International Business Management 6 (2): 158-167, 2012
ISSN: 1993-5250

Law and Economics: A New Dimension in Market Regulation

[1]R. Nordin, [2]A. Waris and [1]M.A. Witbrodt
[1]Faculty of Law, Universiti Kebangsaan Malaysia, 43600 UKM Bangi Selangor, Malaysia
[2]Department of Commercial Law, Law School, University of Nairobi,
P.O. Box 30197, GPO 00100, Kenya

Abstract: This study examines the application of economic analysis of law in the context of resolving dispute in property rights. It analyses the economic and sociological arguments surrounding intellectual property rights exploitation. To be more specific, it focuses on the patenting of pharmaceutical or biotechnological inventions. This study establishes as a theoretical framework the economic analysis of law with specific reference to transaction cost theory. Prior to that it will discuss the interrelation between economics and law, i.e., on how law may have an impact on economics or how economics has influenced the state in formulating its law. This study will also take into account the theories on property rights and social process of law.

Key words: Coasean theorem, economic analysis of law, intellectual property, dispute resolution, indigenous peoples, access to genetic resources

INTRODUCTION

The economic analysis of law is a field of economics that applies conceptual theories and empirical methods in economics to the study of law, legal rules and institutions. Economic scholars, such as Commons and Hale amongst others, initially applied economic theories to the study of law in the 1910s and 1920s. Its origins are international British economists, Adam Smith and Jeremy Bentham and later A.C. Pigou. Prior to 1960, economic analyses of law were applied to antitrust law, taxation and corporations. Most scholars were attempting to explain the behavior of explicit economic markets, i.e., the effect of legal rules to the normal functioning of economic system. Modern law and economics analysis, however applies such theories and empirical methods various aspects of contemporary legal systems including but not limited to common law matters such as tort, contract and property and the origin and evolution of legal systems, particularly procedural and constitutional rules.

In 1961, Roland Coase contributed significantly to this field by introducing the transaction costs theory, later known as Coasean Theorem, in his essay The Problem of Social Cost (Coase, 1960). Coase established a framework for analyzing the assignment of property rights and liability in economic terms. Although, his conclusion were endorsed by those thought to be his followers, particularly Richard Posner while receiving substantial criticism from other scholars such as Samuels, on the basis that Coase's analysis failed to provide better understanding of economic activity and its credibility as the primary basis for the design of social institutions (Cheung, 1983; Samuels, 1974; Cooter, 1982). This study examines the application of economic analysis of law in the context of resolving dispute in property rights. It analyses the economic and sociological arguments surrounding intellectual property rights exploitation. To be more specific, it focuses on the patenting of pharmaceutical or biotechnological inventions. This study will begin the analysis on the basis that law and economics is interrelated, i.e., on how law may have an impact on economics or how economics has influenced the state in formulating its law. The study will then establish as a theoretical framework the economic analysis of law with specific reference to transaction cost theory. This study will also take into account the theories on property rights and social process of law.

THE INTERRELATION OF LAW AND ECONOMICS

The interaction between law and economics relates to criticism that legal scholars view the law too much from within too much in terms of the law's own logical structure and lack of a well developed theoretical or empirical apparatus with which to explore the world around it. Three basic approaches exist to establishing a successful collaboration between law and economics: The legal rule formulation among normative or welfarist economists whose objective is to achieve social welfare

Corresponding Author: R. Nordin, Faculty of Law, Universiti Kebangsaan Malaysia, 43600 UKM Bangi Selangor, Malaysia

maximization; the evaluation of effects among positive economists who uphold microeconomic analysis (verifiable empirically) to determine the possible effect of a particular law and the recent focus on transaction costs and the working of different legal form of organization (Hirsch, 1999) from legal, economic and organizational perspectives.

Legal system as object of control for economic achievements: Samuels (1971, 1995) conducted a case study to examine the interrelations between legal and economic processes by analyzing the case of Miller. This case highlights the position and function of legal processes in economic markets. When there are direct conflicts between the private rights of two claimants in any market, it requires a decision to be made by the state; typically by the legislative or judicial organs of the state. The state determines the rights of a property owner based upon its regulations and acts to secure the owners rights accordingly. Property law is therefore utilised to determine which interest is whose interest. The court typically determines the party whose rights need to be protected while simultaneously determining which party is at a legal disadvantage by interpreting the relevant regulations. The decision of the state and the court regarding such matters are guided by the concepts of public interest, public value or public welfare.

