INTERNATIONALISATION OF HIGHER EDUCATION IN SOUTH KOREA, 1993-2008

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MASTER OF PHILOSOPHY

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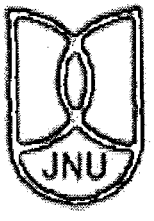

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DECLARATION

I declare that the dissertation entitled "**Internationalisation of Higher Education in South Korea, 1993-2008**" submitted by me for the award of the degree of **Master of Philosophy** of Jawaharlal Nehru University is my own work. The dissertation has not been submitted for any other degree of this University or any other university.

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List of Abbreviations

AFC	Asian Financial Crisis
APEC	Asia-Pacific Economic Cooperation
BK21	Brain Korea 21 Project
EPB	Economic Planning Board
FEC	Free Economic City
GATS	General Agreement on Trade in Services
KAIST	Korea Advanced Institute of Science and Technology
KBE	Knowledge Based Economy
MOE	Ministry of Education
MOEHRD	Ministry of Education and Human Resources Development
MOL	Ministry of Labour
NURI	New University for Regional Innovation
OECD	Organisation for Economic Co-operation and Development
PCER	Presidential Commission on Education Reforms
PCNEC	Presidential Commission for New Education Committee
PECE	Preliminary Examination for College Entrance
PhD	Doctor of Philosophy
POSTECH	Pohang University of Science and Technology
R&D	Research and Development
RIS	Regional Innovation System
ROK	Republic of Korea
SNU	Seoul National University
WTO	World Trade Organisation

Chapter I
Introduction

Internationalisation has been a familiar concept to universities and higher education policies. The environment that globalisation has created constitutes of vivid variables and parameters to operate in. Policies and policy makers have been challenged by the change of dynamics which have been inevitable and need of the hour. Conceptualisation of globalisation has helped in defining the interrelation amongst the variables; however the magnitude of understanding of interdependencies is still short of the changes at which higher education has been exposed. Internet, innovations and technological advancements have made the policy makers realise the importance of information in today's world. The global economy is transforming from an industrial one to knowledge based. Liberalisation has led to a rapid integration of trade and commerce and has created opportunities for the people across the globe. Political, economical, social, and technological transformations have challenged the manner in which demographics were defined. Globalisation has made states interdependent in their policy making processes and institutions can no longer provide solutions to these externalities on its own. Internationalisation of higher education is one of the ways a country responds to the impact of globalisation yet, at the same time respects the individuality of the nation (Knight and de Wit, 1997)

Globalisation has significantly influenced the way higher education is conducted across the globe. It has enabled countries to establish alike platforms to meet and foster the demands of their respective economies. Terminology, measurement tools, research methodology in all fields of study must be standardised to ensure that we are communicating effectively. Globalisation has forced institutions to develop a higher degree of standardisation, not only in the curriculum but also in admissions administration, and the qualifications of instructors. Transparency has caused institutions to examine long-standing policies and practices in light of international standards of equality of opportunity, professionalism and ethics in teaching and research. It requires benchmarks and a set of measurable indicators of quality. As university web pages and printed materials, we can easily access

information and become available to allow outside observers to access the quality of the academic programs, facilities and research activities. As for universities expand international exchange programs, students and faculty members are able to compare the quality of their programs against those of their exchange partners. Increased participation in international conferences and symposium provides another platform for accessing quality (Jaiharn, 2010).

Intercultural understanding is another sphere which can be strengthened through globalisation. It provides an opportunity to get a better understanding of the philosophies, values and beliefs of other cultures. The level playing field in terms of development of higher education provides equal opportunities in regard to quality of education. Irrespective of the location, students are assured of the quality of education that they are receiving, thus resulting in better chances of development and success.

In spite of the above mentioned merits, globalisation faces bottlenecks of English being the primary language of education across continents. Also, creating a competitive environment while retaining academic quality and diversity is a major challenge. As higher education becomes more specialised and curricula focus more on the globally recognised standard courses and programs must be careful not to lose sight of our cultural uniqueness, institutional traditions and social identity (Jaiharn, 2010).

