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Preface

An intriguing issue in area studies, which become an interest of our center, is transnational movement. It includes the movement of good, capital, people, ideas and images. Particularly for the transnational movement of capital, PSDR-LIPI has conducted research on this particular area in the last few years. This book is the final report of the fourth year study on 'Characteristics of European Foreign Direct Investment in ASEAN,' conducted by a research team in European Development Division PSDR-LIPI. Unlike our previous studies that portrayed conditions affected the capital flows from Europe to ASEAN countries, this report is focused on the impact of the capital for a host country, namely the Philippines.

The labels of the Philippines as 'the Asian exception,' because of its ability to cope with the 1997 Asian economic crisis, and 'the sick man of Asia,' because of a long time economic stagnation, seem to be a paradox. It, therefore, tempted our curiosity to further investigate the ability of the country to benefit from the inflow of foreign direct investment (FDI).

To measure impacts of the FDI inflow, which manifested as transnational corporations (TNCs), this study investigates the impacts on domestic productivity, transfer of technology, labour condition, environmental, and socio-political conditions. Beside investigate the impacts on those sectors, this study also traces the historical roots of European enterprises presence in the Philippines.

Prior to be published in this final report, this study has also been presented and discussed in a seminar in our center. However, this study is far from perfect, and we realized that there are some limitations and weaknesses in it. Therefore, we will appreciate any critics and suggestion for future improvement. The authors, of course, remain responsible for any errors and omissions.

We hope that this study will be valuable for any party interested in the issues of foreign investment, and will stimulate further studies in this area.

Finally come to acknowledgement. This study is a result of an extensive work of our researchers, and therefore credit must be given to them. However, it has been made possible by enormous supports from many persons and institutions. We are grateful to Professor Nestor T. Castro from the University of The Philippines, who always open his door, to be our host during fieldwork in the Philippines. Still from the University of the Philippines, we also thank Dr. Rene Offreneo and Dr. Isagani F. Yuzon, both from School of Industrial Relation, Zoraida Maria Cabilo, from Third World Studies, Ai Indrawari, PhD Student in Faculty of Economic, and Felicitas G. Delarosa, a Librarian of the University of the Philippines, for their valuable inputs. Particular thanks also to Hadi Susanto, 1st Secretary of Indonesian Embassy in Manila, who have been very helpful during our visit in Manila. We also would like to thank Mila E. Dijan, from the Board of Investment of the Philippines, and Robert Leon, Information Officer, Politics, Economic, Trade and Public Affairs Section, EU Delegation of The European Commission to the Philippines, for valuable sources. Special thank to Dr. Thee Kian Wie, from Center for Economics Research, Indonesian Institute of Science (P2E-LIPI), who always available with his valuable critics and suggestions whenever we need. Last but not least, we would like to thank our administrative staffs, without them this study will not be here

Jakarta, November 2006

Yekti Maunati

Director of Research Center for Regional Resources (PSDR)
Indonesian Institute of Sciences (LIPI)

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Non-economic issues, such as environmental ones, also show similar results. Many say that TNCs benefit environmental conditions. The standard of engagement of TNCs is seen as a guarantee for a TNC to pioneer the use of technology and environmentally friendly production. However, TNCs are also involved in activities which contributed more than half the gas emissions produced by six industrial sectors that had the biggest effect on global warming (Dunning, 1993:539).

Even though there is disagreement on the effect of TNCs on host countries, FDI inflow into developing countries has risen significantly since the 1980s. Aitken and Harrison (1999: 605) note that FDI contributed around 50% of private capital inflow into developing countries in 1997. The Philippines is no exception in this trend. Over its history, the Philippines has been quite serious in attracting FDI into the country. At least, this has been so since the Marcos period, which used Martial Law to keep down labour wages and labour movements to attract bigger foreign participation in the Philippines economy, to help it succeed in export oriented strategies. It continued to deepen investment liberalization during the Aquino administration. Unsurprisingly, since 1980, FDI into the Philippines has risen significantly. It rose almost twenty-fold from 1980 to 2000, from US\$ 1,280 million to US\$ 12,688 million (United Nations 2001).

Unlike other Southeast Asian countries, which were affected by the 1997 economic crisis and experienced decreasing FDI inflows, the Philippines enjoyed an increase in FDI and was called the 'East Asian exception' because of its success in coping with the crisis. Even though in 1997 FDI in the country decreased, in 1998 it rose to US\$ 1,718 million and in 1999 to US\$1,725

million (ASEAN FDI Database 2002). Based on data from the ASEAN Secretariat (2002), FDI in the Philippines is dominated by investors from the United States (27.8%), Japan (22.6%) and the European Union (18%).

Particularly in European Union (EU) investment, there is a rising trend in the investment in Southeast Asia, including the Philippines, which has rich natural resources attractive to European investors. Moreover, the relations between the EU and Asia were strengthened with the Asia Strategy Papers of 1994 and 2001. In addition, the Asia Europe Meeting (ASEM) also shows an increasing closeness in both regions' relations.

The large amount of FDI from the EU to the Philippines is interesting since the Catholic Institute for International Relations (CIIR) in London (1987) shows that even though European firms accounted for a significant size and benefit to the Philippines' business, they only make a small contribution to employment. In 1985, the European firms only contributed 33,250 people or half a per cent of employment in the Philippines (CIIR 1987: xix). Therefore, the current figure of the FDI from the EU prompts a look at the changed role or contribution of the European TNCs in the Philippines.

This study questions whether the motives of TNCs from the EU to seek benefits in the Philippines contradict the Government development goals. Specifically, this study will analyze the impact of TNCs from EU on the transfer of technology, domestic productivity, the environment, labour and socio-political conditions.

Objectives

In general, this study aims to analyze the impact of TNCs from the EU on the Philippines' development. Specifically, it will analyze:

1. Historical perspective of European involvement during the colonial period;
2. The impact of TNCs, particularly from the EU, on the transfer of technology;
3. The impact of TNCs, particularly from the EU, on domestic productivity;
4. The impact of TNCs, particularly from the EU, on labour conditions;
5. The impact of TNCs, particularly from the EU, on the environment;
6. The impact of TNCs, particularly from the EU, on socio-political conditions.

Analytical Framework

This study starts from the assumption that foreign investors from different countries behave differently: in conducting exports, joint ventures and transfer of technology. Oman *et al.* (1997), for instance, show different corporate governance between firms in Asia and Europe. Implicitly, they show that firms have unique responses to investment policies.

Secondly, it is assumed that a TNC can not only have positive impact but also a negative one on its host country, as on domestic productivity, market structure, division of labour, transfer

of technology and other non-economic factors, such as sovereignty, culture and environmental issues. Even though many believe that TNCs have a significant role in economic development, there are conflicts between foreign investors, government, local people and domestic businesspeople.

Transfer of technology is believed to be an important element in accelerating sustainable development growth for a better standard of living (Thee 2005). There is abundant discussion about the relations between FDI and transfer of technology, such as in Thee (1994 and 2005), Chen (1994) and Zahid (1994). However, besides ending up with different results, none of those studies specifically examines the relations between European FDI and transfer of technology in the Philippines.

This study also looks at the relations between FDI and the transfer of technology through the spillover effect. The spillover effect or indirect effect of FDI on domestic productivity is a measure of technology transfer. There are three channels for FDI to have spillover effects, i.e. competition, technology diffusion and demonstration effect (Blomstrom 1986:36, Iyer *et al.* 2004:9, Kapaty and Lundberg 2004:3) and previous studies, such as by Blomström (1989), Haskel *et al.* (2002), Thong and Hu (2003), Karpaty and Lundberg (2004), Sena (2004), Haddad and Harrison (1993), Djankov and Hoekman (2000), Kathuria (2000) and Peter *et al.* (2004), do not end up in agreement. However, those studies suggest that a certain level of technology and human resources are necessary for spillovers to occur. This study specifically examines the spillover hypothesis of the presence of European TNCs in the Philippines and compares it with other sources of FDI, namely Japan and the United States.

The impact of TNCs on labour conditions focuses on three areas such as labour welfare, employment and labour unions. There is an assumption that TNCs can increase wages. However, governments attempt to depress wages and labour unions because this can attract foreign investors, as happened in the 1980s. It is still unclear whether TNCs increase wages or vice versa. In relation with job creation, it is expected that TNCs can create more jobs. However, according to CIIR (1987), European TNCs create few jobs although they have a large number of plants and can make super profit in the Philippines. Basically, labour conditions depend on the relationships among TNCs, labour and government.

Fourth, analysis of the impact of the European TNCs on environmental issues focuses on mineral resources. The case studies focus on cement and energy sectors. Fifth, sometimes TNCs have a close relationship with social and political conditions. For example, in Indonesia, Freeport does not only create economic problems such as revenue sharing but also political tensions both on regional and national levels. Research on the relationship between politics and FDI usually describes the impact of politics and security on FDI but it is not the reverse. Thee (1996), for example, analyses the evolution of policies on FDI in Indonesia since the New Order and its implication on the magnitude and pattern of investment. Similarly, Negara (1998) argues that, in 1997, instability in the political and security situations was faced by many foreign investors.

Research Method

Basically this study used quantitative and analytical descriptive methods. Even though, using multidisciplinary approach, the study

emphasises on economic approach by looking at the role of the TNCs in development.

Data Collection

There were two steps in the data collection. First was library research and second, field research. Library research focused on collecting secondary data and publications in terms of books, magazines and electronic journals. Field research focused on in-depth interviews with key people such as the European delegates, scholars, government officials, NGOs and investors. A snowball approach was chosen to select the respondents.

Data Analyses

Descriptive and comparative approaches were used to analyze the data. The analysis is divided into five aspects namely: transfer of technology, domestic productivity, labour conditions, environmental issues and socio-politics.

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Chapter 2

FROM THE SPANIARDS TO THE AMERICANS: HISTORY OF FOREIGN ENTERPRISES IN THE COLONIAL PHILIPPINES

Amin Mudzakkir

Introduction

This Chapter aims to trace the historical roots of the foreign enterprise presence in the Philippines. Initially their presence cannot be separated from the history of colonization in the country. This occurred a long time ago in a process negotiated by varied powers and involved domination and resistance. To some extent, foreign enterprises historically have expanded into trans national corporations (TNCs); structurally connected with the transformation of the global market. 'The TNCs', however, are possibly different from 'the enterprises'. Nevertheless, the origin of the TNC phenomena in the contemporary era can be traced through the history of European enterprises which in the past were placed in the structure of the colonial political economy. In subsequent periods of Philippines history, US enterprises replaced the Spanish enterprises. This replacement only changed the agent; while its structure continued to exist. This paper will only show the issues pertaining to the economic history of the Philippines, especially in the colonial period.

In the first part of this Chapter, following the example of Scott (1998), I will discuss 'legibility' and 'simplification' used by the colonial state to control nature and society, especially dur-

ing the early colonization history. It was a kind of politics of state hegemony, in Gramscian terms, which accelerated the Spanish and then the American capitalist power to penetrate the structure of the Filipino political economy. Furthermore, it was done, for example, by collecting all the scattered *barangay* (community) in a resettlement and catalogued the Filipinos by the gift of personal identity papers. In other parts, the Church was used by the State to reorganize native society. The *barangay* were resettled into pueblos and parishes. The relations between the Church and the State in the Philippines, is noted as the most successful in the Christianized history in Asia. At other times, however, the Church has had a significant role as an impetus of popular unrest among the Filipinos.

This Chapter is addressed also to briefly explain ethnicity and class relations in the issues of the economy and what it means in the debate of political discourse. The European enterprises, however, were developed through collaboration with local partners. In the Philippines, besides the native landlords, the Chinese and Mestizos were the middle class that benefited from the colonial presence. They have economic capacity to respond to the transformation, enter higher education institutions and talk and style themselves like their Spanish counterparts. They were often called the *Ilustrados* class. They consisted essentially of the educated children of landlords, bureaucratic and merchant families who adopted the ideology of the liberal bourgeoisie (Sison and de Lima 1998: 70).

The economic history of the Philippines, however, must be placed in the market transformation. The penetration of the European capitalists has opened the Philippines to the global market. In this sense, capitalism became the mode of production behind

colonialism. Therefore, the term globalization has the same meaning as capitalization. Before the coming of the Europeans some traders from various nations, especially the Chinese, Indians and Arabs, visited the Philippines and conducted commerce there. At the end of the 19th century, while the Spanish rule declined, the US opened the Philippines market wider to foreign investors. Although the competition among the investors was really excited this was based on economic factors. This paper will trace the power relations against the wider perspective that has become the background to comprehending the presence of foreign enterprises in the Philippines.

The Formation of Native Society

The pre-Hispanic Philippines was a small community, demographically and politically fragmented. It, however, had a form of organization named the *barangay*, originally a kinship group headed by a *datu* (Agoncillo 1990). The concept was one of dependency or authority over people rather than on territory. Each *barangay* was an independent social, political, and economic unit. There were no streets in the native settlements and no roads linked one *barangay* to another. As a result, the Filipinos economic contacts with others were limited, as they were not regular participants in the regional or foreign trade of Southeast Asia. The *barangay* were neither suppliers nor producers of exotic, specialized, high value wares or goods that attracted foreign traders (Corpuz 1997).

The economic life of the *barangays* during the pre-Hispanic period was characterized by agricultural cultivation. Wet rice agriculture was supplemented by dry rice agriculture (Sison

and de Lima 1998: 68). Besides rice, there was an abundance of coconuts, sugar cane, cotton, hemp, bananas, oranges and many kinds of fruit and vegetables. In the early times, the system of production was still modest, before it was increased by the use of irrigation, as evidenced by the world-famous Ifugao rice terraces in Luzon. This system increased productivity significantly, so that from here on, the Filipinos could improve their economic life.

Although gradually improved, the pre-Hispanic economic life of the *barangay* was limited by the structure of native society (Corpuz 1997). They were largely self-contained economic units producing little more than a sufficiency for their own needs in a delicate balance between nature and people and as a result there was probably little taxable surplus. Nevertheless, the Filipinos made trading voyages to Indochina and elsewhere. In contrast, there were foreign traders voyaging to the Philippines Archipelago among them Arabs and Chinese who were the most active. There were also Indian traders who spread the Indianized State of Southeast Asia. Like the other regions in this area, the Philippines were penetrated by grand world traditions from China, Arabia and India.

The circumstances in the southern region of the Philippine, however, were rather different. Here Islam was established in around 1500 and introduced a political concept of territorial State rule by rajas or sultans who exercised sovereignty over the *datu*. This Islamic political consolidation brought the people of Sulu and Magindanao under the central authority of the sultanates (cf. Mastura 1984). Mason and de Lima (1998: 68) note that the Sulu sultanate had reached the highest sociopolitical formation among the natives of the Philippine in the pre-colonial era. Under the Sultan, a ruling council whose officers had well defined functions assisted him in his autocratic rule. There was also a well-

developed structure of political and religious leaders. In the colonial era, the strength of Islam in the southern Philippines was a persistent impetus for popular resistance against colonial rule. In comparison with the concept of *barangay*, the sultanate of Islam had an ability to transform itself into more cosmopolitan relations.

Since the mid 16th century, native society faced European mercantilists who come with the prominent agenda of: Gold, Gospel and Glory. While the Europeans had modern technological capacity to accelerate their agenda, the natives modestly still used the old ways to maintain their lives. Nevertheless, the natives were not off hand subdued by the Europeans. There was resistance occurring along with the Spanish colonization of the Philippines. Especially in the south, the resistance against the Spaniards was endless. A subsequent part will discuss this process further.

The Spanish Hegemony

Ferdinand Magellan on 16 March 1521, was the first Europeans to land in the Philippines. He came with five ships and a complement of 264 personnel. Magellan claimed the land for Charles I of Spain, but was killed a month later by a local chief. Miguel Lopez de Legazpi, was the first man to establish a permanent settlement for the Spanish. Different from their European counterparts, the Spanish settlement policy conserved and mixed the native population with Spanish and Christian elements. Some historians extravagantly noted that 'before Legazpi there were no Philippines and no Filipinos.' (Legarda 2002: 17). De Legazpi arrived in Cebu from Mexico and established the capital of Manila six years later after the defeat of the Muslim local ruler. Manila became the cen-

tre of Spanish civil, military, religious and commercial activity in the islands. At that time, the islands were given the present name in honour of Philip II of Spain (<http://countrystudies.us/philippines>)

Spain had three objectives in its policy towards the Philippines, its only colony in Asia: to acquire a share in the spice trade, to develop contacts with China and Japan in order to further Christian missionary efforts there and to convert the Filipinos to Christianity (<http://countrystudies.us/philippines>). This conversion of the Filipinos to Christianity was one of the most successful Spanish activities in the Philippines. The Church and State were inseparably linked in carrying out Spanish colonial policy. Even we are told, the success of Spanish colonization in the Philippines was built on a foundation of Church stanchions. Christianisation of the Philippines went hand in hand with the establishment of autocratic civilian rule. One of the Church contributions to colonial political authority was the reorganization of *barangay* into the pueblos-parishes. It was a structure that became the basis of the socio-economic system in which the natives were to produce surpluses and inspire the surpluses and native labour for the support of the new regime.

The reorganization of native society was slow, lasting from 1565 to 1700. During the preliminary phase, the families or survivors of each conquered *barangay* were denominated as *reduccion* or community in the process of being prepared or trained for civil government. At the same time, for the religious administration, the people of *reduccion* were also a *doctrina*, a community undergoing lessons in the doctrine or new faith and being prepared for baptism as Christians (Corpuz 1997)

The resettlement of scattered *barangay* into large villages, named *pueblos*, became the most successful politics that may be discerned of the Spaniards. The *pueblos* were established concurrently with the Church and the convents. In Filipino terms, as cited in Agoncillo (1990): 'all the scattered Filipinos together in a *reduccion* (resettlement) *bajo el son de la campana* (under the sound of the bell) or *bajo el toque de la campana* (under the peal of the bell)'. To the Spaniards, the *reduccion* was a 'civilizing' device to make the Filipinos law abiding citizens of the Spanish crown and in the long run, to make them ultimately 'little brown Spaniards,' adopting Hispanic culture and civilization.

The viability of the pueblo-parish system, however, depended on keeping the natives, most of whom had been uprooted from their ancestral home sites, settled in the new pueblo. This meant that they had to have a steady and adequate food supply. Therefore, the pueblo system and pueblo agriculture combined to produce a profound socio-economic transformation: the pueblo families were all reduced to a single occupational class, of small farmers cultivating equal-sized fields (Corpuz 1997: 28). This would be an enduring characteristic of pueblo society and economic life that the Spanish conquest had established during this period.

After the natives were reorganized into pueblo-parishes, the Spanish introduced the *encoumenda* system. According to Jose Ma Sison and Julieta de Lima (1998), this system was used to integrate the small, disparate pre-colonial societies, collect tributes, spread the Catholic faith and organize labour and military conscription. In other words, this military-feudal device was transitional to the formation of a colonial and feudal society. Corpuz (1997) observes that the essence of the *encoumeinda* system was

that it was a device for exacting produce and labour services from the subject natives.

Trading Contacts

There was no dramatic economic development during the Spanish rule in the Philippines. Spain was an industrialized country. When Jose Basco y Vargas was appointed Governor in Manila in the late eighteenth century, he tried to promote the development of the Philippines economy. But after his departure, the Economic Society was allowed to fall on hard times and the Royal Company showed decreasing profits (<http://countrystudies.us/philippines>). Meanwhile, the independence of Spain's Latin American colonies at the beginning of the nineteenth century had a significant impact on policy reorientation. The Philippines, after this, were more open to free trade.

Since the previous century, Manila became famous as the predominant port in Asia, with the galleon trade that linked the Pacific to America. In the context of the late sixteenth century, it was the one completely new and important creation, stimulating a greatly increased traffic in Asia, America and Europe. The Philippines through the era of the galleon trade, became part of what has been called the first-world economy of modern times based in Seville and the Atlantic (Legarda 2002).

Unfortunately, the restrictive system made the galleon trade stop. (Legarda 2002; Corpuz 1997). Some writers argue about the causes of the galleon trade failure. They deplore the formation of an indolent, unimaginative, monopolistic and numerically small

merchant class; the failure to realize Manila's full potential as an *entrepot*; the tolerance or encouragement of widespread official corruption and evasion of the law; and the neglect of the country's agricultural and industrial development. The galleon trade ceased in 1815 and from that time onward the Royal Company of the Philippines which had been chartered in 1785, promoted direct and tariff free trade between the Philippines and Spain. Nevertheless, it is important to note that Manila was the first city in South-east Asia and the incorporation of the Philippines into the first world was based on Seville and the Atlantic.

In another way, there were official restrictions against residence of non-Spanish Europeans but in fact British, American, French and other foreign merchants circumvented this prohibition by flying the flags of Asian countries or conniving with local officials. As a result, in 1834 the government recognized free trade and opened the region to foreign commerce. The colonial government implemented some policies that theoretically were synergistic but in practice contradictory (Legarda 2002). The main objectives, possible to discern seem to have been the following:

1. Expansion of Philippines trade;
2. Development of internal Philippines resources;
3. Closer communication with Spain through trade;
4. Protection and encouragement of Philippines industry;
5. Favoured treatment for Spanish goods;
6. Encouragement of national (Spanish and Philippines) business;
7. Encouragement of national (Spanish and Philippines) shipping.

After the adoption of an open economy policy, foreign traders built their enterprises in the Philippines. By 1856 there were thirteen foreign trading firms in Manila, of which seven were British and two American. The opening of the Suez Canal in 1869 contributed to spectacular increases in the volume of trade. British and American merchants dominated Philippines commerce, the former in an especially favoured position because of their bases in Singapore, Hong Kong and Borneo. The plantation crops, especially tobacco, abaca and sugar dominated Philippine exports

Table 1: Foreign Trading Houses Founded in Manila in The Mid 19th Century.

| Country | Enterprise |
|---------------|---|
| British | Butler, Sykes and Company Holliday, Wise, and Company Kerr and Company Patterson, W.R. and Company Martin, Dyce and Company Constable, Wood and Company Philips, Moore and Company Bartolome Antonio Baretto and Company |
| United States | Peele, Hubbel and Company Russel, Sturgis and Company |
| Gernan, Swiss | Peter Jenny and Company Peters and Company Engster, Sabhart and Company |
| French | Augusto, van Palanen Petel and Company Juan Augusto Guichard e Hijos |

(Sources: Corpuz (1997: 176)

The profits of trade no longer went predominantly to a few privileged Spaniards and Creoles in the galleon trade but to some extent also to native producers of export crops in many regions of the country. These Filipinos were to form the educated, aspiring class that was increasingly to demand reforms and liberal government and finally national independence in the nineteenth century. Nevertheless, most of the Filipinos were still underdeveloped economically. The disparity between the natives and others was seemingly too wide. The Chinese and Mestizos were a privileged class in the colonial economy.

The Role of the Chinese

The Chinese in the Philippines are the largest minority group, accounting for 2 % of the country's total population. Although quantitatively small, they historically had an important role in the formation of the Filipino identity. They were the immigrants who came to the Philippines mostly during the 19th century and were predominantly male. It was only in the 20th century that Chinese women and children came in large numbers. As a result, the Chinese married the indigenous Filipinas and the Spanish. The Chinese mestizos were the product of these intermarriages and cultural encounters. In subsequent development, there were the Chinese mestizos who become prominent as the political elite, like Jose Rizal, Emilio Aguinaldo and Ferdinand Marcos and Corazon Aquino in the contemporary era.

The Chinese in the Philippines are mostly business owners. They have small and medium enterprises that play a significant role in the Filipino economy. Their sense of entrepreneurship

has been prominent since the colonial era. The colonial government used their strategic position in the structure of the Filipino economy to enlarge their authority. Although suspect, the Spanish recognized the role of the Chinese in the development of the Philippines economy since the galleons era. They, besides managing trade transactions, were the source of some necessary provisions and services for the capital. The Spanish regarded them with distrust but acknowledged their indispensable role. The Spanish tried to control them with residence restrictions, periodic deportations and actual, or the threat of, violence that sometimes degenerated into riots and massacres of Chinese during the period between 1603 and 1762 (<http://countrystudies.us/philippines>). Therefore, the sociopolitical position of the Chinese in the Philippines has always been weak. Chinese expulsion orders issued in 1755 and 1766 were repealed in 1788.

Most of the Chinese were urban dwellers. Since the colonial era, the Chinese Filipinos have lived within Manila. Now almost 60 % of them, and in 1849 more than 90 % of the approximately 6,000 Chinese, lived there, whereas in 1886 this proportion decreased to 77% of the 66,000 Chinese in the Philippines at that time, declining still further in the 1890s. Since the latter half of the nineteenth century the population of Chinese grew along with immigration into the archipelago, largely from Fujian on the southeastern coast of China. The later Chinese spread into the hinterland went hand in hand with the transformation of the insular economy. Some of them became agricultural labourers; some became gardeners, supplying vegetables to the towns but most shunned the fields and set themselves up as small retailers and moneylenders. The Chinese soon gained a central position in the cash-crop economy at the provincial and local levels (<http://countrystudies.us/philippines>).

The Chinese Mestizos settled in big towns and at the beginning of the nineteenth century they accounted for about 5% of the total population of around 2.5 million. Moreover, they converted to Catholicism and spoke Filipino languages or Spanish rather than Chinese dialects. Legally, their status was equal with the Spanish. Edgar Vickberg, a historian, notes that unlike the mixed-Chinese of other Southeast Asian countries, the Chinese mestizos in the Philippines were not 'a special kind of local Chinese' but 'a special kind of Filipino.' (<http://countrystudies.us/philippines>).

The United States and the Economy of Special Relations

American colonial rule in the Philippines was unique. In Filipino eyes, the US was regarded more a guide than colonial ruler. For many of the Filipinos, the US was the model to develop their country. Especially in political economy ideas, the US contribution was very significant. For instance, the US always felt itself as the spokesperson of liberal democracy and in the Philippines this idea was adopted without reserve. At the same time, the Spanish legacy was still deeply rooted. Nevertheless, the US model gradually but strongly replaced the Spanish legacy so many of the Filipinos proudly identified themselves with American ideas.

The impact of the Spanish decline in the Philippines on the European enterprises was still not clear. This was related to the character of Spain itself which had no grand ideas on economic policies. The major concern of the Spanish colonial power seemingly was not in economics but in religious conversion. Meanwhile, the presence of the US brought a new climate to the economy

of the Philippines. Even when the Spanish rule still existed, the US and British merchants had dominated Philippines commerce. By 1856 there were thirteen foreign trading firms in Manila, of which seven were British and two American (<http://countrystudies.us/philippines>).

United States rule over the Philippines had two phases. The first was from 1898 to 1935, during which time Washington defined its colonial mission as one of tutelage and preparation of the Philippines for eventual independence. The second, from 1936 to 1946, was characterized by the establishment of the Commonwealth of the Philippines and occupation by Japan during World War II. Under US rule, political organization of the Philippines developed quickly. This was proved when the Filipinos succeed in electing the Philippines Assembly. Political parties emerged and played a significant role in the context of Filipino politics. One of the political parties, the Federelista, was formed by the Ilustrados. This party dominated the politics of the Philippines until after World War II.

In economics, Corpuz (1997) notes that the major concern of the US economics policy in the Philippine was how to make the Philippines a market for US exports on the one hand and source of cheap raw materials for US industry on the other. This major concern was formulated in the term of 'the economy of special relations'. Imports from the US were 8.7 % of imports from all other countries in 1900, 20 % in 1909, and 64.2 % in 1911; in 1915 imports from the US first exceeded and then eventually outdistanced, imports from all other countries. The trend for Philippines exports was very similar, with 1916 as the turnaround year when exports to the US began to exceed exports to all other countries.

The success of the US expansion in the Philippines market, however, did not succeed easily. In 1900, a Commission was sent to Manila to research economic policy. It found that the business climate was hampered and endangered by the scarcity of currency and there was no law under which currency could be supplied from either public or private sources. The Commission regarded the Philippines as an 'immense field for the sale of American goods' and furthermore recommended that American business 'create a demand among the Filipino people for those articles which the United States can make and ought to sell in these islands' (Corpuz 1997)

Table 2: Foreign Trade of The Philippines With The U.S. and With All Other Countries (in Pesos)

| Year | Imports from | | Exports to | | Total |
|------|--------------|---------------------|-------------|---------------------|-------------|
| | The U.S | All Other Countries | The U.S | All Other Countries | |
| 1899 | 2,301,226 | 23,931,908 | 7,081,788 | 22,198,536 | 55,513,458 |
| 1914 | 48,022,802 | 49,154,504 | 48,855,420 | 48,523,848 | 194,556,574 |
| 1930 | 156,366,057 | 89,819,850 | 210,684,122 | 55,650,133 | 512,520,585 |
| 1938 | 180,714,457 | 84,500,638 | 178,889,989 | 52,700,565 | 446,367,725 |

Sources: some official reports noted via Corpuz (1997)

Based on the composition of the national background, there is an interesting factor that can be analyzed. In the early period, American capital investment in the Philippines was very limited. Most American investors were residents, either ex-military or

former civilian employees with small savings. The government reported back in 1906 that it was difficult to attract US corporate investment. The Chinese held significant resources but they traditionally limited their activities to domestic trading and a key role in foreign trade. Meanwhile, Filipino capital traditionally was invested in land. Some of the rich Filipinos reinvested their profits in export agriculture, where operations involved low labour costs and inexpensive technology relative to the requirements in manufacturing and industry. In the early decades of the 20th century, the only Europeans who invested massively in the Philippines were the British. Statistics in Table 3 in 1919 show the foreign capital invested in the Philippines (Corpuz 1997). It is interesting because among the five biggest foreign investors, there were no Spanish investors.

Table 3: Foreign Capital Invested in The Philippines, by Country, as of 1919

| | |
|-----------------|----------------|
| Great Briain | P 968, 607,682 |
| United States | 555,002,200 |
| Germany | 174,486,264 |
| Japan | 131,500,000 |
| The Netherlands | 23,919,00 |

(Sources: Corpuz (1997))

Beyond the Market Economy

Penetration of foreign enterprises into the structure of the Filipino economy had succeeded in dismantling the previous limitations. Theoretically, from a liberal perspective, when the market for Fili-

pino products expanded greatly from about 1829, it would determine growing occupational and regional specialization. But in fact there were factors conspiring to blur the theory and confuse the trends. For instance, the annual growth of trade volumes to the mid 19th century was characterized as explosive at about 10 %. Thereafter, this annual rate slowed, and from the mid 1880s it was reduced to about 3 %, although the terms of trade had improved since about 1840. Moreover, the dependence of the Philippines on the global market often trapped the economy in instability, like the crisis of the 1870s and 1890s in Great Britain and the panics and depressions of the US in 1873 and 1893 (Legarda 2002: 334-335)

The global market, therefore, did not always have a useful impact on the development of the Philippines economy. Under those conditions, the indigenous Filipinos always became the victims. The transformation of colonial power did not bring a change to them. At the end of the US occupation, the small farmers were in the same position they were in during the Spanish era (Corpuz 1997: 265). Jose Ma. Sison and Julieta de Lima (1998) allege that the comprador class who dominated the economy in the cities of the Philippines was a privileged group in the colonial economy. They acted as the trading and financial agents of the foreign monopolistic firms. In the countryside, the landlords were the ruling class which dominated the economy and succeeded in accumulating land for the production of export crops and staple crops for domestic consumption.

After independence, the condition of the Philippines political economy structurally did not change. The national government inherited the decolonizational problems. The most crucial of

which was the dependence of the national economy on the metropole. In this sense, the emergence of the International Monetary Fund (IMF) and the World Bank in 1945 essentially has been a device for dictating economic, monetary and fiscal policies in the postcolonial countries in order to follow the capitalist political economic agenda. The global market order structurally only elongated from the Western colonial dreams. The national governments seemingly are not powerful enough to reject that pressure. Leftist writers like Sison and de Lima (1998) regard the regimes from Magsaysay to Marcos as 'puppets' to protect assets of the capitalists in the Philippines.

Recently, critics of the market economy ideology have involved consciousness and cultural analyses. A critical writer like Susan George (2000) says that the neo liberal priests created networks to spread the idea of a market economy. They understand what Antonio Gramsci was talking about in the concept of cultural hegemony. In George's words, 'if you can occupy people's heads, their hearts and their hands will follow'. Theoretically, the market economy now is formulated in the idea of neo liberalism. In postcolonial countries like the Philippines, the colonial ideas legacy continued through the educational system. The officials and cultural leaders soaked in the US, for instance, to propagate pro neo liberal and antisocialist ideas as did US textbooks and other cultural materials. Mason and de Lima (1998) loudly state that the continued dominance of English over the national language facilitated the persistence of a colonial mentality.

