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SCHOOL OF ECONOMICS AND BUSINESS ADMINISTRATION
"WORLD ECONOMY AND CHINA"

"ECONOMIC GROWTH ,BUSINESS CYCLE AND POPULATION POVERTY"

"What lessons can Madagascar draw from China's economic growth experiences?"

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ABSTARCT

The global issues weigh a lot on the local and domestic affairs. Globalization appears as necessity that every nation should follow the trend. Consequently, managing national economy in interaction with the world economy matters and brings dialectics and dilemma: "Global inequalities get along with Global economic growth". Countries differ in their productivity, in their capital stock level, in their human capital improvement and in output produced .Those differences lead to a difference in standard of living and economic growth performance.

This Global fact brings us to raise some questions: Why difference in economic growth improvement becomes bigger and bigger among countries? Why some countries are growing faster and other countries are struggling in seeking economic growth? How to explain the difference in income and output level among countries?

We adopted a comparative approach in emphasizing the similarities and the differences between China's economy and Madagascar's one throughout of this research paper. Such methods and tools of our analysis, we mainly used a macroeconomic model analysis based on endogenous model after doing literature review of the china's growth issues.

Therefore, our main findings tell us that China's economic miracles could be explained by three major factors which are capital accumulation, human capital improvement and the progress of china's trade. Moreover, those factors do not contribute similarly to the China's productivity growth, thus China's GDP growth, but the human capital improvement appeared the main source of China's growth at the same rate as international trade progress. Those explanatory variables, they all, were improved rapidly and durably thanks to successful economic reforms. And finally, we realize that China's economic miracle was depending on non-economic factor which had direct effect on productivity growth. China's economic growth found its raison d'être into the reform approach which was able to provide more incentives to Chinese people and foreign investors as well. But the gradual and prudent approach adopted by china during its economic reforms would not exist if the reformers did not consider the interest of the nation more important than personal interest. We qualify such a non –economic factor this kind of nationalism economic and nationalism politic from the reformers that allowed the Chinese government to become more effective during reform period.

Key words:
Economic growth, government policy, capital accumulation, Human capital, productivity, International trade and economic reforms.

摘要

全球性▪▪与本土和国内事▪息息相▪。全球化似乎意味着▪个国家需要遵循一定的▪▪。因此，与世界▪▪的互▪▪管理国家▪▪富有意▪且也▪来了▪▪▪▪与困境:“全球不平等与全球▪▪增▪共存”。不同的国家在生▪力，在▪本存量水平，在人力▪本提升和▪出上不同。▪些差异▪致生活水平和▪▪增▪的差异表▪。

全球性的事▪▪我▪提出了一些疑▪：▪什▪在不同国家之▪的▪▪增▪差异越来越大？▪什▪一些国家的▪▪增▪速度越来越快和另一些国家却依然再▪求▪▪增▪中▪扎？如何来解▪不同国家之▪在收入水平和▪出水平上的差异呢？

本文通▪比▪的方法来研究中国▪▪和▪达加斯加▪▪之▪的相似性与差异。在▪中国▪▪增▪文献的梳理上，我▪的分析主要是基于内生性模型之上，使用一个宏▪▪▪模型来分析研究▪▪。

我▪的研究▪▪，中国▪▪奇迹主要可以由三个因素来解▪：▪本▪累，人力▪本的改善和▪▪，中国▪易的▪▪。此外，▪些因素▪中国生▪力增▪的▪献不一，人力▪本的▪▪与国▪▪易▪展一▪似乎是中国▪▪增▪的主要源泉。感▪中国成功的▪▪改革，使得▪些因素得到迅速而持▪▪展。最后，我▪▪▪到，中国的▪▪奇迹也取决于非▪▪因素，他▪▪生▪率增▪起到了直接作用。改革是中国▪▪增▪得以▪▪的理由，▪同▪促▪了中国人民以及国外投▪者的▪力。然而，如果改革者没有把考▪国家利益放于个人利益之上的▪，在▪▪改革中的逐▪以及▪慎的做法也将不存在。我▪▪▪改革者的民族主▪▪▪和民族主▪政治思想▪非▪▪因素，他▪使得中国政府在改革▪段▪得更▪有效。

▪▪▪：

▪▪增▪，政府政策，▪本▪累，人力▪本，生▪率，国▪▪易和▪▪改革

I- GENERAL INTRODUCTION

21rst century, the era of globalization of politics and overall economics, all countries recommends the liberalism and free Market. The richest countries are calling for this capitalist value through the globalization process as phenomenon guaranteeing the connection between them and other less developed countries. One thing is sure; the 21rst century appears like years of uncertainties and of trying out because the century could not proportionately provide enough tools which help human being to follow the pace of the change in their life. The world economy is always changing from time to time and nothing is sure, about what will the 21rst century reserve us tomorrow. Every second, the world economy is shifting toward another status quo and order. This condition requires more realism from us economists in forecasting or analyzing the dynamic of the Global economy. We know, certainly, what 19th and 20th centuries brought for us because those two hundred years ago are already gone. *"In both the 19th and 20th centuries, technical change played an important role. But, paradoxically, in the 19th century, it was the dramatic decline in transport costs that enabled the rapid expansion of global trade and real incomes, whereas in the second half of the 20th century, it was a dramatic decline in policy-induced trade barriers that had the same effect. And whereas the reversal of globalization in the early 20th century resulted from political hostilities, the major threat to continued economic success at the beginning of the 21st century appears to be economic nationalism."* said Anne O. Krueger

Concerning the future of the world economy, the beginning of 21rst century couldn't provide us any signs of expansion of the Global production possibility frontiers. It seems like the Global leaders are constrained to manage the global economy in day-to- day approach. According to United Nations, signs of improvement are appearing in the world economic situation for the year 2013 but comparing to the Challenges that the global economy is still facing, this improvement seems minima. No one expresses their optimism in their opinions about the future of the Global economy for the coming years. The UN's paper on world economic situation and prospects 2012 underlines clearly this ideas of lack of promising future of the global economy with the expression like: *"Global growth projected to slow and major risks looming"* The world economy is experiencing difficult moment as ever happened in the World economic History. The U.N's paper even provided some data proving this global slowdown trend of the world economy:

-2011 The growth rate of World Gross Products was 2.7%

-2012 The growth rate of W. G. P .was 2.5%

-2013 The growth rate of W.G.P. is expected at 3.1%.

The world is facing economic difficulties because of this high degree of uncertainty, economists cannot predict with exactitude what will happen to the world economy tomorrow. When we have to think, the world economy, globally, we might notice this unpromising world economic growth .But if we take into consideration, the regional and/or individual country's economic performance, we will find a big difference in growth and living standards among countries. Among the almost 200 countries' members of the UN, few of

them only can enjoy high economic growth and high living standards. They don't have the same level of economic development.

Consequently, they also contribute unequally to the global economic growth. Either they are underdeveloped or developing or developed countries, they are all participating to the smooth functioning of the global economy. Just, the level of participation and integration into the Global economic process is different for each country. High income countries, middle income countries and low income ones, they are, all together, building the common World and no single country can be excluded from the global economic building process. Theoretically, the real world should be like what I described it but empirically speaking everything is different from the theoretical perspectives. There are differences among countries in terms of living standards, income level and even human development level. Thus, those differences just mean differences in terms of economic achievement within the global economic process.

Consequently, differences in economic achievement imply differences in contribution part to the world gross products. Most of researchers in macroeconomics and growth issues agreed on the fact that Asia is rising and accomplishing a tremendous economic progress recently. For these researchers, the world economy's map is changing and there is an apparition of a new economic order. This new economic order is marked by the rise of Asia and slowdown of the US, EU and Japan's economy

This table I.1 supports the idea on Asia's economic rise economically during more than four decades. According to Fogel (2009)'s data, the difference in expansion multiples of GDP between Asian countries and Western countries appears very big. The GDP levels produced by Asian countries were two or three times than the GDP produced by western countries (EU and US). The expansion multiples of GDP's value for US and EU's countries reached only around five(5 times) but for Asian countries , the productivity seemed higher with value between 16.1 and 47 times the augmentation of their GDP in 1999 comparing to their GDP in 1950. This data shows us the achievement of some Asian countries in producing output and in seeking growth in a more productive way. The rise of Asia in the global scale is almost unanimously accepted among economist researchers.

Table I. 1 GDP growth performance of 12 economies

Expansion multiples of GDP for 12 economies, 1950-1999 (Ratio of GDP of 1999 to GDP of 1950, International dollars)	
U.S.	5.1
Five E.U. Nations (France, Germany, Italy, Spain and U.K.)	5.0
China	25.6
Hong Kong	28.0
South Korea	38.9
Singapore	36.7
China Taiwan	46.8

Source: Fogel, (2009)

But when we talk about Asian economic rise, China's case comes in our mind, not because the development model path followed by china can represent those of all Asia but just because of its economic miracles during almost three decades. The economic and social reforms implemented by Chinese policy- makers in 1978 made china as an Economic star in that East Asian region. China is leading the East Asian economic, even the whole global economy thanks to the economic achievement that china accomplished since 1979. Now, if we want to understand China's economic miracle, we think we had better to have look at China's economic History. Chinese economic success might easily be understood when we put it in the historical context where it evolved. Now, we are going to develop the dynamism of the economic growth performance of China. We will divide into three different stages the period of our analysis in our presentation referring to the 1978 as the year of the starting point of the real economic reforms in China. We divide the time period into three parts, also because we are aware that China's economic growth is not a fruit of hazard but it is rather a result of a dynamic process of its History.

I.1 - China's economy prior- reform: 1949-1978

The two main concepts that characterized the period prior- 1978 are the "Big push industrialization and the Command economy System". Indeed, the socialist government considered the big push industrialization policy as an objective to achieve and the Command economy system as a mean used to attain this goal. During the implementation of the big push industrialization strategy and the command economy system, the Chinese government had a strong control over most of the main fields in the economy. And the government intended to maximize the investment into the heavy industry through the command economy system. The allocation of the resources depended on the government planners and the forces of the market did nothing with the decision process in using resources. During the period prior economic and social reforms in china, the socialist government highly intervened in all economic fields and made the plan through command economy more effective in order to subordinate individual economic decision-making to the overall national development strategy. The political instability characterized as well the period prior reforms and that could not allow china under Mao Zedong regime to optimize the economic output of all economic decisions. Now, we are going to emphasize some features that marked the big push strategy in china's economic history:

-The consumption reduced in volume as the government gave priority to the industrialization, especially, priority to develop heavy industry.

-The government exerted high control of the resources allocation and used them mostly to boost the construction of new factories.

-The investment was increased in volume but most of the investments were government investment and went to the heavy industry. "Between 1952and 1978 industrial output grew at an average annual rate of 11.5%. Moreover, industry's share of total GDP climbed steadily over the same period from 18% to 44 %"(BARRY Naughton, 2007).

I.2- Economic transition in China 1978: strategy and process toward market economy

Chinese decision-makers expressed a prudent attitude when they took decision to step forwards the reform. Several reasons could explain the prudency of the Chinese government in implementing the economic transition but one of those reasons is the real engagement of Chinese people to the reforms process. Chinese citizens are ready to change the bad images left by the old regime, such as Cultural Revolution, and wanted to make changes. The prudency of the Chinese Government was materialized by its approach in the reform process. China's approach toward Market transition appears different from other Socialist Countries. "The reform process has been spurred by a combination of the effort of central government and the natural desire of Chinese people and lower-level of government unit to improve the economic institutions for their own benefit… As far as the role of the central government is concerned, the process has been a gradual and experimental one and has proceeded in steps."(GREGORY C. Chow, 2002).

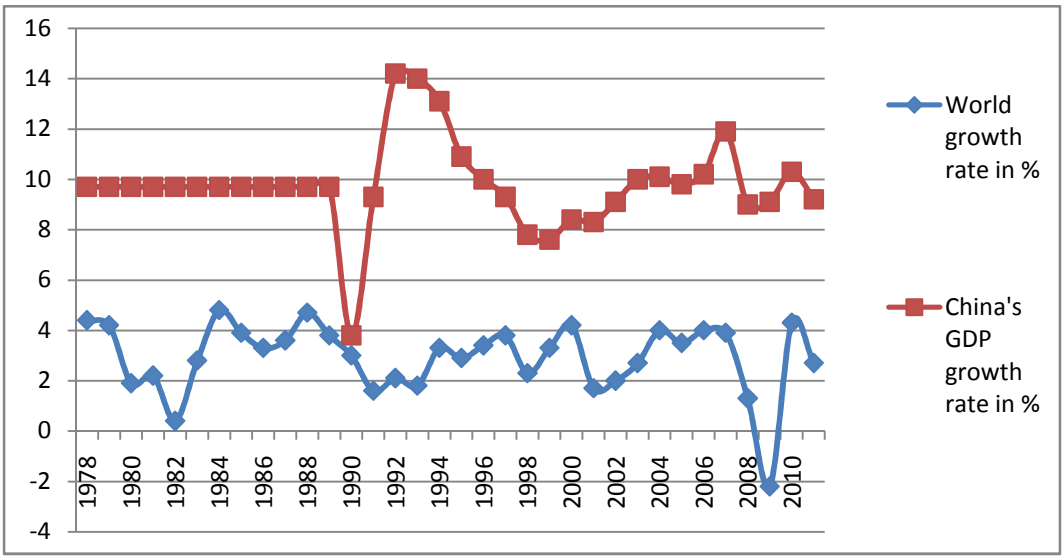
The Chinese government began the reforms with agricultural reform. The government gave more incentives to farmers and allowed them to produce agricultural products without pressures from the targets under system planning. The reforms moved on and reached the state owned enterprises .The reformers accorded more autonomy and independence to local officials in their decision making process in order to increase output. Despite the absence of total privatization of the state owned enterprises, the industrial reforms of the state owned enterprises worked successfully. Concerning the price reform, the Chinese government introduced the two-tier price system. One set of prices remained the same as before. A second set for the same goods could be determined by the Market. This combination of the Market system and the old system left by the socialist regime guaranteed the effectiveness of the dual track system in China. According to some economists, such as G.C. Chow, the two-tier price system provides incentives for enterprises to economize on inputs and increase outputs for profit. The reform in banking system followed the price reform after. In order to control the macroeconomic stability, the Chinese reformers brought some innovation in baking system: gave more independence to the people's bank as a central bank and transformed the specialized bank to commercial banks.

When the banking and financial had been reformed for ensuring a macroeconomic stability and a competitive exchange rate internationally, the Chinese government undertook reform for foreign trade and investment. The Chairman Deng Xiaoping undertook reform through his willingness to open china's door to foreign imports and the promotion of exports. The Foreign investment flew abundantly into china after reformers decided to open the special economic zones (Shenzhen economic zones) to provide special tax breaks to foreign investors. With respects to those different steps and the approach adopted by the Chinese government, we have to say that they had succeeded their reforms objectives and the graph I.1 below supports this view. Post-reform period was marked by high and sustained growth rate of GDP in china.