According to (Peters, 2007), the transformation of higher education in Anglophone countries from a universal welfare entitlement into a private investment in 'human capital' established a similar pattern shared by a number of OECD countries. First, a transparent alignment of the university system to reflect the needs of an emerging 'post-industrial' economy, with increasing demands for highly trained, multi-skilled, tertiary educated workers. Second, the introduction of new forms of corporate managerialism and the emulation of private sector management styles; the coporatisation of the university system – an emphasis on so- called 'clear accountability structures' including the attempted simplification of goals or purposes, and the institution of new forms of delegated authority. Third, the introduction of corporate or strategic planning and the move to institute a form of 'ownership monitoring' in order, allegedly, to reduce the financial risk of the State. Fourth, under

neo-liberalism, there was an attack on faculty representation in university governance and the general attempt to discredit democratic forms of university governance on 'efficiency' grounds. Finally, the introduction of user-charges, student loans, and the creeping privatisation of the system as a whole took place to varying degrees in countries like New Zealand, Australia, Canada and the United Kingdom.

Twenty- first century forces require that countries look at the impact of the global on their higher education systems (mission, administration, faculty, students, community, teaching, research, and community service) as they provide education to support individual country, regional and world educational needs for the future. Whether policy makers decide to provide policy that will increase collaboration or decrease interaction across borders, this policy should be developed from a framework, which looks at the global and international forces in place (Rhodes, 2006).

1.1. Background of Study

In the post-independent period, Republic of Korea (ROK) educational policy changes have closely mirrored changes in the political system. Political power in ROK derives directly from Presidential authority, and, therefore, educational policies have changed along with the change of Presidents. The first ROK President Syng-Man Rhee established modern, democratic educational system including the Education Act (1949). The single line school system, which is 6-year elementary school, 3-year middle school, 3-year high school, and 4-year University (6-year medical college), was established and is now maintained to offer equal educational opportunity. The period between the Korean War (1950-1953) and the early 1960s was characterised as a leap in the development of internationalisation of ROK's higher education. In particular, the active participation of foreign agencies for the development of tertiary institutions was worthy of close attention.

After the military coup d'etat in 1961, the ROK government strongly recognised the need for educational reform to industrialise the country and to build the national identity. On December 5, 1968, the ROK government promulgated 'The Charter of National Education' as the guiding principle of Korean education Under

President the Park Chung Hee, the government emphasised science and technology and the vocational education for the economic development and introduced open high school and junior college systems. With the establishment of Presidential Commission on Education Reforms (PCER), President Chun Doo Hwan's government had driven educational reforms since 1980 such as (a) strengthening the fundamental function of formal education that offers intelligent, emotional, moral, and physically balanced education for students, (b) prohibiting the teaching activities of private academic institutes that focus on college entrance test, (c) restricting college students to participating in political demonstrations and introducing a graduation quota system that limits the number of college graduates in order to require rigorous study, and (d) increasing quota of freshmen to alleviate the intense competition for college entrance.

Thus, from the 1960s to the 1980s, higher education expanded to meet the national demand for manpower in Korean society. With the rapid growth of Republic of Korean economy, the Korean government also strengthened the education of overseas Koreans and tried to foster highly qualified manpower through overseas training and study.

President Rho Tae-Woo's administration implemented some of the reform projects proposed by PCER of the previous government and suggested further reforms being (a) establishing an educational system to meet the demands of international society, (b) extending the compulsory education period into middle school, (c) endowing universities with more decision rights to the student admission quotas, (d) enhancing education for the reunification of South and North Koreas, (e) improving a teachers training system, (f) fostering cooperation between industry and colleges, (g) enhancing the quality of higher education, and (h) reorganising the teachers' personnel system.