According to Samuels (1971), the government in any legal process has become a participant in economic decision making, irrespective of the actual subject matter. An economy is a system of power and rights premised upon mutual coercion, reciprocity, the capacity to receive income, the distribution of risk, the allocation of resources and distribution of income (Samuels, 1971). The pattern, structure and consequences of this system affect the functions of law by which the government determines, through both law and policy which entities are beneficiaries of certain rights and privileges. Therefore, from the economic perspective, the economy is perceived as an object of legal control and parties utilise the law as a means to acquire private economic gain or advantage. In markets, the legal impact upon the private economic sphere and/or the economic use of the government vis a vis its legal process in its day to day economic activities can be witnessed. We often see that the market utilises the government as an instrument or vehicle to control or enhance monetary or non-monetary advantages. Basically, Samuels established three points regarding the interrelation between law and economics; the market needs law in its day to day activities which includes but is not limited to income distribution and risk allocation; economic activities become objects of legal control and market participants utilise law and legal processes as instruments to acquire private economic gains and advantages. This question who actually makes the choice; legislative or judiciary inevitably leads to a discussion of the concept of rule of law. In parliamentary democratic states such as Malaysia and Kenya both the legislative and the judiciary make the choice. Mechanisms exist to ensure the separation of powers between legislative, judiciary and executive branches while ensuring the independence of the judiciary at all times. Both Malaysia and Kenya however have encountered situations that demonstrate that the judiciary is not completely independent where it has been pressured or influenced by executives. The more important issue that arises is which of the three bodies possess ultimate power in such decision making processes.

One can argues that the executive branch has greater influence on the legislative, concerning what laws to legislate and on the judiciary, concerning how to interpret such laws. Studies have shown that several factors exist that affect the rule of law in any state. One main factor is the political culture or political regime. Peeverboom has categorized Malaysia as a semi-democratic state possessing a soft authoritarian, non-liberal, electoral democracy where democracy does not necessarily support the rule of law due to pervasive distinctions between civil and political rights; social and economic rights and law and order (Peerenboom, 2004). The World Bank rule of law index shows that the rule of law in Malaysia has dropped from 82.9% in 1996-69.6% in 2002. The rule of law has certainly related to the economic growth. Democracy has been valued as a requirement of the rule of law rather than democracy as a central principle or system, the achievement of democracy is aided by a reliable legal system (Peerenboom, 2004).

One can also examine the interrelation between law and economics through Likosky's conceptualisation of oligarchic states which considers the manner in which governments utilise public powers to promote private commercial enterprise. The oligarchs, to whom Likosky refers are state officials who collaborate with select private persons in an effort to manage the economy in a manner that benefits the interests of such public officials and/or private persons. The examination considers the cooperation between agents of the state and members of cooperation to pursue their respective interests and the means by which economic actors gain control over state institutions. Ultimately, he examines the state's functions to determine if it relates to economics. Is it true that the state never participate in commercial activities, since all commercial functions are carried out by private actors? Likosky and Michael (2005)'s study on Malaysia proves

that the intermingling between that the state regulation of the economy has transformed the Malaysian government from a neutral law maker to a biased law maker. The conclusion reached is that Malaysia employs its public law powers to promote certain private interest (Likosky and Michael, 2005). In the context of property rights, new property rights are often established by governments to change the economic game. However, changes in property rights may be in conflict with prevailing informal rules. Exogenous changes in properties are favoured by legislators, bureaucrats, political coalitions, ideologues and pressure groups who act in pursuit of their own value and private ends. At the same time, it hides behind the façade of the public interest. Therefore, such changes typically stand in contrast to public interest, public value or public welfare (Pejovich, 1997).

Impact of legal system to economic development: This study has discussed the interrelation between law and economics by observing how a legal system becomes the object of control for economic achievements. It will now analyze the interrelations by focusing on the impact of legal system to economic development. Any legal system containing inadequate legal protections, ambiguous legal provisions and inconsistent application of the laws (due to corruptions and malpractices) may result in highly insecure property rights. This in the eyes of economists, causes an increase in transaction costs within the marketplace. Such legal inadequacies and institutional instabilities affect market efficiency and integrity. Ultimately, such an environment hampers investments, savings and the consumption of durable goods. Thus, it is crucial that any state, such as Malaysia, conducts law and economic analyses to identify any changes in law, regulation and mechanisms required for the enhancement of economic efficiency.