Our data show exactly that, since economic reform started, China's real output measured by GDP has grown at an average rate of 9.5 % per year. China has done a remarkable economic achievement after implementing economic reforms because comparing to the world growth during the same period, China's growth appears strong, sustained and faster. The world output growth grew at nearly zero 0.4% in 1982 and

negative value -2.2% in 2009, but china's growth one remains almost the same 9.7% and 9.1%.

Graph 1.1: Comparison on China and world's average growth rates



Sources: *Chinese 's statistical bureau, 2010*

In order to find out the probable answers to our main question which is why China's economic growth had been growing so fast and how to explain the difference in economic growth between China and Madagascar, now, we are going to organize the rest of this paper as follows. The second section will explain China's economic growth by the capital accumulation process after reforms were started. In section three, we will show the role played by the human capital improvement in China's economic growth miracle. The fourth section will indicate the close link between reforms, international trade and economic growth in china. And before we conclude, we will summarize briefly Madagascar's economy and its economic history and facts in order to make comparison on China's and Madagascar's economic growth performance. So that we can emphasize the differences between Madagascar and China's economic growth reasons and we will be able to deduce some lessons that Madagascar can learn from china's economic experiences.

II- CHINA'S ECONOMIC GROWTH THROUGH CAPITAL ACCUMULATION

The opening policies established during the economic reforms in China in 1978 had positive results on the China's economy because china's economy became more developed than before. China became favorable to capitalist values: more competition, less government, more private businesses, more decentralization, even internationally level china became more attracted by trade and by FDI into china.

According to the following table 2.1, after the Mao era, China was growing at 9. 7% such an average annual of the China's economic growth rate thanks to the economic policy established by Chairman Deng Xiaoping in 1978. This assertion fits our calculation of the average of the growth rate of China since 1990 till 2011 year. When we compute this average, we found that China's economic growth rate was growing at the rate of 9.318% for almost 22 years after the economic reform in China. Moreover, china's economic growth after implementing the economic reform was increasingly growing at high rate and quiet sustained. How to explain this China's long term and sustained economic growth during more than two decades after reforms?

Table 2.1: China's average annual real GDP growth rate in %:

Time Period	China's Average Annual real GDP growth rate in %
1960-1978(Pre-refrorm)	5.3
1979-2009(Post-Reform)	9.7
1990	3.8
1991	9.3
1992	14.2
1993	14
1994	13.1
1995	10.9
1996	10
1997	9.3
1998	7.8
1999	7.6
2000	8.4
2001	8.3
2002	9.1
2003	10
2004	10.1
2005	9.8
2006	10.2
2007	11.9
2008	9
2009	9.1
2010	10.3
2011	9.2

Source: *China's statistical Bureau, 2012*

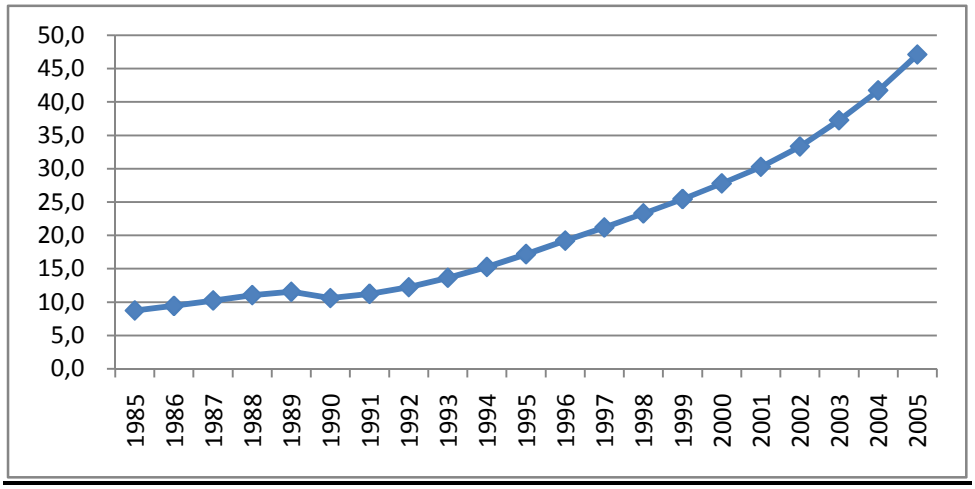
China’s economic achievement arouses many debates about the sources of China‘s economic growth among researchers. Loren Brandt and Xiaodong Zhu argue that Labor deepening, including the transfer of labor out of agriculture, was the key forces behind the extraordinary improvement of per capita’s living standards in china between 1978 and 1998. But for the period since the early 1990s, high and rising saving and investment would be the reason of capital deepening that contributed to China’s economic growth. Indeed, there are several authors and researchers who dare to overstate that China has become excessively dependent on Investment for its economic growth. For Loren and Xiaodong the key driver of China’s economic success expressed in simple way was the rapid rising productivity growth due to the labor shift from agriculture sector to non-agriculture sector and also due to rising investment thanks to China’s high saving rate. High saving rate leads to higher investment level in the case of absence of population growth. When there is smooth accumulation of capital stock through saving, the output level will be improved. Improvement of output level purely means economic growth. Dennis Tao, Zhang and Shaojie stated that high and rising saving and declining consumption constitute a central feature of Chinese economy and government, corporate and household ,all, have contributed to the upsurge in national saving in China. For them, the sharp rise in government taxes on production and the collection of social security fees and income taxes where the dominant factors that increased the disposable income of the government. As the growth income outpaced that of government consumption, the saving rate rose quickly. But the shape of corporate saving is more affected by the firm profitability, by labor compensation and imperfect capital market and by government policies.

The household paid more attention to nature of the institutions, policies and the reforms process. Indeed, the simple citizens in China, after setting up the economic reforms in 1978, got incentives to produce more their own business. China’s economic situation prior reform was poorly developed. But after instituting the reforms, the government gave to citizens such kind of assurance to manage their own businesses. Therefore, Chinese people had incentives to be more productive because the privilege to enjoy the fruits of their own efforts began effective. When the government accorded more freedom to citizens to their own businesses, the capital accumulation process for china was improved very well and faster. High degree of economic freedom generates a high level of investment. The rise in China’s capital equipment was better to strengthen the output production capacity because the firms could increase their investment as long as they are becoming more technically equipped. The volume and the quality of Capital equipment that Chinese firms yield determine their output level. Then, we contend the idea that the factor accumulation plays an important role in determining the level of the outcome.

In his article titled capital accumulation and economic growth in China, C. Chow was joining Yan Wang and Yudong Yao’s thesis saying that before economic reform was started , more precisely during the period of 1952-1980, technological progress was absent in the Chinese economy and the capital formation played an important role as factor contributor to China’s growth. But after implementing economic reforms, the opening policy that Chinese government adopted, generated technology spillovers through the rise

in FDI level. In that paper, Chow describes the impacts of capital accumulation on China's economic growth before reform was started. But Chow argued, in his second article named Globalization and China's economic and financial development that, during the post -reform period, the opening policy adopted by Chinese government originated china's economic growth. Indeed, China became more opened to FDI and free trade practice and the Nation could increase the amount of its reserve in foreign currencies. Our economist went even on and said that due to its opening policy reform, China is now becoming a Global lender with its enormous trade surpluses. The following graph plot the change in capital labor ratio in China after the implementation of the economic reforms. We found a spectacular change in the amount of physical capital in terms of investment in physical capital compared to the size of the labor forces. Therefore, the ratio of the capital stocks K and the labor forces as employment L allowed us to get the value in percentage of the capital labor ratio. The rapid growth in capital to labor ratio post- reform which corresponds to the rise of China's capital accumulation, and thus, to the rise of GDP growth rate, convinced us on the role played by the capital accumulation on China's economic growth miracle.

Graph 2.1: Capital Labor ratio trend in %



Source: *our calculations*

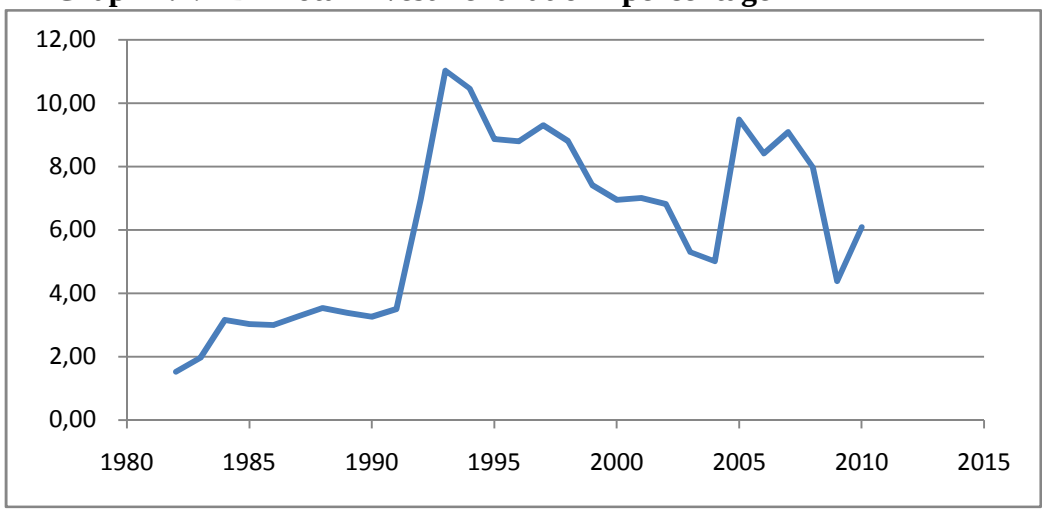
At early stage of the economic reforms, the level of capital to labor ratio in China remained very low and grew at constant pace from 8.8 in 1985 to 12.2 point in1992. During seven years, the change was just less than five points, so it was nothing comparing to the rapid growth of the capita-labor ratio after 1993. The second stage of the reform, since 1993, was characterized by spectacular change in the ratio of capital to labor from 13.6 in 1993 to 25.4 1999. With the same interval of time but the change in the growth of capital to labor was not the same. Since 1993, the value have doubled, it means that the change is almost hundred percent. And again, the value had doubled in just six years, from 25.4 points in 1999 to almost 50 (47.1) in 2005. The table 2.2 below confirms the data on capita labor ratio before China entered into WTO.

Table 2.2: China's Investment and FDI

YEAR	China's GDP in local Currency in 100 Millions	FDI in 100 Millions RMB	TOTAL INVESTMENT in 100 Millions	FDI-TOTAL INVESTMENT RATIO (in %)
1982	12,597.36	27.09	1784.2	1.52
1983	14,164.27	40.07	2039.0	1.97
1984	15,960.79	79.25	2515.1	3.15
1985	19,013.33	104.52	3457.5	3.02
1986	18,465.58	118.13	3941.9	3.00
1987	16,763.08	145.78	4462.0	3.27
1988	19,190.40	201.22	5700.2	3.53
1989	21,326.37	213.76	6332.7	3.38
1990	22,130.09	219.68	6747.0	3.26
1991	23,527.06	275.06	7868.0	3.50
1992	26,204.98	702.83	10086.3	6.97
1993	27,311.06	1,733.45	15717.7	11.03
1994	34,671.93	2,128.58	20341.1	10.46
1995	45,136.45	2,258.50	25470.1	8.87
1996	53,077.25	2,531.34	28784.9	8.79
1997	59,064.47	2,786.93	29968.0	9.30
1998	63,206.43	2,756.31	31314.2	8.80
1999	67,163.23	2,441.44	32951.5	7.41
2000	74,305.45	2,419.16	34842.8	6.94
2001	82,138.03	2,787.18	39769.4	7.01
2002	90,137.31	3,106.40	45565.0	6.82
2003	101,739.44	2,965.83	55963.0	5.30
2004	119,761.95	3,461.00	69168.4	5.00
2005	139,927.96	7,384.12	77856.9	9.48
2006	168,202.95	7,817.17	92954.1	8.41
2007	216,631.47	10,083.27	110943.2	9.09
2008	280,353.29	11,034.30	138325.3	7.98
2009	309,457.90	7,195.52	164463.2	4.38
2010	367,692.83	11,660.09	191690.9	6.08

Source: *China's statistical Bureau, 2012*

Graph 2.2: **FDI-Total investment ratio in percentage**



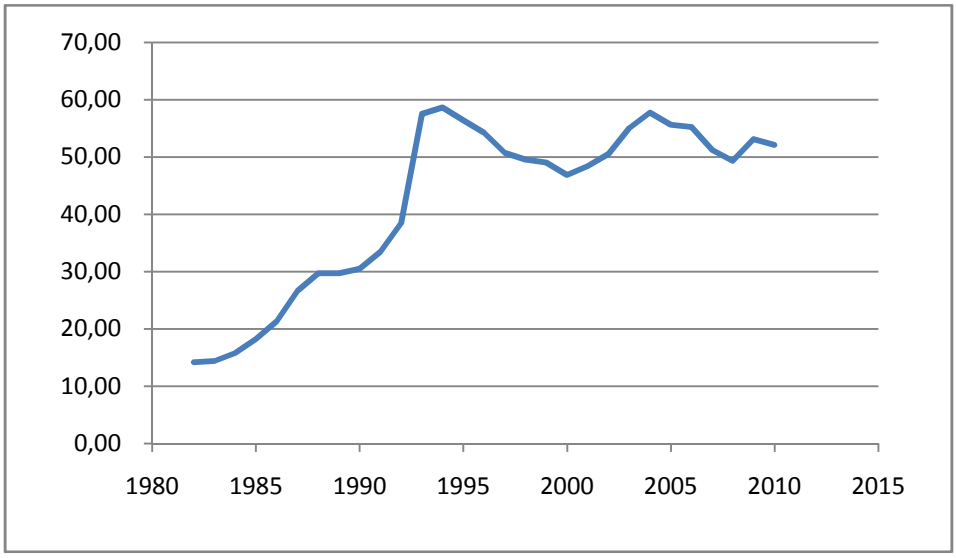
From these table 2.2 and graph 2.2, we see the trend of the FDI-Total investment ratio in China after reform since 1980. At the beginning of the 1980s, the level of FDI inflows into China was still very low at less than 2%. But as long as the economic reform got started with the open-door policy adopted by Chairman Deng Xiaoping, the level of FDI comparing to the china's gross investment increased in volume. Before 1990s, China's FDI –Total investment ratio slipped below the 5 % after reaching the highest level that outstripped 11% in 1993. The fall of FDI-Total investment ratio continue till China entered the WTO 2001. Then China's entry into the WTO encouraged more foreign investors to invest in China and foreign firm began to penetrate China's Market again, especially financial and telecommunications sectors. And the FDI inflows into China rose again till the last financial crisis of 2008 happened. 2009 small improvement of FDI growth in china began to appear in China's business activities.