As economic globalisation intensified competitions in labour, trade, and financial markets and neo-liberal ideology got manifested in the policy discourses of international organisations such as World Trade Organisation (WTO) OECD, and Asia-Pacific Economic Cooperation (APEC). It became vital for ROK to develop skilled-labour, high-tech, and capital investment all of which require internationalisation of higher education. Also, General Agreement on Trade in Service

(GATS) resulting from finalisation of Uruguay Round (UR) added pressure on opening the Korean domestic market, especially in sectors like education, services and agriculture. Corney and Rhoten (2002) argue that governments in a global economy need to stimulate investment and provide a ready supply of skilled labour. This translates into pressure to increase the average level of education in the labour force. The payoff to higher levels of education is rising worldwide as a result of the shifts of economic production to knowledge-intensive products and processes. Rising relative incomes for highly educated labour increases the demand for university education, pushing governments to expand their higher education systems.

Korea has undergone a series of educational reforms aimed at internationalisation its content, but the most comprehensive education reform was started in 1993 under the Kim Young Sam's government. The segyehwa campaign set ROK's attempt in the twenty-first century as its principal goal, and identified productivity, flexibility, fairness and autonomy as new guiding principles for national economic management. Its target was not limited to the economic domain, but extended to entire segments of society ranging from education, law and foreign policy, culture, environment, and the quality of life (Tuchin and Brown, 2002). Particularly in relation to higher education, the educational reform policies emphasised the importance of 'diversification/specialisation, liberalisation and quality improvement of university education'. According to the education reform in 1995, the government almost abandoned the college enrolment quota system based on manpower planning, delegating power to individual institutions to decide admission quotas and matters regarding higher education management (Choi, 2008). The deregulation of university establishment requirements made it easier to establish a university and contributed to the remarkable expansion of higher education. However, lack of a quality assurance mechanism contributed towards raising the issue of quality in higher education. Policies for university restructuring and specialisation of university education have been pursued, but more emphasis has been put on quality and competitiveness in university education than on the qualitative expansion of the education.

After the Asian economic crisis in 1997-8, the unemployment rate of university graduates became a social issue. With the emphasis on human capital in the

knowledge-based economy, the Ministry of Education was transformed into the Ministry of Education and Human Resources Development (MOEHRD), and was headed by the Deputy Prime Minister, who would coordinate the ministries related to education, training, science and technology, culture and social welfare. The Ministry tried to innovate the role and function of the university as a new engine for growth, and launched the Brain Korea 21 project. 'Brain Korea 21'(BK21) was a national-level higher education reform project initiated by the South Korean government to prepare ROK's human resources for the 21st century and internationalise research in Korea. It was a project geared toward providing funds to higher education institutions for restructuring the overall college education system to meet the challenges of the global competition and aimed at cultivating creative and high quality human resources necessary for the forthcoming knowledge-based society. One of the primary objectives was to internationalise higher education system in order to facilitate competitive growth among universities based on the quality of their students and academic productivities. The BK 21 project made noticeable progress in the subject areas, specialised areas, and regional universities. Building a world-class university has been a long-held desire of South Korea and BK 21 created an intellectual atmosphere of universities and produced noticeable academic outcomes (Moon, 2001).

During 2003-2008, government provided measures and financial support to enhance competitiveness, effectiveness, equality and quality assurance in university education, as well as to respond to the demand for skilled labour. The government announced that "balanced development of the nation" would be its supreme mission, and selected "promotion of provincial universities" as an important task to buttress this mission. It also launched the NURI (New University Regional Innovation) project to foster balanced regional development and local universities.

Organisation for Economic Co-operation and Development (OECD) concludes that 'ROK has a unique education system characterised by much larger private sector representation and investment, and a relatively small publicly financed sector compared to other industrialised nations. The education systems in ROK, long organised and operated according to rigid restrictions and uniform control, have not been able to respond to the changing socio-economic and socio-political contexts. In

spite of remarkable achievements in education and in the quality of its basic education, the ROK government has recognised that depending upon the existing higher education system alone can never meet the challenges and intensified pressures generated by processes of globalisation (Mok, 2006). The existing system was developed to serve the needs of the organisation of production in an industrial society; there is now a strong need to reform the higher education system to cope with challenges of the growing knowledge economy.