Conclusion

The European and then American enterprise presence in the Philippines initially was facilitated by the colonial structure. In the early period of colonization, the Spanish tried to reorganize the native settlements order to subdue them easily. The traditional concept of *barangay* was replaced by the pueblo-parish. In this sense, the state collaborated with the Catholic Church. At the same time, Spanish missionaries spread Roman Catholicism among the indigenous Filipinos. Because there was no great religious tradition previously, the indigenous Filipinos converted to the new religion easily, except in the south of the Philippines where there was some of Islamic political authority which rejected the Spanish.

Although there was resistance against its presence, the Spanish colonial authority set up a regulation system to govern the Philippines. In the economy, the Spaniards seemingly did not have a grand design to plan economic development. The government did not show a serious concern for this. At the same time, there were the traders from various countries who came to the Philippines and conducted exciting business activities there. They came from China, the Arab countries, India, Europe and other Southeast Asia countries. Besides conducting business, they were involved in the everyday life which resulted in interesting cultural encounters. In this sense, ethnicity and class relations among the others and the Filipinos had become a background to comprehend the economic history of the Philippines. A racial policy introduced by the colonial rulers, however, had caused a serious problem in the plural society. In the Philippines, the Chinese and the Mestizos had a special position which enabled them to gain economic

advantage from that. Due to this advantage, the Chinese and Mestizos were of the middle class who became political cultural leaders in the development of the Philippines. They prominently were called the Ilustrados class which led the Philippines Revolution at the end of the 19th century.

At the beginning of the 20th century, the US came up as the new ruler of the Philippines. They planned market-oriented policies to dismantle regulation limitations which previously governed the development of the economy. Liberalization was run almost in all sectors, including the reorganization of church land property. Consequently the role of the Church dwindled gradually. In the political arena, the US propagated the idea of liberal democracy which was practically proven with the opening up of the opportunity for political party involvement in the Assembly in the frame of the Commonwealth. Nevertheless, the great agenda of the US in the Philippines was as set by the Commission 'to create a demand among the Filipino people for those articles which the United States can make and ought to sell in these islands'. From the dependency perspective, the Philippines as well as other developed and underdeveloped countries are 'the periphery' from 'the metropole'. The great benefits from the development of the Philippines economy were brought to the US. This capitalization, however, did not end with the declaration of independence but was continued by the national government. Mason and de Lima (1998) infuriatingly say that 'bureaucratic corruption augmented monopoly capitalist and feudal exploitation in plundering the country and sucking dry the blood of the Filipino people'.

At least it can be told, the economic history of the Philippines is the history of victorious capitalism. The transformation of European and then American enterprises which became trans-na-

tional corporations (TNCs) in recent periods has been proved for this argument. Nevertheless, the enterprises' foreign presence remains making a contribution to the development of the Philippines economy. The other papers in this research view the arguments that the enterprises' presence contributed to the Philippines, especially in the displacement of technology and capital spillover. But the useful impact of its presence to the population remains the question which must be answered in a subsequent historical process.

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Chapter 3

DIFFERENT SOURCES, DIFFERENT IMPACTS: FDI AND THE PHILIPPINES DOMESTIC PRODUCTIVITY

Ahmad Helmy Fuady

Introduction

Inviting foreign investment is a commonly accepted strategy for many developing countries to enhance their economic development. At least, as noted by Kind (2000: 17), a massive foreign direct investment (FDI) flow to Asian countries in the post-war period has occurred since the late 1960s, motivated by import substitution policies and major revaluation of the yen. In the 1990s, FDI has become the largest source of developing countries' external financing; accounting for more than 40% of private capital flows to developing countries in 1997 (Aitken and Harrison 1999: 605). Moreover, FDI flows to developing countries shared more than 35% of the world FDI inflows in 2004 (UNCTAD 2005).

In the past, the Philippines was a main destination for FDI flows into the Asian region. At least, in the late 1960s, the country was second after Indonesia in attracting FDI. However, since the 1980s the Philippines has lagged behind the other ASEAN-5 (Indonesia, Malaysia, Singapore and Thailand) in attracting FDI. Moreover, the inability to attract FDI is not the only concern in the Philippines development. Another issue arising is the capacity of the Philippines to benefit from FDI inflow, to improve its productivity through the foreign participation. As noted by Austria

(2000:1), productivity growth is critical for a country's long run sustainable development since diminishing returns will lead the contribution of labour and capital to output growth to decrease. However, Cororaturun (2005) shows that the Philippines total factor productivity (TFP) remains negative, which indicates that it has not been the source of growth, in the last three decades.

Several studies have been conducted to analyse the role of FDI in enhancing domestic productivity. For the Philippines, however, only a few studies on this have been done, such as by Austria (1998) and Cororaturun and Abdulla (1997). Moreover, these studies do not end in one conclusion. Cororaturun and Abdulla (1997) show that FDI has a significant positive impact on TFP. Austria (1998) also shows that FDI has a positive effect on TFP growth but shows that it is statistically insignificant. However, incorporating total FDI and FDI in manufacturing, Austria (1998) shows a significant positive effect of FDI on TFP growth and a significant negative effect of FDI in manufacturing on TFP growth.

This paper aims to contribute new evidence of the impact of FDI on the Philippines productivity growth. It also attempts to fill the gap in literature on the role of FDI sources in determining its impact. Therefore, the purpose of this study is not only to examine the impact of FDI on productivity growth but also particularly to see whether FDI from the European Union (EU) has a different effect on the Philippines productivity growth, compared to FDI from the United States and Japan. A panel data analysis is adapted to the Philippines industrial data, for the 1996-2000 period. This study found that FDI does not have a significant effect on productivity growth. However, disaggregating FDI based on its sources shows that FDI from the EU has a significant negative effect on productivity growth, while FDI from the US has a sig-

nificant positive effect and FDI from Japan has an insignificant positive effect. In addition, this paper shows that wages and salaries have a significant positive effect on labour productivity, while economic instability, education expenditure and imports do not have a significant effect on productivity growth.

This paper consists of six sections: Section 2 provides a brief literature survey on the relationship between FDI and productivity. Section 3 briefly shows current figures and the Philippines FDI environment. Section 4 presents the methodological framework of this paper and describes the data and variables used. Section 5 provides the estimates, findings and discussion, which lead to the conclusion in the final section.

Literature Survey

FDI is considered as an important component to speed up a country's development since it is expected to bring many benefits, such as increasing the availability of capital, higher employment, lower prices for consumers, higher quality products, higher tax revenue for government and more importantly transfer of technology to possibly increase domestic productivity. Thee (2005:231) notes that FDI is often the only way to obtain the latest technologies and to ensure a rapid transfer of technology.

FDI could improve the industrial structure and domestic firms' performance in a host economy so enhance domestic productivity at least through three channels (Blomström 1989: 36; Imbriani and Reganati 1999:9; Iyer *et al.* 2004: 9; Karpaty and Lundberg 2004:3). First, foreign entry can increase competition,

which could drive inefficient firms out of business, increase domestic firms' efficiency and increase allocative efficiency in the host country industrial structure (Karpaty and Lundberg 2004:3; Iyer *et al.* 2004: 9). Second, foreign entry could result in technology diffusion, for example, through licensing or labour training. Trained labour and management by foreign firms, which later can move to domestic firms, can improve the host country's human capital. Finally, foreign entry could result in demonstration effect, i.e., domestic firms observing foreign practices, so that they can imitate these practices.

There has been wide interest in the effect of FDI on domestic productivity, with a number of studies on this topic, such as Blomström (1989), Corroratun and Abdulla (1997), Austria (1998), Haskel *et al.* (2002), Thong and Hu (2003), Karpaty and Lundberg (2004), Sena (2004), Haddad and Harrison (1993), Djankov and Hoekman (2000), Kathuria (2000) and Peter *et al.* (2004). However, these studies find different evidence and conclusions.

A positive relationship between FDI and domestic productivity is found in Blomström (1989) for Mexico, Corroratun and Abdulla (1997) for the Philippines, Haskel *et al.* (2002) for the United Kingdom, Karpaty and Lundberg (2004) for Sweden, Sena (2004) for Italy and Sjöholm (1997) and Takii (2005) for Indonesia. On the other hand, there is also evidence that FDI could worsen a host country's productivity, such as of Haddad and Harrison (1993) for Morocco, Djankov and Hoekman (2000) for the Czech Republic, Kathuria (2000) for India and Peter *et al.* (2004) for Russia and the Czech Republic.

Many studies suggest that to be able to increase a host country's domestic productivity, FDI requires a certain level of technology, human capital and a sound business environment for the transfer of technology. FDI cannot automatically increase domestic productivity and linkage effects. FDI does not necessarily lead to technological upgrading and therefore complementary efforts are needed to maximize the technological benefits of FDI (Sjöholm 1997: 3; Okamoto and Sjöholm 2001: 28). Borensztein *et al.* (1998) note that a minimum threshold stock of human capital, for example, is needed to absorb advanced technology from FDI in order to contribute to growth. The least developed countries might not learn much from a foreign presence possibly because they lack the absorptive capacity (Blomström *et al.* 1994). The characteristics of the host country's industry and policy environment are also important determinants of the net benefits of FDI (Blomström and Kokko 1997).

These studies, however, emphasize the role of a host country in absorbing the benefit of FDI. There are only a few studies examining the behaviour of FDI based on its source country. Unfortunately, as noted by Hill (1991:87), there is different behaviour among investors from different countries, particularly in their marketing orientation and transfer of technology. In addition, Oman *et al.* (1997) show that corporate governances of Asian and European firms are different. This paper, therefore, attempts to fill this gap in the literature. It compares the effect of FDI in different sources, namely the EU, the US and Japan, on the Philippines domestic productivity.

Figures and Policy Context

Kind (2000:17) notes that in the late 1960s, the Philippines was a main destination for FDI flows into Southeast Asian countries. From this first wave of FDI flows into Asian countries¹, stemmed the import substitution policies when the Philippines received greater FDI compared to Thailand and second to Indonesia (Kind 2000:17). Indeed, FDI flow to the country has fluctuated over time. After enjoying a relatively high FDI inflow in the 1950s, there was a sharp fall, continued by negative FDI inflow at the end of the 1950s and the beginning of the 1960s. Kind (2000:18) argues that it was a consequence of the termination of the special privileges to US investors and an introduction of fees on foreign currency in 1959.

Since foreign investors continued to withdraw capital in the first half of the 1960s, the Philippines suffered balance of payment problems. Therefore, two years after Ferdinand Marcos was elected President, the country passed the Investment Incentive Act 1967 and in the same year established the Board of Investment (BOI) to supervise the Act. The Act aimed to improve the country's investment environment, such as through favourable taxes and tariff reduction. It also granted foreign investors full ownership in pioneer industries and up to forty per cent in non-pioneer industries

¹According to Kind (2000:17), there have been four major FDI waves into Asian Countries since the post-war period. The first wave, in the late 1960s, motivated by the import substitution policies adopted by most of Asian countries; the second wave, in 1970s, stemmed from the apparent economic prospects for the region and the availability of capital; the third wave, started in the mid 1980s, was a result of a need for firms in Japan to relocate to countries with lower wage level; the fourth and ongoing wave is notable with massive FDI inflows to China (Kind 2000:17-18).

and allowed full foreign ownership for firms in which at least seventy per cent of production was exported (Kind 2000: 18).

According to Kind (2000: 10), the Act resulted in a sharp increase in FDI flows to the country during 1967 and 1968, when it reached more than US\$160 million. It may also be because, coincidentally, the import substitution policy, during this period, stemmed from national interests to join foreign capital to exploit domestic markets (Kind 2000:19). The massive inflow of FDI, however, only came over a short time. Between 1969 and 1972, there was instability and uncertainty in the country, followed by massive protests to Marcos re-elected President in 1969. The instability, unfortunately, led to FDI outflow during the period.

Thanks to the second wave of FDI into Asian countries, Martial Law 1972 and the change in policy that could make profit repatriation easier along with deregulation of foreign investment, there was a sharp increase of FDI inflow in the next period. Those factors, according to Kind (2000:19), improved investment conditions in the country. The second wave of FDI provided more available capital in the Asian region; the Martial Law provided stability for foreign investment and the changed regulations on profit repatriation gave a wider opportunity for foreign investment. In addition, Lindsey (1983:479) notes that by means of constitutional change, which came into force in 1973, presidential decree and other administrative action, the Philippines rapidly became more open to transnationals business.² It should be noted also that, ac-

² The new Constitution reversed Supreme Court decisions allowing land-holding by Americans and corporate boards of directors requirements; the presidential decree ratified a Treaty of Amity, Commerce and Navigation with Japan and administration was made more flexible (Lindsey 1983:100).

cording to Kind (2000), since 1972, the Philippines has started to establish export-processing zones (EPZs), which may explain the massive inflow of FDI in the rest of the 1970s prior to the second oil shock in 1978-79.

Trade and industrial policies may be a good explanation for FDI flows in the Philippines during the 1980s. While other ASEAN countries (Indonesia, Malaysia and Thailand) adopted more outward-oriented policies and directed FDI toward export-oriented sectors, the Philippines Board of Investment directed FDI into industries that were heavily protected and not toward export oriented industries (Kind 2000:21). The relatively high labour costs in the Philippines may also explain why the country could not take advantage of massive capital flow from Japan and South Korea, which sought lower production costs. The Philippines absorbed the smallest amount of FDI from Japan in the 1980-1990 periods compared with Indonesia, Malaysia and Thailand.

In 1987, a year after Corazon Aquino was elected President, there was a reduction in foreign ownership restrictions, with 40% foreign ownership allowed in non-pioneering industries. Income tax holidays for firms in preferred investment areas were also introduced during this period. The investment reforms came along with other structural reforms such as trade liberalisation, foreign exchange liberalisation, banking and privatisation reforms (Cororaton 2005:100). However, political instabilities, such as of August 1987 and the 1989 coup attempt, seem to be responsible for the Philippines inability to attract high FDI like the other ASEAN-4 countries.

In 1991, a new Foreign Investment Act was introduced. The Act further liberalized existing regulations, allowing 100%

foreign participation in all areas not included in the Foreign Investment Negative Lists (Austria 1998:1). This Act, however, did not directly bring a substantial increase of FDI into the country. It was only after Fidel Ramos was elected President in 1992, that FDI inflow into the country started to increase again (even though still relatively low compared to the other ASEAN-4 countries) until the outset of the 1997 Asian economic crisis.

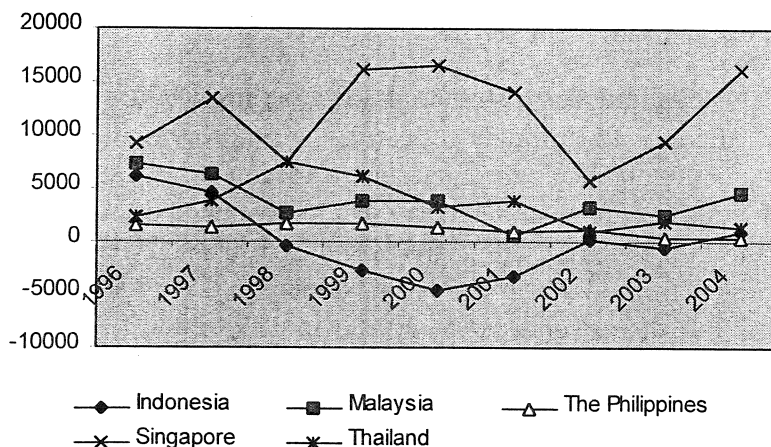
In addition, the structural reforms since the mid 1980s did not improve Philippines industries. As noted by Corroraton (2005:100), while the foreign trade sector increased dramatically, the industrial and manufacturing sectors remained weak. At least, in the last 35 years, the share of industry in GDP remains unchanged, from 31.7% in 1967-1972 it increased to 37.4% in 1983-1985 but then decreased to 30.9% in 1998-2000 (Corroraton 2005:100). Similar figures are also shown by the employment structure, to which manufacturing and industry contributed about 35% around this period (Corroraton 2005:100).

Unlike other Asian economies, such as of Indonesia and Thailand, the Philippines survived the 1997 Asian economic crisis better and was even known as the 'East Asian exception' for this achievement. In terms of foreign investment, only at the beginning of the period of crisis the Philippines experienced a decrease in FDI. In 1998, FDI inflow to the country exceeded its pre-crisis levels. The achievement, however, seems only so in terms of stability. Comparing the amount of FDI flows to the country with that of other ASEAN-5 economies, it is obvious that the Philippines lagged behind. During the crisis period, except for Indonesia, all other ASEAN-5 countries received larger FDI than the Philippines (**Chart 1**). Even, in 2004 the Philippines received

the lowest level of FDI among ASEAN-5 economies, or returned to its pre-crisis rank.

Chart 1

FDI Flow into ASEAN-5 1996-2004 (million US\$)



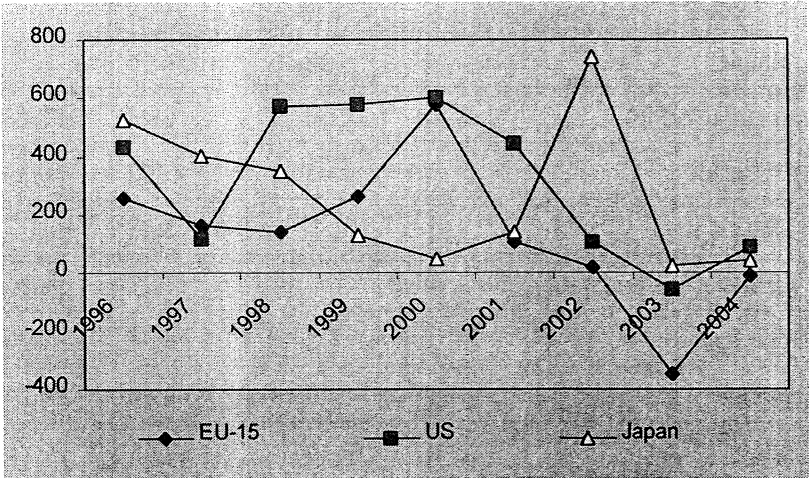
Source: ASEAN FDI Database 2005

Like in other ASEAN economies, the Triad (Japan, US and EU) dominates FDI flows to the Philippines. Among the Triad, the US led the investment during 1998 to 2001 (**Chart 2**). A long and deep relationship with US seems to explain the American FDI domination in the country. Interestingly, while FDI from Japan shows a decreasing trend since the 1997 Asian economic crisis, FDI from the US and the EU increased considerably. However, after 2000, a reverse trend is shown. From 2001 to 2003, FDI from

the EU and the US sharply decreased, while FDI from Japan rose substantially.

Chart 2

FDI in the Philippines by Sources 1996-2004 (million US\$)



Source: ASEAN FDI Database 2005

The members of the Triad, indeed, have different preferences in their investment. As can be seen from **Table 1**, most (81%) of FDI from the US was invested in the mining sector, while the biggest proportion (84%) of FDI from Japan was invested in the manufacturing sector. The manufacturing sector was also the main destination for European investment, with 38% of FDI from EU invested in the manufacturing sector.

Table 1
Sectoral Distribution of FDI by Sources, Average 1999-2003
(percentage)

| | Japan | US | EU-15 |
|--------------------------------------|-------|-------|--------|
| Agriculture | -0.22 | - | 0.07 |
| Mining | 2.15 | 81.06 | - |
| Manufacturing | 84.79 | 2.29 | 38.18 |
| Construction | 5.32 | -2.22 | 0.35 |
| Trade | - | 3.26 | - |
| Financial Intermediation and Service | -1.14 | 11.71 | 8.36 |
| Real Estate | 1.47 | 3.01 | 3.70 |
| Services | 0.18 | 9.64 | -29.29 |
| Other | 10.03 | 12.65 | 71.89 |

Source: Calculated from ASEAN FDI Database 2005

Data, Model and Variables

Data

This paper uses panel data of the Philippines industries, for the period 1996 to 2000. Data on value added (in million peso), gross capital formation (in million peso), number of labour employed (in thousand) and wages (in million peso) are drawn from the International Industrial Statistics 2001-2006, published by the United

Nations for the Industrial Development Organisation (UNIDO). However, since there is no data available for 2000 in the publications, data for 2001 is used as proxy. The UNIDO data, basically, are drawn from Annual Survey of Establishments, National Statistics Office in Manila. The survey includes establishments with 10 or more people engaged. In the survey, establishments with 200 or more people engaged are completely enumerated and establishments with less than 200 people engaged are sampled. Data on the FDI level (in million US\$) and its decomposition are drawn from the ASEAN FDI Statistics 2005. The Asian Development Bank's Key Indicators is another important source, from which data on population, central government education expenditure, import values and inflation are drawn.

Model

We start with a general neoclassical production function:

$$Y_{it} = A_{it} K_{it}^{\alpha} L_{it}^{\beta} \quad (1)$$

Here, Y denotes value added, A denotes level of productivity, K denotes capital, L denotes labour unit, α and β denote factor share of capital and labour to output respectively, while i and t represent industry $i = 1, 2, 3, \dots, I$ and time $t = 1, 2, 3, \dots, T$ respectively. Taking natural logarithm of (1), defines

$$\ln Y_{it} = \ln A_{it} + \alpha \ln K_{it} + \beta \ln L_{it} \quad (2)$$

Differentiate (2) to obtain

$$\frac{\dot{Y}}{Y} = \frac{\dot{A}}{A} + \alpha \frac{\dot{K}}{K} + \beta \frac{\dot{L}}{L} \quad (3)$$

Where $\frac{\dot{Y}}{Y}$, $\frac{\dot{A}}{A}$, $\frac{\dot{K}}{K}$ and $\frac{\dot{L}}{L}$ are growths of value added, productivity, capital and labour respectively. Then, defines as,

$$\begin{aligned} \left(\frac{\dot{A}}{A}\right)_{it} = & \alpha_0 + \alpha_1 FDI_{it} + \alpha_2 IMP_{it} + \alpha_3 INF_{it} + \alpha_4 EDU_{it} + \alpha_5 CON_{it} \\ & + \alpha_6 W_{it} + e_{it} \end{aligned} \quad (4)$$

Where FDI denotes level of FDI, IMP denotes imports value, INF denotes inflation, EDU denotes government expenditure per capita on education, CON denotes level of concentration, W denotes wages per labour, and e denotes error term. Following Sjöholm (1998), combining (3) and (4), we can define

$$\begin{aligned} \left(\frac{\dot{Y}}{Y}\right)_{it} = & \gamma_0 + \gamma_1 \left(\frac{\dot{K}}{K}\right)_{it} + \gamma_3 \left(\frac{\dot{L}}{L}\right)_{it} + \gamma_4 FDI_{it} + \gamma_5 IMP_{it} + \gamma_6 INF_{it} + \gamma_7 EDU_{it} \\ & + \gamma_8 CON_{it} + \gamma_9 W_{it} + e_{it} \end{aligned} \quad (5)$$

Since we are also interested in examining the impact of different sources of FDI, we change FDI variable into FDIEU, FDIUS and FDIJ, which represent FDI from the EU, the US and Japan respectively, and set up:

$$\begin{aligned} \left(\frac{\dot{Y}}{Y}\right)_{it} = & \delta_0 + \delta_1\left(\frac{\dot{K}}{K}\right)_{it} + \delta_2\left(\frac{\dot{L}}{L}\right)_{it} + \delta_3FDIEU_{it} + \delta_4FDIUS_{it} + \delta_5FDIJ_{it} + \delta_6IMP_{it} \\ & + \delta_7INF_{it} + \delta_8EDU_{it} + \delta_9CON_{it} + \delta_{10}W_{it} + e_{it} \end{aligned} \quad (6)$$

For an extension, we consider also to estimate labour productivity, which we define as:

$$\begin{aligned} \left(\frac{Y}{L}\right)_{it} = & \phi_0 + \phi_1\left(\frac{\dot{K}}{K}\right)_{it} + \phi_2FDI_{it} + \phi_3IMP_{it} + \phi_4INF_{it} + \phi_5EDU_{it} \\ & + \phi_6CON_{it} + \phi_7W_{it} + e_{it} \end{aligned} \quad (7)$$

and,

$$\begin{aligned} \left(\frac{Y}{L}\right)_i = & \psi_0 + \psi_1\left(\frac{K}{K}\right)_{it} + \psi_2FDIEU_{it} + \psi_3FDIUS_{it} + \psi_4FDIJ_{it} + \psi_5IMP_{it} \\ & + \psi_6INF_{it} + \psi_7EDU_{it} + \psi_8CON_{it} + \psi_9W_{it} + e_{it} \end{aligned} \quad (8)$$

Variables

This section discusses explanatory variables included in the models.

Foreign Direct Investment (FDI)

There are several ways to measure foreign participation in an economy. It may be measured, through foreign share of total production or foreign share to total inputs, such as employment or capital stock, or directly measure from FDI flows. Blomström (1989) and Aitken and Harrison (1999), for instance, use foreign

share of total employment, while Sjöholm (1998) uses foreign share of total production. However, because of data availability, this paper uses the aggregate FDI level, which is weighted with the number of people engaged in each industry, to measure the foreign participation. By doing so, we assume that each industry could take full benefit from total FDI inflow. We, therefore, cannot differentiate between intra-industry and inter-industry effects of FDI on productivity growth but both together, which may lead to inefficient estimation. We also use the same procedure to measure FDI from the EU, the US and Japan.

Imports (IMP)

Imports are believed to be a channel for transfer of technology, so that an increase in these variables is expected to improve a country's productivity. Indeed, there are several ways in which imports can improve domestic productivity. First, usually new technology is embodied in the imports (of machinery and equipment, particularly). Second, import 'provides' models to be imitated. Finally, increasing imports also put pressure on domestic competition, so improving efficiency. Here, we measure imports simply as the Philippines import values.

Inflation (INF)

Inflation is an indicator of economic stability. Macroeconomic instability usually can be seen from a high inflation level. As noted by Cororaton and Zingapan (1999), the instability could discourage investment and programs to enhance productivity, such as Research and Development (R&D) from being adopted. Here, we

Education Expenditure (EDU)

Government policies to enhance education are believed to be an important channel to increase productivity. We measure this variable through government expenditure per capita on education. This variable is constructed to measure labour quality, since the higher EDU means more chance for workers to increase their skills and knowledge. Therefore, it is expected that there will be a positive correlation between EDU and productivity growth. Indeed, firms' expenditure on training and R&D may be a more sensitive indicator, because it gives direct effect to labour productivity.

Concentration (CON)

Sjöholm (1998:10) notes that an establishment will benefit relatively greatly from knowledge flows if it located in industry producing a large share of output. Here, in contrast with Sjöholm (1998), we construct CON variable simply as share of value adding in industry to total manufacturing value added. The larger this variable the higher concentration in this industry and therefore we expect a positive correlation between this variable and productivity growth.

Wages (W)

Wages (W) are believed to be a direct incentive to increase labour productivity. Here, we measure W variable as wages and salaries per labour unit, which include all payments in cash or in kind made to employees in the reference year. The wages and salaries payment includes overtime payment and other benefits. A positive

correlation is expected between this variable and productivity growth.

Table 2 Explanatory Variables and Expected Effects

| Explanatory Variables | Notations | Expected Effect |
|---------------------------|--------------------------|-----------------|
| Foreign Direct Investment | FDI (FDIEU, FDIUS, FDIJ) | positive |
| Imports | IMP | positive |
| Inflation | INF | negative |
| Education Expenditure | EDUC | positive |
| Concentration | CON | positive |
| Wages and Salaries | W | positive |

Findings and Discussion

A panel data regression is used in this study to estimate the effect of variables included in the models specified. In doing so, we also conduct the ‘Hausman’ test to choose between random effect and fixed effect in our estimate, which can give a more efficient and consistent result. Basically the ‘Hausman’ tests whether difference in random effect and fixed effect coefficients is systematic or not. The results of the test on the equations show that the difference is not systematic, and therefore the random effect estimate is chosen. **Table 3** shows the estimate results of our models.

Table 3 Estimate Results

| Variables | Equation (5) | | Equation (6) | |
|-----------|--------------|-------|--------------|--------|
| | Coefficients | Z | Coefficients | Z |
| L growth | 8.88E-01 | 2.35* | 7.44E-01 | 1.95* |
| K growth | 5.80E-14 | 1.95 | 5.20E-14 | 1.74 |
| FDI | 2.60E-06 | 0.03 | | |
| FDIEU | | | -1.94E-03 | -2.11* |
| FDIUS | | | 1.57E-03 | 1.98* |
| FDIJ | | | 7.14E-05 | 0.15 |
| IMP | -2.51E-05 | -0.12 | 7.12E-05 | 0.50 |
| INF | -6.25E-02 | -0.38 | -1.04E-02 | -0.06 |
| EDU | -5.01E-02 | -0.01 | 2.78E+00 | 0.41 |
| CON | -6.89E-02 | -0.12 | -1.13E-03 | 0.00 |
| W | 3.24E-05 | 0.04 | -1.41E-04 | -0.16 |
| Const | 1.51E+00 | 0.09 | -6.188E+00 | -0.35 |
| Wald Chi2 | 18.53 | | 23.32 | |
| Prob>Chi2 | 0.0176 | | 0.0193 | |

| Variables | Equation (7) | | Equation (8) | |
|-----------|--------------|--------|--------------|--------|
| | Coefficients | Z | Coefficients | Z |
| K growth | 5.29E-11 | 0.53 | -3.65E-11 | -0.31 |
| FDI | 6.36E-01 | 1.52 | | |
| FDIEU | | | -1.046E+01 | -2.67* |
| FDIUS | | | 9.76E+00 | 2.87* |
| FDIJ | | | 2.05E+00 | 0.98 |
| IMP | 6.98E-01 | 0.94 | 8.84E-01 | 1.00 |
| INF | 7.25E+02 | 1.21 | 7.23E+02 | 1.03 |
| EDU | 1.35E+04 | 0.55 | 1.81E+03 | 0.62 |
| CON | 9.15E+03 | 4.18* | 8.09E+03 | 3.40* |
| W | 5.09E+01 | 10.54* | 5.36E+01 | 13.86* |
| Const | -5.33E+04 | -0.83 | -6.66E+04 | -0.87 |
| Wald Chi2 | 162.65 | | 282.32 | |
| Prob>Chi2 | 0.0000 | | 0.0000 | |

Source: Author's calculation

Our econometric estimates for equations (5) and (6) show that only labour growth variable has significant effect on the Philippines value added growth. It seems to confirm Krugman's hypothesis that says only input growth matters in Asian economic growth and not productivity. However, unlike Krugman's hypothesis, the capital growth does not have a significant effect on the Philippines value added growth. The coefficient of capital growth, however, still shows positive signs. The insignificance, therefore, may be due to miss-channelling investment into inefficient protected industries in the past. As noted by Kind (2000:6), the Philippines was late in changing its protectionist inward looking industrial policy, which led to an inefficient production structure.

The FDI variable has a very small (positive) magnitude and an insignificant effect on the value added growth and labour productivity (equations 5 and 7). It confirms Austria (1998) finding that FDI did not increase productivity in the Philippines. There are several possible explanations for this evidence. First, as suggested by Kind (2000:6), it may be due to the bias of the Board of Investment in directing FDI into heavily protected industries. The protectionist policy has led the Philippines to inefficient production systems, where certain firms in the industry are protected from competition and monopolise the industry. Since there is no competition in the industry, inefficient firms can stay in business and therefore there is no improvement in productivity.

Second, as noted by Austria (2000), FDI flows to industry that does not require a high level of technology and therefore transfer of technology is low. The Philippines semiconductor industry is often cited as an example of this. Kind (2000:35) notes that the Philippines has specialised in the lower end of the IT production

chain, mainly labour intensive activities with little connection to the domestic industry. Further, Kind (2000:35) argues that, since the Philippines specialised only in semiconductor assembly and testing, characterised by low value added and unskilled intensive labour, only a limited transfer of technology occurred.

Third, our estimates do not consider the time lag for FDI to take effect. Thus it may differentiate our result from that of Cororaton and Abdula (1997). In their study, Cororaton and Abdula (1997) construct FDI variable with a two-year time lag, so that the impact of FDI on TFP is positively significant. Austria (1998), however, shows that including one year lagged FDI does not improve productivity. For future research, therefore, including a 'right' time lag for FDI is considerable.

Fourth, as noted by Borensztein *et al.* (1998), a minimum threshold stock of human capital is needed to absorb advanced technology from FDI in order to contribute to growth. Even though the Philippines has a relatively highly educated labour force compared to other developing countries, there is only a small number of scientists and technicians involved in R&D (Kind 2000:25). Our findings and discussion on government education also affirms this possibility.