As with other developing states, legal transplants are a key source of trade-related legal changes in Malaysia (Likosky and Michael, 2002). Malaysia has chosen an export-led approach to economic growth and is eager to attract much needed foreign direct investment. In order to attract foreign investment to the domestic market, Malaysia provides the necessary infrastructures required for a stable environment for businesses to operate within. In the context of property law, states with strong patent law regimes for biotechnological inventions for instance will certainly attract potential bio-prospectors. On the other hand, inadequate law and stringent procedures will be seen as potential threats and discourage future ventures. The Philippines, for example has imposed very stringent access procedures to its genetic resources, namely Executive Order No. 247 and this has led to a decrease in access applications in the Philippines. Malaysia, however is willing to reformulate its domestic legal order to serve the transnational commercial interests with the ultimate objective of boosting the transnationalization of its commercial sector. Reformulation refers to the review of tariff, tax and financial regulations to provide an improved efficient market (Malaysia, Seventh Plan). The judiciary is a key element in economic development regarding the resolution of disputes and the facilitation of the exchange of rights. The judicial system includes all the mechanisms that interpret and apply the laws and regulations. More importantly, the judiciary is the main link through which the economic impact of the legal system can be identified. The basic requirements of a legal system are fair processes, accessibility and universal applicability. From the economic perspective, the judiciary can also affect the behaviour of private investment. Lack of access to an equitable and efficient judicial system adds uncertainty and hampers the realization of beneficial transactions. In the absence of an impartial and efficient judiciary, adequate legislation becomes meaningless. Consistent interpretations and applications of the laws by courts provide a stable institutional environment. This will lead to long-term consequences of economic decisions that can be assessed by businesses and the public. The judiciary also needs to be seen as a capable body that provides equal treatment between local and foreign investors, since double standard practices in judiciary hinder potential investors. Thus, in determining the interrelation between law and economics, these questions need to be addressed:

- To what extent does law promote economic development?
- To what extent might economic growth be affected if rules are clearly defined, made public and applied in a consistent manner?
- To what extent are investment projects affected by dispute resolution mechanisms based on the binding decisions of an independent judiciary and flexible procedures allowing new rules to be established when change is required?

TRANSACTION COST THEORY

It is difficult for somebody trained in purely in legal theory to understand Coase's theory and even more difficult to conduct an informed analysis on the theory. However, a better approach to understand his theory is by considering the weaknesses of economic theories that

existed prior to Coase's theory and the contributions made by Coase to such theory. For the purposes of this study, the functions of the state in resolving property rights disputes will be specifically examined. Furthermore, since the discussion of Coasean Theorem in economic literature is extensive, the present research makes no attempt to dispute the notions of the theory. The discussion of the Coasean Theorem considers how the theory may be applied to gain a better perspective regarding the regulation of access to genetic resources. The standard example utilised to describe the theories exited prior to Coase's theory relate to a factory releasing harmful smoke onto neighbouring properties, commonly referred to as the smoke nuisance case. In this case, the Pigou treatment of the Economics of Welfare leads to three options to resolve the property rights dispute between the factory owner and the neighbouring land owners to make the factory owner liable for the damage caused by the smoke; to impose direct regulations on the factory owner by establishing a Pigouvian tax, varying in relation to the amount of smoke produced and to exclude the factory from any residential district (Coase, 1992).

Under perfect competition, private and social costs will be equal. However if the private cost is equal to the social cost, the producers will only engage in activity if the value of the product of the factors employed is greater than the value in which they would spend to prevent or overcome activities. Essentially, the value of production will be maximized with zero transaction costs. With these options, especially the imposition of Pigouvian tax to the factory owner, Pigou was trying to internalize any externalities that existed in the market. The failure to do so will lead to inefficiency in the market. Therefore, inefficiency is eliminated by charging the wrongful party a fee equal to the damage caused by his operations and the internalizing process will then produce an efficient outcome (Coase, 1988a). However, the Pigou Theory fails to inquire further regarding the nature of state's institutions due to his assumption of the existence of almost perfectly functioning public bodies. Pigou also fails to predict the weaknesses of imposing direct regulations to resolve this dispute as the weaknesses may eventually cost more for the parties to resolve any disputes based on direct regulations. Furthermore in imposing the Pigouvian taxes, it may be difficult for the state to calculate the actual tax amount that is equivalent to the actual cost in preventing or overcoming the damage caused by the smoke. The most important weaknesses of Pigou's approach concern its failure to discuss how the state could define property rights and to whom it should be allocated. This was Coase's principal criticism of the Piguo approach as it tended to treat the market and the state as simple alternatives. Coase argued that the reason earlier economic theoretical systems were faulty was that they failed to take into account further essential factors when attempting to analyze the effects of a change in law on the allocation of resources. This missing factor is the existence of transaction costs. Coase (1988b) proceeded further to examine the role of the firm, the market and the law in the working economic system. In his analysis, Coase noted the existence of a gap between the world that is analyzed on basic economic theory and the actual operation of a real market. Such a gap is identified as a potential obstacle to the formation of an efficient market under the Pigou approach. Coase further explains the function of the state relating to property rights from an economic perspective. He poses that the objective of the state's legal system is to establish and recognize rights that will ultimately attain economic efficiency.