According to Eggins (2003), the economic rationale, the political rationale, the academic rationale and the cultural rationale, provide a useful framework for exploring the different ways in which globalisation has engendered reforms in the higher education sector. Governments are moved to 'steer' higher education in the hope of repositioning it to increase effectiveness and efficiency. Realising that the higher education system is too rigid to respond to the external social and economic changes, the government has made various attempts to diversify and specialise the Korean higher education system.

1.2. Literature Review

Despite the disagreements over and diverse interpretations of the impacts of globalisation on contemporary society, no one can deny that there has been a growing literature in globalisation discourse and that many have examined how globalisation processes have affected public policy formulation and modern governance (Massy 1997; Pierre and Peters 2000; Yeates 2001 cited in Mok, 2005). The growing impact of globalisation has caused a number of modern states to rethink their governance strategies to cope with rapid social and economic changes.

A close scrutiny of the impacts of globalisation on public policy/public sector management has led some scholars to conclude that even though there may be similar trends and patterns in the public policy and public management domain along the lines of privatisation, marketisation, commodification, and corporatisation, different governments may use similar strategies to serve their own political purposes. The processes of globalisation have prompted individual states to change their roles and reform their institutions in order to accommodate, and not just adapt to, the demands

and pressures generated from the external environments (Giddens 1999; Waters 2001; Mok and Currie 2002 cited in Mok, 2006). Marginson and Rhodes (2002 cited in Mok, 2006) clearly describe the challenges posed by globalisation to modern states, stating that the role and functioning of the state in the context of globalisation is skewed toward the competitive state, which prioritises the economic dimensions of its activities above all others. Therefore, maximising welfare to promote enterprise, innovation, and profitability in the private and public spheres is becoming popular.

At the outset of the 21st century, one of the most frequently utilised terms is globalisation regardless of nation, region, or race. This term is used extensively in various sectors, including politics, economics, culture, and education. The term "globalisation" has been used as the meaning of "becoming global". It refers to "the development of increasingly integrated systems and relations beyond the nation" (Marginson and Rhoades, 2002). The systems and relations are more than economic although they are also political, cultural, and technological. As a concept, globalisation refers "both to the compression of the world and the intensification of consciousness of the world as a whole" (Robertson, 1993,). It simply connotes that "the world is rapidly being moulded into a shared social space by economic and technological forces and that developments in one region of the world can have profound consequences for the life chances of individuals or communities on the other side of the globe" (Held, et al., 1999).

Globalisation is sometimes used interchangeably with internationalisation, although both the definition and the difference between the two terms are unclear. According to Knight's (1997) assertion, "[g]lobalisation can be thought of as the catalyst while internationalisation is the response, albeit a response in a proactive way". In addition, Levin (2001) regards internationalisation as one set of behaviors influenced by globalising processes. These processes include not only political and economic globalisation but also social and cultural, including educational globalisation. Based on these assertions, globalisation refers to no single or simple phenomenon, but to a world system incorporated with multi-phenomena such as political, economic, social, cultural, and technological (Dudley, 1998; Edwards and Usher, 2000; Marginson, 2002; Held, et al., 1999 cited in Lee 2004). On the other

hand, internationalisation views as a response to the impact of globalisation or a set of behaviours influenced by globalisation processes (Knight, 1997; Levin, 2001).

Policy analysts argue that education policy and development, just like other public policy domains, are not immune from the impact of these globalisation processes (Burbules and Torres 2000; Pierre and Peters 2000). Some scholars in the field of education even believe it is becoming increasingly difficult to understand education without reference to such processes (Currie and Newson 1998a; Jones 1998; Crossley 2000; Welch 2000, 2001; Mok 2001c; Currie 2002; Mok and Chan 2002; Mok and Lo 2002). As Martin Carnoy has pointed out, "globalisation enters the education sector on an ideological horse, and its effects in education are largely a product of that financially driven, free-market ideology, not a clear conception for improving education" (Carnoy 2000, p. 50). According to Carnoy, education reforms within the context of globalisation could be characterised by a finance-driven reform emphasising decentralisation, privatisation, and better performance (2000).