Table 3 shows that the government expenditure on education has an insignificant effect on value added growth. It is in line with the findings of Cororaton (2005), which show that the contribution of labour quality to TFP growth decline over time. It may be due to that the Philippines produced a lower number of graduates in science and technology, even though the country has one of highest numbers of college graduates in Southeast Asia (Cororaton 2005). Another possibility proposed by Cororaton

(2005) is that there is a low level of absorptive capacity for employment in manufacturing industry for graduates. The 'brain drain' phenomena may also contribute to the insignificant effect of the education expenditure since the products of the Philippines education system choose to migrate to other countries, particularly to the US.

Another explanation of the aggregate effect of FDI is obtained from decomposing the FDI variables into their sources, namely FDI from the EU, the US and Japan. Our estimate of equations (6) and (8) shows that FDI from the EU has a significant negative effect; FDI from the US has a significant positive effect; while FDI from Japan has a positive and insignificant effect on productivity growth. The total effect of these three sources could be the cause of the insignificant effect of the aggregate FDI variables. Moreover, since Japan is the highest investor in the manufacturing sector, it is more likely that the effect of FDI from Japan makes the biggest contribution to the aggregate effect.

The difference in the effect of FDI based on its source affirms our hypothesis that host country characteristics alone are not sufficient to explain the impact of FDI on domestic productivity. If only host country characteristics are taken into account, there should be no difference in effect of FDI from different sources. Further question is how the different sources of FDI channel to the impact on productivity.

One possible answer to why the impact of FDI is different according to the source country is the industrial structure in the source country. As noted by Banga (2003:9), there is a dualistic industry in the US, namely: 1) innovative and oligopolistic industries, 2) traditional industries, which are price competitive and tech-

nologically stagnant, such as textile and steel industries. FDI from the US, asserts Banga (2003:9), came from the innovative and oligopolistic industries, which are capital and knowledge-intensive types. It is based heavily on a comparative advantage in the generation of innovation and is associated with oligopoly (Banga 2003:9). When it moves abroad, it can be expected to bring high levels of technology. Moreover, since FDI from this type of industry is cost saving in nature, improvement in its efficiency is more likely. It may therefore explain why FDI from the US has a significant positive effect on the Philippines productivity.

The positive insignificant effect of FDI from Japan can also be traced to Japan's industrial structure. Share of small and medium enterprises (SMEs) in Japan is relatively large. The massive capital outflow from Japan stems from this traditional type of industry (Banga 2003:9). Further, Banga (2003:9) notes that FDI stemming from this traditional type of industry is usually driven by location-specific advantages such as cheap labour and therefore tends to concentrate on the labour intensive sector. Moreover, since it brings only a low level of technology, FDI from Japan cannot substantially transfer technology and improve host country productivity.

An interesting finding is the negative impact of FDI from the EU on value added and productivity growths. The problem is, it is negative and significant. We need to explain this carefully. It is interesting since FDI from the EU, like the one from the US, stems from industry that has comparative advantage in knowledge and technology (ASEAN Secretariat 2001:100), but has a reverse effect. A better explanation for this phenomenon may be due to European firms' input for production. ASEAN Secretariat (2001)

notes that on average more than 35% of input for European firms in Asian countries comes from Europe and less than 45% of it comes from domestic sources; compared to Japanese firms that use more than 75% domestic input. As a result only a small value added amount is created from the European participation. Moreover, the high share of foreign input could put pressure on domestic input.

Another possible explanation stems from the behaviour of European firms operating in Asia. The European firms in their operations in Asia prefer to sub-contract and licensing, rather than to build technology with its domestic counterparts (ASEAN Secretariat 2001). To some extent, as noted by Thee (2005), sub-contract and licensing types could improve technological capabilities. However, it is also possible for sub-contract type of foreign participation to decrease real wages paid to workers. It is because long chains of sub-contractors bid down the contract prices, and also wages (Ranjo-Libang 2001:58). Since wages is an important determinant for labour productivity (Table 3 equations 7 and 8), pressure on wages will decrease labour productivity.

The imports variable also shows a small and insignificant effect on value added and labour productivity growth. It may be because imports of machinery and equipment, which usually embody new technology, only share a small portion of total imports (Austria 1998). Another reason, proposed by Austria (1998), is labour quality problems. New technology embodied in imports, needs a corresponding labour quality to be maximally used, otherwise it will be idle. We can also think that this result comes from the structure of production, which requires only a minimum level of technology in the imported product. The semiconductor prod-

ucts, which share more than 60% of the Philippines exports, basically only re exported imported products. The Philippines semiconductor industry only does the assembly and testing, which only require a little transfer of technology (Austria 2000).

Unlike the findings of Austria (1998), our estimate shows that inflation has a negative but insignificant effect on value added growth. It means the macroeconomic instability, reflected in the inflation rate, did not have a significant effect on growth. A relatively stable economic performance of the Philippines may contribute to the result. The Philippines inflation rate during the period of analysis never passed more than one digit.

The wages and salaries variable also shows insignificant effect on value added growth but a positive significant effect on labour productivity growth. The effect of the variable on labour productivity is not surprising since wages and salaries variable is a direct incentive to improve labour productivity. It shows that labour supply in the Philippines is still on a positive slope curve, where higher incentives lead to labour's greater willingness to work.

The concentration variable shows a positive sign but insignificant effect on value added growth. It however, has a positive and significant effect on labour productivity. It shows that knowledge flows within industry play an important role in improving labour productivity.

Conclusion

Inviting foreign investment is a common strategy for developing countries to enhance their economic development. Therefore it is un-exceptional for the Philippines. In the past, in its early development, the Philippines was a main destination for FDI flows into the Asian region. At least, in the late 1960s, the country was second after Indonesia in attracting FDI. However, since the 1980s the Philippines has lagged far behind the other ASEAN-5 (Indonesia, Malaysia, Singapore and Thailand) in attracting FDI. Indeed FDI flows into this country has fluctuated following political and industrial policy changes.

Moreover, there is another issue, namely the capacity of the Philippines to benefit from FDI inflow, to improve its productivity through foreign participation. The issue arises since, as Cororatan (2005) shows, the Philippines total factor productivity (TFP) remains negative, which indicates that it has not been the source of growth, for the last three decades.

Several researches have been conducted to analyse the role of FDI in enhancing domestic productivity but only a few have been done for the Philippines. This present paper aims to contribute new evidence on the impact of FDI on the Philippines productivity growth and to fill a gap in literature on the role of FDI sources in determining its impact.

Analysis of this paper, confirming Austria (1998), finds that FDI does not show a significant effect on productivity growth. The inward looking industrial policy seems to contribute to directing FDI into inefficient industry. Disaggregating FDI based on its sources, our estimation shows that FDI from the EU has a

significant negative effect on productivity growth, while FDI from the US has a significant positive effect and FDI from Japan has an insignificant positive effect. The explanation of the result seems to come from the differences in industrial structures of the FDI sources.

In addition, our analysis also finds that wages and concentration variables have a significant positive effect on labour productivity, while economic instability, education expenditure and imports do not have significant effect on productivity growth.

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Chapter 4

IMPACT OF MNCS ON TRANSFER OF TECHNOLOGY: A CASE STUDY FROM MANUFACTURING SECTOR

Rita Pawestri Setyaningsih

Introduction

A rapid and wide movement of goods and capital, accompanied by significant reduction in economic barriers between countries, characterizes the globalisation era. The advance of technology and transportation plays a significant role in these economic activities. Countries that control more advanced technology will be more capable of competing within the international market as they can produce their products efficiently and furthermore can create bigger profits.

For the last two decades, the Philippines has been aware of the need for science and technology. One focus of the government goals is to enable the Philippines 'to attain the status of a newly-industrializing country by the year 2000 through the aggressive application of science and technology' (Dept of Science and Technology 1994). The country's industrialization strategy, as stated in the Medium-Term Philippines Development Plan, is premised on global competitiveness. This indicates that the government has to emphasize the industrial activities that can contribute to create a high and sustained rate of economic growth and participate in international forums. In the Medium-Term Philippines Development Plan 2004-2010, the Philippines aims to be a

knowledge based economy. Therefore, Research and Development (R and D) activities are urgently needed. However, data shows that the government has spent little on Research and Development activities. One of the policies that has been implemented by the government to improve the Research and Development activities is to stimulate the private sector to participate in this, particularly through foreign direct investment. The government relies on the FDI in order to get the advantage of technology transfer.

Transfer of technology through FDI is the popular way to provide high technology. Host countries expect to gain benefits from the presence of MNCs. They can stimulate firms in the domestic market to compete in carrying out technological upgrading. In this case, employees can learn technology by on the job training or, and there are many instances of local employees doing so, starting their own ventures using the acquired technology (Montes 1997:177). As Enos (1989) suggests 'transfer of technology depends on two variables: the recipients' capacity to expend technological effort and its degree of technological competence'. This means that it needs a certain minimal expenditure on technological efforts.

In order to gain greater transfer of technology, the Philippines government established EPZs. The aims of these include: generation of employment, earning foreign exchange, transfer of technology, developing the provinces and attracting foreign investment (IBON Databank and Research Center 2005:63). Enterprises located in the EPZs are allowed to import capital equipment and raw materials free of duties, tax and other import restrictions. Therefore, activities for the transfer of technology are expected to be relatively more often conducted in the EPZs than in other zones

or places. However, not all TNCs are willing to transfer technology to the host country. One of the reasons may be, as stated by Dosi (1988) who writes ‘in each technology there are elements of tacit and specific knowledge that are not and cannot be written down in a “blueprint” form, and cannot be entirely diffused either in the form of public or proprietary information’.

Most of the FDI inflows to the Philippines came from the US, Japan, and the EU, such as the UK and France, which in 1997 accounted for about two-thirds of the total. The US has become the largest source of FDI in recent years due to the continued strong growth of the American economy, whereas Japan has been floundering since 1990 (Balisacan and Hill 2003:158). However, the dominance of the Triad as investors in the Philippines has been replaced by NIEs since 1980, when the Triad’s FDI accounted for four-fifths of the total FDI. In contrast, the share of the NIEs rose from 6% in 1980 to 25% in 2000.

FDI has been concentrated in the manufacturing sector but during 1992-1998 when the Ramos administration adopted deregulation and privatisation policies, it began to flow steadily into the service sector. In the 1990s manufacturing became an attracting sector due to the protection given by the government for it to be domestically oriented.

This study, therefore, aims to draw several experiences of technology transfer in the MNCs in the Philippines, in particular, from the EU. It will also describe the condition of technology capacity and government policies to stimulate technology upgrading and transfer.

This paper is organized into seven sections with Section two a theoretical overview of the technology transfer. Section three discusses the government policy towards technology transfer. Section four is a profile of the manufacturing sectors, followed by Section five, the technology capability of the Philippines. Section six analyses the impact of the MNCs, particularly from the EU countries on technology transfer. Finally, Section seven is the Conclusion

Theoretical Overview

Some experts have defined technology. For example, Natarajan and Miang (1992:48) define technology as a modern scientific method that can be applied in a production process and distribution of goods and services. Therefore, technology consists of hardware machinery and software, which should be operated, maintained, adjusted and developed by human beings. Santikarn (1981) defines technology as systematic knowledge used in the process of production and distribution of goods and services.

There is a big gap in technical capability between developed and developing countries. Most developing countries are characterized by a lack of technological capability. Most of the technologies in developing countries are outdated. Even, to produce one item with the same technology used in developing countries will create different output, because they produce inefficiently compared to that produced by developed countries. According to Kam (1991), technological hardware and technical know-how help producers or entrepreneurs distinguish their products from their competitors and/or provide cost advantage through economics of scale and/or economy of scope.

Referring to the second definition; therefore, a transfer of technology will involve transfers of hardware and software, such as science of the production process and distribution. Three different components can be transferred:

1. Physical assets (such as factory, machinery, and equipment);
2. Information, both technical and commercial, science and skills, technology preferences, engineering design and construction, operational methods and organization, quality control and market characteristics; and
3. Human skills, particularly those of the professionals and engineers.

Technology can be transferred through various means: turn key arrangement, machinery and technology purchasing, licensing agreements and management arrangements, technical assistance, direct involvement of foreign experts and local staff training and Foreign Direct Investment (FDI). According to a neoclassical growth model, such as of Mankiw (1995), technology is not a free good that is clearly specified and readily available for use by any firm anywhere. Sometimes, it can be only owned through licensing. Technology assets contain a tacit element that is not easily transmittable or replicable in another place. Dosi (1988) writes 'in each technology there are elements of tacit and specific knowledge that are not and cannot be written down in a "blue-print" form and cannot, be entirely diffused either in the form of public or proprietary information'. Therefore, to use the technology effectively, needs learning and skills upgrading.

There are many theories on FDI and its relation to transfer of technology, which are known as the neoclassical model, such

as of Koizumi and Kopecky (1977), Findlay (1978) and Das (1987). The newer theories came in the 1980s, such as of Grossman and Helpman (1991), Lucas (1988) and Romer (1990). They found a theory on the FDI and its impact on technology transfer through a growth theory framework, focused on issues relating to the creation of technological knowledge and its transmission. It explains the innovation and imitation efforts that respond to economic incentives as major engines of growth. It emphasizes the role of Research and Development, human capital accumulation, and externalities.

Wang (1990) is one exception that deals with FDI and growth. He built a dynamic two-country model to study the interaction between growth and international capital movements. Human capital plays an important role in determining the rate of return for physical capital that affects the direction and magnitude of international capital movements. Gerschenkron's (1962) hypothesis on technology transfer is that the rate of technological change in less developed countries is considered to be an increasing function of the amount of foreign capital operating there.

Walz (1997) incorporating with Grossman and Helpman (1991) says that production activities of MNCs in a low-wage country improve the efficiency of potential innovation there. The knowledge spillover of MNC activities makes innovation in a low-wage country profitable. By allowing imitation of the developed country, the FDI can stimulate Research and Development activities. Thus, policies promoting FD are predicted to speed up growth. The Republic of South Korea and Taiwan, for example, restricted internalised technology transfer via MNCs as they were eager to allow the national enterprises to develop their 'infant' innovative capacities.

The preferences on the usage of transfer of technology depend on the expected gains with respect to technology capacity building and movement towards higher value-added production through one rather than the other. It depends on two considerations:

- (i) Whether the technology is available in an unpackaged form. Firms are likely to licence older technologies from which they have already derived significant rents than newer technologies that are at the heart of the companies' business interests;
- (ii) The availability of entrepreneurial and technical skills to operate new technologies and earn profits doing so in the host countries, as human resources and technological capabilities improve (UNCTAD 1995a).

Japan and the Republic of Korea have relied heavily on licensing and other forms of acquisition of technology from MNCs, while Singapore mainly relies on FDI, attracting it into specific industries. Taiwan prefers to apply both.

A large proportion of all innovation takes place within MNCs (UNCTAD 1995a, Chapter III.B). The reasons include:

- (i) Research and Development activity involves much cost; thus it requires a large market to be profitable:
- (ii) Research and Development activities are mostly conducted by large firms and in partnerships and alliances among large firms
- (iii) Research and Development activities expenditure is very high (UN 1999:34).

Through FDI, host countries can gain the benefits of technology, such as:

- (i) To introduce a new technology not previously in use in the domestic economy and; therefore, lead to the production and consumption of a new good;
- (ii) Foreign investment with a new technological component usually requires the introduction and/or development of new skills needed to operate the technology (with the attendant externalities);
- (iii) Innovation depends on the number of ideas that are available in the economy; thus the introduction of a new idea increases the stock of ideas and stimulates domestic innovation.

However, there are some barriers that make the technology transfer process difficult, including:

- (i) Unwillingness of technology holders to transfer technology;
- (ii) Lack of information and expertise on the recipient side on technology matters;
- (iii) Most of the financial resources within developing countries are scarce;
- (iv) Danger of economic dependence on the holder of the technology;
- (v) Inadequate legal and administrative framework;
- (vi) The lack of skills in the legal and contractual aspects of acquiring technology;
- (vii) The lack of conditions which should accompany the application of technology (Japan International Cooperation Agency and Technonet Asia, 1985:29-30).

Government Policy towards Transfer of Technology

Since 1988, the Philippines has been aware of the need for science and technology. Three main problems, identified as 'three principal causes' for the low state of development of Science and Technology in the Philippines are:

- (i) Under utilization of Science and Technology for development, as reflected in low quality and productivity of production sectors and heavy dependence on imports;
- (ii) Under investment in Science and Technology in terms of manpower training, technological servicing, Research and Development facilities and financial resources;
- (iii) Weak linkages between technology generation, adaptation, and utilization (Department of Science and Technology, Government of the Republic of the Philippines 1990).

Realizing the problems; therefore, the government established a Science and Technology Master Plan (STMP) in 1989, which was co-ordinated by the Department of Science and Technology (DOST). This STMP defines the strategies and priorities that must be put into effect by the Science and technology communities, including:

- (i) Modernization of the production sector through massive technology transfer and linkages with the private sector and academe;
- (ii) Upgrading of Research and Development facilities;
- (iii) Development of Science and Technology infrastructure, institution building, manpower development, and development of an Science and Technology culture.

Under DOST co-ordination, one of the focuses of the government's goals is 'to enable the Philippines to attain the status of a newly-industrializing country by the year 2000 through the aggressive application of science and technology' (Dept of Science and Technology 1994). The focus of the Science and Technology activities is on the crucial areas to increase economic growth. The areas include sectors that provide products and services that are expected to yield substantial contribution to the GDP[1].

As stated in the Medium-Term Philippines Development Plan 2002-2010, in 2004 Science and Technology should have contributed significantly to the enhancement of national productivity and competitiveness and to the solution of pressing national problems. By 2010, the Philippines should have carved niches to become a world class knowledge provider and users in selected Science and Technology areas and should have developed a vibrant Filipino Science and Technology culture (DOST 2002).

To support the vision, the government pursued goals for the 2004 vision, including improved access to quality Science and Technology services, higher productivity and competitiveness for Philippines products and industries and creation of technology based enterprises in the region. The goal to be a technology leader in ASEAN, particularly in the fields of biotechnology, material science and microelectronics, to have technology-based and knowledge-based industrial sectors and to have world-class capabilities ICT is expected in the medium term (2010). In order to improve the Science and Technology capabilities, the improvement of HRD quality and a national Research and Development budget of 1% of the GDP with enhanced participation from the private sector to

Research and Development/Science and Technology activities are becoming the focuses (Department of Science and technology 2002:2).

Up to now, the government has spent little on Research and Development activities. Another problem is the low productivity of the Philippines industry. It may be caused by the old technology applied in the production process. One of the policies to meet the goals is support from other sources for improving the Research and Development activities through encouraging FDI for transferring technology. For the short-term strategies to accelerate technology transfer and utilization, there are three major programs that will be implemented, namely:

- (i) Small enterprises technology upgrading program (SET-UP);
- (ii) Technological innovation commercialisation program (TECHNICOM), and technology support program for e-governance (SUPRE-GOV).

Considering that FDI is an important source of modern technology, know-how and management skills, the government has given tax incentives to projects that include technology transfer. Incentives are also given to pioneer enterprises[2]. Registered new non-pioneer firms will get four-year income tax holidays, while the registered new pioneer firms will gain six-year income tax holidays. Facts indicate that technology transfer and diffusion are accomplished mainly through the provision of information regarding technical and economic feasibility (seminars, fairs and exhibits) (UN 1994:89).

The Philippines government has also established Export Processing Zones and an Information Technology Park to gener-

ate technology transfer[3]. The first EPZ was the Bataan Export Processing Zone (BEPZ), established in 1969. The aims of the EPZs were to generate employment, earn foreign exchange, and develop the provincial sector (IBON Databank and Research Center 2005:63). Besides being given incentives, enterprises located in the EPZs were allowed to import capital equipment and raw materials free from duties, tax and other import restrictions. Therefore, activities for transfer of technology are expected to be relatively high more often conducted in the EPZs than in other zones or places. The IT Park set up is aimed to promote the development and export of IT software products and services and other IT related activities (IBON Databank and Research Center 2005:62).

Nonetheless, the government discriminates in giving incentives to foreign investors against domestic investors in order to attract more foreign investment. As a result, only 17% of the domestic investment was established in the EPZs during 1995-2005. More than half of the total investment is dominated by Japan and the US. The low number of domestic investment projects is caused by some of the joint venture projects perhaps being registered as Filipino (IBON Databank and Research Center 2005:64).

Profile of Manufacturing Industries

The manufacturing sector plays the biggest role in the Philippines industry. The share of the manufacturing sector during 1970-1990 was steady at around 25% of the GDP but it declined slightly in the 1990s and now is about 24%. The Philippines had one of the highest shares of manufacturing in Asia during the 1960s (Balisacan and Hill 2003:220). The share of employment declined from 10.4% in 1981 to 9.6% in 1999, which indicates that manufacturing was more capital intensive.

Table 1 Philippine Industry

| | | |
|--|------|------|
| Total manufacturing value added (\$ billion, 2002) | | 17.7 |
| Share of GDP (%)* | | |
| | 1990 | 25 |
| | 2004 | 24 |
| Share of employment (%) | | |
| | 1981 | 10.4 |
| | 1999 | 9.6 |
| Capital intensity** (%) | | 219 |
| Output growth (%) | | |
| 1990-2000 | | 3.0 |
| 2000-2004 | | 3.9 |
| Manufactured export (\$ billion, 2004) | | 55 |
| Share of hi tech*** (% , 1997) | | 59 |
| FDI/GDP (%) | | |
| | 1980 | 3.8 |
| | 1997 | 10.2 |

* Components are at producer prices.

** Capital intensity refers to manufacturing value added per worker as a percentage of the country's GDP per worker.

*** Hi tech exports refer to manufacturing the percentage of exports originating in industries characterized by high R&D intensity.

Source: World Bank, World Development Indicators 2006, Balisacan and Hills, 2003:226

Since 1970, the Philippines has not experienced rapid structural changes compared to other Southeast Asian countries. Food processing, beverages and tobacco products dominated manufacturing but in the 1980s, electronics from labour-intensive industries replaced them. Now, the share of electronics has come to be the third largest after food processing and garment manufacturing.

The manufacturing sector was predominantly inward-looking so its growth depended on domestic demand. During the 1980s there was a decline in value adding in the manufacturing sector and a significant decline was experienced in 1983-86 when there was economy-wide collapse. It started to increase during the Ramos Presidency until the Asian crisis hit.

In the 1980s, when the Philippines began its trade liberalization, the manufacturing sector received above-average protection but by late 1990, higher protection was given especially to agriculture (Balisacan and Hill 2003:222). During the 1990s the share of value added products declined significantly due to the shift from high productivity but inefficient activities towards labour-intensive and efficient sectors and because of the appreciation of the peso. As a result, it reduced the competitiveness of tradable goods activities, including all manufactured products. The tightened labour market has also led to increased wages in the formal sector.

Manufacturing has become an attractive sector due to the protected nature of the domestic market and the regulatory control of the government over the service sector in the past (Balisacan and Hill, 2003:160). The shift of investment to the export processing zones also attests to the growing outward orientation of new investments. Many investors are attracted to operate in the manu-

facturing sectors due to the Philippines open trading policy and relatively abundant supply of semi-skilled/technical labour. As a result, their exporting activity has had an impressive growth, in semiconductors, computer parts and components and telecommunication equipment, which have become the top exports.

The shift of industrialization policy from import substituting industrialization strategy towards export oriented industrialization strategy has increased the share of electronics (machinery parts, apparatus and appliance industry group) in 1995 (Balisacan and Hill, 2003:160). Electronics exports have increased significantly and their share in the Philippines exports is the highest among Southeast Asian economies. Many of the shares are contributed by electronics industries located in the EPZs. Compared to other Asian countries, the Philippines export of technology-intensive[4] manufactures may be second to the smallest, but its growth is fastest at 37% per annum. Technology intensive manufactures, all of which are electronic, account for 67% of the Philippines merchandise exports. Only three items dominate the electronic exports: integrated circuits (40%), storage units (16%) and parts and accessories of automated data processing machines (17%) (Abrenica, 2001:287).

Semiconductors constitute a higher share than in any other Southeast Asian country. Semiconductors, which are the dominant EPZ exports, rely on imported input. Supporting manufacturing processes in the industry, such as electronics, casings and tool-and-dies, remains underdeveloped. As a result, the exports use low local contents of only 25% in semiconductors, 25% in simple items like circuit boards and 15% in more complex products like central processing units (Padilla 2001). Value-adding is mostly contrib-

uted by the labour used to assemble the products. The proportion of net exports to export value of electronic components has also shown that the Philippines exports of technology-intensive manufactures are highly import dependent. In 1998, the export value of electronic components was US\$ 14.7 billion and net exports was US\$ 4.6 billion, so the proportion of it accounted for 31%.

Table 2

Exports of Technology-Intensive Manufactures, Selected Asian Economies

| | Value 1998 in US\$ million, 1998 | Ave. annual growth 1994- 1998 | Share in total exports |
|-------------|--|-------------------------------------|---------------------------|
| Philippines | 20.034 | 37 | 67 |
| Singapore | 76.628 | 6 | 70 |
| South Korea | 52.951 | 8 | 40 |
| Malaysia | 39.934 | 11 | 55 |
| Thailand | 22.253 | 12 | 42 |
| Indonesia | 5.094 | 19 | 10 |
| China | 49.213 | 22 | 27 |

Source: International Trade Centre, UN, cited in Abrenica, 2001:287

However, data on Research and Development activities shows that the percentage of Research and Development activities of total expenditure (Research and Development intensity) for the all-industry average is small, less than 0.1%. Most of the capital goods industries are skills-intensive rather than physical capital-

intensive, including food processing industries, textiles, garments, leather products and footwear, wood products, printing and publishing, ceramics, metal goods, electronics and miscellaneous industries. The exception to these is the transport equipment industries. Such food processing industries, textiles and garments constitute primitive or low-end technologies. However, the processing industries are mostly above average in their labour intensities, such as petroleum refining, paper products, chemicals, glass, cement and basic metals. Although the proportion of high-tech industries is high, the figure is misleading since it reflects more than anything else Philippines specialization in low-tech electronics activities

Table 3

**Distribution of Manufacturing Foreign Direct Investment
1973-2000 (%)**

| Manufacturing industry | 1973 | 1980 | 1985 | 1990 | 1995 | 2000 |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Import-substituting | 69.8 | 73.9 | 78.4 | 73 | 52.4 | 87.5 |
| Food | 6.1 | 13.7 | 22.1 | 19.6 | 3.1 | 46 |
| Chemicals & Chemical products | 9.3 | 29.2 | 26.5 | 27 | 10.7 | 34.4 |
| Petroleum | 41.8 | 4.6 | 6.2 | 5.2 | 12.9 | 0 |
| metal & metal products | 3.5 | 15.8 | 13.1 | 10.8 | 6.9 | 3.3 |
| non-metallic mineral products | 3.2 | 2.1 | 2.6 | 3.1 | 3.1 | 0 |
| transport equipment | 5.9 | 8.5 | 7.9 | 7.3 | 15.7 | 3.8 |
| Export-oriented | 15.4 | 11.6 | 10.1 | 14.9 | 43 | 10.8 |
| Textiles & garments | 12.7 | 5.6 | 4.4 | 5.1 | 3.7 | 0.3 |
| machinery, apparatus, appliances | 2.7 | 6 | 5.7 | 9.8 | 39.3 | 10.5 |
| Other | 14.7 | 14.5 | 11.5 | 12.2 | 4.5 | 1.6 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |

Source: Bangko Sentral ng Pilipinas (various years), selected Philippine Economic Indicators, in Balisacan and Hill (eds., 2003:161)

General Overview of Scientific and Technological Capacity

There are several variables to indicate the technological capability, such as government budget for Research and Development, the number of people engaged in Research and Development, number of patents and the number of foreign projects which involve transfer of technology. According to the percentages, the Research and Development budget has declined during 1980. In 1980, the government spent 688 million pesos (less than 0.3% of the GNP) to 1.132 million pesos in 1990 on Research and Development. Though the amount was increased in 1990, but it still only constitutes 0.1% of the GNP. The latest data shows that in 2002, the expenditure on Research and Development amounted to 4.5 billion pesos, still only 0.1% of the GDP, less than the standard 1% of the GDP recommended by UNESCO for developing countries. BOI incentives for Research and Development investment have drawn five billion pesos in 1992.

**Table. 4 Philippine research and development expenditure,
1980-1990 (in millions of current pesos)**

| Year | R&D expenditures | % of current GNP |
|------|------------------|------------------|
| 1980 | 688 | 0.26 |
| 1981 | 528 | 0.17 |
| 1982 | 634 | 0.19 |
| 1983 | 514 | 0.14 |
| 1984 | 613 | 0.12 |
| 1985 | 606 | 0.10 |
| 1986 | 620 | 0.10 |
| 1987 | 722 | 0.10 |
| 1988 | 807 | 0.10 |
| 1989 | 972 | 0.11 |
| 1990 | 1.132 | 0.11 |
| 1992 | | 0.22 |

Source: Dept of Science and Technology, Science and technology Master Plan (Tagig, Metro Manila, Government of the Philippines, 1990 and Philippine Statistical Yearbook (Manila, national Statistical Coordination Board, 1990)

From 1989 to 1992, the government had spent the biggest Research and Development amount on agricultural science, followed by natural science and engineering and technology. The share of expenditure in the agricultural sector increased from 30% in 1989 to 39.3% in 1991 but declined in 1992 to 31.8%.

Table 5 R and D expenditure by Field of Activity and by Sector(Peso per million at 1985 prices)

| | 1989 | % | 1990 | % | 1991 | % | 1992 | % |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| gricultural Science | 371.1 | 29.9 | 394.4 | 35.6 | 444.8 | 39.3 | 498 | 31.8 |
| gineering and Technology | 245.4 | 19.8 | 185.7 | 16.7 | 192.8 | 17.0 | 303.7 | 19.4 |
| manities | 15.1 | 1.2 | 15.6 | 1.4 | 17.2 | 1.5 | 30 | 1.9 |
| dical Science | 117.6 | 9.5 | 124.2 | 11.2 | 111.4 | 9.8 | 126 | 8.0 |
| tural Science | 225.3 | 18.1 | 217.3 | 19.6 | 231.7 | 20.5 | 313.1 | 20.0 |
| ial Science | 216.4 | 17.4 | 159.6 | 14.4 | 122 | 10.7 | 230.9 | 14.7 |
| er | 47.4 | 3.8 | 10.5 | 0.9 | 10.5 | 0.9 | 62.8 | 4.0 |
| tal | 1238.3 | 100.00 | 1107.3 | 100.00 | 1130.4 | 100.00 | 1564.5 | 100.00 |

Source: Taeyong, Shin, Assessment Reports, DOST-UNDP Project on Achieving International Competitiveness Through Technology Development and Transfer, 1995.

The number of people from government agencies engaged in Research and Development also declined, from 18.000 in 1982 to less than 7.000 by 1987. As of 1996, there were about 1000 Research and Development personnel or 55 per million people. Meanwhile, Research and Development personnel in private industry declined from 2.829 people in 1982 to fewer than 700 by 1987. The ratio of personnel engaged in Research and Development to the total population declined from 354 in 1982 to 236.9 in 1992. The Research and Development personnel/million population is less than the UNESCO's critical mass of 380 scientists and engineers/million population. There is even predicted to be a shortage of scientists, such as chemists, civil engineers, electronics and telecommunications engineers in less than one year of the forecast

period, between 1998-2003 (Terosa and Molina 1998). The infrastructure for Science and Technology has also deteriorated. Facilities are 20-30 years out of date with only a few upgraded. However, they are still 15 years behind.