Unlike Pigou, Coase continues further after stating the functions of legal system or state from the economic perspective. Coase further analyzes how the functions can be performed accordingly. The importance of looking at the social conditions, role and nature of the firm and the state is emphasised. Treating the firm and the state as social institutions, Coase concludes that both the firm and the state are or should be complements of each other and facilitate the market process. Coase further argues that in order to resolve any property rights dispute as in the example of the smoke nuisance case, there needs to be a clear definition of who has a right to do what. He remarks that:

> In order to carry out a market transaction, it is necessary to discover who it is that one wishes to deal with, to inform people that one wishes to deal and on what terms, to conduct negotiations leading up to a bargain, to draw up a contract, to undertake the inspection needed to make sure that the terms of the contract are being observed and so on (Coase, 1988a)

Under this notion, parties may make and enforce contracts in their mutual interests as a means to resolve disputes. Thus, neither direct regulation nor Pigouvian taxes are necessary. Therefore, the issue lies not with externalities but transaction costs. Transaction cost in respect of property rights is defined as the cost associated with the transfer, capture and protection of rights (Barzel, 1989). However in order to achieve this agreement or mutual understanding, one needs to assume that transaction cost is zero and under rare scenarios, any agreement that is in the mutual benefits of the parties concerned gets concluded (Meade, 1973). Coase further states, in the second part of his analysis that direct

governmental regulation may be a better means of improving economic efficiency; this being the case a transaction cost is incurred. According to Coase, the governmental administrative machine is not itself costless, even though sometimes it might enable parties to get something done at a lower cost than a private organization could. For instance, in the smoke nuisance case if the number of people involved is large then the costs of handling the problems through the market or the firm may be higher than the resolution of the issue by means of direct regulation. There are a number of empirical works premised upon the Coasean Theorem that apply it in other aspects of the field. One such work was an empirical analysis of law and economics by Ellickson who applied the Coasean Theorem to the issue of cattle-trespass (Ellickson, 1991). Legal issues concerning liability for trespass damage and the cost for preventing the trespass were examined. Coase's theory of transaction cost was applied to the situation arising in Shanta county by conducting large-scale interviews with members of the local community to determine how the Coasean Theorem could be applied to such disputes.

Ellickson's study shows that people are generally ignorant of the relevant law and furthermore, ignore aspects of the law that conflicts with their personal views. An important aspect of Ellickson's analysis concerned the relationship between real-life behaviour (informal norms) and the state law. Ellickson discovered that informal norms contradict the basic theory of law and economics. Due to this contradiction, people normally rejected laws that were formulated without taking into consideration the social values of the community. In his view, the rejection of state dispute resolution mechanisms could be due to good relationships between the neighbours and the fact that transaction costs associated with acquiring information and litigating disputes are higher than resolving disputes by relying upon informal norms (Ellickson, 1991). The conclusion reached was that informal norms within a given community govern disputes in reality not Coasean Theorem mechanisms. On the other hand, Ellickson sees his study as consistent with Coase's central claim that the transaction cost of resorting to formal law is a major hindrance to its effectiveness. As a consequence, direct regulation may not be the best solution for any property rights disputes. The discussion above highlighted four main points of Coase's theory. First in a simple straight forward, one-to-one dispute, it is reasonable to assume that the transaction cost for resolving the dispute via private contract is lower than resolving through direct regulation or Pigouvian tax. Second in more complex cases, direct regulation is still the best solution to resolve any disputes on property rights, even though it is understood that resorting to direct regulation may incur costs to the parties of a dispute. Coase however, recognizes that such costs are much lower than the costs of resolving the dispute by private agreements. Third, the high transaction costs associated with resorting to formal law as a means of resolving disputes is a major hindrance to the effectiveness of any direct regulation. Finally, people tend to ignore or reject law that contradict their personal views, the social norms of a given community or real-life behaviour.

PROPERTY RIGHTS THEORY

Before proceeding with the discussion of the connections between transaction cost theory and property rights, concepts associated with property rights need to be briefly examined. Several theories have been developed to explain the idea of property. One of the earliest theories is to treat property as rights, privileges, power and immunities that govern the relative powers of an individual over tangible and intangible things (Underkuffler, 2003). This theory illustrates the principal elements that form the basis of property rights enforcement. The successful assertion of a property right results in the exclusion of others. Therefore, another theory treats the issue of property rights as an interest in exclusively determining the use of separable things. This exclusive right can be seen as an exclusionary right that includes the right to abandon, share, license or give such property to others in its entirety. The emphasis on separable nature of property reflects the ability to change ownership through the transfer of the right to another (Penner, 1997). However, the proposition that property deals with the ownership of an object is too restrictive, especially when dealing with a new forms of property such as intellectual property that are intangible in nature. Property rights may relate to an object that is not a tangible object. The concept of a property right is broader as it relates not only to physical objects or wealth or other tangible benefits also to abstract social relations. It governs the relations between individuals that arise from the existence of a good and the usage of the same including the behaviour of individuals relating to the observance of rights and consequences of violating such rights. Therefore, property rights do not govern the relationship between individuals and objects but relationships between individuals (Pejovic, 1997). Posner identified three criteria for an efficient system of property rights universality, exclusivity and transferability. In the context of the interrelation between the rights of individual private property owners and the public generally, exclusivity is the most relevant criteria in any

