in Madura that must be fight with in the selling problem, that is the lack of knowledge especially about the selling mechanism to the factorian side and also the production of tobacco who produced by each farming/minimal farmer. The commodity of tobacco only have single market (monopsony market) that is the group of cigarette factory inside country (Santoso, 2001)

According to Table 1. tobacco prices from year to year it happen price fluctuations caused by unstable climatic conditions during the growing season, pests disturbance and diseases that can damage crops besides tobacco and production tool price continues to increase. This is also exacerbated by the dealers who supply the delinquency or bring tobacco from Java which is then mixed with Maduranesq tobacco.

Table 1. Growing Price of Tobacco in Pamekasan.

No	Years	Price Tobacco Dried Sliced (Rp/Kg)		
		Min.	Max.	Average
1.	2004	10.000	26.000	18.000
2.	2005	5.000	24.000	12.000
3.	2006	14.000	32.000	23.000
4.	2007	6.000	24.000	16.000
5.	2008	14.000	34.000	24.000

Source : Department of Forestry and Plantations Pamekasan (2009).

The plan of Maduranesq tobacco market system that justice had been still monopolized the capital owner (broker). While the farmers are always exploited by the game of price and quality by the owners of capital. Moreover, there is no law

governing the trading system is obvious. In the era of regional autonomy at the right time to reinforce the tobacco market system in Madura (Yahya, 2000).

Objectives

(1) Analyze tobacco market structure (2) Knowing the consequence from tobacco market structure toward price negotiation/transaction between farmer and seller in village research.

MATERIALS AND METHOD

Location of research are fixed purposively Pakong Village, District Pakong, Pamekasan Regency. In determining these locations through of considerations which Pamekasan District is one area that has the potential of natural resources which need to be developed and maintained its quality, especially the tobacco plant. To answer the purpose of this research used use analyse data :

1.   Descriptive Market Structure Approach

a).   Amount of Sellers and Buyers

Studying the composition of many farmers and traders seller / buyer of tobacco can be used to determine the indication of the tobacco market structure. If the composition of many farmers and traders balanced so that each is able to dominate the pricing indicated a perfectly competitive market. Assessment of market structure based on the composition of many farmers and traders seller / buyer was conducted descriptively.

b).   Market Information between Sellers and Buyers

Studying the comparison market knowledge between farmer seller/tobacco buyers can used to indicated tobacco market structure. If each farmer and seller have knowledge of tobacco market perfectly then tobacco market will be compete fairly. Assessment of market structure based on market knowledge among farmers and seller / buyer was conducted descriptively.

c).   Barriers to Entry and Exit Markets

Studying the degree of difficulty selling tobacco farmers or traders to buy tobacco, can be used to determine indications tobacco market structure. If each farmer and trader no barriers to entry or exit tobacco market, the tobacco market is perfectly competitive. Assessment of market structure based on market barriers to entry and exit was done descriptively.

2.   Competition of Market/Seller with Indeks Monopoly Approach

Tobacco market structure analysis is done with measures market rivalry or seller intergroup monopoly degree, use monopoly index (MPI). Monopoly index formulation based on (Yonekura, Hitoshi, and Jamhari, 2003) consider that P_b = purchasing price, Q_b = purchasing quantum, P_s = sale price, and Qs = sale quantum; seller acceptance (r) is formulated as follows :

(1)   õ $R = P_s . Q_s - P_b Q_b$

if :

(2)   õ $Q_b = Q_s = Q,$ $P_s - P_b = m,$ $m = D(Q),$

so :

(3)   õ $R = P_s . Q - P_b Q = (P_s - P_b)Q = mQ$

M is marketing margin.

if Cf = Fixed Cost dan Cv = Variable Cost, seller total marketing cost (C) formulated:

(4)   õ $C = Cf + CvQ$

in the meantime, seller profit (p) formulated:

(5)   õ $\pi = R . C = mQ . Cf . CvQ$

in rivalry market monopolistic, seller get maximum profit with equate marginal acceptance (MR) and marginal cost (MC).