Table 6 Personnel Engaged in Research and Development, 1980-1987

| Year | Total R & D personnel | Total population (millions) | Personnel per million population |
|------|-----------------------|-----------------------------|----------------------------------|
| 1980 | 11.053 | 48.098 | 229 |
| 1981 | 17.183 | 49.536 | 347 |
| 1982 | 17.992 | 51.283 | 354 |
| 1983 | 9.949 | 52.055 | 191 |
| 1984 | 10.185 | 53.531 | 191 |
| 1985 | 8.425 | 54.668 | 154 |
| 1986 | 7.834 | 56.004 | 140 |
| 1987 | 6.876 | 57.356 | 120 |

Source: Dept. of Science and Technology

There were 1.182 patents owned by foreigners. This was much more than the number owned by Filipinos, which amounted for 44 patents only. The sector domination by foreigners was in chemistry (509), health and amusement (221), separating and mixing (59) and instruments (44). This indicates that the technological level of the Philippines is still weak

Table 7
Foreign-Owned Patents by Main Industrial Sector, 1987

| Industrial sector | | Industrial sector | |
|------------------------------|-----|------------------------|-------|
| Agriculture | 12 | Paper | 8 |
| Foodstuffs & tobacco | 35 | Building | 24 |
| Personal & domestic articles | 14 | Earth-drilling; mining | 9 |
| Health & amusement | 221 | Engines & pumps | 15 |
| Separating & mixing | 59 | Engineering in general | 15 |
| Shaping | 42 | Lighting & heating | 21 |
| Printing | 5 | Weapons: blasting | 14 |
| Transporting | 33 | Instruments | 44 |
| Chemistry | 509 | Nucleonics | 8 |
| Metallurgy | 41 | Electricity | 45 |
| Textiles & others | 8 | Total | 1.182 |

Source: Centre for Science and technology Studies, "Technology transfer in Multination Corporations," (mimeo), 1990, in UN, 1999, "FDI and Development", UNCTAD Series on issues in international investment agreements, New York and Geneva

There were 142 technology transfer agreements by 1990, in which manufacturing was the largest, followed by services and engineering. Most of the technology transfers in the manufacturing sector are taking place in domestic-market oriented industries. In the manufacturing sector, the largest number of agreements in-

cluded industrial chemicals except fertilizer (13 agreements), soap and cosmetics (11 agreements), other chemical products (9). In the service sector, data processing and tabulating are the biggest recipients, whereas in engineering, the largest number of agreements are in architectural and technical services (Bureau of Patents, Trademarks and Technology Transfer, Department of Trade and Industry). Meanwhile, few of the TNCs that are export-oriented seemed to bother to enter the agreements with their subsidiaries (UN 1994:78)

Table 8
Distribution of Types of Collaboration Covered by
Technology Transfer Contracts, 1990

| Type of collaboration | Number | % |
|------------------------------|--------|--------|
| Leasing | 6 | 1.39 |
| Trademark | 78 | 18.06 |
| Patent | 67 | 15.51 |
| Pre-investment consulting | 40 | 9.26 |
| Turnkey | 6 | 1.39 |
| Construction or set-up | 7 | 1.62 |
| Basic engineering | 11 | 2.55 |
| Detailed engineering | 10 | 2.31 |
| Management of construction | 20 | 4.63 |
| Start-up supervision | 20 | 4.63 |
| Production supervision | 13 | 3.01 |
| Equipment repair/maintenance | 17 | 3.94 |
| Administrative supervision | 17 | 3.94 |
| Marketing | 29 | 6.71 |
| Training | 28 | 6.48 |
| Quality control | 21 | 4.86 |
| Others | 42 | 9.72 |
| Total | 432 | 100.00 |

Source: Bureau of Patents, Trademarks and Technology Transfer, Department of Trade and Industry, Government of the Philippines, cited from the UN, Transnational Co-operations and Technology Transfer in Export Processing Zones and Science Parks, New York, 1994

MNCs and Transfer of Technology

It is not easy in this study to analyze how transfer of technology is conducted by the EU MNCs in the Philippines without conducting a survey. Measuring the amount of technology transferred is also problematic. However, this study tries to draw some experience of the technology transfer conducted by other studies.

Pavitt (1985) conducted on survey of 12 manufacturing firms including garments, computers, electronics, metal products, precision instruments and automotive parts and assembly in Export Processing Zones. Reyes (1987) also conducted research which was participated in by 13 firms (46% of the Philippines appliance industry for December 1983). Two of them were either wholly or partially foreign-owned by Sweden and the UK.

Pavitts categorized the industries into 4 classifications:

- (i) Supplier dominated industries. In sectors where firms operated in general supplier dominated industries, technology comes mainly already embodied in production machines;
- (ii) Scale-or production-intensive industries, the key technology relates to constructing and operating large-scale plants and it is transferred internationally mainly through know-how agreements;
- (iii) Specialized supplier. Technology is transferred internationally mainly through reverse engineering and through local linkages with the production engineering departments in product-intensive user firms;
- (iv) Science based firms. The key technology emerges mainly from industrial Research and Development and in some cases from academic research.

From the survey findings, it can be concluded that the type of technology transfer in EPZs and industrial estates were subcontracting and direct foreign ownership and the degree of technology transfer was quite limited. This result has indicated the negative impact of the MNC presence in the Philippines (IBON Databank and Research Center 2005:68)

The concentration of the electronic and automobile industries in the industrial zones is heavily outsourced by the MNCs and they have not developed vibrant upstream industries. The source of technology is relevant to the design policy to encourage Research and Development. However, the survey finding was not very satisfactory as the classification industries did not expect to manifest a high level of Research and Development efforts. For example, microelectronics, which may be regarded as a Science and Technology intensive industry cannot be so classified in the light of the data. The characterization of supplier-dominated industries such as garments fits in well but industries, which off-hand would not be characterized as 'supplier-dominated' manifest the same characteristics (UN, 1994:109).

Reyes finds that most of the MNCs had licensing agreements with multinationals to get the technology and some others also got technical assistance contracts for equipment installation and operations management. Through licensing agreements, the technology was imported in the form of specifications for the assembly of a certain products (Reyes, 1987:27).

Table 9
Summary of Transfer of Technology of the EU Firms, 1983

| Country of Origins | | Sweden | The UK |
|---|--|---------------|---------------|
| Total assets 1983 | | 15,910 | 51,756 |
| Employment | Total | 90 | na |
| | no of skilled workers | 40 | na |
| | no of engineers | 12 | na |
| | no of mgt & supervisory staff | 12 | na |
| Ownership | Filipino | 0 | 100 |
| | Foreign owned | 85 | 15 |
| Primary modes of acquiring technology | Licensing | x | x |
| | Technical assistance technology | x | x |
| | Local R&D | | |
| Budget for technology development and related activities (Thousand) | R&D | 40 | 150 |
| | Technical skills training | 0 | 20 |
| | Engineering training | 0 | 25 |
| | Management training | 0 | 40 |
| | Technical assistance | 70 | 100 |
| | | | |
| Member involved in R&D activities, 1984 | Total | 12 | na |
| | no with masters/PhD | 1 | na |
| | no with bachelor's degree | 11 | na |
| | no with other technical training | 0 | na |
| | | | |
| Other sources of technical assistance or support | Suppliers | x | x |
| | Government research | | x |
| | Private consultant | | |
| | Universities and academic institutions | x | |
| | | | |
| Formal training activities of sample firms, 1983 | In house training | 0 | na |
| | training at local institution | 0 | na |
| | training abroad | 0 | na |
| | | | |
| Obstacles of technological development | Lack of advanced equipment | | x |
| | low capability of local industries | x | |
| | Limited markets | | |
| | lack of adequate product standards | x | x |
| | low capability of local staffs | | |
| | high turnover of staff & brain | | |

Sources: Reyes, 1987:25-37

In terms of the age of the technology, most of the foreign firms use new technology which was recently introduced in developed countries, particularly for the microelectronic products (Pavitt 1985). Perhaps, it is because they are export-oriented firms, thus the importing countries demand technological standards for those products. The low technology was imposed by the demand for higher productivity, thus the firms practice some portion of the assembling by labour-intensive methods. Old technology is still used in some sectors but it is also still used in the developed countries, such as in metal products. The industries in EPZs tend to employ technology of more intensive use of unskilled labour, to utilize the country's principal cost advantage.

Technology may also be generated within the firms by conducting the Research and Development activities. The firms, the financial resources of which were greater had stronger commitment to Research and Development activities. In contrast, a subcontractor and assembler of products design will not attempt to develop his/her capacity to innovate. This is similar to the case of wholly owned subsidiaries or fully controlled joint ventures. These activities are mostly conducted to substitute imported materials or components, since the appliance and electronics industry had been heavily dependent on imported materials and components. The deterioration of the peso exchange rate had also forced the firms to produce the imported materials or components locally. The magnitude of Research and Development activities in a firm is supposed to be related to several factors:

- (i) The size of the firm;
- (ii) The long-term objectives of the firm;
- (iii) The technical capability of its staff;

- (iv) The level of managerial development;
- (v) The access of the firm to foreign or local sources of technology (Reyes 1987:29).

The availability of competent human resources, such as skilled technician and engineering expertise, are also important to develop innovation. In terms of the level of advancement in Research and Development activity, Reyes classified it into four categories. This indicates the strongest local technological capacity and development. They are:

- (i) First level: Testing of materials and products to meet standards;
- (ii) Second level: Substitution of local and products to meet standards;
- (iii) Third level: Adaptation of foreign designs and process to suit local condition/preferences;
- (iv) Fourth level: Local development of new products/product designs and manufacturing process (Reyes 1987:29).

The firms have also used technical assistance or support from suppliers, while only the Swedish controlled firm got support from universities and academic institutions. This indicates that they have contact with external institutions. However, there were some other firms which felt that getting support from either government or academic institutions did not offer significant technical assistance apart from laboratory testing (Reyes 1987:31).

Lack of adequate product standards was the constraint of those firms. This was because of the various raw materials and different manufacture, which in turn created different standards. Whereas the lack of advancement was not only for production but also for laboratory and testing purposes.

Conclusion

Although the two examples of the EU firms are not representative enough to make conclusions on the technology transfer conducted by the EU MNCs in the manufacturing sector; this study concludes that in general there is no significant impact of the MNCs on technology transfer in the Philippines, while considering several issues:

- (i) Process of technology transfer in the Philippines is effective enough as there are learning processes and skills upgrading. Technology supplier and recipient firms usually participate in the technology transfer process. Most of the technology was gained through licensing. Research and Development activities are also actively conducted by both the recipient and the source countries. This indicates innovation and imitation efforts that respond to economic incentives;
- (ii) Since simple assembly activities predominate within the zones, no significant skills transfer takes place. The concentration of electronics and automobile sectors in the industrial zones are heavily outsourced by the MNCs and they have not developed vibrant upstream industries;
- (iii) The success of technology transfer also depends on the capability of the Filipino managers, technicians and workers. The capability of the Philippines does not seem to be encouraged enough to support the technology transfer process as indicated by the small amount of the government budget, although skilled workers are quite abundant. The availability of competent human capital and Research and Development activities are expected to improve the innovation and imitation efforts;

- (iv) Though the proportion of high-tech industries is high, Philippines industries have been characterized as a specialization of low technology. To achieve the Philippines goals, thus, this image should be gradually shifted toward high-tech activity;
- (v) To attract more foreign investment, therefore, the government should provide attractive policies. Improving technological capacity and facilitating Research and Development may attract more EU investment flows into the Philippines

End Note

[1] The 15 'leading edges', include: agriculture, aquaculture and marine fisheries, forestry and natural resources, metals and engineering, textile industry, mining and minerals, processing industry, food and food industry, energy and transportation, construction, information technology, electronics, instrumentation and control, emerging technologies and pharmaceuticals.

[2] It includes those who (i) engage in the manufacture, processing of production, and/or not merely in the assembly or packaging of goods, products, commodities or raw materials that have not been or are not being produced in the Philippines on a commercial scale, (ii) Use design, formula, scheme, method, process or system of production or transformation of any element, substance or raw materials into another raw material or finished good which is new and untried in the Philippines, (iii) Engage in the pursuit of agricultural, forestry and mining activities and/or services including the industrial aspects of food processing (see more in Primer on Investment Policies in the Philippines).

[3] However, the experience with public EPZs has not generally been regarded as encouraging. A study carried out by the Department of Trade and Industry (DTI) in 1991 concluded that the EPZs programs were less successful than those in other countries. The problems include: (i) Poor choice of location; (ii) Poor investment climate, referring mostly to political stability; (iii) Weak promotion; (iv) Bureaucratic customs procedures; and (v) Non-availability of finance within EPZs (DTI, 1991 cited in UN 1994:90)

[4] We have to discount the explanation of high technology products, since it refers to the components of the products and not merely manufacturing products (Discussion with Thee, 12 October 2006). According to OEDC (1996), there are four classifications for high technology industries Aerospace, Computers, Pharmaceutical and Electronics-communications

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Chapter 5

TNCS AND ITS IMPACT ON LABOR: FOCUS ON INDUSTRY AND AGRICULTURE

Paulus Rudolf Yuniarto

Introduction

Today, when we speak of transnational corporations (TNCs) that produce in third world countries, what comes to mind are the big brand names TNCs from the western developed world such as Nike or IBM. The indication of the appearance of TNCs actually comes from world global expansion and development of industries sharing production with other countries, especially poor countries. The globalization of economic activity in general and the growing role of transnational corporations in particular, in fact, have increasingly directed attention towards social aspects i.e. environmental, technological or the labour condition consequences of these developments. The existence of TNCs today has continued to generate considerable controversies in most spheres of social and political economy across the globe. The labour conditions have been a major arena of contention.

The contentions over labour conditions are important to address, because of: *First*: The existence of labour always challenges development and competitiveness. There is a perception in certain circles that the labour environment has not been sufficiently

conductive to more investment if production situations are not secure; *Second*: There also exist arguments about demands from labour groups to improve their life conditions. In a debate such as this, labour market issues are part and parcel of the overall macro-economic challenges facing the country, particularly in this era of globalization of economic activity.

This paper presents the impact of European TNCs on labour in the Philippines with specific attention to its social implications and explanation of labour conditions in special sectors such as agriculture and industry.

Transnational Corporations (TNCs) and Employment Development

For many developing countries, attracting foreign direct investment (FDI) and an increasing role of the TNCs has been a key aspect of their outward-oriented development strategy, as investment is considered a crucial element for output growth and employment generation. New trends have reinforced the importance of private investment. As a result of the move towards neo-liberal policies, the role of the State has shifted from that of an active economic player with productive activities to a provider of an environment for doing business and of social risk insurance. Private investment, both domestic and foreign, is viewed as the driving force of the economy (Ernst 2005: 1). The TNCs are the main providers of FDI and are thus an important source of employment. Various studies have observed that TNCs made a rather disappointing contribution to employment creation especially after World War II. A major concern for a host country should not just be the volume of FDI it may receive but in which sectors it is

placed and what benefits it brings to the domestic economy in terms of employment and wages. FDI inflows during the 1990s are compared with output and employment growth, wage growth and the labour intensity of specific sectors. Labour intensity of economic growth is simply defined as employment growth divided by output growth (Ernst 2005: 15).

In the Philippines case, as had state briefly earlier, the TNCs have already existed since the 1900s when foreign investors started to discover the Philippines and choose advantageous locations for investment. Many other countries saw the Philippines as an attractive place to outsource business services especially human and social services. Labour costs are low, talent is abundant and customer service is ingrained in the attitudes of rank-and-file workers. The Philippines is gradually becoming an attractive location for production centres in Asia for many international companies. For those searching to make an investment in Southeast Asia, the Philippines offers the promise of high growth, with operational advantages such as a strategic location for global exports and a highly qualified and educated workforce. Moreover, the Philippines has recently achieved a stable political environment, something that has held the country back for decades (Pacific Bridge 1999: 1).

Along with international trade, foreign direct investment (FDI) in the Philippines became a key driver of development and increasingly plays a more significant role in, and provides a substantial contributions to, host economies. Both FDI and TNC from an economic perspective, are assumed to be able to spur faster socio-economic changes and significantly affect the lives of workers and the communities in which they operate. Today, FDI and

TNC are the incontestable masters of international trade and finance for the Philippines. With communications technology that travels at the speed of light, the giant conglomerates transfer trillions of dollars, capital and technology around the world each day.

Related to high priority in the long-term goals of human development, world competitiveness and sustainable relationship with capital accumulation, the Philippines Government in the development effort process has placed FDI as its major achievement. In fact, a lot of the Philippines people live below the poverty level¹. In Manila alone there are thousands of barefoot, hungry children weaving through heavy traffic and pollution, peddling chewing gum and cigarettes to add a bit to the family income. Thousands of poor people live on garbage sites where they collect pieces of rag or plastic to trade for a few pesos. To this human tragedy must be added the thousands of women and children who are forced into prostitution and the millions of people who seek work abroad in order to send money to their families back home. Many end up as domestic workers, where they are exploited and physically, sexually and/or emotionally abused by their employers. Others are easily accused of crimes by the host country, as in the case of Flor Contemplation, who was hanged in Singapore for a murder she did not commit. It is ironic that the money these overseas contract workers send home is the country's major source of foreign currency, used to repay the debt owed to foreign governments, banks and financial institutions (Institute of Political Economy Journal, 1996; 23-29).

¹ Though, Rich Philippine in fertile agriculture farm and source of other nature, but the people of a lot are impecunious. More than thirty million Philippine people, or around fourty percentage of resident's amount as a whole, live less than around one dollar per day. http://www.bbc.co.uk/indonesian/news/story/2005/09/050911_phillipinesw.shtml

The Philippines Government deems it necessary to raise the investment levels from overseas in future years in order to encourage growth and poverty alleviation objectives. The Government, however, recognizes that in order to raise the overall investment magnitude, a substantial increase in domestic savings as well as foreign capital inflows is required. Thus, cognizant of the crucial role of foreign capital achieving and sustaining economic growth, the Philippines Government has adopted a positive attitude towards foreign investment and has taken steps to enhance the climate and environment for foreign investments.

Therefore, the use of TNCs to create solution of various Filipino problems of employment development and improvement of the economy is the Philippines Government decision. The capital, technologies and management styles, which FDI and TNC bring give promise of opportunities for greater competitiveness.

General Philippines Employment Situation

The Philippines, a country of 76,504,077 people inhabiting a land area of 301,000 sq. km, is part of Southeast Asia (National Statistical Coordination Board 2005). According to government data, official statistics show that along with economic recovery and growth, the Philippines employment situation has steadily improved especially in the 2000s. In 2003, the labour force was 35, 8 million out of around 80 million population. Most of the Philippines workforce is still employed in agriculture (36.2%). Those employed in the service sector (48.2%) are more than double compared to those working in industry (15.6%). In addition, there are around 9 million who are self-employed and more than 4 mil-

lion unpaid workers (www.fesspore.org/pdf/Trade%20Union/Year%202005/philippines.pdf). The Table below shows a close relationship between the rate of economic growth and the unemployment rate. The figures support the expectation that as the economy moves forward, the number of jobless would be reduced. These facts by themselves show that the Philippines had overcome the phenomenon of “jobless growth”, which was experienced in other Southeast Asian Countries.

Table 1. Description of Labor Market in Philippines

| | |
|--|---|
| Labor Force ('000) July 2003 | 35.830 |
| Labor Force Participation Rate July 2004 | 67.1% Male: 83.4% Female: 51.1 % |
| Labor Force Participation (%), 2002 | |
| - 15-24 | 30.5 |
| - 25-54 | 51.9 |
| - 55+ | 17.5 |
| Youth Employment ('000) | 7.355 (20.9% of the labor force) |
| Labor Force by Occupation, July 2004 | |
| - Agriculture | 36.2 % |
| - Industry | 15.6 % |
| - Services | 48.2 % |
| Informal Employment | Note: In July 2004, there were 11.385,000 own-account and 3,534,000 unpaid family workers in the Philippines. Taking those as an estimate for informal employment shows that about 47% of all employed works in the informal sector. For comparison, the number of wage and salary workers is 16,705,000. |
| Official Unemployment Rate July 2004 | 11,7 % |
| Unemployed in Absolute Numbers July 2004 | 4.207,00 |
| Youth Employment (15-24), July 2004 | 39% of youth population |
| Youth Unemployment Rate (15-24) | 12% of youth population; balance are those not in the labor force |
| Income Distribution & Inequality, 2000 | |
| -1. Quintile | 4.4 % |
| -2. Quintile | 7.9 % |
| -3. Quintile | 12.4 % |
| -4. Quintile | 20.5 % |
| -5. Quintile | 54.8 % |
| -Gini Coefficient | 0.48 |
| Gross Domestic Product (GNP): | US\$ 2,935 per capita |
| Gross National Product (GNP): | US\$ 1,265 per capita |
| Inflation rate | 4.2 % in April 1997 |

Sources: www.fesspore.org/pdf/Trade%20Union/Year%202005/philippines.pdf

Pursuant to the descriptive Table above, the analysts estimate that the labour market in the Philippines is still beset with problems that undermine the Filipino workers quest for a better and decent living. However, the various problems faced by the workers lead them to negotiate for alternative work arrangements, find self-employment opportunities and land alternative to employment by the government.

According to United Nations report (2005) Philippines unemployment remained persistently high in 2001-2003, averaging 11.3 % over this period. Despite the modest growth in the GDP for the same period, growth was not enough to produce ample employment opportunities for the Filipinos as the country's rapid increase in population from the 1960s to the 1990s resulted in a large increase in the working age population. The labour force also expanded by an average of 3.78% or about 1,752 million compared to the net job generation of 1,058 million. Employment opportunities are scarce for those who live in the urban areas, for the youth who are unskilled and inexperienced and for those whose education does not match industry needs (United Nations, 2005).

Unemployment is largely an urban problem where roughly two in every three unemployed are urban residents. This is traced to the insufficient employment and income opportunities in the rural areas that prompt many rural residents to migrate to the cities and attractive regions to find work. The majority of the unemployed are young people aged 15-24 years who are unskilled and inexperienced. Youth accounts for almost half the total unemployed (48.7%). The youth unemployment rate is the highest compared to all age groups and is more than twice the national unemployment rate (United Nations, 2005).

Another group of the unemployed is the “educated unemployed” whose skills do not meet the available job requirements. Most of the unemployed at that time were better educated than the employed workforce. The majority of the unemployed had at least a high school education (42.6%) while those with a college education accounted for 34.3%. the incidence of unemployment also tended to increase with the years of education. In 2002, only 6.7% of those with at least elementary education were unemployed followed closely by those without formal education (9.3%); with at least high school education (13.2%) and with college education (15.4%). Meanwhile, employed professionals, technicians and associate professionals who are considered most valuable to a developing nation, constituted a mere 4.5 % and 2.7%, respectively (United Nations, 2005).

Underemployment is a more serious problem since it cuts across all age barriers and its magnitude is almost twice that of the unemployment rate. It is more of a rural phenomenon as 61.2% of the underemployed are in the rural areas mainly because of the seasonal nature of farm employment that prompts workers to ask for more labour hours.

The rise and fall in employment is largely tied to the agricultural sector’s performance, with employment trends following the rise and fall in the agricultural sector. Addressing the unemployment problem thus requires either minimizing the fluctuations in agriculture or increasing non-farm income.

Flexible working arrangements have emerged in the wake of globalization. Companies adopt more flexible work arrangements to compete in the global economy. Employers are restructuring their companies, downsizing the workforce and utilizing

employment practices like the hiring of part time or temporary workers, subcontracting and business process outsourcing to remain more competitive.

Amidst these changes, labour relations were generally amicable. From 2001-2003, a total of 117 strikes were declared, equivalent to an average of 39 strikes per year, one of the lowest experienced in the country. The disposition rate of cases significantly improved, from 94% in 2001 to 100% in 2003. The settlement rate also improved. It is noteworthy that neither an establishment closed down nor untoward incidence of violence occurred on account of a strike (United Nations, 2005).

Employment in the Philippines is largely labour-supply driven as people who cannot find jobs in the formal labour market try either in the informal area or land jobs overseas. Over the three-year period, the share of self employed workers has been considerable at 37.7% and those who are unpaid family workers at 12.9%. Meanwhile, the country was able to generate 2,624 million job orders overseas or an average of 875,000 deployments per year, contributing approximately US\$20.1 billion worth of remittances to the country (United Nations, 2005).

Employment Practices in European Transnational Corporations

Employment has many dimensions, with respect to its quality, sources and distribution. Employment generation is both direct and indirect, those, which are directly, hired by the enterprise themselves, both local and foreign and by the downward industry linkages and services needed by these enterprises - for example, transport and food services needed by the workforce.

Concerning employment practices in European TNCs, there is little data about the characteristics and correct number of Philippines workers. However, one example of data that I received from the Philippines Board of Investment was a list of registered TNCs arranged by nationality. This data shows a small number of European countries, which have investments in the Philippines, their product activities and total employment. Further information can be gleaned from the Table below:

**Table 2. European Transnational Corporations (TNCs) In
Philippines 2005**

| Country | Product | Total Employment |
|---------|---|---------------------|
| British | Ceramics speaker, Electronic lamps and bulbs, Tugboat, Cargo Vessel, Oil rug Hulls, Distribution facilities for refined petroleum products, Call center, Garment design, markers, patterns & samples, Power generation, Computer aided design/services to printed circuit board | 3264 |
| French | Furniture, fixtures & furnishing made of aluminum frame, Tourist accommodation facility, Distribution facilities for refined petroleum products, Computer aided design/services to printed circuit board | 1050 |
| Dutch | Semi conductor devices (electronic module for aerospace appl, Gold, Copper concentrates, Petro fluid catalytic cracker project, Propylene, Benzene, Toluene, Mixed xylene, Modernization of Grease mfg.plant, Fresh pineapple, Ict-Enable services- Call center, Pre-fabricated artworks for theme park, buildings, landscape | 4660 |
| German | Coco coir Mfrd products, Ecopmat & coco peat, Furniture, fixtures & furnishing made of aluminum frame, Business process outsourcing, Underpad | 1254 |
| Italian | Beauty care product, Native bags, Women fabrics | 229 |
| Belgian | Tourist accommodation facility | 13 |
| Spanish | Tourist accommodation facility. | 21 |
| Irish | Semi conductor devices (electronic module for aerospace appl, operator of Integrated Logistics service facilities | 122 |
| | Total | 10.613 |

Source: Data processed, Philippines Board of Investment. *List of Registered Companies Arranged by Natioality*. For period: 01-Jan-2005 to 31-Dec-2005

In the list in the Table above, the total number employed was 10.613 workers, a small number for the measure of large company investment from European countries and of the total Philippines employed that they have. Workers in European companies usually work in the industrial sector, agriculture and services. This situation could give an explanation, with model company conditions as in the Table, European companies need special skills in their Filipino labour. For example, an industrial sector such as an Oil Company, electronic industries etc. require workers with high skills and training.

Based on the information data that I have on the existence of European TNCs in the Philippines, they mostly conduct activities and are in the export processing zones. The Philippines government had established these areas as the central areas for investment from abroad. One of the reasons for these export zones is, to know the number of workers in the Philippines who work in various existing industries/companies. A significant number of multinational enterprises and joint ventures, which are in the top corporations in the Philippines, are not located in the various economic or export processing zones. These include the oil companies, pharmaceutical and drug firms and firms engaged in consumer products and the like. Industrial relations in these firms are quite well known as these often appear in the national media. TNCs that belong to the top corporations are quite exemplary in their human resources practices, which spill over into local firms.

In fact there are many workers who work in the export processing zones, the workers are spread over various areas of labour absorption and the numbers per area are different from each other. In the next Table is shown the number of Philippines workers residing in the export processing zones which expanded during 1990-1997.

Table 3. Direct employment in the Philippines Export Processing Zone

| Area | 1997* | 1997 | 1995 | 1990 | Percentage change, 1990 to 1997 |
|---------------|----------------|----------------|---------------|---------------|------------------------------------|
| Mactan | 3,672 | 32,111 | 28,259 | 11,624 | 173.3% |
| Baguio | 3,741 | 3,718 | 3,498 | 4,47 | - 16.42% |
| Bataan | 23,845 | 22,118 | 20,205 | 13,919 | 7.1% |
| Cavite | 47,773 | 47,148 | 40,442 | 5,239 | 819.2% |
| Special zones | 57,581 | 47,115 | 29,219 | --- | 97.3% |
| Total | 164,252 | 152,250 | 21,823 | 35,258 | 366.5% |

Sources: Philippines Economic Zone Authority (PEZA), Information Promoting Department

In the Philippines export processing zones are where most foreign investment is concentrated, the data shows that there has been an increase in direct employment of 336% between 1990 and 1997 (Table above). Between 1995 and 1997, employment increased by 35%. The greatest increases in employment were registered in the Cavite Export Processing Zone. Employment in the special zones, which include Techno Parks and industrial estates, is also increasing. According to the Philippines Export Zone Authority, most of the foreign investments today are from Japan, Taiwan, and Korea. Their Asian counterparts are competitors for investors from other areas such as US, Canada, Australia and Europe.

Philippines Labor Condition In Europe TNCs

It is rather difficult to specifically depict the conditions of Filipino labour in European companies but there are some points which can be noted in this paper related to the common situation often faced by all workers, for example; labour rights, social security, wages, health and safety at work. To depict the labour situation especially in European companies, the next section will describe in general the conditions and situation of workers especially in the industrial sector and agriculture.

1. Case one: Working Conditions And Labor Rights In Export Processing Zones

The labour force in the Philippines export processing zones is engaged mostly in the following industries: shipbuilding and repair services, electrical works, metal working, engineering services, electronics equipment, marine equipment, utilities, air-conditioning and refrigeration, construction and recreation. Prevalent skills are in shipbuilding and repairs, electrical and machine works, construction, machine maintenance, marine machinery repair and power plant repair (PEZA 2005)

Export Processing Zones (EPZs) are special Industrial Estates where companies are mainly export-oriented. EPZ incentives include tax and duty-free importation of capital equipment, raw materials and spare parts. The Philippines government has designated 4 EPZs; Bataan, Cavite, Baguio City and Mactan Island in the Visayas. There are about 250 registered companies in the EPZs. The EPZs are defined as "industrial zones with special incentives set up to attract foreign investors, in which imported materials

undergo some degree of processing before being re-exported". The EPZs were set up in the hope of attracting investment, creating employment and generating foreign exchange earnings by promoting non-traditional exports. In this case the government also hopes that foreign direct investment will promote the transfer of technologies and skills (backward linkages) to industries outside the zones. Firms are offered a range of financial incentives to invest in the zones (PEZA 2005).

The number of European companies located in the EPZ can be seen in the Table below. European companies make several commodities and employ workers such as, water service organizers, electronic equipment assemblers or audio product makers. In fact, if attention is given to the amount of investment deposited in industry the full adequate amount is equal to 951.8 million dollars. Although peripatetic European companies amount in the Philippines pertained to a little more, it could be predicted that sufficient large investment can permeate labour although in insignificant amounts.

Table 4. Europe investors in the Philippines Economic Zone (1996)

| Company Name | Project | Country | Project Cost (in million \$) |
|-------------------------------|---|---------------------|------------------------------|
| Biwater International Limited | Water Privatisation | Philippines/Britain | 120.0 |
| Thomson Audio (Phils) Inc. | Audio & communication products | France | 72.8 |
| BICC Brands Rex | Data cables & accessories | Britain | 16.0 |
| Kita Corporation | Manufacturing & assembly of consumer electronics products | Philippines/Britain | 743 |

Sources: data proceced, <http://www.itcilo.it/english/actrav/telearn/global/ilo/frame/epzppi.htm>

The European companies basically do not relinquish the requirements of labour in these companies. The International Labour Organization (ILO) explains the conditions of labour especially in EPZ areas can be said as causing less concern from the government and the unions, this condition explains that, the labour intensive nature of much processing and assembly work means that enterprises compete largely on the basis of price; with labour costs a large component of total costs. Companies see labour as a cost to contain rather than an asset to develop; more complete explanation regarding the condition of the labour situation can be seen in the description which I conclude from the paper International Confederation Of Free Trade Unions (ICFTU) entitled Working Conditions and Labour Rights in Export Processing Zones (2004). The description basically embodies the problems faced by the companies in the EPZ sector. In European companies the situation is more or less equal with that of other companies.

In the Philippines export processing zones, some companies are well-managed industrial entities where responsible firms offer good working conditions and higher wages than elsewhere in the economy. Among these enterprises are many which see the social and commercial value of improving performance and productivity through good human resource management and respect for employment and labour rights.

However, some companies also have a different class of enterprise, one which builds its success on the exploitation of a cheap and compliant workforce. They are located in areas with loose labour markets and governments which are ambivalent or hostile towards trade unions. In this type of enterprise, employers often pay scant regard to labour laws, employment regulations and

health and safety at work. Restrictions on the right to join a trade union, bans on collective bargaining and the right to strike, low salaries and compulsory overtime are widespread. The ILO Committee of Experts on the Application of Conventions and Recommendations, which monitors the application of international labour standards in the Philippines, reports that since 1998 there have been numerous “inconsistencies” between the obligations prescribed in ILO Conventions and national legislation and practices in EPZs. They have urged national governments to develop strategies for foreign-led investment which respect the ILO’s agenda for decent work, notably through improvements in working conditions and productivity.