discussion on property rights. Economists recognize Coase's theory as a new and interesting approach towards defining property rights by making a connection between transaction costs and property rights in the context of the common law of liability. Although, economic property rights are enhanced by the law, they are ultimately used rights and the greater extent one can exercise these uses and bear the consequences the greater are the property rights, regardless of the law (Ellickson, 1991). Property rights are therefore defined as the ability to freely exercise a choice over goods or services. Coase's concept of property rights is not necessarily limited to physical entities but includes the rights of an individual to perform an action that has been defined and recognized by a legal system that addresses both tangible and intangible properties. A transaction cost in the context of property rights is the cost associated with the establishment and maintenance of property rights (Allen, 1991). When property rights are protected and maintained in any context, transaction costs will exist. Transaction costs include not only direct costs, as well as any accompanying inefficiencies in production or misallocation that are incurred as a result. In the context of biodiversity and biotechnology, the cost for development, production, market introduction, safety measures, establishment, protection and control of patents and risk should also be taken into account (Von Barun and Virchow, 1997). The transaction cost property rights relationship can be seen in the following scenarios; when it is costless to establish and maintain rights, they are done perfectly; if transaction costs are prohibitively high, property rights will neither be established nor maintained and property rights will be zero; if property rights are complete, transaction costs are positive and when property rights are zero, transaction costs could also be zero.

Economists argue that courts must interpret property rights clearly when settling disputes involving property and the legislative branch must enact clear provisions concerning property rights as the failure to do so may result in market failure (Cole and Grossman, 2002). According to Coase's theory, the law should define property rights in such a way as to minimize the costs associated with incompatible uses. It is important for a society to allocate resources in a manner that maximizes efficiency by minimizing social costs. This means that the entitlement should be awarded to the party who has higher costs associated with avoiding or abating harm so as to avoid more serious harm (Coase, 1960). So, one of the considerations in the initial definition of property rights is to avoid or fix any inefficient definitions in order to minimize the transaction costs associated with resolving property right disputes at a later point in time. This study observes the access to genetic resources and the sharing of benefits arising from its commercialisation. As the present discourse considers access to genetic resources and benefit-sharing, it is relevant to discuss theories regarding intellectual property rights through the patenting of biotechnological/pharmaceutical inventions in the form of processes or products. While most states accept that any new species of genetic resource is not patentable (Malaysia, S13 Patent Act) a number of legal issues exist concerning the patenting of biological material and its end product, pharmaceutical inventions. One such issue is whether products of biotechnology are patentable as innovations as such activities consist of human intervention to transform a biological material from its natural state into new drugs or medicine.

Even though, it is argued that the pro patenting of a pharmaceutical invention is likely to be accepted (because it complies with minimum requirements of patenting), disputes between developed states and developing states on necessity of pharmaceutical patents are on-going. The basis of the argument brought forward by the disputes between developing states and developed states concerns the relationship between private interests and social interests. Developed states argue that patent protection is essential to protect their private rights. A concern with the developing states is that public policy desires such inventions to be excluded from patents rights to serve greater social regarding the wide availability of such a product at a lower price. There is an ongoing debate between the state's action in recognizing intellectual property as private property and welfare outcomes relating to the protection of intellectual property rights by way of excludability. The issue relates to the standard theory on private property as a mechanism to ensure goods are in the best use by giving the owner the incentive to seek the optimal revenue to be derived from them. Furthermore in the context of pharmaceutical invention, the inventor who utilizes the biological material and develops it into a new product is entitled to property rights that compensate for the hard work and costs involved in development of such a product. This leads to competitive exclusionary effects on property rights that recognize the exclusive rights of the owner to prohibit the use and exploitation of the property by any third parties. However, it debated that theories associated with tangible property are not applicable to intellectual property because of its criteria of being intangible which can be used concurrently. This is because any of its uses or performances will not perish or lessen their value (Picciotto and Campbell, 2003). Policy issues determine whether intellectual property rights

include excludability. Economists debate whether welfare optimization can be achieved by state guarantees of excludability. Economic analysis shows that state intervention resulting in the creation of monopolies can be perceived as an extension of the market and the protection of purely private interests. While the economic rationale of providing intellectual property rights is to encourage and stimulate the invention of new products, there is no economic rationale for protecting the inventors per se (Scotchmer, 2003). To the economists, the notion of private could be misleading. A property right is a social relationship underwritten by the state, rather than relationship between person and thing. It is a socially determined interest which can be achieved only within the conditions of society and with the means provided by the society (Picciotto and Campbell, 2003). Although, state intervention is required to establish a welfare enhancing market, monopolistic intervention is certainly not acceptable. The negative impact of exclusionary rights on public interests can also be seen from the perspective of competition law. In the exercise of the exclusionary rights, the rights bearer may act in an anti-competitive manner in order to maximize returns on their intellectual property. Under these circumstances, fair trades and healthy competition being the principal ambit of competition law may not be achieved and ultimately, customer welfare optimization is not achievable.