(6)   õ   MR = MC

$$
(7) \quad MR = \frac{d(mQ)}{dQ} = m + Q\frac{dm}{dQ} = m\left(1 + \frac{dm/m}{dQ/Q}\right)
$$

so :

$$
(8) \quad m\left(1 + \frac{dm/m}{dQ/Q}\right) = MC
$$

if :

$$
\varepsilon = -\left(\frac{dQ/Q}{dm/m}\right)
$$

are price elasticity, therefore :

$$
m\left(1 - \frac{1}{\varepsilon}\right) = MC
$$

$$
1
$$

(9)   õ $\dfrac{1}{\varepsilon}$ = 1 - MC/m

$\dfrac{1}{\varepsilon}$ = Lerner¢s Index or degree of monopoli, $0 \leq \dfrac{1}{\varepsilon} \leq 1$.

$$\dfrac{1}{\varepsilon} \begin{cases} \text{Jika } m = \text{ MC} \quad \dfrac{1}{\varepsilon} = 0, \text{ Perfect market competition} \\[2em] \text{Jika } m > \text{ MC}, \quad 0 < \dfrac{1}{\varepsilon} < 1 \\[2em] \text{Jika } m \to \infty, \quad \dfrac{1}{\varepsilon} = 1, \text{ monopoly} \end{cases}$$

The estimate of market structure could be used MPI :

(10)   õ   MPI = m/MC

        MC = dC/dQ = Cv,

        MPI = m/Cv

     Monopoly Index (MPI) are proportion marketing margin with variable cost. The highest value MPI score that indicate of monopoly degree height or equally if high value of MPI indicate imperfect rivalry market degree height (imperfect market competition).

3. Consequence Analysis from Tobacco Market Structure

     Description from farmer and tobacco seller related to consequence from tobacco market structure in the case of price negotiation/transaction between farmer with tobacco seller, with how does effect of market formed towards farmer and seller. Who most is beneficialed or what both mutual beneficialed from market structure formed especially at Pakong Village.

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RESULTS AND DISCUSSION

Tobacco Market Structure Analysis at Pakong Village

1.   Approach Descriptive Market Structure

a)   Amount of Seller and Purchase

Farmer as tobacco seller at Pakong Village number approximately 350 person, while tradesman as purchase at village number more than 15 person augmenting that tradesmans from outside village. This matter is as according to farmer answer (respondent) that farmer besides sells the tobacco to tradesman exist in Pakong Vaillage also sell the tobacco to tradesman from village other if there price deals. On the contrary tradesman at Pakong Village besides buy tobacco at village also do tobacco purchasing outside village to get price, quality and tobacco quantity match by manufacturer.

In general tobacco marketing pattern at Pakong Village there 2 kinds, first tradesman comes to farmer and do price offer/transaction, or that farmer to tradesman and offered the tobacco. But not all operative tradesmans such, this could be happen because:

1.   Tradesman is one who known either by farmer, a part bound as customer.

2.   Competition existence inter tradesman for inside also outside Pakong Village to get farmer tobacco.

3.   Farmer also get price information from another farmer both for inside and outside Pakong Village.

b)   Market Information

The result of questionner and interview is known that farmer also follow price development information form farmer group from inside and outside village to get price sameness, but majority farmer stills weak to get price information directly from cigarette manufacturer. Because local manufacturer good manufacturer side or national direct information price to the partner tradesman (bigger tradesman).

While tradesman before do also follow information from tradesman fellow friend, from whole saler or from manufacturer except tradesman only speculation in price pixing without follow price information. For whole saler as a whole get price information from manufacturer side, because before do their purchasing does contract with warehouse side or manufacturer that aimed.

c)   The Obstacle Entry and Exit Market

There is no obstacle enters and out market for farmer and tobacco tradesman at Pakong Vaillage, above all mutual profitting agreement existence between both parties. Explanation give description that:

1. Amount of farmer and tradesman many, mean one of the parties can not influence market.

2. Market information, farmer and tradesman same detect tobacco price information, although not all farmers and tradesman gets direct information from manufacturer.

3. Price is determined by sell and buy process that beneficial both parties, will mean farmer will sell the tobacco to tradesman in or outside Pakong Village if there dealing price.

4. Farmer and free tobacco tradesman out comes, there is no obstacle enters and out market for farmer and tradesman.

Based on explanation known that tobacco market structure at Pakong Village, Pakong District, Pamekasan Regency fulfil perfect market compettition feature and as according to hypothesis that submitted.

2.   Approach of Monopoly Index between Tradesman

To detect competition strength between collectors tradesman and cutter tradesman tobacco at Pakong Village used simple mathematic calculation that Monopoly Index (MPI) that is proportion marjin marketing with cost variable, so that with calculation be known which tradesman that has highest monopoly degree at Pakong Village.