Low labour costs and flexibility of workers are one of the key reasons for foreign firms to invest in EPZs. In addition to financial incentives, such as temporary tax breaks and duty free imports of raw materials, governments also seek to attract foreign investors to EPZs by offering them a loose regulatory framework for social and employment rights. In the Philippines this framework may simply mirror legislation and practice in the rest of the economy. In others, labour standards are lower and employment rights weaker in the EPZs. The reasons for this are:

- a. Exemptions from labor laws: some governments, in their efforts to attract investors, exclude EPZs from the scope of application of national legislation.**

In most EPZs labour laws are the same as those that apply elsewhere, in other countries, although as described in the next section, they are often not enforced. However, in a number of coun-

tries, firms investing in EPZs are exempt from employment legislations. In most of these cases the Philippines Governments had to adopt the core labour standards of the International Labour Organization (ILO), including Convention No. 87 on Freedom of Association and Protection of the Right to Organize and Convention No. 98 on the Right to Organize and Collective Bargaining. So that if a situation arises concerning a labour case, the Philippines government will deny it because it has taken on the rules set by the ILO. But sometimes there is still a case which harms workers, for example, denying workers in the zones the right to belong to and be represented by trade unions, a flagrant violation of these international labour standards.

b. National legislation not enforced: governments frequently do not enforce national laws in the zones. Labor inspections are often infrequent and/or the judicial system under-resourced.

More typically, the weak enforcement of social and employment laws allows firms to operate with lower standards. Governments in some cases may face difficulties in ensuring that legislation is applied because labour inspectorates are too weak, or because their judicial systems lack the staff and resources to deal with cases. Governments may turn a blind eye to illegal practices or even encourage non-enforcement in the hope of encouraging firms to set up or remain in the zones. Generated effect of this problem is the emergence of deviation practices which finally will harm business industry and all people most hit by this impact is a labour group.

- c. Trade unions denied entry to EPZs: in addition, unions encounter huge obstacles in gaining entry to many zones so attempts to organise are restricted.**

Trade unions face great practical difficulties when trying to gain access to zones, particularly when zones are physical enclaves. A Filipino trade unionist, Enrico, told the ICFTU (15) of the difficulties he has encountered in his attempts to organize the Cavite Zone, where only 39 of the 200 companies are unionized:

“Meetings with workers have to be organized outside the company premises, on their way to work, or even in their homes. Sometimes this can prove very difficult, with employers bribing politicians, police officers and other local officials in order to get them to discourage workers from contacting trade unions. Most workers are even scared of answering our questions; they fear for their jobs.” He went on to explain that, “The companies located inside the zone are surrounded by barbed wire and security guards. It is impossible to gain access to company premises without being authorized by management.”

In the Philippines, companies operating in the zones employ private security guards, sometimes armed, to prevent trade union officials from entering production units. This is similar to other countries, such as India, although the right to join trade unions and to collective bargaining exist in law, union activity is very difficult because entry to the zones is restricted to workers who are bussed in by their employers.

In this case, companies sometimes treat the place of their business like military sites which must observe and be armed at all points.. Every compromising movement and menace to the ex-

istence of companies will as soon as possible be eliminated. From this situation it can be understood that many companies' custodians of security observe their business places for security.

d. Dismissals for union activity

Employers regularly use the threat of dismissal to control the workforce. Few workers in the zones have long-term employment contracts. Short-term contracts are used for flexible hiring and firing and for avoiding costs such as maternity and redundancy pay. Dismissals are actually routinely used by employers in the Philippines, which have EPZs in their area, usually to get rid of workers who attempt to form unions. In the eyes of company owners the existence of trade unions will endanger the company because trade unions sometimes are identical with resistance movements for the prosperity of employees. So efforts for the demarcation of trade unions will continue.

e. Firms shut up shop

In its most extreme form, dismissal is used to sack an entire workforce when unions approach success in organizing a factory. It is not unusual for employers, when presented with a request for union recognition, to state that the factory is closing and dismiss the workforce, only to restart production in the same country but under a different name. Although this happens very rarely, the threat to disband a company worries the workers because they will lose their work.

f. Violent repression of trade unions

Violent repression of trade unions is much the same in all labour unions the whole world over, that is, some workers who reveal that they have signed up with a union risk serious reprisals. Intimidation, assaults and death threats are not uncommon. The companies that employ labour oftentimes use the way of violence to eliminate labour problems. Ordinary conflicts finish quickly with disconnection from their jobs. This usually takes place among individuals who were active in labour unions and conducted prosperity campaigns and justice for labour.

g. Gender discrimination

The majority of workers in the zones are women. Employers in the EPZs are more likely to favour women for routine, repetitive work in the low-tech and labour-intensive industries like garment making and electronics. Some consider women more compliant, disciplined and harder working than their male counterparts. It has been argued that some zones, in countries like the Philippines, have been successful in offering women a route into formal employment, where wages are often higher than in traditional jobs in the informal economy. However, female workers often face a number of barriers at work, including discrimination in hiring, wages and benefits, and sexual harassment.

I do not have any examples of European company misdemeanors but I would like to give an example from an Asian TNC, The IT manufacturer Fujitsu (FCPP), a global leader in hard-disk manufacturing, illustrates the attitude of some employers towards women. Fujitsu employs 3,000 workers in its plant in the Laguna

export-processing zone in the Philippines. Eighty per cent of the workforce is female, *because they are better than men*, says Masaaki Nagamine, FCCP Chairman, adding that they barely cost one fifth as much as a skilled worker in Japan. "Better" all too often is synonymous with "compliant" as far as EPZ employers are concerned.

Clearly, the condition of workers, especially of women, in industrial business is always marginal. The differentiation in gender perspective stems from the fact that women seldom complain about the discriminative actions of their companies. Especially concerning their work burden. Women usually accept the burdens placed on them. Discriminative treatment often happens in companies which employ women.

The principle of equal pay for work of equal value is contained in one of the ILO's core labour standards and is a convention that many governments have signed up to. However, female workers in zones are often paid less than men and have less access to training and development. In the Philippines, the Trade Union Congress of the Philippines reports that workers have been made to resign four months into pregnancy and are not allowed to resume work after birth.

h. Excessive working hours

Low pay and tight delivery schedules encourage employers to underpay workers and to force them to work extremely long hours. Basic pay in the zones is often the minimum wage, or wages that are higher than those paid by local enterprises. Wages it is true sometimes become a problem often misused by companies

With the reason of disadvantage of a company it can be the reason for a company to pay labour only within its budget limit, but demand increased, improved productivity. For labour this situation sometimes makes it difficult for them to refuse additional hours even if in some cases their excessive work time is not paid for.

i. Health and Safety

Health and safety for labour is often ignored by a company because the company looks at health and safety is not something urgent. For a peripatetic company in industry, safety and health are matters of vital importance relating to work safety guarantees for their employees. Health is not merely related to the physical conditions for the workers but also with the company environment. This matter is interconnected with the security facilities of the company so that labour is protected from accidents. These two, safety and health, are matters requiring attention.

The weak enforcement of labour laws and the lack of labour inspections can often mean that health and safety legislation is breached in the EPZs. Trade unions frequently report instances of failures by firms to provide protective equipment, proper sanitary facilities, adequate ventilation and training on health hazards.

The lack of sanitary facilities and restrictions on their use are a cause of serious concern. Many firms restrict access to toilets to discourage time wasting and disturbance of work patterns. The Philippines-based company AAA Inc, which produces baby clothes for the Little Betty, Sears Roebuck and J C Penney labels, allows its workers to go to the toilet once in every four hours of continuous work.

Perhaps the most appalling breach of health and safety legislation in the zones is the practice by some employers of locking workers into the premises during working hours. The practice, stemming from paranoia about employee theft, has been the cause of numerous deaths in company fires. Low wages and excessive working hours mean that many workers cannot get any proper rest nor afford decent food or medical care.

From the description above regarding the condition of TNC companies EPZs are expected to be able to give better understanding especially regarding the conditions of labour at work. However, every developing country needs foreign investment to help to solve its unemployment problems. The existence of TNCs actually is important but if they act arbitrarily, those who suffer most are the workers through their rights and their benefits. Analysis must be made in this paper to give an understanding of the labour position in the TNCs, that is, the jobs they get are basically flexible, insecure and without any welfare benefits. In order to compete with workers in other countries, their legal rights are neglected or even stripped by their government. For example, in an advertisement released by the Philippines EPZ could be seen with this: "Philippines offer the most inexpensive but productive labour force. Law forbids formation of labour unions in the zones and strikes are illegal". The rush to set up EPZs has provided TNC investment with a wide ranging choice of competing zones.

2. Case Two: Working Conditions And Labor Rights In Contract Growing Agricultural Areas

Agriculture, including forestry and fisheries, plays a dominant role in the Philippines economy particularly as 70% of the

country's population is rural and two-thirds of this depends on farming for its livelihood. Almost 50% of the labour force is engaged in agricultural activities. With the expansion of poultry, live-stock and rice, the agricultural contribution to the economy has been substantial, providing 23% of the GDP in 1999 and a growth rate of 3.2%. Marine fisheries and aquaculture have also increased significantly during the last decade with a growth of 2.8% in 1999 contributing almost 20% of total agricultural production. The agricultural sector recovered from the recent slump although the country was not as badly affected as others by the regional economic crisis in 1998. However, sustained expansion of the national economy will require further growth in the agricultural sector (IBON, 2002).

Following is a study related to labour conditions in the Philippines agricultural sector, particularly regarding the efforts of agriculture entangled with TNCs with agricultural capital investment. The model to be studied in this part is agriculture with a growing contract system. In the Philippines, contract growing is the most prominent form of incorporation of farmers into international agribusiness complexes. Contract growing is an arrangement in which an agriculture-based business corporation transfers the farm production process to independent farmers, either to supplement or entirely pass on production. The arrangement is bound by contract, which is usually initiated by the corporation. Thus, the general agreement is for farmers to grow a crop as specified by the corporation. The corporation is in charge of marketing, financing and technical supervision. It also provides planting materials, farm input and technical advice. On the other hand, the independent and individual farmers, now called growers, are contracted to provide the land, to labour and supervise labour and to rent the machinery (IBON, 2002).

Contract growing is not new on the Philippines agricultural scene, it has become an important feature of the current restructuring of the Philippines agriculture being implemented as a result of trade and investment liberalization. The promotion of investments by TNC agribusinesses and production of high value crop “export winners” has resulted in the rapid expansion of contract growing arrangements in various crop systems and in various agricultural areas in the Philippines.

Contract growing is commonly practiced by end-users such as food processing firms since their processing plants have high fixed costs. Large fresh food exporters of fruit, vegetables and seafood either to augment their production or as the main source even, also practice this. Through contract growing, these firms sustain the inflow of raw materials at a steady rate or close to plant capacity. They can abate the uncertainty in buying crops on the open market and still exercise a degree of control over produce, particularly over its price and quality standard. They do away with the risk and uncertainty of production and therefore, are assured of the required volume of raw materials of consistent quality since these are preset under contract growing. In essence, contract growing allows the corporation a degree of control over agricultural production. The control is comparable to what is exercised on company plantations.

But the more significant gain from contract growing by agribusiness is the resolution of issue of labour and land ownership. The corporation does not have to invest in the land, hire labour or manage large-scale farming operations anymore. Thus, the problems in managing an agricultural labour force are minimized as the corporation is detached from the challenges of unionizing and

the pressure to increase wages. The firm, too, is freed from controversial land issue, such as the acquisition of large land holdings, which have become a liability in most countries.

Operations in contract growing usually introduce new crops and techniques and generally entail conveyor-belt processing or packing. Thus, contract growing does not only involve the individual farmers but can also extend to hired labour, other household members, and the entire rural community. In short, contract growing is considered job generating. Contract growing in the Philippines emerged in the context of the historical evolution of TNC control in Philippine agriculture.

Agricultural effort with the system of contract growing in the Philippine entangles many TNCs. The investors come out from many countries especially from the US and Europe. In the next explanation can be seen the example of a company conducting contract growing in the Philippines:

Table 6

**SELECTED EXAMPLES OF KEY CONTRACT
GROWING IN THE PHILIPPINE**

| Item | Sample Form |
|---------------------------------|--|
| Crops | |
| Cavendish Banana | Dole Stanfilco, Del Monte Phils |
| Pinapples | T'boli Agro-industrial Corporation, Dole Phils |
| Lakatan Banana | Sarmiento Management |
| Asparagus | Dole Tropifresh, Nova Vista (Marsman-Drsydale Group) |
| Cassava | Sarmiento Management |
| Processing Tomato | San Miguel Bukidnon Resources Corp, Northern Foods Corp |
| Soybeans | Nestle Philippine |
| Hybrid Corn Seeds | Pioner Hybrid Ayala Agri Cargil Asian Hybrid Corn World |
| Pickling Cucumber | California Manufacturing Kraft General Foods Ram Foods |
| Papaya for Canning | Del Monte |
| Poultry and Livestock | |
| Chicken breeding and broiler | Swift Foods Vitarich San Miguel Corp Purefoods General Milling Corp First Farmer Food |
| Aqualuturc | |
| Seaweeds | Shemberg Marketing Marcel Trading FMC Marine Colloid |
| Forestry | |
| Tree special for pulp and paper | Paper Industries Corp. Of the Philippine |

Source: Institute for Agribusiness Development and Policy, University of Asia and the Pacific

Contract growing is fast restructuring agriculture in several areas. It has an immediate effect on the overall agricultural productivity and development. The impact is not only in the environment or agricultural structure but in social aspects also. In the case of labour the impact is from contract growing related to the labour contract system between a company and the workers. Under contract growing, agribusiness provides the inputs while growers are assured of a market. There is nothing wrong with this arrangement, apparently. For as long as everyone follows the contract then the growers are assured of a livelihood and the agribusiness transnational corporations are assured of supplies and profits.

But the relationship is inherently one sided in favour of the corporation which controls capital and markets and therefore controls technology, production and pricing through the contract. Under conditions of semi feudalism where the peasants and farmers barely eke out a living from their unproductive farms, under extremely exploitative relations with landlords and merchant usurers, there is little choice and freedom in the scale of produce, transaction production loans or in entering into contract growing schemes.

Relating to the problem facing labour, the contract growing system in the Philippines also has impact or problem that is situational on labour group workers in agriculture. In the Boxes below, can be seen cases related to labour conditions that work in the contract growing arena;

Box 1.

Labor only contracting: A Case Study

Contract growing also affects labor practices of contracting companies and introduce oppressive hiring schemes. It has given companies the leeway to go around labor laws not only in plantations but also in processing plants. A civil case has been filed against Tropifresh for terminating its regular workers in its processing plant.

In 1989, Tropifresh engaged the services of Francisco Java tasked to recruit laborers for the processing plant. To circumvent the labor code, Tropifresh asked Java to organize the F-Agro Industrial Manpower Services (F-AIMS) in 1991 to make it appear that Java was a "labor only contractor" and that Tropifresh and Java entered a "a labor only contract" from August 1993 to March 1995.

Tropifresh also engaged the services of another contractor, Ante Manpower. After which, the workers of the two contractors were divided into two shifts, one for F-AIMS and another for Ante.

In 1993, the labor department in Davao City ruled that the practice of "a labor only was contracting" of Tropifresh is prohibited by law and declare that the workers were actually regular workers. Tropifresh terminated the Ante workers in February 1997 and F-AIMS workers in April 1997.

In May, the National Labor Relations Commission in General Santos City decided that the worker be: 1) reinstated; 2) given wage differentials; 3) paid and additional amount equivalent to three hours of work per day; 4) given P50,000 each for moral damages; 5) paid attorney's fees; 6) paid exemplary damages; and 7) paid the cost of ten suit.

(Source: IBON Field Research)

The Boxes explains that in labour in the agricultural sector the improvement in agricultural productivity does not necessarily balance with prosperity of farm workers especially from the wage system, mobility and opportunity to get jobs outside the agricultural sector. Wage rates based on offers of labour, adjustment of growth of farmer mechanism systems and growth of labour which is quite a lot. Besides the problems of wages there are other problems for agricultural workers such as a contract system that is put into effect by companies and contract givers. This system is susceptible to abuse because at any time workers can be dismissed.

Besides that, other problems faced by labour are losing the rights at work that they had had before. Agricultural labour especially can frequently be unappreciated free labour, for example, they may not get suitable payment or be esteemed very cheaply.

Box. 2

Displaces Workers

Dominador Digno had to transfer from one grower to another after Tropifresh abandoned asparagus farmer-growers in Polomok, South Cotabato. Under farmer-grower Rene Relatibo, Digno had to do field maintenance for only P200 per week while the budget was supposedly P300 per week. Tropifresh abandoned Relatibo and Digno had to transfer to Relatibo's brother, another grower who has also abandoned later on the company.

He works for another grower, Dexter Dangautan to harvest, spray and weed for P720 per week, but this was not a fixed income. During the non-harvest period, he relied on his income from spraying and wedding, and worked for another grower who gave P5 for wedding 40-meter row of asparagus. His wife also helped out to augment their income.

In 1995, Digno developed a terrible infection in the back after a mosquito bit was contaminated by a chemical, Bundosiv which he sprayed on the asparagus. He was able to raise P24, 000 by borrowing from relatives while his equally poor grower gave him P300 only.

Digno used to be a tenant (on a 50-50 sharing arrangement) on a corn farm in Sultan Kudarat, but his meager income forced him to work for contract growers instead. However, life becomes more difficult for Digno since now, he is not only displacing with only a seasonal source of live hood, and he has also come into conflict with the growers themselves. In 1995, around 100 farm workers attempted to organize a union but the growers objected.

(Source: IBON Field Research)

Conclusion

The Filipinos as employees are friendly and have a “laid-back” culture. They adopt an informal attitude, even in the workplace. They are at ease with walking into their superior’s office simply to have a conversation. On the other hand, they are sensitive to being reprimanded. They like to be treated with patience. Because they value a solid reputation and a good public image, it is shameful for them to be reprimanded in public. They respect a manager specifically fair, respectful of their dignity and willing to compromise. In return, they are trustworthy, dedicated, responsible and productive workers.

Typical of Asian culture, Filipinos avoid conflict and confrontation. In order to avoid unsettling situations, they often rely on an intermediary or third party to convey their message, the Filipino is more comfortable avoiding conflict. They value harmony over their personal viewpoint and often remain silent in disagreements. Thus, harmony is preserved at the expense of their own creativity or initiative. They will follow a boss’s decision rather than create a stir by suggesting an alternative proposal..

However, the explanatory two cases of labour conditions in industry and agriculture show that important matters in labour groups in European TNCs are inequality and discriminative policies still experienced by labour groups. There are two matters causing injustice and discriminative policies, for example; (1) that the government still gives less attention to labour groups especially by not placing emphasis on the efforts to overcome problems in production able to help labour through the legislation system and (2) protect labour rights exploited by companies, which means that the process between the government and investors to protect

the rights of all workers, can be viewed as new attention to all corporate enterprises and the government, to provide protection for workers in company production.

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Chapter 6

IMPACT OF TRANSNATIONAL CORPORATIONS ON THE ENVIRONMENT: A CASE STUDY FROM MINERAL RESOURCES SECTOR

Maxensius Tri Sambodo

Introduction

In the late 16th century, Ferdinand Magellan's Spanish expedition landed in Cebu. Following which, the Spaniards were the colonial masters in the Philippines for three hundred years. Generally speaking, the Philippines is one of the most natural resource rich countries in the world. In terms of geological prospectivity the Philippines is second after Indonesia; in terms of gold production per square kilometer, second after South Africa; it also ranks third in the world in terms of copper reserves and sixth in terms of chromite reserves (Tujan Jr. 2002: 148). The interaction between the Spaniards and local people happened in all dimensions such as culture, economy and religion. The relationship with Europe became more intense after the Suez Canal opened in the 19th century^[1]. Basically European countries attempted to expand relationships with other countries both individually and as a group of the European Union. According to a Delegation of the European Commission to the Philippines, in the mid-1980s, when the Philippines returned to democracy, the bilateral relationship between the European Union and the Philippines focused on combating poverty and raising the standard of living in the poor and remote areas and strengthening both trade and economic links with the Philippines.

It is not necessarily true that a natural resource rich country will be more prosperous than a poorly resourced country. According to the World Bank Report 2002 (Nettleton et al. 2004: 15):

Natural resources-based activities can lead growth for long periods of time. This is patently evident in the development history of natural-resource-rich developed countries, such as Australia, Finland, Sweden, and the United States over more than a century.

However, the theory of *the resource curse* also suggests that natural resource extraction can magnify conflict, corruption, weak governance and poverty (Nettleton et al. 2004: 15). Similarly, Leite and Weidmann (1999:8) distinguish between direct and indirect effects of natural resources. Direct effects have been labeled the *Dutch Disease*^[2]. The idea came in the 1960s, when large discoveries of natural gas led to a recession in the Netherlands (Leite and Weidmann 1999:8). Indirect effects represent the impact of natural resources on rent-seeking activities and institution building (ibid.).

In 2002, the contribution of the mining and quarrying sectors to the Philippines economy was about 27.6%, higher than the contribution of the manufacturing sector (23.5%) (United Nations 2004). In 2002, manufacturing absorbed 27.6% of the total employed (United Nations 2004). In contrast, the number of people employed in mining as a percentage of the Philippines workforce has decreased since the mid 1980s, particularly in large-scale operations, partly as a result of the intensity of new technology (Nettleton et al. 2004: 17). In 2002, the Philippines mining and quarrying industry employed 134,000 workers or only 0.5% of the

total workforce and in 2004 the number declined to 112,000 (Nettleton et al. 2004: 17). This indicates that labour absorption in the mining industry is quite small. Further, Kirkpatrick and Nixon (1981:380) say that the structure of the international mining industry has been shaped by two main factors: the high degree of uncertainty associated with the exploration and exploitation of exhaustible natural resources and the high cost, capital intensive mining technology. These features account, in large measure, for the dominance of large international and vertically integrated firms in the mining industries.

However, production of gold, copper, chromite and nickel has tended to decline for two reasons. First, they reached their maximum in the early 1980s with gold reaching its peak between 1980 and 1990 (Tujan Jr. 2002: 148). This indicates that the mining industry has declined and implies that protests against mining companies have also declined (Tujan Jr 2002: 153). Thus there is a positive correlation between the number of mining companies and protests against them. Second, many mineral deposits in the Philippines are low grade (Nettleton et al. 2004: 6). Thus, only the application of new technology – with high levels of mechanization and therefore reduced labour costs-makes these deposits commercially viable for large-scale production (Nettleton et al. 2004: 17).

Foreign investors from the United States, Canada, Australia, Britain and Japan have been involved in mining activity in the Philippines. They have collaborated with local investors and through them built transnational corporations (TNCs)^[2]. The top TNCs in the mining sector such as: Benguet Corp, Lepanto Consolidated Mines, Philex Mining, United Paragon and Rio Tuba

Nickel are owned by those countries. In order to liberalize and restructure the mining sector, the Philippines government introduced the new Philippines Mining Act of 1995. Basically, the new Act attempts to attract more transnational companies to invest in the mining sector with the firms' own capital of up to 100%.

On 24 March 1996, the Marcopper Mining Corporation, a Canadian multinational mining company, of which nearly 40% of the total shareholding was owned by Placer Dome Inc, released tailings into the environment from the mine. This affected about 20,000 villagers living near the Boac River. The company spent millions of dollars cleaning up the river but in 1997 Placer Dome divested itself of Marcopper (PRRM 2005:46). According to Nettleton et al. (2004: 3) the Marcopper mine had been polluting the environment continuously since it opened in 1969. Hence, although the Philippines government has attempted to attract many investors to the mining sector, the government must be aware that the impact of mining activities on the environment needs to be minimized. Besides that, a growing concern on promoting TNCs should be balanced with protecting the environment.

This paper argues that although the Philippines has abundant mineral resources and many TNCs can freely come to explore and exploit these; the government needs to consider the consequences to the environment. The study focuses on the TNCs from European countries^[4]. It is organized into 5 sections. Section 2 discusses the historical background of mining activity. Section 3 describes the current situation in mineral resources. Section 4 analyses the impacts and potential impact of TNCs on the environment. Section 5 concludes and offers policy implications.

Historical Review of Mining in Philippines

The Pre and the Colonialism Eras

The history of mining in the Philippines is divided into three periods (Caballero 1996: 160). The first is the Chinese period from as early as 500 B.C to the 1500s; the second, the Spanish period from the early 1500s to 1889; and the third, the American period from 1889 to 1941 (Caballero 1996: 160-161). According to Tujan Jr. and Guzman (1998: 29) indigenous people used gold and bar-iron as media of exchange with Chinese merchants. During that time, production of mining was insubstantial and because of economic self-sufficiency, mining activity was based on community and small-scale mining in the Cordilleras and Mindanau (Tujan Jr. and Guzman 1998: 29).

In the 16th century when the Philippines was colonized by Spain, Spanish colonizers attempted to exploit gold. However, the Spanish colonizers could not fully exploit the mineral resources because the aboriginal communities and rebels attempted to protect their land as in the Mountain Province and the central part of Cordilleras (Tujan Jr. and Guzman 1998: 32-33). The Spanish colonizers made rules and regulations in mining and conducted identification of mineral deposits in different districts, pacification of the *Igorots* in the gold district in the Cordilleras, dealings of specific mining groups with the hacienda and discussion of benefits for specific groups interested in pursuing the activity (Tujan Jr. and Guzman 1998: 33). However, development of mining was still stagnant and many gold mine locations had to be abandoned (Tujan Jr. and Guzman 1998: 35). This indicates that the Spanish colonizers did not have the capacity to develop the mines (Tujan Jr. and Guzman 1998: 33)

When the Philippines drove out the Spanish in 1896, it was re-colonized by the US after the Spanish-American War in 1898. American colonial power was more progressive in optimizing mineral resources than the Spanish colonizers. The 1905 Mining Act, based on the US Mining Act of 1872, stated that all public land in the Philippines was to be free and open for exploitation, occupation and purchase by citizens of the United States and the Philippines (Nettleton et al. 2004: 6). As a result, American companies began to intensively exploit mineral resources especially in districts such as Baguio, Paracale-Mambulao, Aroroy, Surigao, and Marinduque.

The 1905 Mining Act was replaced by the 1935 Mining Act which gave a 25-year lease renewable for the same period, as the maximum concession (Tujan Jr. and Guzman 1998: 38). The law also opened public lands to exploration, occupation and purchase and limited mining to corporations with at least 60% Filipino capitalization and minerals from underground had to be patented (Tujan Jr. and Guzman 1998: 38).

Gold was a very important commodity at that time. There were two gold booms in 1933 and 1936. The gold boom had positive impact on profits for many American companies and the boom also opened opportunities for new investment in capital, land and labour. As a result, in 1935, the Philippines produced more gold than Alaska and its output was second only to that of California (Tujan Jr. and Guzman 1998: 40). Thus, gold was the third most important commodity in the Philippines export trade, exceeded only by sugar and coconut products (Tujan Jr. and Guzman 1998: 40).

After Colonialism

The US granted the Philippines Independence in 1946 after World War II but the Philippines government still protected the ownership of mining companies by US individuals and corporations (Tujan Jr. and Guzman 1998: 40). In 1952 there was a gold crisis because of increasing production costs, high taxes and low world prices but the copper mining industry was booming (Tujan Jr. and Guzman 1998: 40).

The Parity Rights Amendment and the 'mutually beneficial' Laurel-Langley Agreement resulted in the big mining industry being 'Filipinized' (PRRM 2005:11). New technologies like open pit mining for large-tonnage, low-grade copper deposits were introduced (PRRM 2005:11). The period 1960-1980 was the 'Golden Age' of Philippines big mining, even as the neo-colonial 'intimate relation' retained the pre-existing trade pattern and ownership of mining companies by the US (PRRM, 2005:11). The decade 1980-1990, towards the end of Martial Law (1982) and the fall of Marcos (1986), was the 'dark period' of the mining industry (PRRM 2005:11). During President Marcos' regime wages were controlled by the government and pressure on labour unions was also high. The government, too, was very weak in implementing environmental control on mining activity even when Cory Aquino became the President (Nettleton et al. 2004: 7).

However, in the 1980s, there was a decline in the mining sector and its contribution to exports decreased. Between 1970 and 1974 mineral exports recorded 22% of total exports but in 1986 and 1995 they accounted for only 7% (Nettleton et al. 2004: 7). Nettleton et al. (2004: 6) give two reasons for this. First, there is a lack in investing, thus only lower-grade deposits are now left. Second, there is high pressure from the local community.

On 6 March 1995, the Philippines government issued a new Mining Act or Republic Act No 7942 and a new Mining Code was proposed by President Gloria Macapagal-Aroyo. Basically, the act allowed 100% foreign ownership of mining operations, skirting constitutional prohibitions to foreign ownership of mining companies through Financial and Technical Assistance Agreements – FTAAs – and Exploration Permits (EPAs) (Tujan Jr. 2002: 152)^[5]. The government also facilitated Mineral Production Sharing Agreements (MPSAs).

As a result, foreign investment in mining increased more than 50% between 1995 and 2001, from US\$980 million to US\$1.5 billion but the production remained constant (Nettleton et al. 2004:9). The Philippines government introduced the National Mineral Policy (NMP) to repair the poor performance^[6], with this NMP consultation process funded by the World Bank. The NMP basically attempted to enhance sustainable development and responsible mining. However, it lacked support because the NMP process sought to marry two attitudes that may simply be incompatible (Nettleton et al. 2004: 10). On the one hand, it has sought to bring at least some critics on board with promises of greater inclusiveness (Nettleton et al. 2004: 10). On the other, the proposed policy seeks to appeal to the industry by offering a mining-friendly regime of self-regulation and fast track processing of extraction claims (Nettleton et al. 2004: 10).

Less than one year, after the act was implemented, Marcopper, damaged the environment by releasing mine tailings directly into Calancan Bay (Tujan Jr. 2002: 153). The tailings destroyed agricultural land and killed organisms (marine life) along the river. Further, the tailing also affected people in 14 villages

where people complained of skin irritations and respiratory problems. Besides that, many people were hospitalized because the drinking water was infected and the fish contaminated (Tujan Jr. 2002: 153).

The accident had a huge impact on people movements against the Mining Act and large-scale mining by transnational corporations. People asked for cancellation of the Act and large-scale corporation mining shutdown. The people's movements (local and environmentalist) were successful, in 2000 Climax Arimco and Western Mining Corporation left mining development projects (Tujan Jr. 2002: 158). Further, the national government's Mining Act also has been neutralized which means that the Act is unimplementable because people have become empowered and vigilant (Tujan Jr. 2002: 162). Besides that, Mining corporations have been constantly pressured and forced to introduce more effective measures of waste disposal and management (Tujan Jr. 2002: 162). Thus new entrants are finding that the Philippines is not exactly a haven for global mining corporations as even exploration activities are subject to protests (Tujan Jr. 2002: 163).

According to two case studies conducted on Lepanto Consolidated Mining, a Philippines company which owns a copper and gold mine in Mankayan and TVI Pacific, a Canadian company, Nettleton et al. (2004: 5) conclude that:

Here the picture is clear-people who live near mines in the Philippines are overwhelmingly being made worse off, because of environmental degradation, economic stagnation and human rights concerns. Only a small minority are benefiting from the few jobs available, and occasional company-sponsored community programs.

In summary, the mining sector has shown dynamism, changing in terms of regulations and its contribution to economic development. However, it is clear that the Philippines government failed to develop the mining sector to be more efficient. This is because of lack of modernization and to protect the environment. The mining sector is also subject to vested interests and it comes from the elite community both local and foreign. Although the mining sector has a long history, the government failed to develop strong institutions such as in labour relations, human rights and environmental standards. As a result, although the government has liberalized the sector, the government cannot reap full benefits. It seems that people still struggle over asking for their rights that have been marginalized and stolen by the big mining companies.

Current Situation in Mineral Resources

According to the information pack from the Delegation of the European Commission to the Philippines (2004), in 2003 the top three EU imports from the Philippines were machinery, electronics, electrical apparatus and appliances; clothing and jewelry. In contrast, the top three EU exports to the Philippines were machinery, electronics, electrical apparatus and appliances; chemicals and base metals and base metal products. It is important to note that jewelry, that is part of mineral resources, is one as the most significant products. Basically, mineral resources can be divided into three categories, namely metallic mineral, industrial non-metallic mineral and energy mineral.

According to the government mineral resource data (1973-1996) that could account only for about 10% of the country's total

mineral wealth with total estimated value of mineral resources US\$ 2.1 trillion. As can be seen from **Table 1** the estimated value of metallic minerals was about US\$ 465 billion and the top four in terms of value were Nickeleferous Laterite, Aluminous Laterite, Primary Gold, and Primary Copper. Total estimated value of those resources was 457.5 million USD of metal ore reserves. **Table 2** shows non-metal mineral reserves and magnesite gave the highest value or about 35% of total estimated value of non-metal minerals .

