

CHAPTER TWO

Literature review

The issues of intellectual property protection and how it would foster the economic development progress locally and internationally lead to some controversies and arguments among researchers, academicians and policymakers. This section will focus on some existing and contentious empirical work and analysis pertaining to the issues being examined.

Discussions will provide a context for analysis and as a platform to identify the impact for the issues that cover in this research. The literatures developed in this research vary in various related topics and discussions. The main concern is to identify the mechanisms process provided by the stronger IPRs framework given by other factors remained intact.

The literatures differ in many ways and vary across issues on how FDI, R&D activities and IPRs would affect the economic growth. The speed up process may vary from country to country due to different economic development

progress⁶, level of new technological and/or knowledge stock⁷, accessibility of infrastructure, availability and dissemination of information and other economic environment including international trade policy and political stability.

In viewing the mechanisms, the existing literature constructed in this research proceeds as follows: Firstly, the literature shows the evidence on how the IPRs affect economic growth and productivity. Secondly, identified the possible benefits of such process as a result of strengthening the IPRs protection and finally, the literatures proceeds with the discussion from different view and perspectives (i.e positively and normatively) on how negative institutional factors (i.e. transparency, openness or illegal market activity or level of bureaucracy and so on) adversely contribute to the aforesaid matters.

2.2 IPRs, Economic Growth and Productivity

For the first issues, the ultimate documented agreement so far was postulated in the TRIPS agreement under Article 7 (for details of the provision see WIPO, 1996 and for more critical discussion see Paras Gorasia, 2002, Ganguli, 1998, McCalman, 2001 and Lall, 2003) and this view were unanimously shared by many other researcher like Gould and Gruben (1996), Eaton and Kortum

⁶ Different economic development progress can be viewed according to classification made by United Nation (i.e. categories divided into groups of developed and developing countries) or classification made by The World Bank (i.e. countries groups into level of income categories)

⁷ Also refer as human capital stock.

(1996), Park and Ginarte (1997), Maskus and McDaniel (1999), and Kwan and Lai (2003).

Gould and Gruben (1996) found that stronger patent protection significantly affect the economic growth especially in an open economies which denotes by the interaction between patent protection and dummy trade policy variables (i.e represent by black market premium, real exchange rate distortion and comprehensive trade index).

Eaton and Kortum (1996) also found the evidence from 19 sample set of OECD countries. Each of the OECD countries in their analysis share the same rate of relative productivity which induced from the innovation activity and emphasis that half of the growth in the selected OECD countries in the sample set were driven by the innovation activity originated from the United States, Germany and Japan. Moreover, Maskus and McDaniel (1999), also found the same conclusion where the technology diffusion through the post war Japanese patent protection system had significantly affect the total factor productivity (TFP) of Japanese economy through the innovation process.

Kwan and Lai (2003) however provide the extended analysis (i.e. using dynamic general equilibrium) on the impact of IPRs to economic growth and welfare to the US economy. Their analysis found that the welfare loss were

substantial (i.e. involving the current consumption) as a results of under-investment in R&D due to under-protection of IPRs.

Since the process of economic growth were influenced by a lot of factors, researcher among themselves, believe that the development process were mainly driven by the process called transfer of technology brought by the first issues. Therefore, this research proceeds with the explanations of the next issues.

2.3 Benefits and Cost of Strengthening IPRs Protections.

The sources of technological transfer exist in several channels namely FDI, trade and licensing. The issues of FDI and trade discussed extensively by many researchers and topics concerning licensing⁸, examined by Markusen (2001), Yang and Maskus (2001), Glass and Saggi (2002). The two most significant and effective channels identified were contributed through FDI and trade which were examined by Park and Lippoldt (2003). An effort for strengthening the IPRs protections is seen from two related issues, the importance and significance of IPRs in attracting FDI inflow and how to improve the trading account balance.

⁸ Some researchers view the licensing issues from the perspectives of contract enforcement to get involved in bilateral FDI agreements.

The issues concerning IPRs protection and its magnitude attractions of FDI exist in different aspect, intensity and directions. It can be found empirically through several discussions by Mansfield (1995), Kumar (1996), Maskus (2000), Haley (2000), Smarzynska (2002), Glass and Saggi (2002), and Park and Lippoldt (2003). Maskus and Penubarti (1995), Smith (1999 and 2001), Fink and Braga (1999) and Zigic (2000), however view the issues for the perspectives of open trade related activity.

