

GAME THEORY ANALYSIS OF PROSPECTS OF FORMAL AND INFORMAL INSTITUTIONS TOBACCO INDUSTRY IN GRESIK REGENCY

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Abstract

Institution is a rule of the game and organizations that play an important role in regulating the use and allocation of resources in an efficient, equitable and sustainable [1][2][3][9]. Institution will provide an important change in terms of industrial and agricultural sectors in tobacco plants. The research aims to identify prospects existence of formal and informal institutions against the tobacco industry in Gresik. The research data is primary and secondary data. Research sites focused on Gresik. Technical analysis of data is using descriptive analysis and game theory. The results showed that the existence and role of formal and informal institutions will provide a new euphoria in the tobacco industry in Gresik. This is indicated by an effort to increase awareness of the importance of communication between economic actors in the tobacco industry.

Keywords: *-game theory; prospects; institution; industry; tobacco*

Introduction

Institution is rule of the game with an important role in regulating the use and allocation of resources in efficient, equitable and sustainable [3][9]. Furthermore, Williamson (1998) showed differences in definition of institutional justification becomes the New Institutional Economics (NIE) and The Institutional Government. New Institutional Economics (NIE) is a rule of the game which includes policy, justice, contract and property rights. Meanwhile, The Institutional Government is the institution that regulates the institutional market, corporate, and bureaucratic. On the other hand, institutions consist of informal institutions and formal institutions [8]. Formal institutions are institutions that have the rule of law and regulation legality of the government. Informal institutions are institutions that run out of legality formal system and has no legal force. Therefore, the basicly institutional implications will provide an important change in terms of industrial and agricultural sectors in tobacco plants. One of the agriculture and industrial sectors relationship within the framework of the tobacco economy.

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Institutional framework of the industry is a phenomenon preference in the selection of the flow of economic activity in certain industry sectors [13]. Tobacco is a plant that has economic value added in Indonesia [6][7][12][13]. Tobacco is the main raw material for the tobacco industry. This euphoria made tobacco has the potential to be developed extensively because it has economic value to the tobacco industry. Furthermore, tobacco has an important role in the economy in fiscal aspects. Tobacco is a product developed and cultivated plantations in the district of Gresik in addition to sugar cane, cotton, coconut, coffee, cloves, cashew nuts and palm. However, the cultivation of tobacco farming has many problems both in the process of industrialization of production and processing in one of the aspects of the institutional relationship between the agricultural sector and tobacco industry sectors. Therefore, based on the background of this research aims to identify the prospects for the existence of formal and informal institutions against the tobacco industry in Gresik regency.

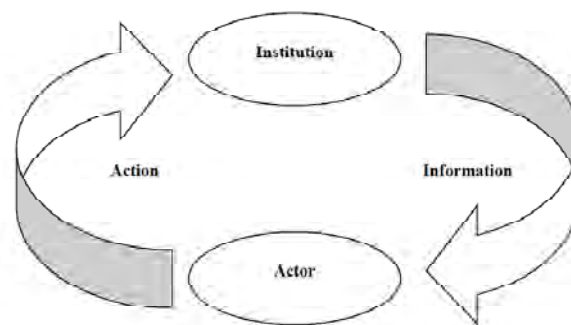
Theoretical Overview

Institution is a rule of the game and organizations that play an important role in regulating the use and allocation of resources in an efficient, equitable and sustainable [1][2][3][9]. Another definition states that the institution is an organized set of relationships in the community who knew the right, the influence of the rights of others, privilege and social responsibility on its right [11]. Therefore, institutions can lower transaction costs is the key to the success of economic indicators [2]. Institutional developments related to the period of institutional change. Efficient institutional changes that will impact positively on economic growth. Meanwhile, an inefficient institutional change will negatively affect economic growth.

Among other institutional characteristics from Hodgson (1998) is 1) institutional actors enter interaction (interaction of agents) in the presence of feedback (feedbacks), 2) institutional characteristics has units, concepts and routines in general; 3) Institutional sustainability and have expectations of the concept; 4) Institutions are not immortal, but has institutional survival (durable), coercion (self-enforcing), and quality; 5) include institutional values and processes of normative evaluation, and 6) institutional legitimacy to the process of moral .