In most developed states, proper laws have been formulated to handle such anti-competitive practices. However, such laws will still need to address the existing issue on how to balance private rights and public rights, since monopolies, excludability and restrictive practices typically contradict public interest. The social impacts of the extension of property rights and excludability to intellectual properties may be seen from the intellectual property and bio-piracy. This extension has created so much threat on developing states and such system provides possibilities for granting patents based on existing knowledge, normally traditional knowledge rather than new knowledge (Gopalakrishnan, 2005).

The biopiracy is an act of the prospector using the traditional knowledge of local and indigenous peoples to develop biotechnological products without proper acknowledgement. Most importantly, the pecuniary benefit arising from the intellectual property rights has never been shared equally with the genetic resources donors. India has experienced the impact of patent system in cases concerning turmeric and basmati. In Malaysia, the issue of bio-piracy has never been explicitly addressed by existing policies and regulations. For example, no laws exist to protect the interests of indigenous peoples with respect to their traditional knowledge (Nordin, 2008). As a note, the Islamic perspective on property rights is similar to the above discussions. According to Islamic scholars, all legal rights including both tangible and intangible property rights are God-given rights but not absolute. All legal rights must be exercised in the manner that does not conflict with public interest and are required to promote positive social values and public interests. In the event of any conflicts between private and public rights, the latter shall prevail. Accordingly, the exclusive rights of the intellectual property proprietors should be prevented as it may deleteriously affect the public as a whole. Concepts of property are influenced by political cultures and social goals. As a result, intellectual property laws may differ between states. Some states, especially developed states consider property to be an individual liberty that does not involve the relationship between the individual and society. Others define self-identity as an individual relationship with the society rather than an individual liberty. This is if only the social goals are to recognize and reward the pharmaceutical companies for their new inventions or to ensure that these new inventions are distributed as largely as possible by reducing the price. In this context for most developing states, private property rights should not supersede state's power to nationalize industries or to adopt other policies involving a redistribution of wealth in the name of social justice.

Issues concerning intellectual property rights have served as the principal reason that most developing states have signed the Convention on Biological Diversity (CBD). The reason is that the convention provides for the transfer of technology resulting from research involving genetic resources (CBD, Article 16). The implication is that the developing states may utilise the provisions of the CBD to insist on the transfer of technology without having to provide effective intellectual property protection.

This transfer, however is unlikely to occur because pursuant to Article 16 regarding technology subject to patents and other intellectual property rights, such access and transfer will be provided on terms that are recognized as consistent with the adequate and effective protection of intellectual property rights. It simply means that the transfer of technology pursuance to CBD should be done in harmony with intellectual property protections under the Agreement of Trade-Related Aspects of Intellectual Property Rights (Trips Agreement).

THE MAKING OF LAW AS A SOCIAL PROCESS

The economic analysis of law through the application of transaction cost theory to the resolution of property rights disputes has been examined. The issue concerning

of whether such sociological and anthropological analyses are crucial to legal analysis remains to be considered which requires an analysis of whether the state should consider socio-legal elements when disposing of its functions rather than focusing simply on economic aspects. The discussion in this study will conclude that theoretically the answer is in the affirmative. The economic analysis of law does not simply consist of analyzing law from an economic perspective as it also requires considering the social interaction between law and economics. In the earlier discussion, the interrelation between the state and the market was established. The state's function is not merely to regulate the market but to do so with proper regulations that continuously keep transaction costs to a minimum while maximizing social welfare. To achieve this, the state has to properly define property rights and thereafter allocate them to the rightful parties with adequate mechanisms to protect those rights by way of enforcement. In other words, the state's function is a three-tier step of defining, allocating and enforcing property rights.

In the literature review, we noted that a large number of legal and economic scholars have shown interest in the relationship between social norms and the law. It is the contention here that sociological and anthropological analyses are as crucial as economic analysis in any process of legal formulation. Reseachers agree with Campbell and Picciotto (1998) that law formulation is rooted in the structures of social relation and in this context, social relations should include economic, sociological and anthropological analyses.