We know that investment is one of the main components of GDP for a country and the relationship between investment and GDP growth turns out to be positive. When the GDP growth rate is improving, thus, the level of national saving may increase as well even at higher level than the increase in GDP. Then, if the saving rises, the net investment will grow quickly to boost the potential and real GDP. The economic performance for a country may increase the aggregate demand of goods because the purchasing power and living standards level of the population become better. The rise of the aggregate demand level leads investors to increase their production. Actually, increased production just means that the investment level rose because of the enhancement of the real GDP volume.

Graph 2.3 exhibits the ratio of total investment to GDP in China overtime. Through those this graph 2.3, we can see clearly the importance of the role played of capital accumulation for china's economic development. The level of the total investment to GDP, after the economic reforms were started, laid at the lowest level just 14% of the GDP. That poor performance of investment in China was changing and increasing in value from 14% in 1982 to33, 4% in 1991. And the increasing trend still continued till 1994 and reached the highest level 58 % of GDP such a Total investment to GDP ratio in China after reform was implemented. The graph 2.3 plots the decreasing trend of the curve of the Share of the gross investment to GDP between 1995 and 2000 years. The decline

of total investment ratio to GDP happened during that period of time, perhaps, because of political uncertainties and the effects of the Asian financial crisis (1998) that might impact the capital inflows into China. 1995-2000 corresponds to the description of Barry Naughton (2007) as period of economic slowdown in China's economic growth processes post-reform excluded from the four period of especially rapid growth close to or surpassing 10 %(Barry Naughton, 2007).

Graph 2.3 Total Investment to GDP ratio in percentage



Source: *China's statistical Bureau,2012*

After 2001, following the china's entry into the WTO, the Share of China's Gross investment to GDP restarted to climb and continued till reaching the highest level of 57% of GDP again. In fact, the tendency of the China's gross investment share to GDP was not only very high but it showed as well rising trend overtime. The high rate of saving and the open door policy marked by the china's engagement in WTO appear the main reason of the high inflows of capital and investment ratio to GDP for China. Therefore, we can see clearly the important role played by the capital accumulation in China's economic growth performance.

Brief, all the economic literature and data we presented supported and emphasized the idea that the main reason for the explanation of China's economic growth the important role played by the economic and social reforms in the capital accumulation process for China. They, all, believe that the success of the capital formation thanks to high and rising saving rate and the opening policy during the economic reforms in China's was the main reason of its economic growth during several decades. Not only the economic literature underlines the importance of the capital accumulation in china's economic growth but all the data we present support those authors' ideas as well. We also think that capital accumulation played a significant role to explain China's economic growth when we analyze China's economic History. Even the empirical data which we gather from the Chinese statistic yearbook previously showed fits well with those theoretical statements on China's economic growth reasons.

III- HUMAN CAPITAL IMPROVEMENT AND CHINA'S ECONOMIC GROWTH

"At the start of the 21rst century, the gap in the living standards between rich and poor countries is large and rising. The developing world suffers persistent poverty, while the developed world enjoys growing prosperity" (Peter Howitt, 2005). Rapid economic growth and improving living standards must benefit every country if they could reach the minimum condition needed to grow which is optimization of the resource allocation. The quality of Labor forces plays a central role in resources' allocation process. Human capital through health or through education has a significant role in contributing to the economic growth level. Economic growth is related to both health growth rate and health level. Health has positive effect on the rate of economic growth by improving the efficiency of labor production" (Liutang GONG et al. 2012). "Through the six channels, such as productive efficiency, life expectancy, learning capacity, creativity, copying skills and inequality, the improvement in a country's population health will impact on its long run growth performance. Health improvement will raise productivity and per capita GDP of a country that is sufficiently well off to be growing at the same rate of the world technology leaders and it will raise the growth rate of per-capita GDP in a country whose growth rate is below that of technology leaders. It will also stabilize the relative gap in living standards that separates them from the technology leaders" (Peter Howitt, 2005). The level of health improvement mainly determines the level of economic growth of a country and helps that country to minimize the deceleration of the latter from the technology leaders.

Human capital may be improved as well through the education channel. Human capital can be developed also by education or training which have impact on the individual workers' productivity. Generally in the real life, a well-educated and well-trained worker earns more and can be more productive than a less educated one. Therefore, most developed governments bestow more resources to investment in education in order to improve the competences and capabilities of their workers. Among the developing economies countries, China has done quite well in improving its human capital in terms of education. According to the education center information, Investment in education accounts for 4% of total GDP in China, in 2012. In 1986, Chinese government passed compulsory education law, making nine (9) years of mandatory education for all Chinese children. And still from the same source of information, 99.7 percent of the population areas have achieved the universal nine-year basic education. Moreover, Chinese people attribute more respects to teacher's status and teaching activities. Chinese People and political leaders, all, have agreed on the importance of the education in seeking economic growth and succeeding in life. We can notice this fact upon their beliefs when we look at the recent trend of Chinese government's spending on education. The following table 3.1 and graph 3.1 plot the gross domestic expenditures in China between the years 1996 and 2009. Over time, we can find the increasing trend with the public expenditures on Research and development in China. The Chinese political leaders dare to allocate more resources into the investment in education through the R&D because the return to education in the future will be higher and it will benefit the nation for its economic growth.

Human capital has a positive effect either direct or indirect on economic growth of the country which invests more in education. But advantages brought by human capital might be also useless if the country cannot be able to mobilize efficiently their human capital such resources. That is to notice the importance of the qualitative aspects of the content of the education and the teaching program for a Nation. If the content of the syllabus cannot satisfy the demand of the Job Market, in that way the country will not gain any benefit from the investment in Human capital. China is trying to improve the quality of its education through training program and internship practice. Almost in every institution, such as schools, Banks, we meet the students still studying in the university but they are doing benevolat. This practice can improve the relationship Education-Job market through learning by doing

Table 3.1: Gross Domestic Expenditures on R&D in absolute value and as percentage of GDP

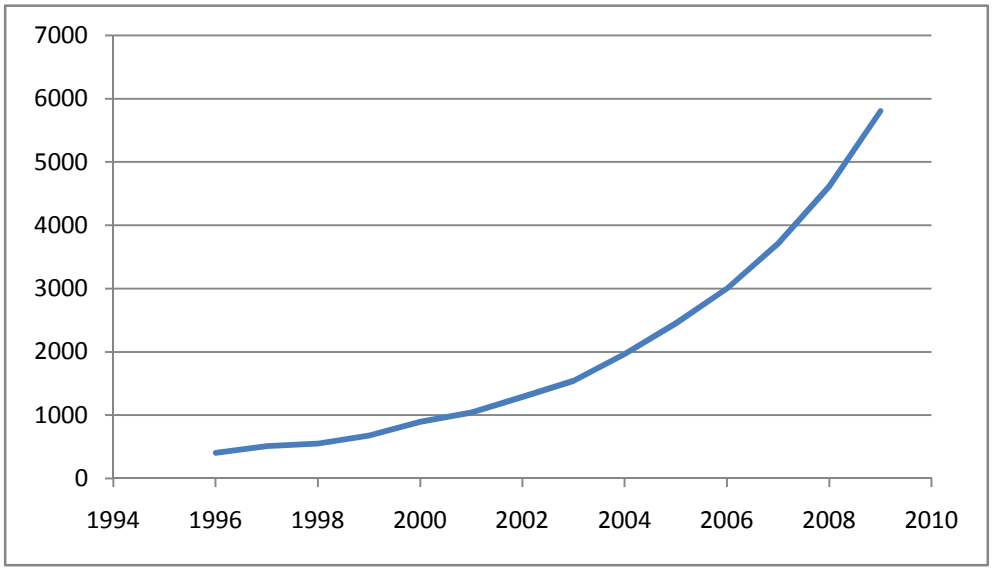
YEARS	China's GDP In 100.Millions RMB	Gross Domestic Expenditures on R&D in 100 Millions RMB	Gross Domestic Expenditures on R&D as percentage of GDP
1996	53,077.25	404.48	0.76
1997	59,064.47	509.16	0.86
1998	63,206.43	551.12	0.87
1999	67,163.23	678.9	1.01
2000	74,305.45	895.665	1.21
2001	82,138.03	1042.48	1.27
2002	90,137.31	1287.6	1.43
2003	101,739.44	1539.63	1.51
2004	119,761.95	1966.33	1.64
2005	139,927.96	2449.973	1.75
2006	168,202.95	3003.097	1.79
2007	216,631.47	3710.242	1.71
2008	280,353.29	4616.022	1.65
2009	309,457.90	5802.107	1.87

Source: *China's statistic yearbook,2010*

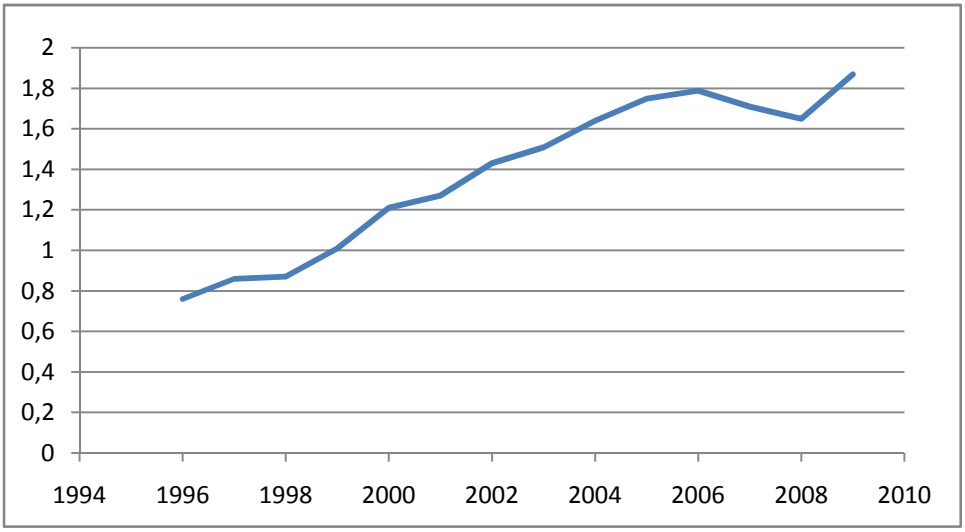
On this table 3.1, we can find the increasing trend of the gross domestic expenditures on R&D in china from 1996 to 2009. From this table, we see that the 0.76% level in 1996 jumped and doubled the level just in 2003 with 1.51% as value. The increasing trend in China's Gross domestic expenditures on R&D had not ceased to rise overtime. The following graph 3.1 shows this increasing and rapid trend clearly. The evidence is that when we compare the rise of growth rate of china's GDP and its expenditures on R&D, there seems a parallelism between the two curves in graph 3.1 and the graph 3.2. It is to say the causation relationship exists between those two variables: as long as China's GDP

growth rate becomes higher, the country spends more on education. When there is decline in GDP growth rate level, the expenditures on R&D goes down as well. The 2008 year illustrates this case if we look at the graph 3.2 and graph 3.3. Moreover, the increase in education investment improves china's workers productivity and china's resources allocation efficiency.

Graph 3.1:
Gross Domestic Expenditures on R&D in absolute value (in 100 million yuan)

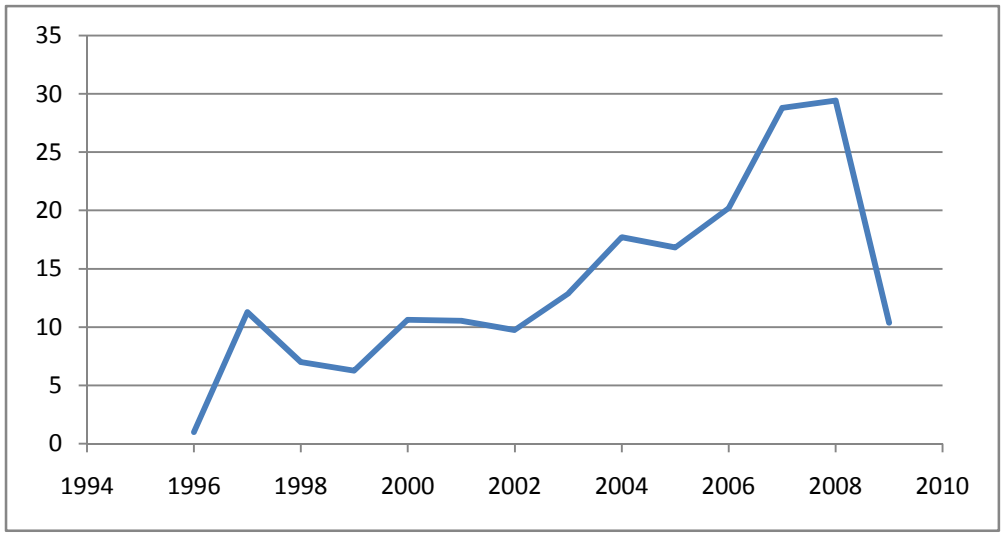


Graph 3.2: Gross Domestic expenditures on R & D as percentage of GDP



In both terms, Nominal value or relative value, the expenditures on R&D in china overtime displays an increasing trend. The increased amount of expenditures on R&D as percentage to GDP points out the improvement in investment in education for China. Therefore, the level of productivity of workers became higher and foreign investors were willing to bring their capital to China.

Graph 3.3: Trend in the GDP level in RMB



Except the high and rising trend with china's public spending on R& D that is showing the importance accorded to the investment in Human capital trough education, we can also mention the political will of the Chinese government to improve education level of the population. Since 1995, Chinese government decided to implement 9 years of compulsory education: 6 years of primary followed by 3 years of junior middle school. Certainly, a well educated and low abiding worker should have a strong work ethic and that is the condition sine qua none of China's economic growth (Rongxing Guo, 2010). "In fact, Chinese policymakers clearly recognized the increasing role of technology in the Chinese economy and have also paid considerable attention to the acceleration of research and Development (R& D). According to UNESCO (1986) , during the 1980-85 period, the R& D/ GDP ratio in China was , although, lower than that of US, Japan , west Germany, the UK and Switzerland(Whose R&D/GNP ratio was exceeded 2%), higher than that found in Pakistan, Indonesia, Thailand and Philippines ,whose R&D/GNP ratios ranged between 1.0 percent and 0.4 percent, and very similar to that of Australia, Denmark, Italy and South Korea. In the mid -1980s China has implemented a package of plans for the development of new technology, and traditional technology." (Rongxing Guo, An introduction to the Chinese economy. the driving forces behind modern day China, John Wiley and sons in 2010.) . But nowadays, China is doing well in improving human capital stock through an increasing public spending on R& D.

Moreover, in average, China has 11 years of school life expectancy from primary level to tertiary level which is relatively high comparing to the 6 years for Madagascar (UNESCO, 2007). The advantage in having high level of years of schooling like that is of course resides in its implications on the productivity of the workers. Indeed, thanks to the high degree incentives in China before its economic miracle, Chinese citizens are willing to become more productive. Thus, they, citizens and political leaders all together, are motivated to develop the abilities of people and the nation's human capital because people's educational attainment has a significant influence on their productivity and the level of output national. Their educational level determines their ability to change, to adopt or even introduce new technologies and innovations. In the other words, the

technological progress, thus economic growth, depends on the stock of human capital. Skills and competences of workers have a significant impact on their productivity and probably on the technical change.