In the study of theory, New Institutional Economics paradigm (NIE) is one of the evolutionary theory of economics [4]. In this theory, individuals are key or important

actors in economic transactions. Individuals have a preference about the thoughts that will be applied in the economy. Preferences can be changed to change according to the need that must be met in his life. Individuals have to be applied to individual preferences through their behavior in the economy. If the individual is a group, it will generate an institutional form that reflects the preferences of the individual aggregates. Institutions can be used to obtain information about the individual needs of the market. Instead, the information is also used by individuals to choose their preferences in behavior in the market. Therefore, economic theory assumes that preferences can be used as a consideration for determining the function of individual preferences. The mechanism is based on the individual is the core of economic transactions, behavior, information, and institutional information in a market turnaround. Figure 1 shows the velocity of information and institutional role.



Source: adapted from Hodgson, 1998

Figure 1. Turnover of Information and Role of Institutional

Furthermore, in the New Institutional Economics (NIE), there are two aspects that influence the development of institutions such as the relative price and technological innovation [2]. Relative prices can affect the rules of agreement on economic transactions. Influence will benefit one or both of the economic actors who perform economic transactions. Meanwhile, the use of technological innovation will affect the transaction costs caused by the lack of information of economic actors.

Research Method

This study is a type of research exploratory. Exploratory research is research that aims to develop knowledge or suspicion and identification of situations that are still new research and to provide direction for further research. The study focused on Gresik. It used

primary data and secondary data. Primary data as a source of information to absorb information about the prospects for formal and informal institutional tobacco industry in Gresik. Technical analysis of the data using descriptive analysis and game theory.

In the method of game theory, the interaction between formal institutions and informal institutions in the tobacco industry in Gresik is stacking the goal to shows institutional prospects in supporting the economic activity of tobacco in Gresik through alternative strategies and policies for each hierarchy institutions. Game theory model in this study are follows:

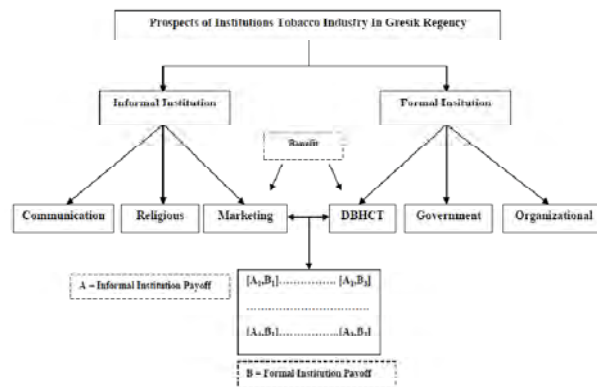


Figure 2. Hierarchy of Interaction of Formal and Informal Institutions

Based on the picture, it shows that the first hierarchy of game theory there are two institutional patterns in the tobacco industry in Gresik, namely institutional informal and formal institutions. Formal institutions are institutions that have the rule of law and regulation has legality of the government. Informal institutions are institutions that run out of legality formal system and has no legal force. Furthermore, in the second hierarchy are the benefits to be provided by each institution on the tobacco industry that can be used to determine the institutional prospects. Instruments on the second level is the informal institutional communication between economic actors (Communication), the closeness of the social relations of religious (Religious), and ease of marketing tobacco products in the market (Marketing) and for formal institutions are beneficiaries and allocation of tobacco excise revenue sharing (DBHCT), guidance and assistance from local government (Government), and the force of law on the organization structure of the tobacco business (organizational).

Result

Existence of tobacco in Gresik tend to fluctuate over the period 2005-2010 in growth. During the 2005-2009 peridoe land and tobacco production in Gresik tends to decrease, but in 2010 there is a rise in land area due to the attention of local governments in the development of tobacco up to 25 hectare (BPS, 2011). According to the keyinforman, tobacco is a plant that has a high economic potential if developed to increasing its contribution to the regional economy. Furthermore, tobacco plants that tend to Gresik marginal compared to other regions in East Java can provide a positive impact on governance and development if appropriately and effectively in the institutional realm of economic actors. This course gives an implication in an institutional setting effective and efficient in dealing with the economic flow that links tobacco between agriculture and industry sectors in Gresik.