Therefore, the formulation of laws and regulations require the adoption of an uncertain process of interpretation and application of principle of justice and fairness and also interacting. They are also influenced by informal normative expectations and social practices of relevant social groups and communities (Campbell and Picciotto, 1998). Thus, law should be seen as a social process. Even though, Campbell did not proceed further in discussing how the social process should take place and who the actors for the process are it is concluded that such social processes require a better understanding of the social interaction between law and economics (Goodhart, 1997). Campbell argues that law should not be established under the guise of legal formalism where law is standardized and adopted without appreciating the concerns or values of all relevant social groups (Campbell and Picciotto, 1998).

If law is to be influenced by the informal expectations and social practices of relevant social groups, it will be a revolving process, rather than a standard and fixed process. The process, albeit complex should involve participation and consultations with the relevant social groups throughout the whole process, starting from the earliest stages of policy analysis.

Even after the law is enacted, it will still be subject to modifications and amendments as and when the social context requires such amendments to be made. The social process of law should not rely solely on the knowledge of the legislative branch or policy makers as part of the state but requires the participation and consultation of all interested parties. It is through this process that expectations and social practices could be identified and dealt with. The next relevant question is how the social process of law should take place? What is the procedure of an effective social process of law? Researchers mentioned that participation and consultation are crucial in this process and should normally take place at the policy analysis stage of any law-making processes. In conducting policy analysis, the state should focus on the effects of the proposed laws.

For example in the case of access to genetic resources, the state should consider among other factors, the effects of adopting stringent procedures for access to genetic resources in relation to economic development and the potential social impact of such laws to local and indigenous peoples. When evaluating newly proposed regulations and laws, the state may adopt a social welfarist stance by asking whether the legal rules will satisfy the welfare needs of the society and how the adoption of such laws and regulations will achieve social welfare maximization. It is therefore important for the state to identify the objectives of any regulations which are normally to maximize the social welfare and thereafter to formulate the regulations in a manner where such objectives may be achieved (Baldwin, 1990). As such, it is at the policy analysis stage that efficient participations and consultations should take place.

The consultation process could be complicated, time consuming and costly depending on the scope of participants. However, such complications will not justify any failures to ensure that policies or legislation undergo an extensive consultative process. The active participation of interest groups in policy drafting relating to access to genetic resources, coupled with a broader consultative process will facilitate policy implementation by raising awareness among those affected and responsible for administration. Most importantly, it is the forum where the concerns of different interest groups can be identified and addressed accordingly. Public discussion could generate a sense of policy ownership, motivate collective action and improve the practical feasibility of a policy. Effective participation alone will not guarantee the effective implementation of policies or law.

There are other factors that may also serve to guarantee efficient administration and monitoring such as sufficient political commitments and institutional capacities. In the context of regulating access to genetic resources, the process is more complicated as the state has to deal with vulnerable social groups which are typically less educated, less fortunate and less united. India and the Philippines have experienced such issues in relation to tribal or indigenous peoples. While the existence and importance of other stakeholders of genetic resources, such as the state itself, industry participants and the public generally are not denied, the interest focuses on indigenous peoples. Based upon the experiences of India and the Philippines, poor consultations with indigenous peoples served as the main criticism on their access policies.

An effective consultation process requires ample information, reasonable time and adequate facilities for the indigenous peoples to participate. Indigenous peoples normally live in area of high biodiversity and are therefore directly affected by access and benefit-sharing policies and should play an active role in its formulation. Governments should allow for the extensive participation of indigenous peoples in the development of access policies and demonstrate a sincere willingness to address their concerns and maximize the potential benefits of genetic resources for both national interest and the interests of indigenous peoples (Carrizosa *et al*., 2004). Furthermore, indigenous peoples should be directly involved in all phases of policy formulation, not simply represented by NGOs or anthropologists. Participation and consultation should involve community meetings and consultations in key regions and provinces with a significant presence of indigenous communities as well as at the national level.

CONCLUSION

An economic analysis of law is crucial to law formulating processes, especially in regards to property law. The discussion on the concept of transaction costs demonstrates that in most circumstances, direct regulation is the best solution to resolve disputes on property rights. However, high transaction costs in resorting to formal law and alien law that contradicts the social norms or real behaviour, tends to be rejected by communities and may become a major hindrance to the effectiveness of any regulations. The theory regarding property rights, particularly intellectual property rights may be argued from either an economic or social perspective. Economic arguments support the exploitation of those rights by the rights bearer and social arguments perceive property rights as the relationship between individuals. Therefore, social interest should always take precedence over individual or private interests, in any dispute. This study also establishes that social relations or social elements are significant parts of the economic analysis of law. Therefore, sociological and anthropological analyses are significant in any law formulating process, referred to by some as a social process. During such a social process, policy analysis plays a major role in discussing the objectives and effects of any proposed law to relevant interest groups. Furthermore, an effective policy analysis requires the effective participation and consultation of such interest groups particularly between the states and its indigenous peoples.