The difference of value magnitude Monopoly Index (MPI) in table 2. show that is collectors an cutter tradesman good same has position aloof towards imperfect market competition degree height (monopoly degree) descriptively as follows:

1.   Collectors tradesman

Collectors tradesman has highest monopoly degree towards bon irigated dry field kind tobacco purchasing. mean collectors tradesman gets premium price is compared cutter tradesman in bon irigated dry field kind tobacco purchasing. Although has only highest monopoly degree only in one tobacco kind Tegal (bon irigated dry field tobacco), but collectors tradesman gets average tobacco quantity according to bigger aggregate is compared cutter tradesman such as those which appear in table 3. Therefore that although value Monopoly Index (MPI) collectors

tradesman only superior in one commodities (Tobacco Tegal), but if value (MPI) collectors tradesman and cutter calculated with tobacco quantity that got each tradesman according to aggregate (table 3.) so knowable that collectors tradesman get profit higher. This matter is very natural because more many farmers that sells the tobacco to collectors tradesman.

2.   Cutter tradesman

Cutter tradesman penebas has highest monopoly degree towards mount kind tobacco purchasing and agriculture field, it mean that cutter tradesman get premium price both types of tobacco compared collectors tradesman. This matter is caused by cutter tradesman does not use when buy farmer tobacco. In the other side the collectors tradesman always weigh tobacco volume per bale. So that cutter tradesman be beneficialed if tobacco volume appraising per bale lower and on the contrary tradesman will lost if higher the appraising, this matter very natural has happened because tobacco sells in package bale, where is farmer self obvious never use definitive weigher to weigh tobacco volume per bale and only based on predictions.

As known market structure that measuresed to pass market competition or tradesman intergroup monopoly degree that buy tobacco "rajangan" direct from farmer, that highest monopoly degree presents in cutter tradesman, because cutter tradesman has highest monopoly degree towards mount kind tobacco purchasing and agriculture field as big as 3,81 and 5,55. While has only highest monopoly degree in purchasing one tobacco of Tegal (Tobacco Tegal, as big as 2.91). second tradesman has value MPI > 1, it means monopoly degree height or the highest imperfect market competition degree (imperfect market competition) tradesman intergroup.

Table 2. *Monopoli Indeks* (MPI) Tobacco Seller that Buy Direct from Farmer at Pakong Village in Dry Season (Rp/Kg).

Type of Data	Collectors Tradesman			Cutter Tradesman		
	Type of Tobacco			Type of Tobacco		
	Mountain	Tegal	Agriculture Field	Mountain	Tegal	Agriculture Field
1. Price Buyers	22.813	20.375	18.500	21.750	18.125	15.625
2. Marketing Cost	410,11	410,11	410,11	360,5	360,5	360,5
3. Price Seller	24.250	21.563	20.188	23.125	19.125	17.625
4. Profit (3-1-2)	1.027	778	1.278	1.015	640	1.640
5. Margin (3-1)	1.437	1.188	1.688	1.375	1.000	2.000
6. Monopoli Index (MPI) (5/2)	3,50	2,91	4,12	3,81	2,77	5,55

Source : Primary Data, (2010).

Table 3. Average of Tobacco Quantity that is buy Collectors and Cutter Tradesman, directly from Farmer in Dry Season (Kg).

Respondent	Average of Tobacco Quantity Buying (Kg)		
	Mountain	Tegal	Agriculture Field
Collectors tradesman	640,625	300,625	561,875
Cutter tradesman	230	207,5	286,25

Source : Primary Data, (2010).

3.   *Consequence Analysis from Tobacco Market Structure at Pakong Village*

a)   *Consequence of Perfect Market Competition*

Tobacco market formed at Pakong Village has consequence that farmer or tobacco tradesman does not has strength to influence market. Amount of farmer and tradesman same quantity, openly market information with farmer and free tradesman out comes indicate that is also previous tobacco tradesman same take the high price on the chance of gets highest profit, then both parties meets so that happen transaction process, price here formed if there mutual profitting agreement both parties, but otherwise there price agreement so farmer will change to sell tobacco to also with tradesman also will change to will buy tobacco to another farmer such as those which appear in table 4.

The tradesman payment systems to tobacco farmer cash and debt payment systems. Payment with debt systems usually happen between farmer with collectors/cutting tradesman who event meat or furthermore is called as %customer+, while whole saler always pay every tobacco purchasing from collectors/cutting

tradesman according to cash. In debt systems collectors/cutting tradesman do tobacco purchasing by way payment in advance before, while the payment remainder after tobacco sold to return to whole saler.