Most studies done thus far empirically revealed that the impact of FDI and patent protection is rather mixed and different in channel and development perspectives. Although some researcher found the positive relationship between level of IPRs protection to FDI inflow, but the results is different when dealing with level of development and income for certain groups countries (Park and Ginarte, 1997).

Empirical analysis, found that level of FDI is positively related to patent rights protections but with diminishing increase as the protections stringently increase. When IPRs regimes are weak, least developed countries will reap the benefits from larger FDI variation and, as the IPRs regime strengthened the impact goes to developing nations. But according to them, the empirical finding

is based on the analysis that the IPR not reaching the excessive levels of strength (Park and Lippoldt: 2003)⁹

Moreover, high technology and/or sensitive sectors that rely heavily on IPRs protection empirically benefited from such protections since the sectors received higher volume of FDI (Park and Lippoldt, 2003). The author use firm-level data set from Eastern Europe and the former Soviet Unions to examine the effect of IPRs protection on the likelihood of FDI flows and on the choice of project function due to the impact of economic transition.

For the sensitive sectors (high technology industries), higher level of IPRs protection has a greater positive (i.e. significant) impact. However, for the choice of project function, weaker protections of IPRs unfortunately discourages foreign investors from undertaking local production and only concentrate on distribution alone (Smarzynska, 2002). The IPRs itself is arguably (since it rely on many others factors) a major trigger and signaling factor for attracting FDI, as empirically hypothesized and tested by many authors.

⁹ Park and Lippoldt (2003) examine the impact of FDI stock and trade to patents rights index rather than inflow of FDI.

2.4 Other Important Factors

In reality, most analysis in economics is connected with the mechanism or interaction of other variables with subject to available resources and information.

Theoretically (as it was developed and improved), economic growths were driven by at least two main input factors namely capital, labour and Solow residual (Solow, 1956¹⁰) and further developed to include the empirical contributions of human capital (Mankiw et.al, 1990).

The role of human capital obtained from education development process (Mankiw et.al, 1990) to the investment flow in certain countries (developed and developing) suggest that educations are at least as important as technological progress (Park and Ginarte, 1997¹¹).

However, the effects of educations to investment vary across the countries. For developed countries, higher level of education were found to be significantly (indirectly) important to accumulate scientific R&D compared to the

¹⁰ Other basic of growth accounting model include Kendrick (1961), Denison (1962) and Jorgenson and Griliches (1967) – Barro (1998), Pp.1.

¹¹ The authors found that basic educations are important to investment (domestic) as well as to human capital accumulation but insensitive to scientific R&D capital (Pp. 59).

developing region. Government transparency (or bureaucratic corruption), higher default risk to investment, currency volatility due to extreme exposure of (floating) exchange rates, black market activity, problematic contract enforcement¹² and culture differences have a high possibility (directly or indirectly) to affect the economic growth through several channel, namely trade, licensing and investment itself.

During the Mexican crisis 1994-95 and Asian financial crisis 1997-98, lack of government transparency and hidden weaknesses in financial system became factors to be blamed. Less transparency and bureaucracy corruption became an apparent factor for international investors to flee from, instead of remained in the markets (Gelos and Wei, 2002) and reduce the ability of the government to collect the tax revenue thus lead to the imposition of capital controls and also financial repression (Bai and Wei, 2000).

In the end, the performance of institution's target policies to curb target variables (such as to maintain low inflations, and control rate of currency volatility) become ineffective (Huang and Wei, 2003). Another empirical

¹² Tao and Wang (1998) found the phenomenon that substantial FDI has been carried out under contractual arrangements in developing countries in which contract enforcement is problematic.

studies found the significant (with enormous negative impact) linked between corruption to foreign investment¹³ (Wei: 1997a, 1997b and 2000).

Governance with no perfect activity or zero corruption does not exist in nature. Bureaucratic corruption do exist in several mode in any institutions. Though researchers like Hines (1995)¹⁴ and Wei (1997a) found that an enforcement of law pertaining to corruption will at least provide some lessons to those who are keen to such practices, however empirical the recurrence of likelihood might still exist.

¹³ Author found that, as one percent increase in average level of uncertainty (corruption) for the case of Singapore to Mexico, increase the multinational tax rate up to 20 percent (1997a) and 30 percent over (1997b) respectively.

¹⁴ Hines (1995) found that the bribery action made by American (individual and corporation) has been reduced (after 1997) due to the establishment of Foreign Corrupt Practices Act 1997. However, such findings conclude that those activities (bribery) still not totally banish.