Energy mineral can be divided into three commodities: coal, natural gas and petroleum. As shown in **Table 3**, natural gas gave the highest contribution to the total of energy minerals. It accounted for about 95% of the total estimated value of energy minerals. The share of coal and petroleum of total estimated energy minerals was about 1.7% and 3.3%. Thus between 1973 and 1996, in terms of value contribution to mineral resources, natural gas gave the highest value, estimated at 71% of the total value of mineral resources. However, it should be noted that the monetary figures are only indicative, partial and preliminary. Thus this number has a high degree of uncertainty.

Basically, mining operations have five stages (PRRM 2005:18). First, exploration or prospecting which covers several activities such as searching for mineral resources, estimating the quality and quantity of minerals and estimating the profits. The process takes four to six years but it can add two to four years. Second, mine development prepares construction works both infrastructure and related facilities. In the case of open pit mining, the ore body should be cleared from the overburden. Mining development takes one to four years. Third, utilization or extraction

and disposition of minerals comprise the mining proper either on the surface or underground (PRRM, 2005:18). Fourth, initial mineral processing refers to the milling, beneficiation or upgrading of ores or minerals and other by products to convert them into marketable products (PRRM 2005:18). Fifth, decommissioning includes all activities leading to the winding up of mining operations, including final mine rehabilitation (PRRM 2005:18). It should be noted that refining, smelting and fabricating are all part of the stages of a mining industry but the Philippines mining industry is not integrated and is basically extractive and export-oriented (PRRM 2005:18).

Combining the cost of extraction, processing, marketing, semi-fabrication and fabrication with the estimated value of mineral resources at 10% potential level between 1973 and 1996, there was a profit margin for mineral resources of about \$1.4 trillion (PRRM 2005:15). This money was enough to finance the national debt that was at least \$52.5 billion and it was also the source of funds to finance the long-term costs of national development projects (PRRM 2005: 15). However, as can be seen in **Tables 5 and 6** metal ore production declined in the 1990s mainly because of depressed international markets and low prices for metal ores (PRRM 2005:20). This makes the production of metal ore unprofitable (PRRM 2005: 20). This also indicates that the contribution of metal ore may decline in the future.

The mining industry has been dependent on foreign capital and at the mercy of the international market (PRRM 2005:20). There are two reasons for saying the mining industry is a 'sunset industry' (PRRM 2005: 24-25). First, a low market price of metals depresses profits. This is part of the usual short cyclic boom

and bust that has been overextended. Second, unstable-prices pushed the backward, wasteful and small in scale and inefficient level of mining technology. This led to the lack of local and foreign investments in the metal mining sector. Data from the Board of Investments (BOI) shows, starting in the 1990s, foreign investment in metal mining accounted for only 7% of the total investment in the industry. In addition, the Philippines mining industry is basically extractive, export oriented and dependent on foreign capital. Foreign consultants suggest that liberalization can harness and make these industry features more efficient to expand ore exports. However, there is a fear of an over-extended crisis in the industry (PRRM 2005:25).

Further deterioration of the industry was aggravated by the government's economic policy based on raw material extraction and export. There were no incentives to develop the local mining industry because it literally followed the boom and bust cycles of the international market (PRRM 2005:25). According to PRRM (2005:25) the mining industry was not able to adjust to the price fluctuations in the international market. There was a strong *ningas cagon* tendency in the industry: when metal prices on the international market go up, mining companies suddenly sprout. And when metal prices go down, many of them suddenly find themselves in distress, being unable to cope with payments for loans they incurred in reviving, expanding or putting up new mining firms.

With the entry of transnational mining firms facilitated by the government, the intended end-scenario of the mining industry's liberalization was for a resurrected Philippines-hosted mining operation that is large-scale, highly mechanized and foreign-dominated. Efficient exploitation of the country's mineral resources with

financial and technical assistance coming from the transnational companies becomes the pre-requisite for a revitalized big mining industry or even just its semblance (PRRM 2005:26).

On 16 January 2004, Executive Order No 270 outlining the national policy agenda on revitalizing mining in the Philippines was issued by the President, in line with the policy-shift from tolerance to promotion of mining in recognition of the economic contributions from the sector (PRRM 2005: 26). Further, the Supreme Court on 27 January 2004 declared the Mining Act (RA 7942) unconstitutional by a vote of 8-5 and one abstention (PRRM 2005:27). It nullified all the provisions of the mining act concerning financial and technical assistance agreements that allowed foreign firms to own up to 100% of mining projects and other permits that could be granted to foreign investors (PRRM, 2005:27). The high court ruling was issued after environmentalist groups filed a petition questioning the constitutionality of RA 7942 on claims that the law would displace indigenous communities and destroy the country's natural resources.

Based on the Department of Environment and Natural Resources MAP 2004 data, there were only eight operating large metal mines left in 2002 from the original total of 58 in 1981. A separate survey of IBON in 1996 had counted 14 operating large metal mines (PRRM 2005:49). These included the country's major producers of gold, copper and silver metals, namely: Benguet Corporation, Lepanto Consolidated Mines, Manila Mining Corporation, Philex Mining Corporation and United Paragon Mining Corporation (PRRM 2005:49). Based on available data, the identified foreign interests-big-time or otherwise-linked with these mining companies were as follows (PRRM 2005:50):

1. Benguet Corp.-Broken Hill Proprietary (BHP)/US subsidiary of the conglomerate BHP Billiton, CEDE and Co. (US), Pacific and Co (US), Kray and Co. (US), plus partnership with Toronto Ventures Inc. (TVI) Group of Companies (Canada) et al;
2. Lepanto Consolidated Mines – CRA (Australia), a subsidiary of Rio Tinto Zinc (RTZ) (Britain) conglomerates;
3. Manila Manila Corp. – under the control of Lepanto Consolidated Mines et al;
4. Philex Mining – Witalo, HK Ltd, HSBC, Ltd, Philtreade Tire and Rubber Corp., GST Phils. Inc. and Philex Gold Inc (Canada);
5. United Paragon – Paragon Resources NL (Australia) and Johnson Matthey PLC (UK);
6. Rio Tuba Nickel-under Coral Bay Nickel Corp., joint venture with Sumitomo Metal (Japan), Mitsui and Co. Ltd (Japan) and Nissho-Iwai Corp. (Japan); plus Nippon Steel Corp. (Japan) and Nisshin Steel Corp. (Japan); Hinatuan Mining Corp. – Pacific Motors Co Ltd. (Japan);
7. Taganito Mining – Pacific Motors Co. Ltd. (Japan).

According to the Philippines Board of Investment, Atlas Consolidated Mining and Dev. Corp. registered as a gold and silver company, expanded its operations in 1985. The company is a joint venture between Filipinos and British and is listed on the Philippines Stock Exchange. In 2005, the Australasian Philippines Mining Inc. that produces gold and copper registered as a new pioneer export. The company is a collaboration between Filipinos and Dutch. In 1997, two new pioneer companies, namely Celedonia Power Corporation and First Gas Power Corporation

were established. The companies produce electricity through a diesel plant and a cycle gas turbine (**Table 7**). This indicates that foreign interest in mining industries is still quite high.

Recent figures pointed to by Hondai (2006: 110) indicate that inward foreign direct investment increased sharply to US\$812 million in the first three quarters of 2005 or 69% above the level for the corresponding period in 2004. He argues that this increase is partly the result of government effort to improve the investment environment by reducing the high cost of electricity for multinationals in economic zones, allocating more funds to improve infrastructure and reducing its fiscal deficit to insure macroeconomic stability.

The Impact of TNCs on the environment

The data indicate that growth rates of energy demand, industrial emissions and depletion and degradation of many forms of environmental services and natural resources have matched or even exceeded rates of economic growth (Coxhead 2003: 22). This is mainly because people forget that natural resources or natural capital have a maximum carrying capacity, thus they have to be managed in a sustainable way. The concept of sustainable development has become a useful guide for utilization of resources. As can be seen from **Chart 1**, sustainable development means future generations have at least the same potential economic opportunity to achieve welfare as the current generation or welfare does not decline over time. There are two opinions on sustainable development namely weak and strong sustainable development. According to weak sustainable development, natural capital can be

substituted for physical and human capital but a strong sustainable development view says that some natural capital is important because of imperfect substitution, irreversible losses and uncertainty over values. Besides that, extraction and exploitation of natural resources also have impact on dimensions of the environment, social, economic and cultural aspects and the impacts are interconnected with each other^[2]. Thus, there are two ways of looking at the value of natural resources, namely before and after utilization and both have to be considered as an internal cost of using the resources.

Wright (2002:226) argues that for the minerals industry to be strongly sustainable it would not be involved in mining at all but perhaps would focus on recycling or metal re-use. He continues (2002:227) the 'three R's' of reduce, re-use, recycle are perhaps nowhere more pertinent than to the minerals industry. Further, Wright also points out 'Factor Four' that doubles wealth by using a halved resource can be done through conscientious resource efficiency and by raising energy productivity.

Another way to minimize the impact of industrial activities on the environment is by conducting environmental impact assessment. In the Philippines, it is a must for any mining company to conduct environmental impact assessment before constructing a factory. Further, the companies should conduct environmental management and environmental protection after they begin to operate. In the early review of mining project proposals through the environmental impact assessment (EIA) process is a standard requirement before the conduct of any mining activity-addressing environmental concerns at all stages of project implementation and predicting any potential adverse impacts at the early-stage of project design (PRRM 2005:20).

Chart 2 shows the interconnectedness of the environment, social, economic and cultural impact from large-scale mining industry. According to this, environmental degradation is a contributing factor to other impacts. It is clear that the host community and indigenous people have the highest risks from environmental degradation. Environmental impacts have many sources and there are also potential pollution impacts from the mining industry. The identified potential impacts associated with mining activities are (PPRM 2005: 40-41):

1 Environmental impacts

1. Destruction of natural habitats at the mining and waste disposal sites;
2. Destruction of adjacent habitats as a result of emissions and discharges;
3. Destructive of adjacent habitats arising from an influx of settlers and mine encroachments;
4. Adverse changes in river regimes and ecology due to pollution, silting and flow modification;
5. Alteration of water table;
6. Soil contamination from treatment residues and spillage of chemicals;
7. Change in landform;
8. Land degradation due to inadequate rehabilitation after closure;
9. Land instability;
10. Danger from failure of structures and dams;
11. Abandoned equipment and buildings.

2 *Pollution sources*

1. Drainage from mining sites, including acid mine drainage and discharged mine water;
2. Sediment run-off from mining sites;
3. Pollution resulting from mining operations in river beds;
4. Sewage effluent from sites;
5. Oil and fuel spills;
6. Leaching of pollutants from tailings residues, disposal areas and contaminated soils;
7. Air emissions from mineral processing activities;
8. Dust emissions from sites close to residential areas and habitats;
9. Release of methane from mines.

According to Evans et al. (2002: 210) the European Parliament has made regulations for TNCs by creating the European Parliament's 1999 Resolution on standards for European enterprises operating in developing countries. Basically, the resolution has binding requirements on European TNCs, to ensure that these corporations comply with international law relating to the protection of human rights and the environment when operating in developing countries. However, the resolution has not been fully implemented because there has been no response to every point of the resolution by the European Commission.

Case Study: Holcim Philippines, Inc. – Davao

There are currently nineteen cement firms operating all over the country, more than half, in the Luzon area (NSCB and UNDP

2000:100). The cement manufacturing industry is one of the most pollutive industries in terms of particulate matter (PM) emissions (NSCB and UNDP 2000:102). This is due primarily to the dusty nature of its non-metallic mineral raw materials and its products as well as the combustibility of coal during cement production (NSCB and UNDP 2000:102). With regard to coal, only one out of eighteen cement firms operating in 1988 used fuel other than coal in their production process and the cement manufacturing industry, in fact accounted for almost 40% of the total country consumption at the time (NSCB and UNDP 2000:102). However, under the auspices and financing by the Development Bank of the Philippines (DBP), selected cement plants will be fully rehabilitated and required to convert to coal (EMB: 46). This is because the cement industry, among all industries with the exception of power plants, is the fourth largest energy user, consuming nine per cent of the total industry requirement (EMB: 46). With only eighteen plants, it ranks first in terms of average energy consumption on a per plant basis (EMB: 46).

Holcim is one of the world's leading suppliers of cement as well as aggregates, concrete and construction-related services, with interests in over 70 countries on all continents (Andres 2004: 3). Holcim Philippine, Inc. – Davao Plant is located along the Davao-Agusan National Road in Barrio Ilang – about 16 kilometers from the heart of Davao City (Andres 2004:3). It started in 1966 as Davao Cement Plant as Bacnotan Consolidated Industries Inc. (BCII). In 1980, BCII spun off Davao Cement Plant and established the Davao Union Cement Corporation (DUCC). It was a joint venture among BCII, PHINMA, F.L. Smith and Company of Denmark and Japan and the Industrialization Fund for Developing Countries, with BCII retaining 70% of its original holdings

(Andres 2004:3). In June 1995, DUCC was certified by the Bureau of Product Standards (BPS) to ISO 9002:1994 (Andres 2004:3). This gave distinction to DUCC as the first Philippines cement manufacturer certified to ISO 9002 (Andres 2004:3).

The raw materials quarried are limestone and silica quarried from open pits (Andres 2004:5). Under this method, the area to be quarried is developed first by removing the vegetation and the topsoil cover to expose the raw material and pave the way for its eventual extraction (Andres 2004:5). The topsoil is hauled to designated waste dumps and used in topsoil restoration (Andres 2004:5). In the course of quarrying, a series of terraces are developed for slope stability and overall operational flexibility (Andres 2004:5).

There are nine items that are included in a report on environmental management such as land resources, raw material processing, water resources, noise, air quality, conservation values, heritage and cultural values, social issues, abandonment and future plans (**Box 1**). Each item needs to be evaluated and the firm needs to minimize its impact as much as possible. According to the Holcim Philippine, Inc. in 2005 the firm spent about 5,745,845 pesos or approximately Rp 909 billion on control strategies. The activities/projects include topsoil restoration, reforestation, siltation and flood control, pollution control monitoring and environmental management systems (Andres 2004: 30).

Case Study: Energy Sector

There is a symbiotic relationship between TNCs and global trade. According to Buckman (2005: 93) nearly 70% of all the world trade is controlled by 500 TNCs. Further, trade has impact on the

environment because most trade depends on oil and the pollution effects of oil-powered trade and transport growth has been overwhelming (Buckman 2005: 160). There are two indicators for analyzing air pollution: energy consumption and carbon dioxide emissions.

As can be seen from **Figure 1**, energy consumption in the Philippine increased dramatically. Between 1994 and 2004 energy consumption increased about twofold. According to EMB(:205) there was a consistently positive relationship between the country's Gross National Product (GNP) and energy consumption. Basically, the energy mix in the Philippines can be divided into two sources: indigenous energy and imported energy. In 1996, the Philippines imported 56.28% of its energy needs and it decreased to about 52.60% in 2005 with most in oil and coal. The Philippines is also quite successful in developing alternative energy such as from coconut residues, rice residues and animal manure. It was expected that in 2025, imported energy would increase to 58.75% and it seems that for indigenous energy sources, the Philippines government attempts to use more gas, coal, and wood waste. The Philippines Energy Plan 1996-2025 noted that in the future coal will be the major source of energy and it will supply energy for power generation, cement and industrial direct processing.

Rapid energy consumption leads to high emissions of carbon dioxide. According to the Philippines Energy Plan 1996-2025, in 2005 from 159,070 gigagrams of carbon dioxide emissions, 73% of emissions came from the combustion of oil and coal. As can be seen in **Figure 2** consumption of coal increased sharply with most used for power generation. The second largest coal consumer was

the cement industry. This amount will increase in the future if coal use becomes more intensive. In 2002 the cement industry consumed about 767,617 metric tons of coal, three times higher than industrial district processes. According to EMB in 1975, coal accounted for 0.5% of total energy demand. By 1985, the share of coal consumption to the total energy need was estimated to be 13.4%. This is mainly because of the full conversion of the country's 17 cement plants, not using coal, to coal since 1987 (EMB 205).

As can be seen in **Table 7**, European TNCs are also interested in the energy sector. Basically, in diesel plants and gas turbines. Further, according to *Business Profile 2002-2003: Top 7000 Corporations*, in 2001 Shell Philippines LLC Philippine Branch ranked 2100^[8]. The burning of oil is responsible for 40% of the energy-related carbon dioxide emissions. Besides that, oil production and consumption contribute to about 26% of greenhouse gases (Greer and Bruno 52)^[9]. Thus many European TNCs are also responsible for greenhouse gas emissions. At the same time, a Delegation of the European Commission (EC) to the Philippines also showed special interest in the energy sector. There are three programs directed to sustainable development and the EC is going to grant about 41.5 million euros for those projects. There are three projects that have been run in the energy sector:

1. **Period 2002-07 EC-ASEAN Energy Facility Program.** Increasing the security of energy supply and strengthening the linkages between the policy makers and businesses in the energy sector of ASEAN and Europe, through actions on market awareness, institutional frameworks, feasibility studies and demonstration projects, focusing on electricity interconnection, gas pipeline interconnection, clean coal technology, energy efficiency and renewable energy.

2. **Period 2003-08 EU-Asia Pro Eco II Program.** Fostering adoption of policies, technologies and practices that promote cleaner, more resource-efficient, sustainable solutions to environmental problems in Asia.
3. **Period 2003-07 EU-Asia Pro Eco Program.** Fostering adoption of policies, technologies and practices that promote cleaner, more resource-efficient, sustainable solutions to environmental problems in Asia.

Basically the EU has attempted to promote clean and efficient energy use not only in the Philippines but also in Asian countries in general. Although the program was conducted from government to government (G to G); governments are responsible to spread and impose the program to the private sector. Thus the government can be a leader for further relationship from private to private among countries. However, Buckman (2005:95) says that it is not always true that TNCs are in line with governments, As a result, Buckman (2005: 279) argues that much more global regulation on TNCs should be created especially with regard to their labour practice, their environmental impact, their transfer pricing and profit shifting practices, their preparedness to develop links with local business, their merger and takeover policies and their attitude towards the shifting of investments from one low-income country to another.

Conclusion

As one of the natural resource rich countries in the world, the Philippines has developed its mineral resources and enjoyed a boom in the mid 1980s. Basically, mineral resources can be divided into

three categories, namely metallic minerals, industrial non-metallic minerals and energy minerals. Now jewelry is still one of the top three exported products to the EU.

Generally speaking, when the Philippines was colonized by Spain from the early 1500s to 1889, the development of the mining sector stagnated and many gold mine locations had to be abandoned. Thus, the Spanish colonizers did not have the capacity to develop the mines. After the colonialism era, few European companies were involved in developing the mining sectors compared to American and Canadian companies.

Some efforts were made to strengthen institutional capacity, such as by issuing the Mining Act 1995. The Act is believed as one of the most liberal mining acts in the world. However, the performance of the mining sector is still unsatisfactory. Many TNCs exploit natural resources but forget to protect the environment and the local community. Thus, although the mining sector has a long history, the government has failed to develop strong institutions such as in labour relations, human rights and environmental standards.

The mineral resource data between 1973 and 1996 shows that natural gas made the highest contribution to total energy minerals. It amounted to about 95% of the total estimated value of energy minerals. Further, the gross profits from mineral resources were enough to finance the national debt and to finance the long-term costs of national development projects. However, the metallic ore production has declined since the 1990s because of depressed international markets and low prices. Basically, international market price determines the performance of the mining industry for two reasons. First, a low market price of metals de-

presses profits. Second, unstable-prices affect the backward, wasteful and small in scale and inefficient levels of mining technology. Further deterioration of industry was aggravated by the government's pathetic economic policy based on raw material extraction and export.

Currently, there are some mining and energy companies partly owned by European countries such as Lepanto Consolidated Mines, United Paragon, Atlas Consolidated Mining and Dev. Corp, Australasian Philippines Mining Inc., Celedonia Power Corporation and First Gas Power Corporation. However, their position in terms of the total industries are quite small compared to the United States and even Japan. Thus, the impact of those firms on development is small. This means European countries need to be more aggressive to find business opportunities in mineral resources or it could be because of the problems in the business environment. However, according to Wright (2002:226) the development of the minerals industry should be limited and recycling or metal re-use industries be promoted. Wright also points out 'Factor Four' that doubling wealth by using half a resource can be done through conscientious resource efficiency and by raising energy productivity.

Basically, it is a must that in the early review of mining project proposals, the mining industry needs to conduct an environmental impact assessment (EIA). The project addresses environmental concerns in all stages of project implementation and predicts any potential adverse impacts at the early-stage of project design. The assessment also needs to expand because there is an interconnection among variables such as environmental, social, economic and cultural aspects because environment degradation is a contributing factor to other impacts.

Two case studies have been analyzed. First, Holcim Philippines, Inc. conducted the Environmental Management and Environmental Protection Program and it spent a substantial amount of money to repair the environment. Further, the European Parliament is very concerned about the standards for European enterprises operating in developing countries by promoting the European Parliament's 1999 Resolution. The resolution is a binding requirement on European TNCs to ensure that these corporations comply with international law relating to the protection of human rights and the environment when operating in developing countries.

Second, the energy sector is one of the most strategic sectors for the Philippines. The Philippines needs to import energy and the amount will tend to increase. Basically the Philippines has gas reserves that it has not fully exploited. The European Commission (EC) also has concerns with the energy sector and the EC strongly supports energy efficiency, clean energy and energy alternatives. Thus carbon dioxide emissions and energy intensity can be reduced. The commission also offers three programs directed to sustainable development. Although the program creates relationships government to government; the private sector needs to support it both in the local and the global levels.

Finally, the Philippines needs TNCs to accelerate natural resource development, but the Philippines needs to enhance its institutional capacity. Besides, that institutional capacity needs to develop at the global level. Thus the benefits of natural resources can fully reap rewards for the community and for economic development. Further, Evans et al. (2002:218-222) propose seven strategies as a framework for future action and for future campaigning by mining sectors.

1. Strengthening the rights and capacities of civil society;
2. Standing for communities and civil society;
3. Contesting companies' licenses to operate;
4. Cease financing destructive mining;
5. Enhance nation state powers and responsibilities to protect citizens;
6. Make directors personally responsible for the actions of their corporations;
7. Democratize shareholder powers.

End Note

[1] On 1 January 1986 Spain and Portugal joined the European Community (EC) which at that time had a membership of 12 countries.

[2] Resource booms can destabilize national economies, for example, in the 1960s when large discoveries of natural gas led to a recession in the Netherlands. This phenomenon is known as the 'Dutch disease'.

[3] There are some criteria for choosing a location for investment. Mudambi (1995:249) says location factors are arranged into three basic groups: business and political risk factors, infrastructural factors and policy factors relating to the openness to the domestic economy. Risk and infrastructural factors were found to be relatively ineffective in explaining the location of MNE investment. On the other hand, the corporate tax rate was found to be very important and labour costs were found to have a significant effect as well. As a result, mining companies could create super profits.

^[4] According to Buckman (2005: 92) of the largest 100 TNCs in the world, 38 have their headquarters in Western Europe, 29 in the United States and 16 in Japan.

^[5] Some of the provisions of the Mining Code: 1) 100% foreign ownership of mining projects is now allowed (previously foreign companies were restricted to a maximum 40%). 2) A foreign company can lay claim to an area of up to 81,000 hectares onshore or 324,000 hectares offshore. Philippines-based companies are by contrast restricted to 8,000 hectares in one province and 16,000 hectares within the country. 3) Companies can repatriate all profits, equipment and investment. 4) Companies are guaranteed against expropriation by the state. 5) Excise duties have been cut from five per cent to two per cent, and tax holidays and deferred payments are allowed until all costs are recovered. 6) Losses can be carried forward against income tax. 7) The government commits itself to ensuring the removal of all 'obstacles' to mining including settlements and farms. 8) Companies are promised priority access to water resources within their concession. 9) Companies are given the right to sell gold directly on the international market without intervention from the Central Bank. 10) Mining leases last 25 years with an option of 25-year extensions (Nettleton et al. 2004: 8)

^[6] Despite the rush of applications to mine, the expectation that the Mining Act would attract industry leaders and cutting-edge technology was not realized (PRRM 2005:26). The national minerals policy (NMP) emerged in 2003 to rectify the government's poor performance. The NMP had sought to reposition mining as 'sustainable development' by emphasizing the supposed best practice of the major companies and their concern for social equity and environmental protection (PRRM 2005: 26).

[2] There are several pieces of inter-related legislation that are pregnant with biased provisions for transnational mining interests (PRRM 2005:26):

1. People's Small-Scale Mining Act of 1991 (Republic Act 7076)
2. National Integrated Protected Areas System Act of 1992 (Republic Act 7586)
3. Philippines Mining Act of 1995 (Republic Act 7942)
4. Indigenous People Rights Act of 1997 (Republic Act 8371)

[3] Shell headquarters is in London-United Kingdom. Royal Dutch/Shell explores for oil in some 50 countries, refines in 34 and markets in over 100 nations (Greer and Bruno 51)

[4] Shell spent US\$5 billion or more than three quarters of its net earnings on oil and gas exploration and production alone, with new ventures starting in Algeria, Guatemala, Kenya, the Philippines and Yemen (Greer and Bruno 52-53).

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Table 1. Philippine Metallic Ore Reserve Profile 1973-1996

| Mineral/Commodity | Estimated Reserves In Metric Tons [Mt]) | Average Grade | Estimated Value (In US \$) |
|---|---|------------------|----------------------------|
| 1 Nickeleferous Laterite | 1,569,870,000 | 1.1% Ni | 229,326,609,600 |
| 2 Aluminous Laterite | 292,010,000 | 21% Al, 37% Fe | 98,897,216,780 |
| 3 Primary Gold | 2,108,260,000 | 2.4 gm Au/Mt | 73,473,199,950 |
| 4 Primary Copper | 4,052,087,000 | 0.4% Cu | 55,758,947,360 |
| 5 Silver | (2,108,260,000) | n.d.a | 2,489,238,173 |
| 6 Molybdenum | 30,600,000 | 0.08% Mo | 1,809,072,000 |
| 7 Chromite | 91,576,000 | 21.3% - 43.5% Cr | 1,494,212,625 |
| 8 Iron (lump 9 ore/laterite/magnetite sand) | 1,619,933,090 | 40.5% - 47% Fe | 754,706,023 |
| 10 Mercury (Quicksilver) | 1,474,602 flasks | 6.9 lbs Hg/Mt | 365,760,280 |
| 11 Lead | 9,318,000 | 2.3% Pb | 186,667,494 |
| 12 Zinc | 6,162,000 | 2.9% Zn | 182,629,356 |
| 13 Manganese | 7,537,000 | 48% Mn | 136,751,328 |
| 14 Cadmium | 47 | 0.10% Cd | n.d.a |
| 15 Platinum | 942 | 0.08 oz/Mt Pt | n.d.a |
| 16 Uranium | 200 | 0.04% U3O8 | n.d.a |
| 17 Cobalt | Nickel by-product | n.d.a | n.d.a |
| Total | | | \$464,966,247,400 |

Note:

- Commonly associated with gold ores; average ratio of gold to silver, 1:2
- n.d.a = no data available

Source: PRRM, 2005, Table 1

**Table 2. Philippine Non-Metallic Mineral Reserve Profile
1973-1996**

| Mineral Commodity | Estimated Reserve (In Metric Tons) | Estimated Value (In US \$) |
|-----------------------------------|---------------------------------------|----------------------------|
| 1. Asbestos | 5,811,000 | 98,787,000 |
| 2. Barite | 163,000 | 1,304,000 |
| 3. Bentonite | 1,381,946 | 10,551,671 |
| 4. Clay (all types) | 450,432,000 | 2,815,200,000 |
| 5. Diatomaceous Earth | 4,573,000 | 396,326 |
| 6. Dolomite | 650,070,000 | 1,904,705,100 |
| 7. Feldspar | 22,706,000 | 123,974,760 |
| 8. Guano | 297,000 | 270,270 |
| 9. Gypsum | 2,438,000 | 25,599,000 |
| 10. Limestone-Cement Materials | 19,361,673,000 44,411,000 cu.m* | 1,723,188,897 3,552,880 |
| 11. Limestone-Marbleized | 52,276,000 | 398,343,120 |
| 12. Magnesite | 10,800,000,000 cu.m* | 25,352,000,000 |
| 13. Marble | 22,557,000 | 60,903,900 |
| 14. Pebbles | 13,922,000 | 14,850,133 |
| 15. Perlite | 21,981,000 | 373,667,000 |
| 16. Pumice and Pumicite | 13,798,000 | 154,399,620 |
| 17. Pyrite | 1,467,166,000 cu.m* | 3,711,929,980 |
| 18. Rock Aggregates | 513,000 | 1,698,030 |
| 19. Rock Phosphate | 82,863,000 cu.m* | 299,964,060 |
| 20. Sand and Gravel | 1,145,297,000 | 732,990,080 |
| 21. Shale | 1,793,035,000 | 4,357,075,050 |
| 22. Silica | 19,534,000 | 1,035,302,000 |
| 23. Sulphur | 512,000 | 1,751,040 |
| 24. Talc | 152,407,000 | 644,681,610 |
| 25. Volcanic Tuff (Adobe) | 550,000 | n.d.a |
| 26. Rock Asphalt | 172,981,000 | n.d.a |
| 27. Saprolite | n.d.a | n.d.a |
| 28. Salt | n.d.a | n.d.a |
| 29. Peat | n.d.a | n.d.a |
| 30. "Zambles Jade" et al | n.d.a | n.d.a |
| 31. "Mindoro Jade" et al | n.d.a | n.d.a |
| 32. Jasper/Chert et al | n.d.a | n.d.a |
| 33. Garnet et al | n.d.a | n.d.a |
| 34. Petrified Wood et al | n.d.a | n.d.a |
| 35. Rhodonite et al | n.d.a | n.d.a |
| 36. Tektite | n.d.a | n.d.a |
| 37. Pearl, coral, shell, et al | n.d.a | n.d.a |
| 38. Amber | n.d.a | n.d.a |
| Total | | \$ 71,765,078,605 |

Note: *cu.m refers to cubic meters; n.d.a = no data available

Source: PRRM, 2005, Table 2

**Table 3. Philippine Mineral Energy Resources Profile,
1986-1996**

| Mineral Commodity/Location of Deposits | Estimated Reserves | Estimated Value (In US \$) |
|---|---|----------------------------|
| Coal Cagay Valley Polillo-Batan-Catanduanes Southern Mindoro Semirara Samar-Leyte Negros Cebu Surigao Agusan-Davao Cotabato Zamboanga del Sur | Total Resource – 1.5 Billion metric tons 42% lignite (carbon @ 40- 70% volume) to sub- bituminous coal (70-80 carbon) 55% sub-bituminous to bituminous coal (80-91% carbon) 3% bituminous to semi- anthracite coal (91-98% carbon) | \$ 26,730,000,000 |
| Natural Gas 1. Palawan 2. San Antonio 3. Malampaya | Recoverable wet gas reserves – 3 to 5 trillion cubil feet or approx. 112.3 billion cu.m Max pipeline capacity @ 650 million cu.ft. per day- dry gas | \$ 1,496,959,000,000 |
| Petroleum 1. Palawan 2. El Nido 3. Matinloc 4. N. Matinloc 5. W. Linapacan 6. Malampaya | Ave. annual production (1979-2004) @ 4,000,000 barrels of crude oil, or approx. 100,000,000bbl = 10% Total Reserves = 1 billion bbl | \$ 55,000,000,000 |
| Total | | \$ 1,578.689,000,000 |

Source:PRRM, 2005, Table 3

Table 4. Estimated Value of Phil. Mineral Resources At 10% Potential, 1973-1996

| Mineral Resources | Estimated Value (In US \$) |
|------------------------------------|----------------------------|
| Metallic Minerals | 464,966,247,400 |
| Industrial or Non-Metallic Mineral | 71,765,078,605 |
| Energy Minerals | 1,578,689,000,000 |
| Grand Total | \$ 2,115,600,326,005 |