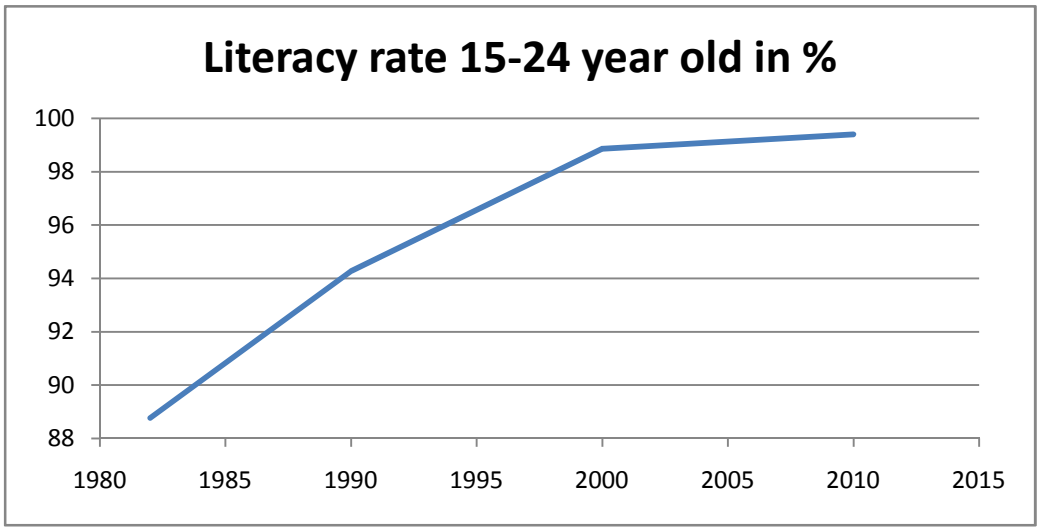
The following table 3.2 exhibits the literacy rate for the students ranged between age 15-24 both sexes and compare this literacy rate with the population growth rate during the same period of time: 1982-2010. We saw that the literacy rate in china is always improving and had no cease to strengthen while the population growth rate was, not only, very low but decreased at all. It means that there is a net improvement of the education system in china regarding to the population growth rate situation.

Table 3.2: **Literacy rate 15-24 Year old both sexes**

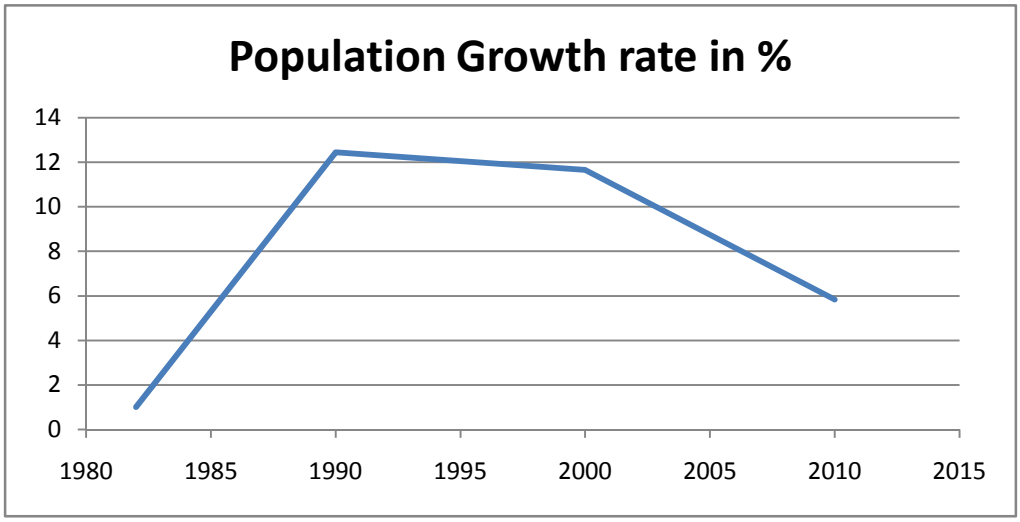
YEARS	Age group and sex	Literacy rate 15-24 year old in %	Population aged 15-24 in 1000	Total population in 10000 persons	Population Growth rate in %
1982	15-24 year olds Both sexes	88.77	187 296	100818	1
1990	15-24 year olds Both sexes	94.28	249 800	113368	12.44
2000	15-24 year olds Both sexes	98.86	196 474	126583	11.65
2010	15-24 year olds Both sexes	99.40	225 311	133972	5.83

Source: *China's Statistic Year book, 2010*

Graph 3.4: Literacy rate 15-24 Year old both sexes



Graph 3.5: Population growth rate post- reforms



Source: *China's statistical bureau,2012*

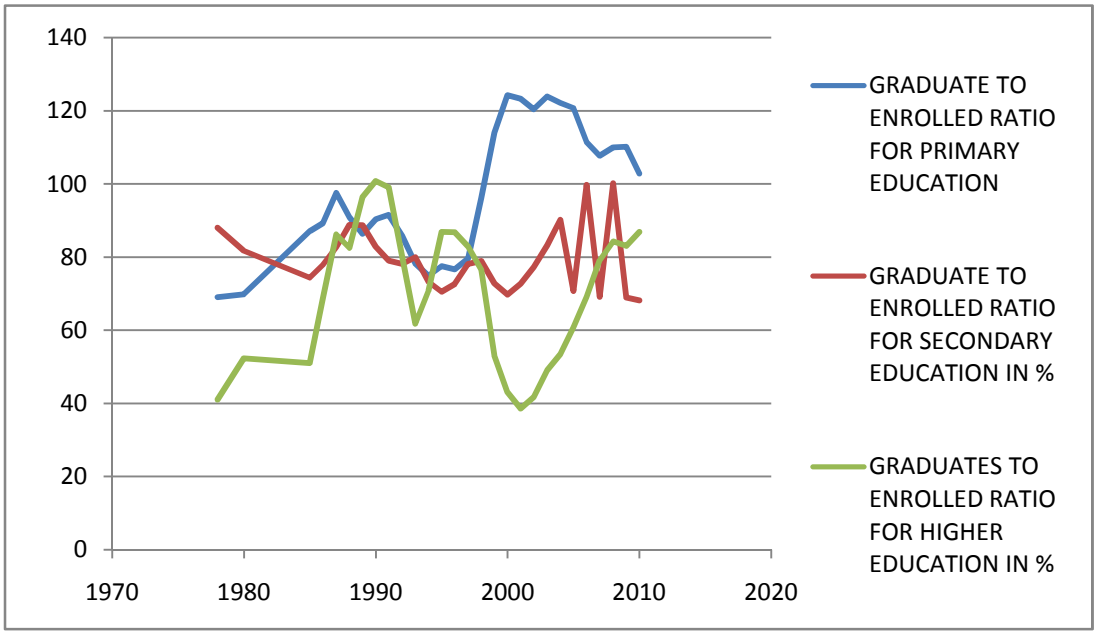
Those two charts above show clearly the trend in literacy rate and the trend in population growth rate. The trend for both, the literacy rate and the population growth have increasing trend at the beginning from 19980 to late 1990s but the literacy rate curve keeps that rising trend before stopping the trend at constant pace. When the literacy rate has got constant pace, the population growth rate is decreasing. That's to say that the level of literacy rate in China is improving comparing to the change in population growth rate. The following table expounds numbers of graduate to enrolled ratio by educational level over time.

Table 3.3: Ratio of graduate students to enrolled students in China, in percentage

YEARS	GRADUATE TO ENROLLED RATIO FOR PRIMARY EDUCATION	GRADUATE TO ENROLLED RATIO FOR SECONDARY EDUCATION IN %	GRADUATES TO ENROLLED RATIO FOR HIGHER EDUCATION IN %
1978	69.01	88.01	41.04
1980	69.79	81.73	52.31
1985	87.02	74.36	51.05
1986	89.28	77.92	68.71
1987	97.54	82.7	86.22
1988	90.91	88.83	82.54
1989	86.32	88.79	96.48
1990	90.27	82.87	100.82
1991	91.51	79.05	99.03
1992	85.76	78.15	80.11
1993	78.25	80	61.8
1994	74.88	73.23	70.78
1995	77.47	70.54	86.93
1996	76.61	72.64	86.85
1997	79.61	78.19	82.9
1998	96.18	78.93	76.57
1999	114	72.77	53.1
2000	124.28	69.76	43.06
2001	123.28	72.71	38.61
2002	120.44	77.28	41.72
2003	123.97	83.25	49.11
2004	122.22	90.26	53.45
2005	120.81	70.75	60.81
2006	111.51	99.81	69.13
2007	107.72	69.17	79.13
2008	109.98	100.22	84.24
2009	110.22	68.99	83.05
2010	102.83	68.17	86.94

Source: *China's statistic yearbook,2010*

Graph 3.6: China's graduate students to enrolled ratio by educational level overtime



Source: *China's Statistic Yearbook 2010*

From the above table 3.3 and the graph 3.6, we can see the change in terms of number and quality of Chinese workers because they showed the number of students succeeded their studies after school enrollment. At the early 1980s, the graduate to enrolled ratio curve for the primary education appeared relatively low but it has a spectacular rise after 1999 and it went down after 2006 again. But secondary education has constant pace at the beginning and sustained more fluctuations after 2004. However, the tertiary education does not have more fluctuation and kept rising trend as well, especially after 2005.

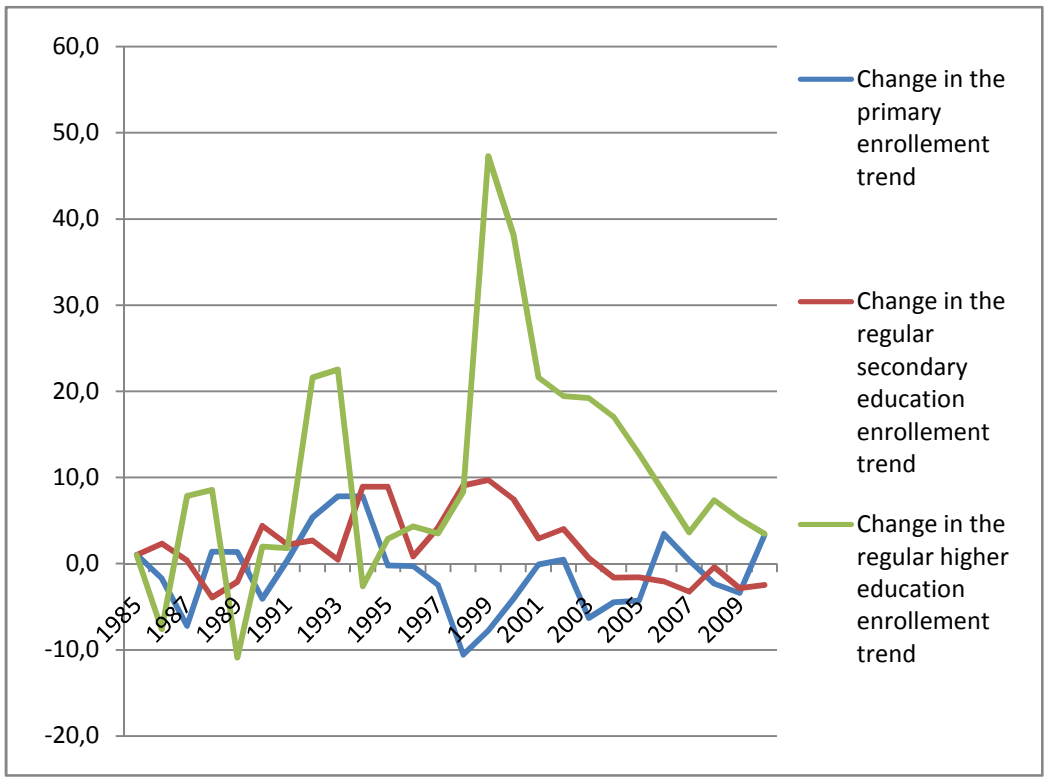
The following table 3.4 and graph 3.7 appear more explicit in showing the improvement in human capital in china, notably the higher education level. Chart 3.7 showed the constant change in school enrollment in china but the higher education's curve has a high change rate over time and laid always above the two curves of the primary and secondary 's ones. At the beginning, they all have a negative value such change but as time goes they all are improved in terms of change rate. That is to say China has valued its workers' intellectual abilities and competitiveness that's why the human capital improvement in china seems developed very well. Consequently, productivity level was improved in China, that because of the progress in human capital investment. Actually, an improvement of Human capital level appears the foundation of other factors of production's efficiency, such as labor or physical capital. Human capital is the basis of economic growth building because everything resides in the productivity improvement if we want to improve our growth performance

Table 3.4: Change in enrollment overtime in primary, regular secondary and tertiary education

YEARS	Numbers of pupils enrolled in primary schools in 10 000	Change in the primary enrollment trend	Numbers of persons enrolled in regular secondary schools in 10 000	Change in the regular secondary education enrollment trend	Numbers of Persons enrolled in regular higher education in 10 000	Change in the regular higher education enrollment trend
1985	2298.2	-21.9	1606.9	-16.9	61.9	120.3
1986	2258.2	-1.7	1643.9	2.3	57.2	-7.6
1987	2094.6	-7.2	1649.5	0.3	61.7	7.9
1988	2123.3	1.4	1584.8	-3.9	67.0	8.6
1989	2151.5	1.3	1551.5	-2.1	59.7	-10.9
1990	2064.0	-4.1	1619.6	4.4	60.9	2.0
1991	2072.7	0.4	1655.2	2.2	62.0	1.8
1992	2183.2	5.3	1699.7	2.7	75.4	21.6
1993	2353.5	7.8	1707.3	0.4	92.4	22.5
1994	2537.0	7.8	1859.8	8.9	90.0	-2.6
1995	2531.8	-0.2	2025.9	8.9	92.6	2.9
1996	2524.7	-0.3	2042.9	0.8	96.6	4.3
1997	2462.0	-2.5	2128.2	4.2	100.0	3.5
1998	2201.4	-10.6	2321.0	9.1	108.4	8.4
1999	2029.5	-7.8	2546.0	9.7	159.7	47.3
2000	1946.5	-4.1	2736.0	7.5	220.6	38.1
2001	1944.2	-0.1	2815.9	2.9	268.3	21.6
2002	1952.8	0.4	2929.0	4.0	320.5	19.5
2003	1829.4	-6.3	2947.4	0.6	382.2	19.3
2004	1747.0	-4.5	2899.7	-1.6	447.3	17.0
2005	1671.7	-4.3	2854.3	-1.6	504.5	12.8
2006	1729.4	3.4	2794.8	-2.1	546.1	8.3
2007	1736.1	0.4	2703.9	-3.3	565.9	3.6
2008	1695.7	-2.3	2693.2	-0.4	607.7	7.4
2009	1637.8	-3.4	2616.7	-2.8	639.5	5.2
2010	1691.7	3.3	2551.7	-2.5	661.8	3.5

Source: *China's Statistic Yearbook, 2010*

Graph 3.7: Change in enrollment overtime in primary, regular secondary and tertiary education



The following table 3.5 and graph 3.8 indicate the number of graduates by educational level and they express clearly the net improvement in tertiary education in China. That is to say that the level of the productivity in Chinese economic production process is becoming better. The graph shows us a constant trend with the primary and secondary education in terms of graduate numbers but the tertiary education has the constant pace at the beginning of our time range and exponentially rising after .That is to say the level of R& D, the level of innovation and creation of new technology is ameliorating in China. Therefore, the level of the productivity and efficiency in allocating resources improves as well.