The farmer a large part who sell the tobacco with debt systems as big as 73,33 %. Implicitly farmer chooses as well as known tradesman (good reputation), reflect farmer hope gets a high price, or minimal farmer do not lay by tradesman. Tradesman with good reputation dislike to make dishonest in weigh/estimate tobacco they bought. The connection of farmer with tradesman as customer will be belief mutual profitting connection both them. Although many stand factory and cigarette warehouse at area Pakong but farmer must sell the tobacco pass comission agent because little the production capacity, so that farmer inclined make connection customer mutual profitting with cutting/collectors tradesman as broker.

Tabel 4. Tobacco Price Transaction Systems between Farmer and Tradesman at Pakong Village.

Transaction System	Farmer		Tradesman	
	Total (30 people)	Persentase (%)	Total (15 people)	Persentase (%)
1. Price Information Source :				
a. Manufactur Cigarette	0	0	8	53,33
b. Information Technology	5	16,67	1	6,67
c. Profession	25	83,33	6	40
2. Tobacco Marketing :				
a. Tradesman inside village	23	76,67	13	86,67
b. Tradesman outside village	7	23,33	2	13,33
3. Marketing Decision :				
a. Speculatif of profit that high and risk	28	93,33	13	86,67
b. Only sold out	2	6,67	2	13,33
4. Price Taker highest or lowerst :				
a. Yes	30	100	15	100
b. No	0	0	0	0
5. Transaction Process :				
a. Negotiation/Dealing	30	100	15	100
b. Without Negotiation	0	0	0	0
6. Change to another otherwise happen price agreement.				
a. Yes	30	100	15	100
b. No	0	0	0	0
7. Payment System :				
a. Cash	8	26,67	7	46,7
b. Debt	22	73,33	8	53,3
8. Price based on quality:				
a. Yes	30	100	15	100
b. No	0	0	0	0

Source : Primary Data, (2010).

b)   Consequence of Market Competition Inter tradesman

Profit comparison and margin that got between collectors tradesman and cutter (table 5.) if calculated with tobacco quantity aggregate total that got from farmer at Pakong Village appear as follows.

In table 5. known that is also margin tobacco purchasing from third tobacco kind (mount tobacco, tegal and agriculture field) according to collectors tradesman higher aggregate than cutter tradesman, although has highest monopoly degree only in one tobacco kind tegal (Tegal tobacco), it means influenced by tall farmer belief level and proved from farmer total more many sell the tobacco to collectors tradesman although collectors tradesman more a lot apply systems delays to pay but there scales certainty than if farmer sells the tobacco to cutter tradesman with cash payment systems but definitive scales inexistence.

Table 5.   Margin and Total Profit, Collector and Cutter Tradesman
at Pakong Village in once Sales (Rp).

Types of Tobacco	Collector Tradesman		Cutter Tradesman	
	Profit	Margin	Profit	Margin
Maountain	657.921,875	920.578,12	233.450	316.250
Tegal	233.886,25	357.142,5	132.800	207.500
Agriculture Village	718.076,25	948.445	469.450	572.500

Source : Primary Data, (2010).

CONCLUSION

1. Tobacco market structure at Pakong Village, Pakong District, Pamekasan Regency fulfil perfect market competition feature if is looked at from aspects that is farmer total and tobacco tradesman many so that one of the parties can not influence market price, farmer and tradesman same detect tobacco market price information and farmer can sell the tobacco to tradesman exist inside or outside village, on the contrary also can buy tobacco from farmer exist inside or outside village.

2. Market tobacco structure if looked at from market competition or tradesman intergroup monopoly degree, so highest monopoly degree is on cutter tradesman with value MPI 3,81 and 5,55 for both types of tobacco that is mount tobacco and agriculture field. While has only highest monopoly degree in purchasing one that tobacco Tegal, with value MPI 2.91. Secondly tradesman

has value MPI > 1, this matter shows that imperfect rivalry market degree height (imperfect market competition) tradesman intergroup.

3. The consequence of tobacco market structure at Pakong Village, Pakong District, Pamekasan Regency show farmer and tradesman same beneficialed because price formed pass transaction process that continue in both parties agreement, if one of the parties feels, so transaction cancels and change to farmer or to another tradesman. Besides, tradesman intergroup market competition that buy direct from farmer, so visible that collectors tradesman most be beneficialed.

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