Source: PRRM, 2005, Table 4

**Table 5. Philippine Metallic Mineral Production
(in thousand units)**

| Year | Copper Qty (DMT) ¹ | Silver (KG) ² | Nickel (MT) ³ | Chromite (DMT) |
|------|----------------------------------|--------------------------|--------------------------|-------------------|
| 1975 | 821.8 | 50.4 | 9.5 | 520.0 |
| 1976 | 857.1 | 46.0 | 15.2 | 431.1 |
| 1977 | 956.4 | 50.4 | 36.8 | 538.6 |
| 1978 | 906.9 | 51.1 | 29.5 | 539.9 |
| 1979 | 1,061.5 | 57.2 | 33.3 | 556.1 |
| 1980 | 1,123.9 | 60.7 | 47.1 | 496.1 |
| 1981 | 1,120.4 | 62.9 | 29.2 | 439.2 |
| 1982 | 1,060.7 | 61.7 | 19.6 | 321.1 |
| 1983 | 1,009.3 | 56.7 | 13.9 | 266.9 |
| 1984 | 860.0 | 49.0 | 13.6 | 259.2 |
| 1985 | 841.0 | 52.4 | 28.2 | 272.0 |
| 1986 | 842.9 | 51.5 | 12.7 | 202.2 |
| 1987 | 817.6 | 50.8 | 8.5 | 188.3 |
| 1988 | 824.2 | 54.6 | 10.4 | 170.9 |
| 1989 | 743.6 | 50.6 | 15.4 | 269.7 |
| 1990 | 698.2 | 47.1 | 15.8 | 263.3 |
| 1991 | 572.3 | 39.1 | 13.7 | 210.3 |
| 1992 | 491.7 | 30.9 | 14.0 | 112.3 |
| 1993 | 526.2 | 31.6 | 7.6 | 60.6 |
| 1994 | 431.1 | 29.6 | 9.9 | 75.9 |
| 1995 | 399.0 | n.d.a | n.d.a | n.d.a |
| 1996 | 256.5 | 24.0 | 8.6 | 117.9 |
| 1997 | 188.0 | 21.0 | 741.0 | 98.0 |
| 1998 | 178.0 | 19.0 | 960.0 | 42.0 |
| 1999 | 151.0 | 18.0 | 631.0 | 17.0 |

Note: 1 DMT = dry metric ton, 2KG = Kilogram, 3MT = Metric Ton, n.d.a = no data available

Source: PRRM, 2005: Table 7

**Table 6. Philippine Gold Production (in kilograms)
1975-1999**

| Year | Primary Producer Large-Scale | Secondary Producer Large-Scale | Panned | Panned Small-Scale (CB)* | Total |
|------|------------------------------------|--------------------------------------|--------|--------------------------------|--------|
| 1975 | 5,657 | 9,975 | n.a. | n.a | 15,632 |
| 1976 | 4,933 | 10,836 | n.a | n.a | 15,769 |
| 1977 | 4,515 | 12,858 | n.a | n.a | 17,373 |
| 1978 | 4,702 | 13,541 | n.a | n.a | 18,243 |
| 1979 | 4,300 | 12,345 | n.a | n.a | 16,645 |
| 1980 | 6,345 | 13,679 | n.a | n.a | 20,024 |
| 1981 | 8,855 | 14,580 | n.a | n.a | 23,435 |
| 1982 | 9,993 | 15,960 | 1 | n.a | 25,954 |
| 1983 | 10,665 | 14,588 | 136 | n.a | 25,389 |
| 1984 | 9,222 | 15,251 | 1,254 | n.a | 25,727 |
| 1985 | 9,529 | 15,449 | 8,085 | 6.72 | 33,063 |
| 1986 | 9,835 | 14,155 | 11,437 | 40.39 | 35,430 |
| 1987 | 9,667 | 15,066 | 7,995 | 52.34 | 32,780 |
| 1988 | 9,683 | 13,517 | 7,282 | 140.18 | 30,482 |
| 1989 | 9,483 | 11,865 | 8,243 | 40.10 | 29,992 |
| 1990 | 8,363 | 10,718 | 5,131 | 379 | 24,590 |
| 1991 | 7,845 | 8,867 | 8,722 | 482 | 25,916 |
| 1992 | 8,983 | 8,774 | 7,414 | 438 | 25,609 |
| 1993 | 7,990 | 7,436 | 9,484 | 7 | 24,917 |
| 1994 | 7,745 | 6,943 | 12,372 | 41 | 27,307 |
| 1995 | 6,621 | 5,775 | 14,193 | n.a | 26,589 |
| 1996 | 8,091 | 6,439 | 15,428 | n.a | 29,952 |
| 1997 | 5,637 | 3,765 | 5,390 | n.a | 14,792 |
| 1998 | 8,639 | 5,539 | n.a | 19,859.00 | 34,038 |
| 1999 | 7,019 | 6,986 | n.a | 17,045.00 | 31,050 |

Notes:

*included panned gold remitted to the Bangka Sentral ng Pilipinas/Central Bank (CB)

n.a = no available

Primary producer – refers to a mine producing solely or mainly for the gold content of its mineral deposit

Secondary Producer – refers to a mine producing gold together with other ore minerals in almost equal economic significance (co-producer), or a mine wherein gold is recovered only incidental to mining and/or milling for other ore minerals (by-product gold)

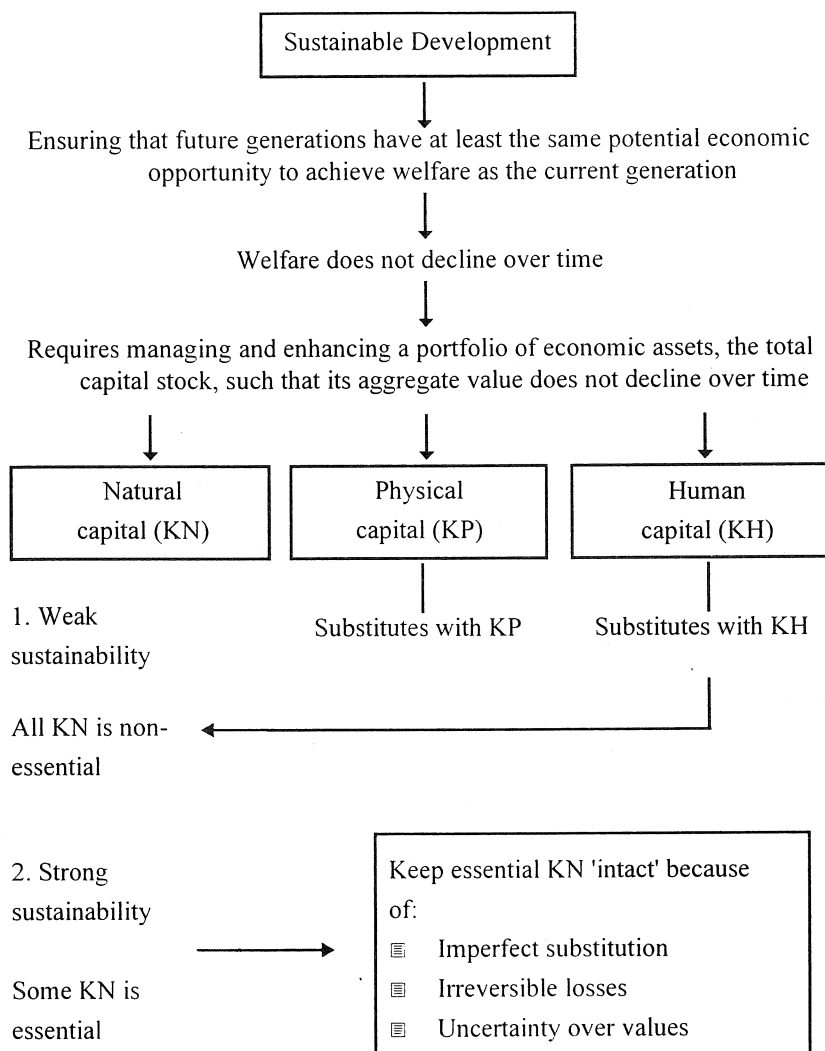
Source: PRRM, 2005: Table 8

Table 7. List of Registered Projects

| Firm Name | Nationality (% of share) | Registered Product | Year of Registered & Project Type |
|---|---|---|--|
| Atlas Consolidated Mining And Dev. Corp | Filipino (42.759%) and British (27.966%) | Gold and Silver | 1985 – Expansion non-pioneer domestic |
| Australasian Philippines Mining Inc. | Filipino (0.001%) and Dutch (99.999%) | Gold and copper concentrates | 2005-New pioneer export |
| Celedonia Power Corporation | Filipino (60%). British (20%) and Irish (20%) | Power Diesel Plant (70MW) | 1997 – New Pioneer Domestic |
| First Gas Power Corporation | Filipino (40%) and British (60%) | Mw Combined Cycle Gas Turbine (1,000MW) | 1997 – New Pioneer Domestic |

Source: Board of Investment

Chart 1. Natural Capital and Sustainable Development



Source:: Pearce and Barbies, 2000 (Figure 2.1)

Chart 2. Social, Economic, and Cultural Impacts of Large-Scale Mining

| POTENTIAL IMPACT | AFFECTED SECTOR(S) |
|---|---|
| Social, economic and cultural dislocation triggered by environmental degradation caused by large-scale mining | Communities and their sectors directly dependent on natural resources: Farming sector Forestry sector Fisheries sector Small-scale mining sector Indigenous People |
| Social and cultural repercussions of integrating the offices and operational units of a corporation owned and managed by people from urban centres as well as its labour force | Host communities and adjacent ones Indigenous people |
| Forced or involuntary relocation and many forms of social disruption caused by mining projects | Host communities and adjacent ones Indigenous people |
| Threatened indigenous political systems of indigenous communities as the management of their traditional domains are effectively turned over to the mining contractor | Indigenous communities |
| Commercial mining operations impact on ancestral domain rights-mining interest enjoy unrestricted access and exploitation rights over mineral resources found in ancestral domain areas | Indigenous communities |

Source:: PRRM, 2005: Chart 2

Box 1
Examples for Land Resources

The aspects and impacts of the quarrying activities are:

a) Quarry pit

Environmental aspect: land conversion from agricultural to mining use

Environmental impacts

Decrease in agricultural produce

Decrease in income to farmers

Environmental aspect: Loss of vegetative cover

Environmental impacts

Damage to aesthetic values

Potential erosion and siltation of nearby bodies of water

Environmental aspect: Change in topography and landforms

Environmental impacts

Potential flooding of the nearby community due to increased surface run off

Damage to aesthetic values

Environmental aspect: Change in the course of run off during heavy continuous rains

Environmental impacts ...Continue

Potential damage to crops

Potential flooding of the nearby community

b) Overburden stockpiles

Environmental aspects: Discharge of loose soils to the surroundings during stockpiling

Environmental impacts

Potential for siltation of water bodies during heavy rains

Potential flooding due to clogging of waterways by collapsed portions of the stockpiles

Hazard to people and livestock due to landslides and floods

Environmental aspects: Discharge of loose soils to the surroundings during spreading of topsoil at mined out areas

Environmental impacts

Renewed land fertility – a beneficial impact

Return of biodiversity and aesthetic attributes to the natural landscape-a beneficial

impact

c) Haulage Roads

Environmental aspects: Release of dust to the surroundings due to dusty roads

Environmental impacts

Nuisance to people near the roads-negligible impact

Potential health hazards to people who might contract respiratory illnesses

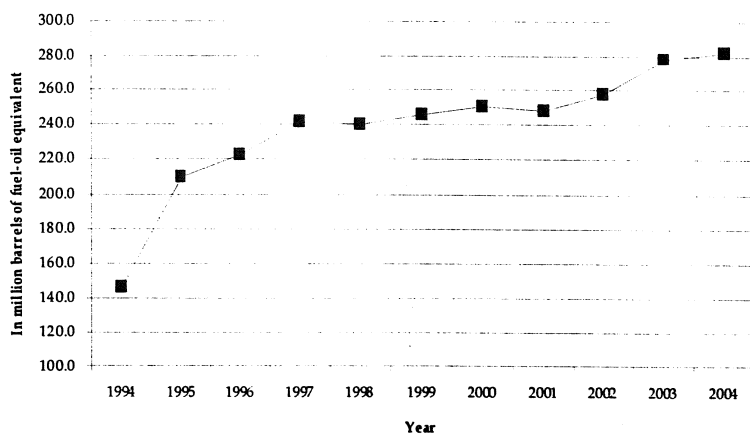
Environmental aspects: Discharge of loose soil and rock particles during road construction and maintenance

Environmental impacts:

Potential siltation of drainage run-off

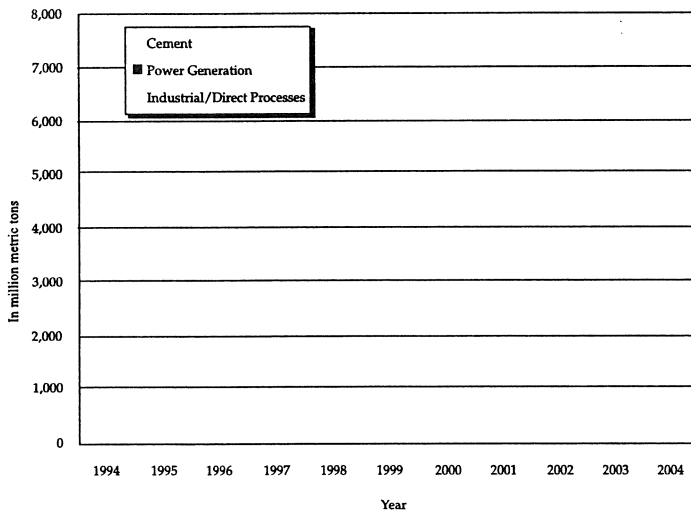
Source: Andres, 2004

Figure 1 ENERGY CONSUMPTION: 1994 to 2004



Source: Philippines Statistical Yearbook 2005

Figure 2 COAL CONSUMPTION by MAJOR USER: 1994 to 2004



Source: Philippines Statistical Yearbook 2005

Chapter 7

TRANSNATIONAL CORPORATIONS, CIVIL SOCIETY AND THE STATE IN THE PHILIPPINES

Cahyo Pamungkas

Introduction

The first broad definition of firms operating internationally stems from the report of the group convened by the Secretary General of the UN, multinational corporations are enterprises, which own and control production or service facilities outside the country in which they are based (Reiffers 1982: 20). Referring to the multinational corporations, transnational corporations (TNCs) are corporations, which have foreign affiliates (Aldana 1994). It is an endless debate about the existence of TNCs in developing countries. The Liberal groups say that the existence of TNCs is needed to help the development of countries through Foreign Direct Investment (FDI).

Nevertheless, the critical groups claim that their existence is not needed since it is a new form of colonization of developing countries. Meanwhile, moderate groups agree to the coming of TNCs but the government should have a clear framework and development plan for them. To a certain degree, the existence of TNCs has been questioned by critical and moderate groups in relation of how to benefit the government and people in developing countries. It means that the phenomena of TNCs cannot only be understood from the economic perspective but also from the so-

cial and political perspectives. Study of the TNCs will follow two mainlines. The first will focus on the impact of multinational enterprises upon the total pattern of social life. The second will emphasize their roles in nation states.

This paper is addressed to shedding a light on the relations among the TNCs, the civil society and the state in the Philippines. It is also meant to answer the questions as follows: (1) What is the relationship between the TNCs and economic development in underdeveloped countries; (2) What is the relationship between the TNCs, the state and civil society in the Philippines? It is hypothesized that there is a conflict of interest between civil society organizations with the government towards the existence of TNCs. Besides that, there are many conflicts and disputes among civil society organizations against the TNCs particularly in the mining sector. Before explaining in depth about TNCs in the Philippines, the theoretical framework of the TNCs will be explained.

The Transnational Corporations (TNCs) and Economic Development of Underdeveloped Countries

Transnational Corporations (TNCs) are a late capitalist phenomenon the similarity of which to earlier institutional forms is superficial; defined with reference to the following criteria (Becker 1987:2). (1) The enterprise is composed of a parent company that has historical association with a metropolitan country and daughter or subsidiary companies located in two or more countries; (2) The subsidiaries earn the bulk of their profits from production of goods and services; international trade is for the subsidiaries an ancillary activity; (3) The various national components of the en-

terprise are mutually supportive and subject to central direction; (4) Because of their dependence on elaborate managerial technologies, transnational firms on the average are more effective under managerial control.

Both liberals and socialists consider that TNCs are an agent in the regionalization and internationalization of metropolitan enterprises, it is a means of expanding particular systems among nation states through private networks (Apter 1976: 2). As far as the international market is dominated by metropolitan agencies through TNCs, so their activities affect the political autonomy of the nation states. The liberal groups say that the TNCs are a rational method of organizing enterprises with reasonable efficiency and involving fewer complicated political arrangements than government-to-government agreements. To free themselves from constraints imposed by TNCs, nations seek remedial strategies or compensatory national policies through political means. The network of international change is mediated by political considerations, through which real politics replaces comparative advantage (Apter 1976: 2). For the liberal view, the appropriate counterbalance to the power of TNCs is international competition.

According to the socialist view, uneven development in the world results from dominating and hegemonic enterprises of advanced countries. Therefore, the TNCs are regarded as instruments of capitalist power, extending their hegemony through market systems, organizing the market systems and creating mutual interdependence on their own terms. Such domination results in metropolitan export of capitalist crises and determines periphery policies, which can only respond rather than initiate action on its own behalf. Hence, the appropriateness of state, rather than pri-

vate enterprise as a means of internal development by periphery countries (Apter 1976: 3). As a consequence, the socialist groups offered counterbalance to the power of TNCs is '*socialist transformations*' through nationalization, planning, and decentralizations conducted by the state.

The existence of TNCs should be seen comprehensively from the political perspective of international economic order stemming from the past. The development of TNCs is in line with the development of capitalism in the international economic order. There are three stages of development, as follows: (Apter 1976: 6). (1) Primary stage marking the beginning of the industrial revolution, leading to colonialism. (2) The intermediate stage represented by shift of metropolitan trade into colonialism and imperialism creating a stable environment for increasingly internationalized capitalism, leading to cartelism. (3) The third stage is marked by the emergence of modern TNCs, leading to the provincialization of the periphery, which becomes a residual area in terms of decisions made in a few multinational centres.

According to the above explanation, it can be shown that a Charter Company is a means of stage one, cartel is in stage two and TNCs are stage 3 from one stage to another. In the first stage, Portugal, Spain, the Netherlands and Britain dominated the Charter business from Europe to Asia, Africa and America. This was followed by the establishment of state companies that exploited and colonized newly discovered continents. It was called the imperialism period over underdeveloped countries as a stage of capitalist development. In the third stage or after an economic depression and two world wars, TNCs grew as main pillars of the international economic order. Enterprises make the transition: from

commercial to productive operations, the combination of industrial and financial enterprises, a growing scientific and technical competition between firms, the capital rather than labour intensive, the role of management, science, and technology become more and more central. This description can be seen in **Figure 1**.

Stages of Development.

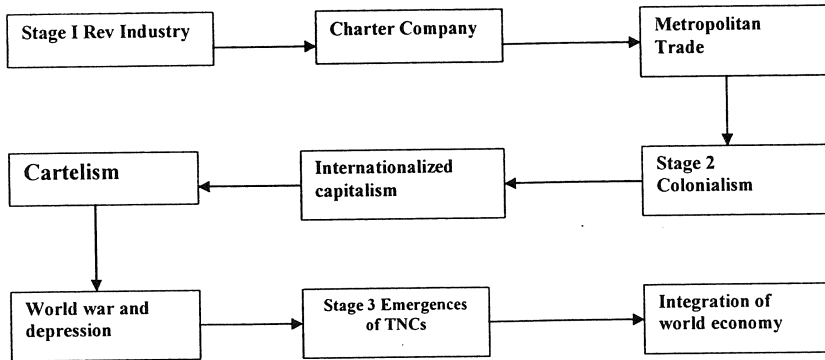
The stages of development are in line with the explanation of Stephan Haymer about the transformation of firms in becoming TNCs (Haymer in Radice 1975:37). He supports the argument that since the beginning of the Industrial Revolution there has been a tendency for the representative firms to increase in size from the workshop to the factory to the national corporation to the multi-divisional corporation and to the Transnational Corporations (Haymer in Radice 1975:37). The transformation from workshop to the factory is the result of the Industrial Revolution started in the UK. Meanwhile, the change from factories to the national corporations marked the early colonization by companies such as the East India Company (EIC) of the UK and Vereenigde Oost Indische Compagnie (VOC) of the Dutch. The colonization and imperialism over underdeveloped countries resulted in the development of TNCs.

In the liberal view, international corporations and conglomerates form entirely new jurisdictions and financial empires. The competition between the nation states and corporations has consistently favoured the corporations since they operate beyond the nation states. However, Marxists believe that behind the giants' financial and productive conglomerates still are their governments. The interest of TNCs in underdeveloped countries reflects the in-

terest of their home governments although there is a difference at a certain level. Based on that view, it is clear that transnational corporations represent a unique international social structure of productive relations. The relations between the rich and the poor can be seen, as the relations between the advanced and underdeveloped countries. In this context, TNCs are a tool of exploitation. It is like migrants who reconstitute their social life wherever they go (Haymer in Radice 1975: 17).

Nevertheless, it is not fair if the TNCs are only seen from a socialist viewpoint. In the liberal view, the problem of evolution of TNCs is the power of monopolistic international firms over the domestic policy-making of governments and the need for governmental intervention as a way of compensating for this development. Therefore, the solution is to introduce more competition and decentralization over private firms and finding international fiscal and monetary arrangements appropriate to this end. It means the existence of TNCs should be seen in a positive manner as a tool of development through investment. This is quite different from the socialist view that sees the evolution of TNCs as a negative instrument of metropolitan power upon a peripheral and positive stage in the transition from capitalism to socialism as well as freeing up or decentralizing bureaucratic control (Haymer in Radice 1975: 18-19).

Figure. 1
Stages of Development



Sources: Haymer in Radice, Hugo et. al. *International Firms and Modern Imperialism*, Penguin Books, Baltimore, 1975.

The other popular line of theoretical projections in relation to the development of TNCs is that the internationalization of TNCs will require and result in the decline of nation states. This speculation is prompted by the search of big business for the ultimate freedom for the international movement of capital, profits and goods (Haymer in Radice 1975: 210). It means that the political power of the TNCs will become challenges for the nation states. Able to be understood in view of capital movements, the international free market system requires freedom of capital to move that may threaten the economic and political stability of nation states. It is hypocritical to see any similarity between the transnational integration brought about by the multinational and the growing interdependence of the earth's regions (Haymer in Radice 1975: 212). The latter arises from the problem of limited natural resources and the effect of environmental changes in one region on the life

supporting possibilities of other regions. However, the former is a natural power relation and a mode of exploitation by advanced countries of the underdeveloped countries.

The global corporations are regarded by those with socialist views as the perpetrators and not the saviours for economic stability of the international order. It is far from being an organism that has grown out of the necessary interdependence of all parts of the world; they have been built to obtain the maximum profit advantage out of the artificial interdependence imposed by the long history of colonialism and imperialism (Haymer in Radice 1975: 212). The anticipation of coalition or conspiracy of multinationals to settle international matters among themselves and then force the nation states to conform to their wills. The interference by the TNCs in the affairs of weaker dependent states is central to their whole history such as in the International Telephone and Telegraph Company in Chile 1970. Even, the ITT could not influence the military to throw out President Allende of Chile (Haymer in Radice 1975: 212).

Nevertheless, in reality, almost all of the TNCs cooperate with the corrupt governments of underdeveloped countries. Any government against the TNCs, such as that of Allende, will be eliminated by TNC agents. This should be understood in a symbiotic context. There is an underlying symbiosis of monopoly capital and its home state (Haymer in Radice 1975: 213). First, the multinational corporations need social stability in the countries where they operate or expect to operate. For international stability, a police force is needed. For external law and order, an army, navy and air force are needed. Business firms also will invest in private armies to protect their property and repress trade unions.

Resources will be devoted by TNCs to insure a friendly environment including having a voice on security matters.

Second: Almost all TNCs are in fact national organizations operating on a global scale. Capitalism from its early beginnings has been a world system or the system has been further integrated by TNCs. Each capitalist firm relates to the world system through nation states. So that, the decisive owners and the headquarters of the TNCs are located in one of the metropolitan centres and dividends are paid in the currency of the centre. Third: The more the TNCs struggle among themselves for market control, the more they need and rely on the active support of the state. Furthermore, rich as the giants are, they nevertheless depend extensively on government support through subsidies for research and development, government purchases of goods and services, etc. (Haymer in Radice 1975: 214).

If traced, the details from the perspective of advanced countries, the operations of TNCs in parent and host countries are harmful to the national interests of both insofar as these activities limit each state's ability to keep employment high, maintain a sound currency and control the economy for the common good. The national interest becomes equated with the interests of individuals and institutions which by virtue of their ownership of the decisive wealth of the community have power to regulate the allocation of economic resources (Haymer in Radice 1975: 215). Therefore, there is no contradiction between the national interest and that of the TNCs. The state needs prosperous TNCs and TNCs need the support of their states. Meanwhile, the infrastructure of exploitation is available in the underdeveloped countries. Because under the sway of the long history of colonialism, underdeveloped countries

have developed a mode of production, class structure and a psychological and cultural milieu to serve to the metropolitan centres (Haymer in Radice 1975 : 217).

The relations between the TNCs and underdeveloped countries is called 'the law of uneven development'. TNCs tend to create uneven development between developing or underdeveloped and developed countries. Stephan Hymer (Haymer in Radice 1975: 54) mentions that the governments of underdeveloped countries ability to tax TNCs is limited by the ability of these TNCs to manipulate transfer prices and to move their production facilities to another country. It is difficult for them to take out surpluses from TNCs for long run development programs and for stimulating growth of other industries. In contrast, the advanced countries governments, the home offices and financial centres, can take the profits of the corporations as a whole.

Therefore, the metropolitan government captures some surplus generated by TNCs, to improve infrastructure and economic development. The TNC regime turns the underdeveloped countries into branch-plant countries not only oriented to their economic functions but through the whole scope of social, political and cultural roles (Haymer in Radice 1975: 55). Robin Murray (in Radice 1975: 108) says that the international economic order is not an aggregation of national economies but a total system in which nations are inferior structures, Trotsky said that the world economy should be seen as a powerful independent reality created by the division of labour and the world market controlling all the national markets. Therefore, it is easy to understand the law of uneven development that is the tendency of the system to produce poverty as well as wealth, underdevelopment as well as development (Haymer in Radice 1975: 38).

Conflict Between TNCs-Civil Society: General Picture

To understand the relations between the TNCs, nation states and economic development theoretically, the relations between the TNCs and civil society in the Philippines will be described. The civil society is regarded as heir of the spirit of the nation states rather than of the government. As mentioned before, the governments of underdeveloped countries including the Philippines, inherit the infrastructure of exploitation from the colonial period. The assumption used in this paper is that the politics of the Philippines economy is a continuation of the colonial system, marked by exploitation of resources by foreign corporations. The coming of political independence in 1946 and the creation of the liberal democratic system mainly after the emergence of 'People Power' in 1986, brought forth the awakening of civil society to struggle against the TNCs, which exploit their natural resources and seize their ancestral lands. This paper sees that there are four sectors where there is a conflict of interest between TNCs and civil society that is: women, farmers, workers and local communities.

1. Conflict with Women

25 out of 1000 workers of Mode International, a giant clothing TNC in the Philippines, in 2001 demanded as follows: (Libang in Goodman 2001: 54): (1) Regularization of workers, as the whole workforce of the company was contractual; (2) Recognition of their union; twice management had closed shop because the workers formed a union; (3) Minimum wage compliance as the highest salary given by Mode is 225 pesos, which is below the 250 pesos legislated by Law; (4) Reinstatement of dismissed workers: 14

workers had been dismissed by management since June 2001, for asking for a salary raise. The MI does not consider the employees who are members of one of four cooperatives supplying the company with much needed womanpower (Libang in Goodman 2001: 54). Since forming a union, the 25 workers could be severely penalized since the law does not permit the formation of unions within cooperatives (Libang in Goodman 2001: 54).

The food and agribusiness corporations such as Nestles, Cargill, Zeneca, Chiquita, BAT, and Monsanto are gaining control over every part of the food chain from land to seeds, crops to chemicals, processing to marketing (Libang in Goodman 2001: 57). It is weakening the role of women as food producers and increasing the family burden since in most societies, ensuring that there is food on the table for their family is a woman's function. For example, conversion of food crops (cut flowers and asparagus) to export crops impact on the concentration of land becoming faster since land is converted to the growing of export crops.

Offshore sourcing has become the strategy of TNCs in the Philippines; it allows them to contest to the bottom to find the lowest wages in the global economy (Libang in Goodman 2001: 58-59). Besides that, TNCs use flexible labour arrangements, which range from (Libang in Goodman 2001: 58): (1) Subcontracting or out sourcing by using third party employers; (2) Direct hiring of temporary workers in the forms of trainees, apprentices, casuals and contractors; (3) Intensification of labour through forced overtime, work rotation, etc.; (4) Discriminating against women who are pregnant; (5) Refusal to acknowledge the special needs of women arising from their reproductive functions.

To ensure political stability and security and to protect their business interests, TNCs do not scruple to use military force from abroad or within the host country (Libang in Goodman 2001: 60). TNCs support repressive regimes by donating to their military budget or directly providing arms such as in the US-Philippines Visiting Forces Agreement and NATO serving as enforcers of these trade alliances (Libang in Goodman 2001: 60). The relations between TNCs and the military are symbiotic; in terms of their feeding one another. This strengthens the earlier theses that the governments' of underdeveloped countries cooperation with the TNCs is a colonial legacy. Both pressure the civil society to realize the interests of colonial powers that are TNCs.

2. Conflict with Farmers

Monsanto and Du Pont, US TNCs, claim that the use of biotechnology will increase productivity and once applied on a large scale mean cheaper food on the tables of consumers. However, this ignores the interests of poor farmers whose lives depend on traditional agriculture without using biotechnology. It created conflict and violence between Monsanto and the farmers in South Cotabato. Hundreds of resentful farmers and militant activists stormed the trial site of the genetically engineered *Bacillus* corn plants on August 30, 2001 in Maltana, Tampakan, South Cotabato (Mariano in Goodman 2001: 149); a 5000 square metre lot rented as test field by Monsanto Philippines.

Monsanto responded by saying: it is considering legal action against the perpetrators of this aggression against Monsanto and Filipino farmers. Monsanto is a multinational agrichemical

corporation controlling 70% of hybrid corn in Asia and 90% of Genetically Modified Organisms (GMO). Therefore, the Filipino farmers did not give the opportunity to Monsanto and they powerfully delivered a message to the giant corporations by people power (Mariano in Goodman 2001: 149). It shows that the interests of the TNCs and local farmers are different. Meanwhile, the government always supports Monsanto by condemning the perpetrators instead of resolving the conflict through dialogue. Such TNCs seem to have sacrificed the people, the environment, science and technology to get their super-profits.

3. Conflict in Industrial Relations

Some Europe and US based clothing and footwear manufacturers in the Philippines concentrate on the design and marketing while subcontracting all of their manufacturing activities since the labour is cheaper and unions are restricted (Bultron and Quintos in Goodman 2001: 166). TNCs utilize subsidiaries and subcontracting parties at multiple tiers where contractors bid down the contract price along with wages and working conditions (Bultron and Quintos in Goodman 2001: 166). TNCs are able to exploit, oppress and use flexible labour while rejecting the responsibility for this exploitation (Bultron and Quintos in Goodman 2001: 166). This is consigning the underdeveloped countries to a colonial or neo-colonial pattern of production and trade intensifying the exploitation and insecurity of workers in host countries including the Philippines. The forms of exploitation against workers conducted by TNCs include labour flexibilization, labour control, and state oppression as follows (Bultron and Quintos in Goodman 2001: 166).

Labour flexibilization covers: (1) denial of formal job security; (2) paying lower wages with few benefits; (3) deprivation of sufficient training and information on health and safety conditions; (4) denial of rights to form and join unions, participate in collective bargaining and wielding their right to strike. Meanwhile internal flexibilizations are: (1) flexible work hours; (2) flexible functions; (3) flexible wages. Flexible work hours covers forced or routine overtime, 24 hour rotating shifts and weekend work shifts. Flexible functions are multi tasking, varied work, work-sharing, job leveling and other work agreements. Flexible wages are a euphemism for a license to evade a rigid wage floor.