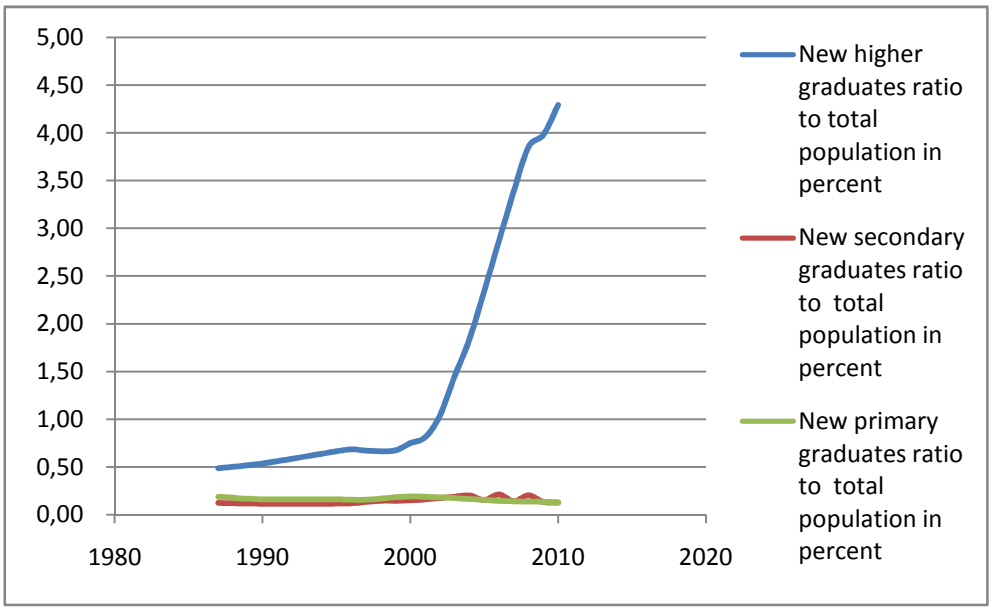
Table 3.5: Graduates by educational level to total population ratio overtime

YEARS	New higher graduates ratio to total population in percent	New secondary graduates ratio to total population in percent	New primary graduates to total population ratio in percent
1987	0.49	0.12	0.19
1990	0.54	0.12	0.16

1995	0.66	0.12	0.16
1996	0.69	0.12	0.16
1997	0.67	0.13	0.16
1998	0.67	0.15	0.17
1999	0.67	0.15	0.18
2000	0.75	0.15	0.19
2001	0.81	0.16	0.19
2002	1.04	0.18	0.18
2003	1.45	0.19	0.18
2004	1.84	0.20	0.16
2005	2.35	0.15	0.15
2006	2.87	0.21	0.15
2007	3.39	0.14	0.14
2008	3.85	0.20	0.14
2009	3.98	0.14	0.14
2010	4.29	0.13	0.13

Source: *Our calculations,2013*

Graph 3.8: Graduates by education level to total population ratio overtime



In fact, productivity ensuring the increase in output national determines the efficiency of the other factors of productions such as labor or Physical Capital. For example, when the health system for a country is maintained in best condition, everyone could have access to a best health service and they can enjoy their lives with good health. The people's healthier life help labor to become more productive in working life and labor productive means an increase in the output level. This change positive in output level expresses economic growth characterized by the shift of the production frontier of the national output level. The same thing may happen if the country is able to have the best policy on education in order to rebuild a strong foundation of economic growth. Suppose

that the country has a strange policy on education like some African countries: “We need more technicians to promote development so students, you don’t need to study far away. What you need is undergraduate curriculum study and then go to work directly for the experience. Experience is more important than postgraduate diploma…….” “Other fact also that happens especially in Madagascar is the bad condition of the teacher’s status (low salary, lack of materials, bad social status attributed to the teaching work….). Such a consequence of this kind of condition, no one wants to be teacher and people are discouraged to improve their educational level that leads to the Human capital improvement.” May be, that’s why most African countries who apply such kind of policy on education are just worsening their economic development level. Hence, we can easily understand through those explanations the importance of the Human capital improvement in determining the economic growth rate level. In other words, the productivity of labor or physical capital depends on the success of the Human capital which embodies productivity. Simply, by a simple logic, we can say that the rise in output (GDP) is closely linked with the human capital improvement. That is why China has high level of economic growth due to the rise in productivity growth generated by deliberated policies and practices improving quickly human capital of the country.

Indeed Education matters for the employment because the quality of workers has a significant impact on the labor market mechanism. No firms could hire less skilled workers because the need of competitiveness proves to be tough. Thus, not only education matters for employment but for individual earnings and his productivity as well. In fact, well educated workers have big chance to earn more because they have a high degree of understanding to adopt the mechanism of the production processes. Then the labor market will demand skilled labor and more productive and the wage level will rise and the output national will improve thanks to the increasing productivity of well paid productive workers. That is why we say that education matters for employment, for productivity of workers and thus for the economic growth. Being aware of this fact, Chinese government and Chinese household, together, are willing to improve the human capital level in increasing the quality of the education of citizens in China. The ability of the policy-makers to maintain and to develop the human capital level of a country assures the economic prosperity for that country. Briefly, human capital through education and health improvement plays an enormous role in seeking economic development for a country in general and for China economic performance in particular.

IV- INTERNATIONAL TRADE AND GROWTH PERFORMANCE IN CHINA

Now, in this fourth chapter, we are going to determine the role played by the international trade in the explanation of china's economic miracle after its economic and social reforms. Indeed, even in theory, there is a positive relationship between growing trade and economic growth for a country. Countries that are trading each other can get more benefits from trade activity than countries living in economic autarky. In fact, the choices to live in Crusoe economic for a country might appear completely insane nowadays. That is because the degree of economic interdependence among countries is strengthening and spreading. The globalization is considered by many economists as one of the driving forces of that economic interdependence phenomenon without saying the international trade. "But what are the driving forces of the globalization? The first and perhaps the most profound influence is technological change… technical innovations have led to an explosion of the productivity and slashed transportation costs… as technical progress has extended the scope of what can be produced and where it can be produced, and advances in transports; technology have continued to bring people and enterprises closer together, the boundary of tradable goods and services has been greatly extended. Also, continuing liberalization of trade and investment has occurred as the results of multilateral trade negotiations. Globalization has also been promoted by the widespread of the liberalization of investment transactions and the development of international financial markets. These factors have facilitated international trade through the more ready availability and affordability of financing" (ROBERT J. Carbaugh, 2004).

International trade and globalization are two concepts that go always together. We are even tempted to say that they are like the two sides of the same coin. When we talk about international trade, the two main concepts of Adam Smith and David Ricardo come always to our mind: "Absolute advantage and Comparative advantage." According to Adam Smith, trade between two nations is based on absolute advantage. When one nation is more efficient than (or has an absolute advantage over) another in the production of one commodity but is less efficient than (or has an absolute disadvantage with respect to) the other nation in producing a second commodity, then both nations can gain by each specializing in the production of its absolute advantage and exchanging part of output with the other nation for the commodity of its absolute disadvantage.''… "And Ricardo stated the law of comparative advantage in declaring that even if one nation is less efficient than (has an absolute disadvantage with respect to) the other nation in the production of both commodities, there is still a basis for mutually beneficial trade. The first nation should specialize in the production of and export the commodity in which its absolute disadvantage is smaller (this is the commodity of its comparative advantage) and import the commodity in which its absolute disadvantage is greater (this is the commodity of its comparative disadvantage)" (Dominick Salvatore, 2004).

Better understanding of those two concepts could help economists to explain the complex and complicated international exchange processes, as policy-makers to determine trade policy and strategy in seeking economic growth. International trade and economic growth are inseparable concepts and there seems a causation relationship between both. International trade might contribute to economic growth of a country by several paths. For

instance, if one country trades with other countries, through the imports –exports processes, that country can improve its economic growth performance by increasing earnings of foreign reserves through exports or accumulating physical capital (or raw material) like machineries (or oil) through imports. Thus, due to trade activity between two or more nations, all participants could gain more benefits from trade rather than living in autarky and self-sufficient economic. In the real world, there are even some countries whose economic growths are qualified as exports-led or FDI-led. And the economies of those countries are mainly depending on the external sectors such as international trade or FDI. Many researchers agreed on the fact that china‘s economic growth is one of the sustained growth and depending on the international market and trade. We can quote the study conducted by Won W. Koo and Jianqiang Lou that confirms the positive relationship between trade and economic growth of China. Those researchers studied the role of international trade in Chinese economic development in applying econometrics and non-parametric methods. As findings, they found out, after regressing four main variables such as land, labor, investment and trade with economic growth, that trade variable has a positive sign and significant impact on china’s economic development. Studying the probable interdependence between agricultural economy and the industrial economy, they found that traditional input, such as labor or land, is important to china’s economy especially, to the agricultural sector. But their impact has been declining as long as the Chinese economy change structure and more developed. Contrariwise, Capital investment has made the smallest contribution to China’s agricultural and industrial sectors, thus china’s economy. But international trade has made the most significant contribution to Chinese economic growth” (Won W. Koo and Jianqiang Lou, 1999). Those researchers argued that the economic reforms implemented by china played an important role to china’s economic growth because since reforms of 1979, China has experienced dramatic economic growth. The country’s GDP grew from 447 billion Yuan ($ 298 billion) in 1980 to 3138 billion Yuan ($ 544 billion) in 1993 (Won W. Koo and Jianqiang Lou, 1999).And according to the information available on www.chinadaily.com and the global finance www.gfmag.com , China‘s GDP was estimated $ 8.28 trillion (51.93 trillion Yuan) in 2012. The reason of this dramatic increase in China’s GDP resides on its open-door policy adopted during the economic reforms since 1978. The role of foreign trade and foreign Investment had grown faster since the economic reforms began in 1979. The amount of foreign capital inflows into china and the volume of foreign trade were becoming larger as the reforms move forwards.

Nicholas R. Lardy, in analyzing the role of foreign trade and Investment in China’s economic Transformation, listed three main reasons of the sources of capital flows into China: “FDI, Foreign Borrowing and Foreign equity Investment.” Among those three sources of China’s capital flows, the most important contributing to its economic growth was the FDI which is generated by the institutional change after applying economic reforms. The economic reforms implemented led china to adopt the market economy’s value such as liberalization, free market, and free trade. “The dramatic increases in Foreign Direct Investment in the first half 1990s appear to be caused by four factors. First, the magnitude aggregate FDI flowing to developing countries increased significantly in the 1990s. Secondly, China’s seeming political stability in the wake of Tiananmen,

combined with the explosive growth of the domestic economy after 1992, led to a fundamental reassessment by foreign firms of china's economic and investment potential. Thirdly, China systematically liberalized its foreign investment regime (Creation of the four special economic zones in the South of China) and China also opened up sectors that previously off limits for foreign investors. Fourthly, the last reason is that FDI flows had increased, in part, because of the phenomena of the recycled capital of Chinese origin" (NICHOLAS R. Lardy, 1995). The direct impact of the increase of the capital inflows and coming of the foreign investors into China was the rise of the exports capacity of the country. "The small amount of foreign direct Investment in the late 1970s and early 1980s initially made a negligible contribution to China's total exports. As late as 1985, six years after the passage of China's foreign investment law and five years after the establishment of special economic zones , the exports of foreign invested enterprises were only $ 320 million, barely over 1% of china's total exports. From that modest base, they expanded dramatically, reaching about $ 35 billion by 1994, almost 30% of China's total exports." (NICHOLAS R. Lardy, 1995). And the central Intelligence Agency the www.cia.gov released an estimates value of the total amount of China's exports in 2012 as more than $ 2.050 Trillion. International trade allowed China's economy to grow rapidly because it gave to China abundant and huge benefits either static or dynamic. "The static benefits from international trade result from importing capital goods which embody high technology. And the dynamic effects of trade refer to the improvement in the TFP through learning by doing and accumulation of human capital" (PENG Sun and ALMAS Heshmati, 2010). Therefore, China's trade volume and trade structure changed at the same time thanks to its growing engagement and participation to the international trade activity. The increasing participation in the global markets facilitates the rapid economic growth in China.

The following data will show us the fitness of those previous explanations with the empirical data released by the Chinese government on the Statistic yearbook, 2010. Table 4.1and graph 4.1 indicates the main sources of china capital investment from abroad. In fact, the borrowing sources did not last for long time for china but the main sources came from foreign direct investment and other foreign investment (e.g.: recycled capital for Chinese origin). The scarcity of foreign loans for china had relation with its best strategy and approach in adopting the reform. China adopted the economic and social reform with prudency, thus, its approach was neither brisk nor prompt. China's gradual and undoubted economic reform provided confidence among foreign investors and called many investors to invest their capital in china. The presence of competent government determined the success of economic transition in china, especially during the second phase of the economic reforms (from 1992), ensured investors and furnished such kind of assurance and safety for them if they invest in china. Strong and competent government guaranteed political stability allowed china to have been the favored recipient of capital flows from early 1990s. That flow of abundant foreign direct Investment into China was closely related to the guarantee brought by the economic reform but it had an impact as well on the trade volume and structure of China. Indeed, the absence of lots of foreign borrowing for china is often considered by many economists as consequence of the rise of its exports volume. Another explanation attributed to that high capital inflow was the comparative

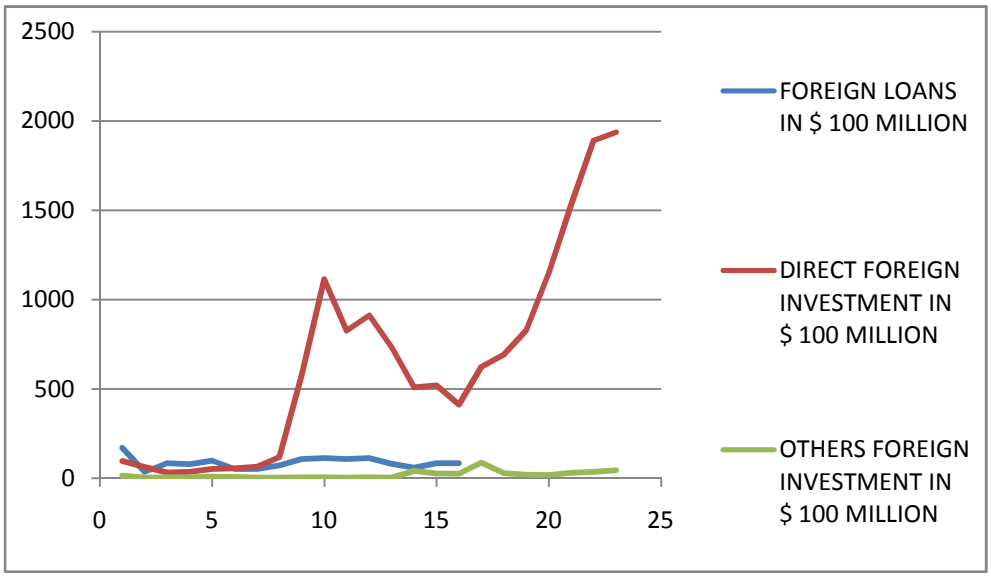
advantage in terms of cheap labor that china enjoyed.