ACKNOWLEDGEMENTS

This study is part of the research funded by the Universiti Kebangsaan Malaysia through grants UKM-GGPM-CMNB-138-2010andUKM-UU-05-FRGS0082-2009. Researchers thank Mr. Philip Lawton of the Lancaster University, UK for reading through the draft and for his kind comments.

REFERENCES

Allen, D.W., 1991. What are transaction costs?. Res. Law Econ., 14: 1-18.

Baldwin, R., 1990. Why rules don't work. Mod. Law Rev., 53: 321-337.

Barzel, Y., 1989. Economic Analysis of Property Rights. Cambridge University Press, New York, USA.

Campbell, D. and S. Picciotto, 1998. Exploring the interaction between law and economics: The limits of formalism. Legal Stud., 18: 249-278.

Carrizosa, S., S.B. Brush, B.D. Wright and P.E. McGuire, 2004. Accessing biodiversity and sharing the benefits: Lessons from implementing the convention on biological diversity. IUCN Environmental Policy and Law Paper No. 54. IUCN The World Conservation Union, Gland, Switzerland and Cambridge, UK.

Cheung, S.N.S., 1983. The contractual nature of the firm. J. Law Econ., 26: 1-21.

Coase, R.H., 1960. The problem of social cost. J. Law Econ., 3: 1-44.

Coase, R.H., 1988a. The Firm, the Market and the Law. University of Chicago Press, Chicago, ISBN: 9780226111001, Pages: 217.

Coase, R.H., 1988.b The Problem of Social Cost in Coase. University of Chicago Press, Chicago, Pages: 62.

Coase, R.H., 1992. The institutional structure of production. Am. Econ. Rev., 82: 713-719.

Cole, D.H. and P.Z. Grossman, 2002. The meaning of property rights: Law versus Economics?. Land Econ., 78: 317-330.

Cooter, R.D., 1982. The cost of coase. J. Legal Stud., 11: 1-33.

Ellickson, R.C., 1991. Order Without Law: How Neighbours Settle Disputes. Harvard University Press, Cambridge, UK.

Goodhart, C.A.E., 1997. Economics and the law: To much one way traffic?. Mod. Law Rev., 60: 1-22.

Gopalakrishnan, N.S., 2005. TRIPS and protection of traditional knowledge of genetic resources: New challenge to the patents system. Eur. Intellec. Prop. Rev., 27: 11-18.

Hirsch, W.Z., 1999. Law and Economics-An Introductory Analysis. 3rd Edn., Academic Press, California.

Likosky, M. and B. Michael, 2002. Transnational Legal Processes: Globalisation and Power Disparities. Butterworths Lexis Nexis, UK.

Likosky, M. and B. Michael, 2005. The Silicon Empire: Law, Culture and Commerce. Hashgate, UK.

Meade, J.E., 1973. The Theory of Economic Externalities: The Control of Environmental Pollution and Similar Social Costs. Sijthof-Leiden, Geneve.

Nordin, R., 2008. Regulating access to genetic resources and the sharing of benefit through the Access and Benefit Sharing (ABS) Agreement: Transaction cost theory. Malaysian J. Sci. Technol. Stud., 6: 89-99.

Peerenboom, R.P., 2004. Varieties of Rule of Law. In: Asian Discourses of Rule of Law: Theories and Implementation of Rule of Law in Twelve Asian Countries, France and the US., Peerenboom, R.P. (Ed.). Routledge Curzon, London.

Pejovich, S., 1997. The Economic Foundations of Property Rights: Selected Readings. Edward Elgar Publisher, UK., ISBN: 978-1858985435, Pages: 320.

Penner, J.E.P., 1997. The Idea of Property in Law. Clarendon Press, Oxford.

Picciotto, S. and D. Campbell, 2003. Whose Molecule is it Anyway? Private and Social Perspectives on Intellectual Property. In: New Perspectives on Property Law, Obligations and Restitution, Alistair (Ed.). Cavendish, pp: 279-303..

Samuels, W.J., 1971. Interrelations between legal and economic processes. J. Law Econ., 14: 435-450.

Samuels, W.J., 1974. The coase theorem and the study of law and economics. Natur. Resour. J., 14: 1-33.

Samuels, W.J., 1995. Legal-economic policy: A bibliographical survey. Lib. J., 58: 230-230.

Scotchmer, S., 2003. The political economy of intellectual property treaties. Berkeley Program in Law and Economics, Working Paper Series 2003

Underkuffler, L.S., 2003. The Idea of Property: Its Meaning and Power. Oxford University Press, UK.

Von Barun, J. and D. Virchow, 1997. Conflict-prone formation of markets for plant genetic resources: Institutional and economic implications for developing countries. Quart. J. Int. Agric., 1: 6-38.