Institutional tobacco industry in Gresik has the majority of informal institutional forms related to the farmers, intermediaries and the cigarette industry. This condition is caused by fluctuations and extensive cultivation of tobacco plantations in Gresik have focused on Balongpanggang sub-district. Informal institutions are strengthened because reluctance of economic players in the tobacco sector who do not want the administrative and bureaucratic processes that tend to complicated. Informal institutions between the tobacco industry in Gresik regency established for culture and cultural factors as well as trust between communities. Therefore, this phenomenon shows that the existence of informal institutions is far from clear legality and structure among economic agents formed by the communication between economic actors, religious ties are close and easy access to tobacco markets because farmers simply act as a price taker. However, informal institutional weaknesses are consequences of tobacco farmers who have low bargaining power than the cigarette industry and trade intermediaries. Directly, farmers in the future will act as a price taker in the absence of determine the ability for the tobacco crop prices in the market.

On the other hand, formal institutions are also formed on an ongoing basis by the local government to establish cooperation with economic actors within socialize the benefits of formal institutions in economic activity of tobacco. According to the keyinforman, benefits will be provided by formal institutions is the government's attention through the cultivation of tobacco and organizational structures that have a legality. This benefit is achieved by giving more attention to the importance of educating and fostering

an organizational structure and legal rules in the flow of production and distribution of tobacco in Gresik regency. This policy is implemented by enhancement of environmental quality tobacco plantations to maintain the continuity of productive land in order to produce optimum quality raw materials for the cigarette industry.

The phenomenon of informal and formal institutional fabric of the agricultural sector and the tobacco industry provides a trade off in the development of tobacco in the future between cultures and economic benefits. This is shown by the pay-off interactions between the benefits of each institution. If economic agents choose to benefit from formal institutions DBHCT the informal institutions will offer the prospect of the benefits of religious closeness with pay-off value of 0.229. Whereas, if the benefits offered by formal institutions and programs is a concern of local governments to tobacco cultivation offers the benefits of the informal institutional marketing of tobacco products with the convenience of pay-off value of 0.038. Furthermore, if formal organizational structure legally offer institutional, informal dining will offer the benefits of the fabric of close communication between economic actors with the pay-off value of 0.154.

Table 1. Pay-Off Benefits Of Informal And Formal Institutions Tobacco In Gresik Regency

Prospect Institution		Formal Institution Pay-off		
		DBHCT	Government	Organizational
Informal Institution Pay-off	Communication	0.045	0.120	0.162
		0.202	0.030	0.154
	Religious	0.142	0.129	0.121
		0.229	0.035	0.105
	Marketing	0.056	0.259	0.224
		0.187	0.038	0.143

Sources: primary data, processed 2012

Whereas, if economic agents choose informal institutions as institutional has a positive outlook for the tobacco industry in close communication with the benefit of the formal institutions will offer the benefits of providing benefits to the organization as a legal structure to the value of pay-off of 0.162. Furthermore, where the informal institution offering the benefits of religious closeness of informal institutions will offer DBHCT with pay-off value of 0.142. Whereas, if the institution offers the benefits of ease of informal marketing of tobacco products will respond to the formal institutions by offering benefit

care and local government programs for the cultivation of tobacco to the value of pay-off of 0.259.

Conclusion

The results showed that the existence and role of formal and informal institutions that have the prospect of potential in providing a new euphoria in relation agricultural and tobacco industries in Gresik. Prospects are based on the interaction of the benefits offered by both institutions in providing informal communication between economic actors, the closeness of the social relations of religious and ease of marketing tobacco products in the market and use of both formal institutions and the allocation of tobacco excise revenue sharing (DBHCT), Development and aid of local government, and legal power over the tobacco business organizational structure so as to avoid trade-off negative impact to the performance of the tobacco industry in Gresik.

Recommendation

The government to increase awareness of the importance of communication between economic actors in the tobacco industry through both informal and formal institutions to absorb market information. Given the alignment between the performance of formal institutions and informal institutions in the future the economic prospects of rolling tobacco will be sustainable in creating a multiplier effect in the economy.

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