Table 4.1 : The Sources of Capital inflows into China

YEARS	TOTAL in $ 100 Millions	FOREIGN LOANS in $ 100 Millions	DIRECT FOREIGN INVESTMENT In $ 100 Millions	OTHERS FOREIGN INVESTMENT in $ 100 Millions
1979-1984	281.26	169.78	97.50	13.98
1985	102.69	35.34	63.33	4.02
1986	122.33	84.07	33.30	4.96
1987	121.36	78.17	37.09	6.10
1988	160.04	98.13	52.97	8.94
1989	114.79	51.85	56.00	6.94
1990	120.86	50.99	65.96	3.91
1991	195.83	71.61	119.77	4.45
1992	694.39	107.03	581.24	6.12
1993	1232.73	113.06	1114.36	5.31
1994	937.56	106.68	826.80	4.08
1995	1032.05	112.88	912.82	6.35
1996	816.10	79.62	732.76	3.71
1997	610.58	58.72	510.03	41.82
1998	632.01	83.85	521.02	27.14
1999	520.09	83.60	412.23	24.26
2000	711.30		623.80	87.50
2001	719.76		691.95	27.81
2002	847.51		827.68	19.82
2003	1169.01		1150.69	18.32
2004	1565.88		1534.79	31.09
2005	1925.93		1890.65	35.28
2006	1982.16		1937.27	44.89

Source: *China's statistic yearbook 2010*

Graph 4.1: Sources of Capital Inflows into China



The importance of high flows of capital into China's Market post reforms is the increasing production capacity of the nation, thus, the output national. The arrival of abundant capital flow into china led china to the expansion of its exports. The exports rose with the decline of unemployment and that permitted china to improve its current accounts. China's increasing exports just meant increasing competitiveness and gain of bigger international market share. Thus, the need of productivity improvement looked like an emergency for china in order to achieve high and rapid economic growth.

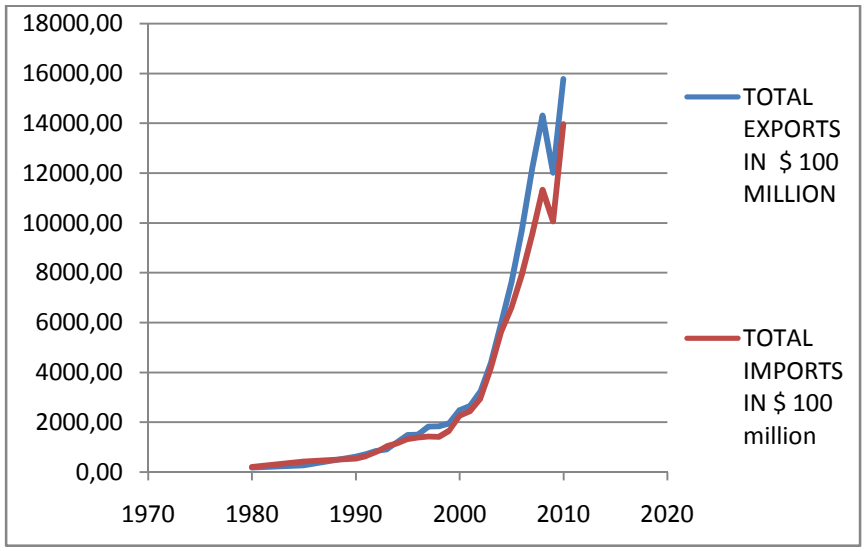
Table 4.2: Total Exports and Imports in $ 100 million

YEARS	TOTAL EXPORTS in $ 100 million	TOTAL IMPORTS IN $ 100 million
1980	181.19	200.17
1985	273.50	422.52
1990	620.91	533.45
1991	719.10	637.91
1992	849.40	805.85
1993	917.44	1039.59
1994	1210.06	1156.14
1995	1487.80	1320.84
1996	1510.48	1388.33
1997	1827.92	1423.70
1998	1837.09	1402.37
1999	1949.31	1656.99
2000	2492.03	2250.94
2001	2660.98	2435.53

2002	3255.96	2951.70
2003	4382.28	4127.60
2004	5933.26	5612.29
2005	7619.53	6599.53
2006	9689.78	7914.61
2007	12204.56	9561.16
2008	14306.93	11325.67
2009	12016.12	10059.23
2010	15777.54	13962.44

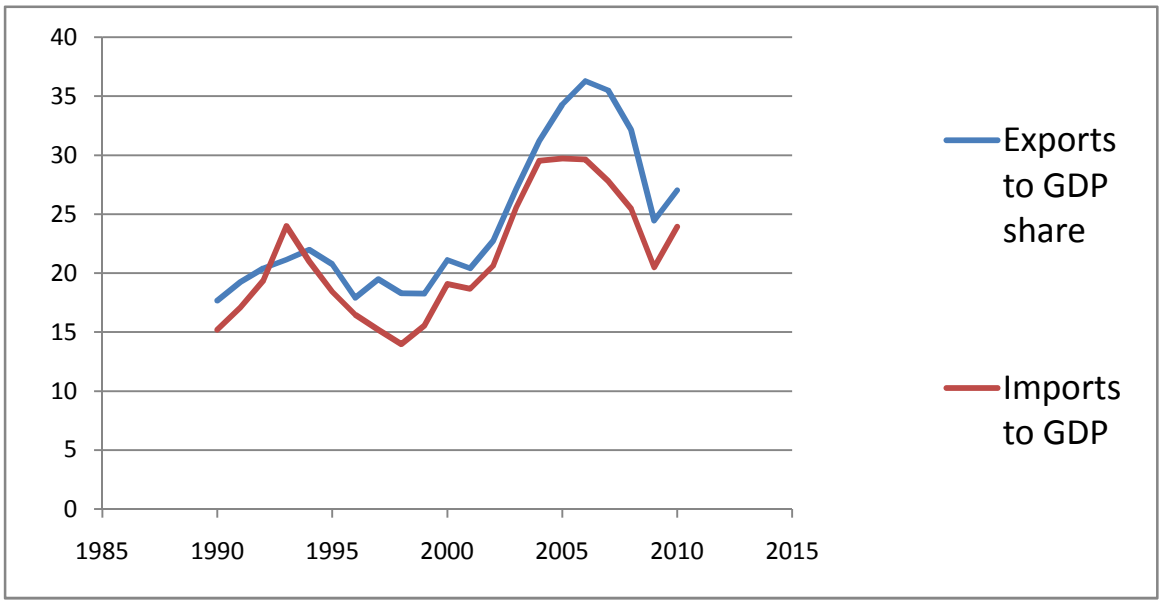
Source: *China's statistic yearbook, 2010*

Graph 4.2: Total Exports and Imports in $ 100 million



Moreover, if we look carefully at the data above (graph 4.2 and table 4.2) we can see that just prior 1985 china had an imports level surpassed the amount of exports. In other words, at earlier time of reforms, china still imported more than it exported in terms of goods overall. The following graph 4.3 shows clearly that the relative value of China's exports to GDP surpassed largely its imports share to GDP as we found in nominal value in the previous table 4.2 and the graph 4.2. The nominal value of the exports and imports has almost the same trend with the relative value of imports and exports to GDP shares when we compare the general trend of the curves on the graph4.2 and the graph 4.3

Graph 4.3 China's exports and Imports share to GDP in percentage



During the early stage of the reforms, the imports of manufactured goods exceeded the imports of primary goods. We thought it seemed logical in the sense of reinforcing investment, thus, china needed more capital goods to increase investment level.

The following table 4.3 and graph 4.3 plot the trend of the china's exports by products (primary goods and manufactured goods) since the beginning of the economic reforms. We can notice that between 1980 and 1985, china imported more than it exported without taking into consideration what kind of products are trading. But after 1985, the exports amount always largely surpassed that of the imports for china. And when we pay attention to the type of products traded, referring to the following table and graph, we can understand that China's trade policy was well approached. China's trade policy approach appeared well done because it has been logical and realistic approach in seeking productivity growth: "Productivity from capital accumulation and opening"

Table 4.3: Exports value by products in $ 100 Millions

YEARS	EXPORTS OF PRIMARY GOODS IN $ 100million	EXPORTS OF MANUFACTURED GOODS In $ 100 million
1980	91.14	90.05
1985	138.28	135.22
1990	158.86	462.05
1991	161.45	556.98
1992	170.04	679.36
1993	166.66	750.78
1994	197.08	1012.98
1995	214.85	1272.95

1996	219.25	1291.23
1997	239.53	1588.39
1998	204.89	1632.20
1999	199.41	1749.90
2000	254.60	2237.43
2001	263.38	2397.60
2002	285.40	2970.56
2003	348.12	4034.16
2004	405.49	5527.77
2005	490.37	7129.16
2006	529.19	9160.17
2007	615.09	11562.67
2008	779.57	13527.36
2009	631.12	11384.83
2010	816.86	14960.69

Source: *China's statistic yearbook, 2010*

Graph 4.4: Exports value by Products in $ 100 Million

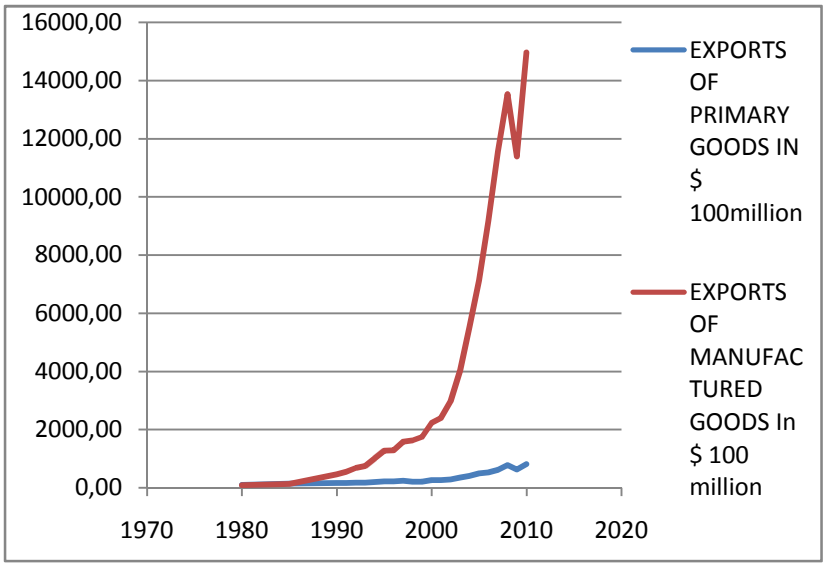


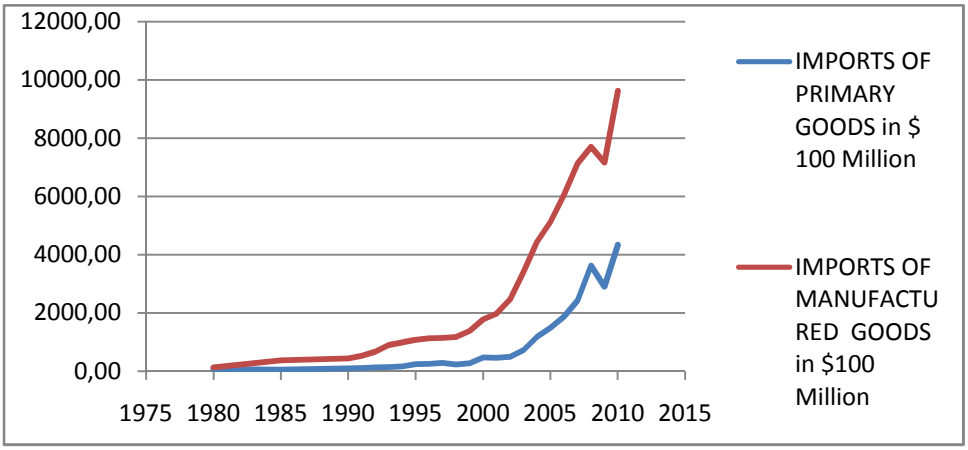
Table 4.4: Imports value by Products in $ 100 Million

YEARS	IMPORTS OF PRIMARY GOODS in $ 100 Million	IMPORTS OF MANUFACTURED GOODS in $100 Million
1980	69.59	130.58
1985	52.89	369.63
1990	98.53	434.92
1991	108.34	529.57
1992	132.55	673.30

1993	142.10	897.49
1994	164.86	991.28
1995	244.17	1076.67
1996	254.41	1133.92
1997	286.20	1137.50
1998	229.49	1172.88
1999	268.46	1388.53
2000	467.39	1783.55
2001	457.43	1978.10
2002	492.71	2458.99
2003	727.63	3399.96
2004	1172.67	4439.62
2005	1477.14	5122.39
2006	1871.29	6043.32
2007	2430.85	7128.65
2008	3623.95	7701.67
2009	2898.04	7161.19
2010	4338.50	9623.94

Source: *China's statistic yearbook, 2010*

Graph 4.4: Imports value by Products in $ 100 Million



TRYING TO RUN REGRESSION TO TEST:

In order to verify the exactitude of the positive effects of each variable according to the literature review and the data processing results, we were trying to run regression between the China's GDP and six other independents variables. The specification of our model reveals a linear model showing the relation between china's GDP and China's FDI, total investment, gross domestic expenditures on R&D, the percentage of higher graduates' students and the total exports and imports volume. Our model was written in linear equation as follows:

- China's GDP = C + α FDI +β Total Invest+ + λ Gross domestic expenditures on GDP + γ percentage of higher graduates students + δ Total exports + θ total imports + ε

We can see the values of each variable in following table showing our raw data overtime between the time range 1996 and 2009. We use the same data from the same China's statistic yearbook 2012 but we were just shortening the time period because before 1996 and after 2009 many data are missing. And we suppose fourteen years, from 1996 to 2009, cannot be considered as a long term period comparing to the almost three decades of China's economic growth, thus, we consider time range we chose in this regression as a short term.