Labour control is a strategy for human resource management implementing unitarianism in the work place by saying that the interests of labour and capitalist-employers are the same and using the rhetoric of worker empowerment and participation. It also includes anti union screening, repressive company rules and regulations regarding community outreach, anti-union hate campaigns, dragging legal tactic, using company unions, intra firm coordination and collusion with government officials from local to national levels. State repression includes whittling down labour rights such as the right to form or join unions, the right to bargain collectively and the right to strike. Governments also set up for the TNCs facilities such as export zones or special economic zones where worker rights are too often ignored as documented in the Philippines (Bultron and Quintos in Goodman 2001: 168). Apart from awarding generous public subsidies to TNCs, governments actively collude with TNCs to suppress unions.

4. Conflict with Local Communities: the Mining Sector

Conflicts of TNCs with local communities take place in almost every mining sector. Besides destruction of the environment, mining exploration has influenced health costs, loss of jobs, infrastructure problems, revenue allocation, social impact, militarization and the suffering in local communities of mainly indigenous people. Asthma and respiratory problems often affect local communities as well as mine workers. The large amount of land and water lost and polluted by open pit mining means declining farm yields and fish stocks. Therefore, people's ability to earn money is decreasing. Meanwhile, large-scale mining is seen as a lucrative source of jobs but in reality the arrival of TNCs in mining can often cut the number working as small-scale miners displacing them and farming lands being polluted.

The large-scale mining eliminated indigenous women whose lives depend on small-scale mining. Large-scale mining developed infrastructure but it also created new problems, that is, the facilities are frequently controlled by the company, infrastructure can be destroyed after the company leaves, existing infrastructure can be damaged by mining companies and construction of roads and bridges can encourage unregulated immigration, resulting in land grabbing from local communities (Christian Aid 2004:20). As well, there are revenue allocation problems such as delays between the time the money is collected by the national government and its transfer to the local councils.

The creation and abandonment of company towns can have severe effects on the indigenous communities. Mining also relies on migrants and male work places associated with drunkenness and prostitution. There is suspicion that mining and corruption has links to

both national and local levels. The company will use the tactics of bribery to get consent from local governments and communities and set up NGOs and mining councils in local areas. Besides that, the large-scale mining in the Philippines often means an increase in military presence, frequently in places where there is already armed resistance to the government. Historically, government forces have been present largely to protect private business interests (Christian Aid 2004: 20). Finally, the mining exploration often leads to a direct assault on the culture of indigenous communities. Although on paper, the Philippines law protects the land rights of indigenous communities, in reality their land is still under threat because many mineral deposits are in indigenous territory. The conflict in the mining sector conducted by TNCs against cultural communities in the Philippines, will be described in the next part of this paper.

Conflict In Mining: Social And Political Perspectives

Conflict in the mining sector will be explained in detail since it involves the resistance of civil society organizations and people's organizations against TNCs. The analysis is not focused on the destruction of the environment but emphasizes the social and political perspectives. The conflicts between TNCs and civil society and people organizations consisted of conflicts in the composition of the law and that of exploitation of natural resources. The TNCs are regarded as threatening the ancestral lands of local communities and continuing the colonization over underdeveloped countries.

For the Philippines Government, the mining industry had become one of the main sources and a key contributor in its strategy for stimulating economic development (Remonde 1999:9). The Philippines has abundant mineral wealth with some of the leading global reserves of gold, copper, nickel, chromite, iron, bauxite, marble and limestone (Guzman 2002: 9). With countless mineral reserves waiting to be exploited and foreign investment knocking at the door, it is convenient to ignore that mining is one of the most devastating of all industries (Remonde 1999: 9). The Philippines government uses political economy in the perspective of neo-liberal policy that means the implementation of liberalization and privatization in all economic sectors including mining.

One of the policies in mining was the creation of RA 7942 regarded by civil society as selling the Philippines land to the transnational corporations. The bill was proposed in the Senate by Gloria Macapagal Arroyo and was signed by President Fidel Ramos as Mining Act RA 7942 on March 6, 1995 (Christian Aid 2004: 8). It created a storm of applications from mainly foreign mining companies exalting the virtues of the industry. However, it also created a storm of protest from local communities after the incident of Marcopper in 1996 (Evans 2002: 153). It influenced many communities with intensified environmental destruction, cultural disintegration, health concerns, militarization, human rights abuses and displacement (Evans 2002: 8). It brought forth many affected and threatened communities to ask for support from NGOs, People's Organizations and Churches in the struggle against the mining TNCs and the government policies favouring the TNCs.

Some of the provisions of the mining code regarded as threatening the existing ancestral lands and selling the national sovereignty to the TNCs were (Christian Aid 2004: 8):

- The 100% foreign ownership of mining projects now permitted (previously 40%);
- A foreign company could lay claim to an area of up to 81,000 ha or 324,000 ha. While a Philippines Company was limited to 8,000 ha in 1 province and 16,000 ha for the country;
- Companies were able to repatriate all profits, equipment and investment;
- Companies were guaranteed against confiscation by the state;
- Excise duties were cut from 5% to 2%, tax holidays and delayed payments were allowed until all costs were recovered;
- Losses could be carried forward against income tax;
- The government committed itself to ensuring the removal of all obstacles to mining including settlements and farms;
- Companies were promised priority access to water resources within their concessions;
- Companies were given the right to sell gold directly on the international market without intervention from the Central Bank;
- Mining leases were to last 25 years with an option of a 25year extension.

Article XII Section 2 The Philippines Constitution 1987 said: All land of the public domain, waters, minerals, coal, petroleum and other mineral oils, all forces of potential energy, fisheries, forests or timber, wildlife, flora and fauna and other natural resources are owned by the state. It meant that the exploration, development and utilization of mineral resources are under the supervision and control of the state (Christian Aid 2004: 18). The Constitution granted the state the option to directly undertake min-

ing activities or to enter a different mode of mining agreements with Filipinos or 60% Filipino owned corporations. Meanwhile, Chapter III Section 18 RA 7492 states: All mineral resources in public or private lands, including timber or forestlands shall be open to mineral agreements or financial or technical agreement applications.

It meant the opening up of the entire country to mining operations, according to the law. However, according to the RA 7942 the areas covered by existing mining claims or that are deemed ecologically crucial such as old growth forests, watershed forest reserves, mangrove and mossy forests, national parks and bird sanctuaries and marine reserves were closed to mining operations (Christian Aid 2004: 19). Nevertheless, with the consent of the government or other concerned parties, areas barred from mining operations could still be mined including military reservations, small-scale mining sites and ancestral domains (Christian Aid 2004: 19).

The Mining Act RA 7942 allowed three kinds of mining rights as follows: Exploration Permit, the Mineral Agreement and the Financial or Technical Assistance Agreement (FTAA). The Exploration Permit grants the right to explore a specified area for a period of two years (Christian Aid 2004: 19). If a mineral deposit is found and has potential commercial viability, the permit holder has the right to enter into any type of mineral agreement or financial or technical agreement with the government (Christian Aid 2004: 9). A Mineral Agreement grants the contractor the right to conduct mining operations within a specified contract area for a period of 25 years, renewable for another 25 years (Christian Aid 2004: 9).

There were also three modes of mineral agreements, that is: the Mineral Production Sharing Agreement (MPSA), the Co-production Agreement and the Joint Venture Agreement. In the first agreement, the government merely gives the right to the mineral resources where the contractors offer financing, technology, management and personnel for the implementation of the agreement. In the second one, the government contributes other resources. The third one, requires the government and contractors to organize a joint venture company in which both parties have equity shares. All three relations should involve Filipino citizens or a corporation having at least 60% Filipino equity (Christian Aid 2004: 20).

The environmentalist groups filed a petition with the Supreme Court seeking the dissolution of the Mining Act of 1995 and the grant of FTTA (Financial and Technical Assistance Agreement) as unconstitutional (PRRM 2005: 28). The Supreme Court on January 7, 2004 declared that the Mining Act violated the Philippines Constitution (PRRM 2005: 29). Government parties responded that the decision was not final and executory pending the resolution. Finally, the Supreme Court on December 1, 2004, annulled the January 27, 2004 decision (PRRM 2005: 29). The Supreme Court upheld the legality of the Mining Act and its provisions allowing foreign mining corporations full access to the country's minerals (PRRM 2005: 29). This proves that the power of the TNCs is stronger and more influential than the government. Even, the government and the Supreme Court tend to side with the TNCs rather than the people's interests.

Foreign investment in mining increased by more than 50% between 1995 and 2001 from US\$ 980 million to US\$ 1.5 billion

but production was still below that of two decades ago. The Philippines government responded to the poor performance of the TNCs in mining by setting up the National Minerals Policy borrowing the language of international effort to reposition mining as sustainable development (Christian Aid 2004: 9). Catalina Corpuz from the Tebteba Foundation says that this policy was a tool to fool the people through the shift of paradigms, sustainable development and responsible mining (Christian Aid 2004: 9). Meanwhile, the government appeared to believe that civil society only needed to be educated to overcome its emotional resistance to mining.

However, the NGOs and People's Organizations questioned the FTAA provisions since the RA 7942 allowed foreign companies not only financial and technical assistance but also total control of mining operations. The Constitution only allowed the foreign corporations limited financial and technical assistance but did not allow them to actually control, manage and engage in full mining operations (Christian Aid 2004: 20). The people interpreted the provision of technical and financial assistance as meaning restrictive participation of foreign corporations in exploiting the mineral resources. The Law also provided auxiliary rights for the corporations including the right to enter private lands, the right to build necessary infrastructure on private lands and timber rights within the mining areas necessitated by the mining operations (Christian Aid 2004: 20). Such law also provided a host of fiscal incentives that would guarantee returns on investments and profitability to the mining contractor including a 100% repatriation of investment in US dollars and a 100% remittance of earnings in dollars, freedom from expropriation and double acceleration of depreciation (Christian Aid 2004: 20).

The government also enacted RA 8371 on October 29, 1997 that concerned the rights of indigenous cultural communities called the Indigenous People's Rights Act (IPRA) touching significantly on the country's fundamental laws and principles governing natural resource ownership and use (Christian Aid 2004: 20). It explained the provisions of the Constitution about the rights of Indigenous Cultural Communities. Article II Section 22 states that it: recognizes and promotes the rights of indigenous cultural communities within the framework of national unity and development. Article XII Section 5 says that the state is: subject to the provisions of the Constitution and national development policies and programs, shall protect the rights of indigenous cultural communities to their ancestral lands to ensure their economic, social and cultural well being. IPRA emphasizes the rights of indigenous people to their ancestral domain, the right of self-governance and empowerment, social and human rights and the right to cultural integrity.

The bills of RA 8371 brought forth disappointment for corporations mainly from the mining companies; they claimed that the IPRA law violated the Regalian Doctrine and certain provision of the Mining Act. The enactment of the IPRA was regarded as sending confusing signals to foreign mining corporations, which wanted to invest in the Philippines. Nevertheless, it was supported by the local communities and the NGOs, although, the full Act made the local communities and NGOs reject some provisions although some NGOs rejected them entirely because they considered them full of government rhetoric about its commitment to protect the rights of indigenous cultural communities. The controversial section was Section 3 A which defines ancestral domain and Section 56 which explains the existing property rights regime.

Section 3 A states that the concept of ancestral domain includes not only ancestral lands, forests, worship areas, hunting and burial grounds but also pastures, residential and agricultural lands.

However, Section 56 says: Property rights within the ancestral domain already existing and or vested effectively of this Act, shall be recognized and respected. It has reduced the full meaning of ancestral domain stated in Section 3. So that, under such interpretation, mining concessions already existing prior to the effectiveness of the IPRA are excluded from the scope of ancestral domain. The NGOs and local communities have taken strong opposition against this Act. Many people say that it could only be implemented because the Transnational Corporations in mining bribed both the government and Congress to protect their interests. This is ironic since neither the government nor the politicians ignored the Constitution or the aspirations of the indigenous cultural communities. Mining corporations were quick to register their opposition to the IPRA.

One of the main concerns in the IPRA Act was that companies using ancestral land; before exploration and extraction rights are granted, must inform and have agreement to the decision from the whole community. This was called free prior and informed consent (Christian Aid 2004: 11). It means that the consensus of all members of the local communities must be determined in accordance with their respective laws and practices, free from any external manipulation, interference or coercion and obtained after fully disclosing the intent and scope of the activity, in a language and process understandable to the community. But the evidence shows that the government agencies and National Commission on Indigenous People have failed to effectively apply the law due to

(Christian Aid 2004: 11): severely limited resources to enforce the legal provisions in terms of the budget and considerable expertise required and lack of government political power.

Conflict with Local Communities

The case studies are Benguet Corporation in Benguet Province (USA), Philex Mining Corporation in Sibuted-Zamboanga del Norte, Western Mining Corporation (Australia) Tampakan Copper Project in Southern Mindanao, TVI Resource Development Inc (Canada) in Siocon, Zamboanga del Norte, Mindex (Norway, part of UK Based Crew Development Corporation) in Mindoro.

1. Benguet Corporation in Cordillera:

The Cordillera is home to people of diverse cultures who have managed to retain their indigenous identity for hundreds of years despite political integration and social interaction with people from the lowlands (Cruz in Remonde 1999: 30). They are Igorot people consisting of the Kalingas, the Bontocs, the Tinggians, the Ibalays and the Kankanaeys. Before the Spaniards came, the Igorots were mining gold in Cordillera and trading with Chinese in 900 AD. The Igorots share a common history of discrimination, displacement and struggle against violation of their ancestral domain both in the past and the present.

The Benguet Corporation was established during the American regime in 1903 making it the country's oldest mining

corporation which contributed 2% to the GNP of the Philippines. The Mining Act of 1905 declared that all untitled property could be occupied, purchased and exploited. It created disagreement with the Igorots who have their own concepts and customs regarding lands. As a consequence, mines that had been owned by Cordillera families and communities for generations fell into the hands of American corporations, the Benguet Consolidated Mining Company (BCMC). BCMC became the Benguet Consolidation Inc. In 1907, Benguet mine was the first modern gold mine in the Philippines (PRRM 2005: 10). In 1950 and the 1980s the Benguet Corporation in the 1980s. The company shifted from tunneling to open pit mining to utilize more chemical processing in 1981.

The open pit operation dislodges isolated small-scale miners. Benguet Security forces attacked the tunnels of picket miners in the *barangay* of Ucab and Virac. However, the local communities stopped them when they wished to move to other *barangay* in July 1992. In January 1993, local miners were also arrested when they reopened their tunnel in Acupan. The suppression of local communities of Igorot led to resistance and protest. Leaders of People's Organizations of Igorot consider the struggle against the Chico Dam owned by the Benguet Corporation as a landmark in their history because it galvanized unity among the different tribes. They need to go beyond opposition against the Benguet Corporation, towards a broader struggle for self-determination (Cruz in Remonde 1999: 36). Today the opposition against the Benguet Corporation has intensified and become widespread in Ucab, Oakan, Virac and other *barangay*. The conflict of the Igorot against the Benguet Corporation is the people's quest for the recognition of their rights over their ancestral lands.

The oppression and resistance that has characterized Cordillera history is seen in the issue revolving around open pit mining (Carino 1992). The struggle of the Igorot people is a continuation of struggle in the past when the Spaniards and Americans forced them to leave their ancestral lands. Since the independence of the Philippines, there has been no change for them. The government agencies mainly DENR fail to grasp the issue of damage to the ecosystem and the ancestral domain in that area (Special Report 1991). However, the campaign against Benguet at a certain level is successful, pushing the government to adopt strict measures designed to protect the environment from the use of the pit mining method.

2. Philex Gold Philippines in Sibutad, Zamboanga Del Norte:

The Philex Gold Philippines was set up as a subsidiary of the Philex Mining Corporation in 1996 to handle all of the corporation's gold assets and investment. It was reported in 1995 that Philex dumped excavated waste material down the side of the mountain rather than storing it at a waste site. Philex road infrastructure also caused consternation for proceeding without a valid Environmental Compliance Certificate (ECC). Local communities and NGOs held a public hearing in their attempts to call government attention to the problem. However, The Department of Environment and Natural Resources regarded it as exaggeration and speculation (Cruz in Romundo 1999: 44).

Since the DENR let Philex violate the ECC, it has been reported that there are social impacts, that is: economic displacement of local fisher folk and the displacement of local small-scale miners. The abundant variety of fish, shellfish and seaweed in the

Murcielagos Bay has long been the primary source of livelihood for many small fishers (Cruz in Romundo 1999: 45). At the community public hearing at Labay in 1995, the local fishers described their frustration because of their inability to support their families (Cruz in Romundo 1999: 45). Many of them have been forced to pull their children out of school because they can no longer afford it. Women have been forced to increase backbreaking workloads to supplement their families' incomes. The difficulties of local communities are not limited to the environment; the mining operations also resulted in evictions as farmlands and settlements fell in the way of the mining areas (Guzman 2002: 139).

In June 1997, the Philippines government announced that high mercury levels had made the fish and shellfish of the Murcielagos Bay no longer fit for human consumption. Meanwhile, Philex denied any responsibility and put the blame entirely on the small-scale miners. The small-scale miners refused to accept total responsibility but they recognized their partial role in the mercury contamination (Guzman 2002: 46). Nevertheless, a study conducted by the San Carlos University in September 1997 determined that 'mine tailing discharges from the Philex Gold Philippines Incorporated operations should not also be reduced as a source of contamination' (Guzman 2002: 47). The Small-Scale Mining Act 1991 allows the small-scale miners to have organizations through legally recognized cooperatives to apply to the Provincial Mining Regulatory Board (PMRB). Unfortunately, PMRB has not been created, so the status of small-scale miners remains blurred. The Sibutad Small-Scale Miners Multi-Purpose Cooperative was formed in 1993 with 500 members and asked the President to set up PMRB. The PMRB was established in 1996. There was a suspicion that Philex spent money to delay the creation of PMRB to eradicate the small-scale miners.

It demonstrates a classic case of what can happen when the checks and balances interaction between the government, corporations and community go wrong. Governments are caught in the weak role of ensuring protection for their citizens while providing a regulatory climate conducive to business activities. When the businesses are in potentially questionable situations, communities find themselves relying on the government for that protection. When the government neglects its duty to monitor the business, then it also neglects its duty to protect its citizens (Guzman 2002: 51). Reducing the interaction between the government and big business to the level of pesos might explain the reason for the government's willful negligence of duty (Guzman 2002: 51).

3. WMC in Tampakan South Cotabato

WMC has exploration sites of 99,387 ha in four provinces of Mindanao: Sultan Kudarat, South Cotabato, Davao Del Sur and Sarangani. Opposition was registered to this operation by a number of groups, who fear that the open pit mining will pose a threat to the three river systems that supply water to irrigate lands in the uplands and lowlands. Fears were also expressed that the B'laan culture would be undermined (ESSC 1999: 69). The WMC is regarded as lacking knowledge and consciousness of the meaning of the river to the local communities. For B'laan people, like for other traditional communities, the river is understood as a means of preserving their culture and community through ceremonies and festivals.

The Australian TNC, Western Mining Corporation, was one of the first mining companies to develop a written policy re-

lating to indigenous people but in practice this was only rhetoric. WMC allegedly tried to persuade the leaders of the B'laan people of Tampakan to endorse its mine by giving them gifts, building tribal halls, employing relatives and taking them on trips where they received entertainment (Christian Aid 2004: 12). There was once a joint team from the WMC and the Office of the Southern Cultural Communities OSCC presenting a 75 page Memorandum of Understanding (MOU) with B'laan. The OSCC lawyer explained it in rough oral translation and advised tribal communities to sign it (Christian Aid 2004: 12).

WMC facilitated the granting of a Certificate of Ancestral Domain claimed for the B'laan communities but some tribal leaders did not know what a CADC was. The document become useless in the light of MOA that WMC has been able to get some leaders to sign by force, coercion and money politics (Ballesteros 2000:27). While money failed to weave its attraction, the military was utilized. It created violent conflicts and hostilities between military forces including the armed forces, the militia and private security guards with the rural communities and indigenous people. Two bombing operations killed some B'laan children in 5 months. The military accused that it was perpetrated by B'laan bandits, while the WMC corporate manager played a new role as Armed Forces spokesperson, who offered this excuse (Ballesteros 2000: 28).

4. TVI Resource Development Inc. in Siocon, Zambonga Del Norte

The Subanon are indigenous people in the Zamboanga Peninsula, they have lived in a traditional manner peacefully for hundreds of

years before the coming of the Filipinos, through hunting and agriculture for their livelihood. These people depend absolutely on their land in the mountainous interior of Mount Canatuan. The coming of TVI to explore for gold in 1994 caused the villages of Subanon in Siocon-Zamboanga Del Norte to be destroyed including their settlements and sacred groves. TVI says that the mining will bring benefits for the local communities such as employment, education, healthcare and income generation projects. Many Subanon people opposed the TVI plan because TVI lacks respect for the traditional practices and human rights, besides insulting the community leaders.

The exploitation of mining by TVI only created bitterness and division of the community without improving their lives. Since the strong opposition from Subanon supported by Muslim and Christian communities, the exploration project was postponed until 2003. Between 1994-2003, the TVI and government have pressured the Subanon, so the Subanon surrendered because of poverty and frustration (Christian Aid 2004: 29). In this case, the National Commission of the Indigenous People and the Commission for Human Rights and the Mines and Geosciences Bureau have failed to protect the rights and livelihood of Subanon people, and have even supported actively the coming of TVI.

Nevertheless, the resistance against the TVI was never withdrawn by some people's organizations such as the Save Siocon Watershed Paradise Movement, the Committee on Mining issues (CMI), and Muslim Women's Group. However, the TVI and the government used the politics of division to pressure the NGOs by encouraging the people from municipalities neighbouring Siocon to support them. So that, the 2000 people of municipalities

neighbouring Siocon held an awareness rally in August 2004, supporting the TVI operations. It was addressed to show that local communities agree with the TVI. The conflict is still going on since the TVI do not consult with the local councils and 26 *barangay* captains in line with the politics of decentralization.

TVI also has employed security personnel to protect its operations and staff. It elicited conflict with the local communities, which threaten peace and order in those areas. The two separatist groups that is, the Moro Islamic Liberation front (MILF) and Abu Sayyaf Group burned down Ipil and attacked the centre of Siocon in May 2003. Therefore, the military supplied force to TVI accompanied by militia and the Special Civilian Armed Auxiliary. The militia comes from local communities as the way for TVI to get support from them. Nevertheless, the struggle of local communities continues until now. It can take place since the company is allowed to operate although there is much evidence that they have violated the human rights and indigenous people's rights according to the IPRA.

5. Mindex in Mindoro

Mindex was given an Exploration Permit to a nickel-cobalt project in Sablayan, Mindoro covering 97.2 square kilometers in 1997 (ESSC 1999: 81).is a Norwegian and UK TNC, Mindex, cooperated with the Regional Office-National Commission of Indigenous People (NCIP) to set up a new indigenous people's organization called Kabilogan. However, there were two IP organizations before they came which claimed the land concession. Because it dealt with strong IP organizations, NCIP established Kabilogan or *the*

Lupang Ninuno Kabilogan Manyan Incorporation (LKMNI) to get mining concessions for Mindex. The project was endorsed as having gained free consensus prior to informed consent and a license was granted. However, this license was later withdrawn following an unprecedented level of local protest (Christian Aid 2004:13).

The federation of Mangyan Cultural Communities, the Kalipunan Para sa Lupang Ninuno (KPLN) sent a letter to NCIP as follows (ESCC 1999: 81):

The LNKMI is a newly organized group with questionable credibility, with most members employed by Mindex. In fact the election of their officers took place inside the Mindex compound. Clearly this was in violation of the provision of the Law where it is prescribed that free and prior consent of the indigenous people should be free from any external manipulation, interference and coercion (RA 8371 Sec 3g). KNKMI represent only the minority of stakeholders. The definition of FPIC requires that a pre-requisite condition “consensus of all members of the indigenous cultural communities/indigenous people should be obtained.” Also it was found out that they could not genuinely reflect the sentiment of their individual members; and there are already existing organizations for the representation of the Mangyans-one representing the Tadyawans (Kapyan Agpaysangan Mangyan Tadyawan Inc or KAMTI and the Alangans (Samahan ng Nagkakaisang Mangyang Alangan or SANAMA), both registered with KPLN. The formation of a new group in time for the NCIP is therefore questionable.

The letter point out that Mindex has violated Section 59 of the IPRA Act. Nevertheless, Mindex responded that the opposition from local communities by politics of division and publishing in

the mass media. In July 1999, a local NGO, Samahan Lihim Inc (SLI) sent a position paper bearing the signature of 35,000 people to the Department of Environment and Natural Resources (DENR) expressing conditional support to the operation of Mindex to uplift the quality of life and support of progress. Mindex also published the Mindoro News Network to serve as a promotional arm, at the national and local levels. The conflict in the mining, as in the Mindex case is complex, because it involves many stakeholders with different interests, ideology and experiences. There is one group that benefited but the other dominant groups did not.

Nevertheless, a protest movement was also launched by the NGOs such as the Philippines Indigenous People's Link (PIPL) that is based in Britain. A letter sent to the Secretary Antonio Cerriles of the Department of the Environment and Natural Resources by the Philippines Indigenous People's Link in 2004 says:

We call on you not to grant an ECC (Environmental Clearance Certificate) or any further authorisation to Mindex at the present time and instead use your good offices to encourage and require further dialogue based on sufficient and independent information about both the benefits and dangers of this project for local livelihoods and basic rights.

The reasoning of the PIPL was that the project would violate the lands and rights of Mangyan indigenous people in several communities. This would be a human rights violation in breach of the Mangyan customary laws and rights protected by the Philippines Constitution and Indigenous People's Rights Act (1997) and the Philippines Mining Code (1995). Indigenous communities have the right to be informed and consulted on projects affecting their land based on the IPRA Act (1997). There is recognition of their

right to veto projects which through their indigenous structures they find unacceptable or unwanted. Meanwhile, the consultative process adopted by Mindex both for indigenous and lowland communities in this case has been inadequate because they do not represent the aspirations of local communities in that area.

Conclusion

Talking about the social and political perspective, the discourse of TNCs should be perceived from their position in the international economic order. Economically, TNCs can be analyzed independently from the interests of their state but not politically. Besides the international economic organization such as the International Monetary Fund (IMF), the World Bank (WB) and the World Trade Organization (WTO), TNCs represent the interests of developed countries. The analysis of power relations between the developed and developing countries is significant as a foundation to explain the role, function and framework of TNCs in developing countries. So, it is a blurred differentiation between investment and exploitation in the context of the TNCs. On one hand, the TNCs investment affects the handling of unemployment problems and contributes to economic growth but it also exploits natural resources for their own interests. To a certain degree, TNCs may control the national politics to force their investment according to their interests.

The TNCs, as one of the instruments of advanced countries, besides the international economic organizations such IMF, World Bank, and WTO, continue the colonization of underdeveloped countries. So that, the TNCs operations prove that there is

uneven development law between the advanced and underdeveloped countries. The existence of TNCs at the present time is a continuation of the history of capitalist development. As a consequence, the underdeveloped countries will depend more on the advanced countries if they follow their path of development including giving open space to the TNCs. Social transformation is the solution for the underdeveloped countries.

The case of the TNCs and the Philippines people's relations exemplify the mode of exploitation of TNCs of the people of underdeveloped countries. Some society groups in the Philippines such as women, labour, farmers and local communities experience suffering because of the operations and activities of TNCs. Those are the restrictions over trade unions, using biotechnology to encourage the displacement of local farmers and seizing the ancestral lands of local communities. Besides that, the TNCs in mining also create resistance from the local communities because they impact on the environment and socio-politics. Besides the environmental problems, TNCs also displace the local miners, violate the Law of Indigenous People's Rights Act (1997), take the ancestral domains, make divisions and conflicts among the local communities and bring about militarization.

In the Philippines case, the government tends to side with the TNCs for the reason of inviting foreign investment. Implementation of IPRA is often ignored by government officials because of the political power of the TNCs. Meanwhile, the resistance against the TNCs by local communities, NGOs, Churches and people's organizations is addressed to pressure the government to control the TNCs or make the TNCs subject to the aspirations of local communities. The governments of nation states has

a duty to protect its citizens and to ensure their livelihood. But in reality, these governments work hand in hands with the TNCs subject to the corporations' interests rather than the people's interests. When the government cannot control the TNCs, it means that it does not work to protect of its people. What the governments of nation states, mainly of underdeveloped countries, need is a framework for TNCs to force them to operate according to the people's interests.

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Chapter 8

RUNNING ON EMPTY: CLOSING REMARKS

Ahmad Helmy Fuady

Like other developing countries, the Philippines regards foreign investment as an important means to accelerate its economy and development. This country has taken trade and investment liberalisation since the 1970s and has deepened liberalisation since the 1990s. Moreover, the country offers various investment incentives to influence the investors' location decisions, such as tax holidays and import duty exemptions. The liberalisation, indeed, is also criticised since there is a doubt that foreign participation will increase the country's development performance.

Interested to analyze the impact of transnational corporations (TNCs), as a manifestation of foreign investment, in the Philippines' development, this report has assessed six fields of development of the country. It shows that in the country, that is known as 'The Asia Exception' because of its ability to cope with the 1997 Asian economic crisis, but known also as 'The Sick Man of Asia' because its development lagged behind other Southeast Asian economies, TNCs did not make a significant contribution to improve the country's development. Even worse, they create problems in development. This report highlights that, 'TNCs in the Philippines were born and inherited economic and political structures from the colonial period, poor transfer of technology, does not have significant impact on enhancing domestic productivity,

injustice and discriminative treatment of labour, worsen the environment and result in conflict with local communities.’

From a historical point of view, in **Chapter 2**, Amin Mudzakkir notes that the presence of TNCs in the Philippines cannot be separated from the country’s colonization history. Mudzakkir shows that TNCs in the Philippines inherit the economic and political structure of the colonial period. Besides, as a consequence of global market transformation, the presence of TNCs, also, continues the mode of domination and exploitation of the colonial period.

Using the panel data of the Philippines industry, Ahmad Helmy Fuady, in **Chapter 3**, shows that FDI does not have a significant effect in enhancing productivity growth in the country. The inward looking protective industrial policy seems to contribute to directing FDI into inefficient industries. Disaggregating FDI based on its sources, Fuady shows that FDI from the EU has a significant negative effect on productivity growth, while FDI from USA has a significant positive effect, and FDI from Japan has an insignificantly positive effect. Fuady argues that the different effects of FDI based on its source seem to come from the differences in industrial structure and the behaviour of the FDI source countries.

From the transfer of technology point of view, Rita Pawestri Setyaningsih, in **Chapter 4**, notes that there is no transfer of technology from TNCs into the Philippines since the technology still remains in the hands of foreign companies. Setyaningsih shows that TNCs in export processing zones (EPZs) and industrial estates, for instance, mostly subcontract the production with a limited degree of technological transfer. Moreover, Setyaningsih notes

that the TNCs did not develop vibrant upstream industries, which is important for the transfer of technology

In **Chapter 5**, Paulus Rudolf Yuniarto notes that Philippines workers in European TNCs, in industry and agriculture are treated unequally and discriminatively. The problems, Yuniarto argues, may be because the Philippines government still gives less attention to labour groups and, moreover, the government does not emphasize the efforts to overcome the problems through the legislative system. Here, Yuniarto emphasizes the importance of labour rights protection, to prevent labour exploitation.

Meanwhile, Maxensius Tri Sambodo, in **Chapter 6**, examines the impact of TNCs that operate in the mining sector on the Philippines environment. Sambodo notes that many TNCs exploit natural resources but forget to protect the environment and the local community. Although the mining sector has a long history of development, the government has failed to develop strong institutions such as in labour relations, human rights and environmental standards.

Finally, Cahyo Pamungkas, in **Chapter 7**, highlights the relations of TNCs and the Philippines' government and civil society. Pamungkas points out the modes of exploitation of TNCs of women, labour, farmers and local communities. Besides, the environment problems, the mining TNCs in the Philippines displaced local miners, took over ancestral domains of the local communities, caused conflict among the local communities and brought militarization. Therefore, there is resistance against TNCs by local communities, NGOs, Churches and people's organizations, which put pressure on the government to control the TNCs. Unfortunately, asserts Pamungkas, the Philippines government tends to back TNC interests, to attract more foreign investment.

Findings of this research seem to cast doubt on the absolute wisdom of inviting foreign investment. Further research, of course, is needed to improve the ability to benefit from foreign participation. Indeed, this research has highlighted several lessons to be learned. First, host country characteristics, particularly investment and industrial policies (and other sectoral policies) are important determinants for the country to benefit from TNC presence, particularly for growth and transfer of technology. Second, source countries, indeed, also determine how TNCs will benefit the host country. Third, since TNCs inherited economic and political structures from the colonial period, it should be considered that TNCs embodied domination and exploitation in their natures. Ignoring the facts will lead a host country to run on empty.