Table 4.5: Relation between GDP and the six other independent variables:

year	chinasgdpin100millionsyuan	fdiin100millionsyuan	totalinvestmentin100millionsyuan	chinasgrossdomesticexpendituresi	graduatesstudentstoenrolledratio	totalexportsin100million	totalimportsin100millions
1996	53077.3	2531.34	28784.9	404.48	86.85	1510.48	1388.33
1997	59064.5	2786.93	29968	509.16	82.9	1827.92	1423.7
1998	63206.4	2756.31	31314.2	551.12	76.57	1837.09	1402.37
1999	67163.2	2441.44	32951.5	678.9	53.1	1949.31	1656.99
2000	74305.5	2419.16	34842.8	895.665	43.06	2492.03	2250.94
2001	82138	2787.18	39769.4	1042.48	38.61	2660.98	2435.53
2002	90137.3	3106.4	45565	1287.6	41.72	3255.96	2951.7
2003	101739	2965.83	55963	1539.63	49.11	4382.28	4127.6
2004	119762	3461	69168.4	1966.33	53.45	5933.26	5612.29
2005	139928	7384.12	77856.9	2449.97	60.81	7619.53	6599.53
2006	168203	7817.17	92954.1	3003.1	69.13	9689.78	7914.61
2007	216631	10083.3	110943	3710.24	79.13	12204.6	9561.16
2008	280353	11034.3	138325	4616.02	84.24	14306.9	11325.7
2009	309458	7195.52	164463	5802.11	83.05	12016.1	10059.2

Before we run the regression, we were expecting to get positive signs as estimate coefficients for all independent variables except total imports. China's GDP is our

dependant variable which is measured in 100 million Yuan.

Our independent variables are:

- 1- FDI in 100 Millions we expect positive coefficient in relation with GDP
- 2-Total Investment in 100 million Yuan sign expected of its coefficient positive
- 3- Higher graduates students in percentage sign expected positive
- 4- China's gross domestic expenditures on R&D in 100 millions sign expected positive
- 5-Total exports in 100millions dollars sign expected positive
- 6- Total imports in 100 Millions dollars sign expected negative.

We report the result of our simple regression in the following table:

Table4.6. Regression results

chinasgdpi~n	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval
> -						
fdiin100mi~n	0.964005	3.608644	0.27	0.797	-7.56908	9.49709
> 2						
totalinves~n	4.013975	1.431943	2.8	0.026	0.627969	7.39998
> 1						
chinasgros~i	-45.5182	32.09748	-1.42	0.199	-121.417	30.3802
> 7						
graduatess~o	-516.609	220.2719	-2.35	0.051	-1037.47	4.2513
> 8						
totalexpor~n	24.42091	7.634948	3.2	0.015	6.367129	42.474
> 7						
totalimpor~s	-34.7451	8.11859	-4.28	0.004	-53.9425	-15.5476
> 8						
_cons	6263.707	14765.22	0.42	0.684	-28650.5	41177
> 9						

Now, we are able to write the exact form of our equation thanks to this regression table results. Thus, our linear equation can be shown like this:

- *China's GDP= 6263.707+ 0.964005FDI +4.01375 Total investment-45.518 Gross domestic expenditures on R&D -516.609 Higher Graduates student in percent + 24.4209 total exports – 34.745 total imports*

Actually, our expectation proves to be exact and fitted except the two independent

variables on human capital: gross domestic expenditures on R&D and the percentage rate of higher graduates' students. The negative signs of the estimate coefficients for those two independent variables are really unexpected for us because the literature review and the data processing results told us that those variables have net positive effect on China's GDP. Therefore, we anticipate positive signs for their estimate coefficients but the regression results show something different. Our explanation to this kind of surprising results resides in our time range period. The negative signs of the Gross domestic expenditures on R&D and the negative sing in front of the percentage of higher graduates' students mean that the investment in human capital costs really expensive for china and their effects on China's GDP in the short run turn up negative. But in the long run perspective, this high cost of investment in human capital will benefit China in many respects like employment or technological progress. In other words, holding constant all other independent variables, the increase of 100 millions of China's expenditures on R&D will decrease the China's GDP level by 45.518* 100 million RMB (=decrease of 455.18 million Yuan in China's GDP). Our regression results showed the same results as the literature review and data processing results said. They, all, display that the exports variable has significant positive impact on China's GDP comparing to the total investment, FDI or total imports. We have to precise that the negative signs as estimates coefficients of the gross domestic expenditures on R&D variable and the investment in higher education do not really mean that the spending on these variables are really bad for the economic growth of China. Like what happened with the negative sign of the estimate coefficient of the imports variable. It does not mean that imports activities are harmful for GDP growth; contrariwise imports can strengthen economic growth when china imports more capital goods or raw materials for production.

V- OVERVIEW ON THE DYNAMISM OF MADAGASCAR 'S ECONOMY AND CHALLENGES

In order to make comparison studies on China's and Madagascar's economic growth, as the title of our thesis indicated, we are going to show the basic facts and challenges in Madagascar economy. Actually, Madagascar does not appear the size of a country worth to be compared with China in many respects, but be aware of that fact, we will just try to find out the difference in China's growth experience and Madagascar's one.

Several regimes succeeded one by one after Madagascar gained again its independence from France, its colonizer, and the economic history of Madagascar changed with its political history. There was a high degree of economic dependence due to the magnitude of the French power on Madagascar economy and political life before the independence. But the French interferences upon Malagasy economy still existed and continued even after the country got its independence. The first Republic founded after the independence, governed by President Tsiranana tried to take Madagascar away from the continued and growing economic dependence towards France. The first republic focused its economic policy on allowing French financiers and domestic investors to invest unfettered. That socialist republic Malagasy so called Social Democratic party (PSD) reduced its socialist characteristic on state investments in the areas eschewed by those two kinds of investors, notably the farming activity. Intraparty conflict within PSD members in 1972 brought the Tsiranana regime into a downfall and led to a Military interlude between 1972 and 1975. The Military interlude regime under President Ramanantsoa did not change anything in political institutions but the political culture of the people knew a small change. Malagasy people wanted freedom in their everyday life and needed free space for political expression. Because of the lack of fairness during the Military interlude regime, existence of winners and losers, again internal conflict within major state of the regime, forced Ramanatsoa to hand power to Ratsimandrava who was assassinated just after three days of taking power. Ratsimandrava had good intention to develop Madagascar from the local population in giving the entire autonomy of decision to the local collectivity called:"Fokonolona."

After that Military interlude, the second republic of Madagascar was born and brought few major changes in both political and economic institutions under the Ratsiraka presidency and "Scientific Socialism ". First, the scientific socialist regime confiscated and bought foreign firms and turned them over to Malagasy ownership. The main intention of the Ratsiraka regime was to socialize the economy by nationalizing major enterprises. In the rural sector, local farming cooperatives were established by the Ratsiraka regime which intended to increase the level of the government capital investment. During the 1980s, severe economic crisis reached Malagasy economy due to the failure of the increased investment implemented by Ratsiraka. The only apparent effect of the enhanced level of investment was to put the country deeply in debt to foreign creditors. And when Madagascar fell into a deep debts level, thus, the second republic regime governed by Ratsiraka was forced to negotiate with foreign sponsors such as IMF and the World Bank. From that time, a series of structural adjustment agreements signed

with the IMF and the World Bank during 1980s and the early 1990s. The Ratsiraka regime recognized the failure of the socialism and initiated a return to a more classic liberal economic model.

The third republic regime just strengthened the inauguration of the liberal economic system initiated by the second republic in 1993. Most of Madagascar's transitional economic and social reforms had begun and been strengthened during the third republic regime in 1990s. The third republic had privatized more public enterprises, disbanded the agriculture marketing boards , ratify more liberal investment codes favoring foreign investment , privatize the banking and financial sectors and tried to diversify the traditional and primary products exports. The major aim of the third republic regime was to improve the quality of the products produced domestically and doomed to exports. The Zafy Albert regime was also trying to improve, in terms of quality and quantity, the exports crops, coffee, and vanilla despite the limit restrictions on the world demand. In short, Madagascar economic transition began and initiated in 1985 by the second republic of Ratsiraka regime but reinvigorated by the third republic IN 1990S. Most of the reforms implemented were among the requirements of the IMF and the World Bank in return against their acceptance to finance Madagascar economic crisis generated by the socialist regime in 1970s and early 1980s. The IMF and World Bank wanted all of Madagascar's economic and institutional reforms implemented and achieved by 2000s even it just began effectively early 1993. Madagascar's political leaders did not have any choices if they would like to get the funds from those sponsors. Therefore Madagascar's economic transition was briskly done in big bang way processes for all sectors either agricultural sector or industrial sector. The last part of the third republic ruling by Ravalomanana Marc characterized by willingness to attract a lot of foreign investors who can invest especially in the mining sector. And the Ravalomanana regime's appeal has positively been answered from foreign investors and many of them came to Madagascar to use their money. The main reason that incited foreign investors to join Madagascar in business activity was the political stability during the Ravalomanana rule between 2002 and early 2009. Madagascar have made progress in terms of economic growth during that period and the economy was grown annually at almost 5 % till the new Military coup occurred in March 2009. The data below from the central bank of Madagascar on the real GDP growth rate during that period of time confirmed the growth achievement during Ravalomanana regime.

Table 5.1: Real GDP growth rate 2001 – 2012 in percentage

YEARS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Growth rate	6	-12.4	9.8	5.3	4.6	5	6.2	7.1	-4.1	0.5	0.5	2.9

Source: *Central Bank of Madagascar, 2010*

The economic development of Madagascar is characterized by a cyclical political crisis every almost 10 years and the worse thing is this cycle is becoming smaller and

smaller as time goes. The political unrest happened before every almost ten years, in 1972, 1985, 1991 and 2002 but nowadays, it occurred every nearly five or seven 2002 and 2009 as we saw in the above table political crisis accompanied by negative economic growth. This political instability is appearing the major obstacle of Malagasy economic growth without saying the lack of integrity and loyalty of political leaders that led them to bad governance and the nation to a shortage of technological capabilities. The economy as whole is always hampered by the shortage of infrastructure equipments, by the lack of technological progress and lack of efficient educational system, by high degree of Kleptocratic rule among the government officials, by an economic colonialism from its economic partners ' side. Despite the independence that Madagascar got in 1960, Madagascar still suffered a lot from the interference of foreign countries who enjoy economic powerful status. Madagascar's mining resources, for instance, are extracted at the expense of the Malagasy citizens because they cannot feel the impact of the return received from the exploitation in their daily lives.

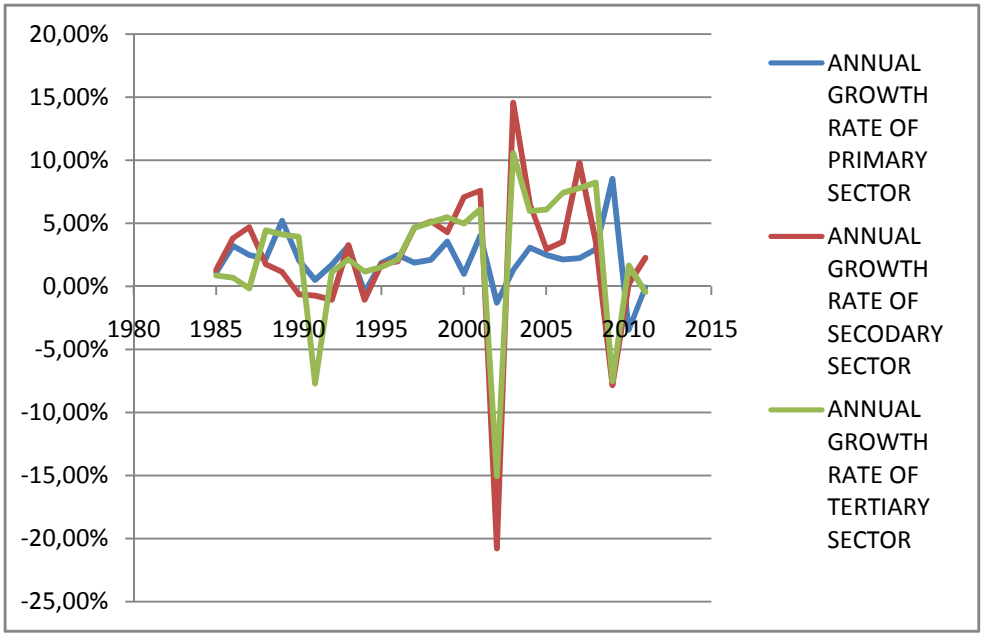
Table 5.2: Annual growth rate by sector of activities of Malagasy economy

YEARS	ANNUAL GROWTH RATE OF PRIMARY SECTOR	ANNUAL GROWTH RATE OF SECODARY SECTOR	ANNUAL GROWTH RATE OF TERTIARY SECTOR
1985	1.12%	1.32%	0.87%
1986	3.24%	3.81%	0.69%
1987	2.51%	4.71%	-0.18%
1988	2.20%	1.77%	4.44%
1989	5.21%	1.15%	4.11%
1990	2.08%	-0.62%	3.94%
1991	0.51%	-0.73%	-7.72%
1992	1.71%	-1.07%	1.12%
1993	3.22%	3.27%	2.13%
1994	-0.45%	-1.05%	1.2%
1995	1.87%	1.75%	1.5%
1996	2.50%	1.98%	2.12%
1997	1.89%	4.65%	4.648%
1998	2.11%	5.170%	5.0815%
1999	3.56%	4.301%	5.4885%
2000	1.00%	7.089%	4.9840%
2001	4.02%	7.593%	6.1318%
2002	-1.29%	-20.8%	-15.0%
2003	1.3%	14.6%	10.6%
2004	3.1%	6.5%	6.0%
2005	2.5%	3.0%	6.1%
2006	2.1%	3.5%	7.4%
2007	2.2%	9.8%	7.8%

2008	2.9%	3.6%	8.2%
2009	8.54%	-7.84%	-7.5%
2010	-3.4%	0.2%	1.7%
2011	-0.1%	2.3%	-0.4%

Source: *Central Bank of Madagascar, 2012*

Graph 5.1: Annual growth rate by sector of activities of Malagasy economy



Moreover, when we look quiet closely at GDP composition of the Malagasy economy overtime, we can find disarticulated economy. According to the central bank of Madagascar's data, shown in the data on table 5.2 above, each sector of the Malagasy economy developed unevenly overtime. This uneven progress expressed the absence of solid articulation among the three sectors of the economy in Madagascar. From the above graph 5.1, we notice the fall of all sectors together in early 1990s, 2000s and 2009 because the whole economy was damaged by the political crisis during those years. But when there is stability of the political situation which should be accompanied by an economic recovery for the nation, none of the three sectors evolved into the same direction and trend. Instead of leading to the progress of the agricultural field, the industrial sectors development has the same trend as the tertiary sector on the graph 5.1. The primary sector's trend kept a constant pace and without fluctuations. Not only there is no articulation among the three sectors of the Malagasy economy but also we observed that the two modern sectors (industrial and services) have grown rapidly than primary sector one. That is to say that there is, perhaps, neglecting behavior from the political leaders towards the farming activities. In Madagascar, for instance, 80% of Malagasy people are still farmers but the land access remains very difficult, especially in terms of administration procedures. The following data provides the GDP composition of the Malagasy economy overtime according to www.exxun.com .

This table 5.3 below shows us the percentage of each sector that constitutes the

Madagascar‘s GDP and we see that the service sector has always the big share overtime comparing to two other sectors. The service sector has got 54% in 2000 and keeps the share at more than fifty percent till 2013. The industrial sector contributes to GDP at 12% the least value and 16% at most over 13 years. It means that the improvement of the industrialization process in Madagascar does not develop so well. But even worse the farming sector contributes less and less to real GDP of the Malagasy economy despite the proportion of the labor forces working in the farm activities. According to the official statistic data, more than 80% of Malagasy people still worked in farming fields and more than 50% of arable lands are not fully exploited.

Table 5.3: GDP composition of Madagascar by sector overtime 2000-2013

DATA FIELD	MADAGASCAR GDP COMPOSITION BY SECTOR
2013 January GDP - composition by sector	agriculture: 28.3% industry: 16.4% services: 55.2% (2011 est.)
2012 January GDP - composition by sector	agriculture: 29.3% industry: 16.2% services: 54.5% (2010 est.)
2011 January GDP - composition by sector	agriculture: 26.5% industry: 16.7% services: 56.8% (2010 est.)
2010 January GDP - composition by sector	agriculture: 26.2% industry: 15.2% services: 58.5% (2008 est.)
2009 January GDP - composition by sector	agriculture: 26% industry: 15.9% services: 58.1% (2008 est.)
2008 January GDP - composition by sector	agriculture: 27.3% industry: 15.8% services: 56.8% (2007 est.)
2007 January GDP - composition by sector	agriculture: 26.9% industry: 16.5% services: 56.6% (2006 est.)
2006 January GDP - composition by sector	agriculture: 29.3% industry: 16.7% services: 54% (2004 est.)
2005 January GDP - composition by sector	agriculture: 29.3% industry: 16.7% services: 54% (2004 est.)
2004 January	agriculture: 27.4%

GDP - composition by sector	industry: 12.8% services: 59.8% (2002 est.)
2003 January GDP - composition by sector	agriculture: 25% industry: 12% services: 63% (2001)
2002 January GDP - composition by sector	agriculture: 34% industry: 11% services: 55% (1999 est.)
2001 January GDP - composition by sector	agriculture: 30% industry: 14% services: 56% (1999 est.)
2000 January GDP - composition by sector	Agriculture: 34% industry: 12% services: 54% (1997 est.)

Source: http://www.exxun.com/afd_hy/Madagascar/ec_gdp_composition_sector.html

In addition, the poor in Madagascar are especially rural families practicing subsistence agriculture, producing just enough for their families because they are not well equipped materially and technically. More than 70 % of those 80% rural inhabitants are living worsening conditions with permanent declining livings' standards because the number of the rural population grows faster but they size of their lands as first means of production never enhanced. In terms of numbers and data we think Madagascar economy is remaining traditional economy because more than 3/4 of the work forces are working in farming activities. And the two industrialization of the Malagasy economy does not appear achieved and succeeded very well after all the economic reforms implemented during 1990s. Concerning the high level of the service sector share in contributing to GDP, we think the Globalization and the international trade render the service sector more developed in Madagascar. But we suggest that the government should change its development approach in emphasizing the primary sector and overall the articulation between this primary sector and the other two sectors, especially the industrial sector. We think that in enabling the rural population to improve their income earnings, the Malagasy government could eradicate the half of poverty in few years.

We evoked the question such title of this section, in asking ourselves what Madagascar can learn from China's experiences. Such an answer, we find out that, first of all, this prioritization of the rural areas that Madagascar should learn from China's economic experiences instead of neglecting it. When China began its economic reforms in 1978, the middle kingdom under the Socialist regime prioritized and started reforms by the rural areas. "China's market transition began at the end of 1978 with a wide -ranging reassessment of nearly every aspect of command economy. Indeed, there was at this time a broad social relaxation after the storms of the Cultural Revolution: political prisoners were freed, millions of sent-down youth returned to the cities, discussion were relatively free and wide ranging. In this environment, the extent of possible was known, and

experimental reforms were launched in nearly every sector of the economy. However, it was in the countryside that reforms succeeded first, it was the dramatic success of the rural reforms that cleared the way for continuing and progressively more profound change." (BARRY Naughton, 2007). Secondly, we saw also the difference of the approach adopted by Madagascar and China when they implemented respectively their transitional reforms. Approaches are different because China opted the gradual and prudent approach in moving towards the Market economy. However, Madagascar wanted to achieve its economic reforms in big bang way in few years seeing that its political leaders were under pressures from foreign sponsors such us IMF and World Bank. They have to reach the goals determined in the IMF and World Bank requirements; otherwise there will not be a new financing in the future. Thus, the nationalism attitude, the independence in decision making process without foreign interference or obligation among the political leaders seem very important for governing one nation. Finally, we saw as well an important role of the government in seeking economic growth and it made big difference between China and Madagascar. Government plays a significant role because the ability of the political power to set up political stability determines the level of its economic development. The strong and efficient Chinese government can ensure a highly safe and secured investment environment which is the only one thing that interested foreign investors. But Madagascar couldn't enjoy this political calm because of its eternal political crisis that hampered its economic growth process.

VI – WHAT CAN MADAGASCAR CAN LEARN FROM CHINA'S ECONOMIC EXPERIENCES: POLICY SUGGESTIONS

We are totally convinced that the way china adopted in seeking its economic growth could perfectly be applied for Madagascar to take off its development stage. We think the path of growth seeking that china followed can still work for Madagascar. In fact, China began its economic reforms by reforming agricultural fields and it is still the same thing that Madagascar's government should do for shaking off the poverty in Madagascar. Indeed, 80 percent of Malagasy people are still farmers and more than 75 % of the poorer citizens are from rural households. Therefore, we think it seems rational if the government tries to enable rural families in fighting against poverty.

Certainly, when the government increases its investment in farming, it will generate positive impacts on the revenues of rural families. If the government raises its expenditures on agricultural investment, such as facilitating the access to clean water, to raw materials and inputs for farming, providing technical assistances for peasants, this will affect the level of agricultural outcomes. When the agricultural sectors have a net increase in output, it means that the productivity of the agricultural activities grows. The productivity growth in the agricultural sector has positive impact on the whole economy Malagasy because the rural poor families can enjoy an improvement of their purchasing power thanks to the rise of their revenues and the urban consumers feel an improvement of their purchasing power as well due to the fall of the price level. The productivity growth in the farming activities will cause not only an improvement within the farming sector but within the secondary sector and tertiary sector as well, thus, the whole economy will became better. The progress of the primary sector will allow the secondary sector to get access easier to the raw materials and inputs for the industrial production. That's why we think, and it appears the logical way for Madagascar nation, that the best way for Madagascar economic growth seeking is to enable rural farmers in helping technically (Modern methods of cultivating) , materially (roads, bridge, river dam) and even in subsidizing the farmers in their activities. The one reason that supports our argument in saying that the development of Madagascar should begin by reforming agriculture as china did it, is the truth fact shown by the table5.2 (page 38) plotting the annual growth rate by sector of activities of Malagasy economy. In that table, we can see clearly that the agricultural sector appears more solid and robust in front of the shocks generated by the cyclical political crisis than the other two sectors. Look carefully at the years 1991, 2002, and 2009 and compare the impact of the political unrests during those years on each sector. We can see that during those three political instabilities the two other sectors grew at highly negative pace comparing to the annual growth rate of the primary sector. For example, in 2009 the political crisis brought the secondary and the tertiary sectors at the pace of -7.84% and -7.5% but the agricultural sector still grew at 8.54% according the data from the Central bank of Madagascar. Thus, the key to develop Madagascar lies in the farming production and activities.

Secondly, if Madagascar 's political decision -makers would like to improve the capital formation process in Madagascar , we still think that the path followed by China seems still useful and can be really implemented in Madagascar without problem. Indeed,

China developed its heavy industries before moving to expand all resources for light industries in order to strengthen the capacity of the domestic and national industries. We guess the ideas remain the same and appear the best strategy for Madagascar but its implementation needs high degree of economic nationalism and certain level of political will from Malagasy government leaders. Madagascar's government should be aware that the Malagasy economy cannot grow without political stability. Consequently, they need to set up political calm in order to attract foreign investors, otherwise no one will come in Madagascar to invest and use their foreign funds for the Malagasy economy. If Malagasy government can ensure political stability, more foreign investors will invest in many fields such as communication, construction, mining sectors that open many opportunities. We agreed on the fact that Malagasy economy needs foreign capital to boost its capital formation and capital stocks but we think it would be better for Malagasy economy if the national investors could make their investment in a freer and safer environment and protected from the international shocks. The stability of the economic and political situation will cause a net improvement of the Malagasy economy because the level of the urban unemployment will decrease rapidly with the increase of the capital flows into the industrial sectors. Then the amelioration of the employment rate will lead to the productivity growth of the secondary sector and at the same time the purchasing power of the poorer urban families who are the first beneficiaries of the rise of FDI will become higher thanks to the improvement of the productivity within the industrial sector. Whether foreign investors or national ones, they need safety and calm environment for investing and making money. Therefore, the improvement of the capital flows in industrial production depends on the economic and political situation of Madagascar. In addition to this, the Malagasy government can reduce also its budgets deficits with the tax revenues from those foreign and domestic firms. Moreover, the development of the investment in the industrial sectors may strengthen the exports capacity of Madagascar and lead to the reduction of the trade deficits accompanied by the appreciation of the Malagasy Ariary currency.

Finally, we totally agree that Madagascar does not yet arrive at the stage of the high and fast development of the services sectors and that is why we think that there is a wrong policy in Madagascar in prioritizing the tertiary sectors in thinking that this sector contributes more to GDP of the Malagasy economy. When we pay attention to the table 5.3 showing the GDP composition of Madagascar by sector overtime (page 39), we can notice that the services sector contribute more to the Madagascar's GDP overtime comparing to the two first sectors despite the three quarter of the human resources are working on farming activities. We do not deny the presence of a lot of opportunity in the services sectors investment but Madagascar is not actually ready yet to step in and to reach that stage and also the tertiary sector itself appears really vulnerable facing the cyclical political crisis in Madagascar. In relation with this issue, we think Madagascar has to adopt a gradual approach in trading with foreign countries because its domestic producers are quite weaker facing the harsh global competition. Thus, the Malagasy government needs to adopt certain degree of protectionism for protecting the weak domestic enterprises otherwise Madagascar will experience an outflow of the national capital and it will impact negatively on the national economy. Thus, to improve Madagascar trade

activities, we think Malagasy government leaders should reform its exchange rate system and make it more stable in order to avoid more fluctuations of the Malagasy Ariary currency. We think unstable exchange rate regime cannot benefit Madagascar for its exports. Because the unstable exchange rate system shows the weaknesses of the national currency and a weak currency do not allow any country in the world to be more competitive in the Global market and International trade. Malagasy government should prioritize the trade in services related to the tourism activities because Madagascar possesses an absolute advantage in that field as an island. Madagascar holds many endemic fauna and flora with many touristic sites and long and beautiful beaches. Madagascar can earn more foreign reserves in attracting more tourists and the increase of the investment in that field will boost Madagascar‘s economy in strengthening the purchasing power of the Malagasy consumers and lowering the inflation level. We know that China undervalued its currency in order to boost its exports but we think the approach is not good for Madagascar because nowadays, the value of the Malagasy Ariary is already very low but it cannot help our exports and of course it is absolutely bad for our imports. Consequently, we think we should seek a stronger currency instead of weaken it for our domestic consumers’ living standards. The improvement of the Malagasy ariary will rise the propensity to consume of Malagasy citizens because their purchasing power increases thanks to the improvement of the currency level after the development of tourism activities.

GENERAL CONCLUSION

The growing differences among countries in terms of economic development level attracted our curiosity and led us to ask a question about china's economic growth miracles and Madagascar's economic difficulties. Throughout our research, taking both into account the economic literature and the empirical data, we found that many explanations are plausible to explain the difference in growth among these two countries. The first explanation that many researchers support and the data showed as well resides in the accumulation of physical capital. Loren and Xiaodong argue simply that the key driver of China's economic success was the rapid rising productivity growth due to the labor shift from agriculture sector to non-agriculture sector and also due to rising investment thanks to China's high saving rate. Chinese people have got incentives to make their own business after the government accorded more freedom to citizens; thus, the capital accumulation formation improved well and faster and china's national output grew faster such consequence. The second factor of China's economic growth discovered regarding to economic literature and empirical data is the improvement of the human capital level in China. We measured this improvement of human capital in China through the total domestic expenditures data on R&D and numbers of graduate student to enrolled students. We found overtime that there are improvement and increasing trend in expenditures on education in China. Among the three levels of education, the higher education was more privileged in China's education system and policy. That meant that it is not amazing to see a rapid growth of productivity level in China after reforms were implemented because productivity concerns are closely related with the higher education system (R &D). The last reason we advanced to explain china's economic growth was the progress that china made in terms of international trade practices and engagement. We have discovered also that after china applied the economic reforms and strengthened its engagement by the entry into WTO, both FDI level to GDP and FDI level to total investment coming into China rose. And the rise in FDI and Investment level in China led to the change in structure and volume of china's exports –Imports and allowed China to enjoy a large trade surplus with the rest of the world.

We found that those three main reasons that we suggest are all caused by the economic and social reforms that china implemented. Consequently, we thought that China's economic growth was not a fruit of hazard but it is closely linked with its History either political or economic. We deduced as results of our comparison on China's economic reforms and Madagascar one, we think that the difference lays on their approach and strategy to adopt the reforms. Then, the difference in their economic achievement depends on their reform approach and strategy and the aptitude of the government to set up reforms. Madagascar and Chinese government did not have the same approaches because China opted the gradual and prudent approach in moving towards the Market economy. However, Madagascar wanted to achieve its economic reforms in big bang way in few years seeing that its political leaders were under pressures from foreign sponsors such us IMF and World Bank. We mentioned as well that china is characterized by the competent and strong government that is able to set up social order and political stability which are the major conditions of economic growth seeking process. As prospects, we

propose that the Malagasy government should to rethink its economic reforms process and reset a new economic reforms if needs appear necessary. We suggest as well that the Malagasy government should start its economic reforms by the agricultural field which encompasses more than 80% of Malagasy inhabitants, thus, the bulk of the Malagasy work forces. Economic reforms need more commitment and high engagement of the citizens to be successful not obliged from outside of the nation.

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