Globalisation has been predominantly connected to higher education. As Levin (2001) points out, "with emphasis upon international competitiveness, economic globalisation is viewed as moving postsecondary institutions into a business-like orientation, with its attendant behaviours of efficiency and productivity". Higher education institutions are closely related to the marketplace, especially in the field of techno-science. Under the worldwide proliferation of neo-liberal policies, higher education institutions play an important role not merely in a nation state and national system but also in a national marketplace (Marginson and Rhodes, 2002). Scholars who are recently interested in the former stress on changing relations between national ministries and postsecondary institutions (Gornitzka, 1999; Kogan and Hanney, 2000; Neave and van Vught, 1994; Salter and Tapper, 1994), whereas scholars who are connected to the latter have focused on universities' entrepreneurial activity and adaptation to external markets (Clark, 1998; Marginson and Considine, 2000; Slaughter and Leslie, 1997; Sporn, 1999; Subotzky, 1999).

In recent studies related to globalisation, structural adjustment, and higher education, such terms, "enterprise / entrepreneurial university," "academic capitalism," and "glonacal agency," have currently discussed in scholarship. With

structural changes in the global economy, higher education has also required structural adjustment and reform strategies. One of the representative structural changes is to create entrepreneurial universities. In order to occupy international competitiveness in the world marketplace as well as to adjust new modes of knowledge production in a global society, several scholars argue that universities should adopt entrepreneurial structure, strategy, and culture (Clark, 1998; Levin, 2001; Marginson, 1997; Marginson and Considine, 2000; Rhoades and Smart, 1996; Slaughter and Leslie, 1997; Subotzky, 1999).

With these structural adjustments of universities, the global economy demands new national policies to promote academic capitalism. According to Slaughter and Leslie's (1997) argument, the global economy facilitates academic capitalism in higher education, with focusing on national policies and funding patterns. On the contrary, Marginson and Rhoades (2002) point out the weaknesses of "academic capitalism" as the following:

> The metaphor of academic capitalism reveals a power global trend but blinds us to the power of national traditions, agencies, and agents in shaping the work of higher education, as well as to the local agency exercised by students, faculty, non-faculty professionals, and administrators, pursuing prestige, knowledge, social critique, and social justice. (p. 287).

As described in the above, academic capitalism puts emphasis on the global and national levels, while it disregards conceptual development at the local level and also neglects interactions of global, national, and local domains.

In consideration of the weaknesses of academic capitalism, Marginson and Rhoades (2002) suggest an alternative, "a glonacal agency heuristic,2" to advance the importance of studying global phenomena (p. 288). They illustrate the merit of a glonacal agency heuristic as follows: Our heuristic highlights the growing saliency of global agencies and relationships, including meta-national regions, in both the national and the local domains....it emphasizes the continuing fecundity of local institutions and other agents at the national and global levels...it takes us beyond

nation states, national markets, and national systems and institutions of higher education to consider organisational agencies and human agency at various levels. (p. 305). The heuristic approach presents the harmonious interactions of global, national, and local phenomena as well as reciprocal interrelationships between or among agencies or domains.

As reviewed in the above, the recent trend of higher education needs innovative or reformative structural adjustment to cope with rapid global changes. In this vein, Republic of Korea also demands restructuring or reengineering of higher education in order to reach international standards and to improve academic quality.

Realising that the old education governance model is inappropriate in the global policy context, the government of ROK has started to review its education systems and the comprehensive reform strategies that have been adopted since 1993 to make its education systems more responsive to changing social and economic environments. ROK is widely known as a strong state, and the state has played a significant role in charting directions for social and economic developments in this Asian Tiger (Koo 1993). Education policy and development, under such a strong state model, has long been significantly shaped by the state through its executive arm, the Ministry of Education (MOE). Before the government's initiatives to reform the higher education systems in the mid-1990s, the higher education sector in ROK had been strictly regulated and governed by the MOE.

Park, Nagmi (2006), in her article, "Korea", in James J. F. Forest and Philip G. Altbach (ed) International Handbook of Higher Education, introduces the history characteristics and the problems of higher education in South Korea. The author traces the historical and cultural linkages in current South Korean higher education system. The article provides a brief history of higher education reforms in South Korea chronologically and provides major characteristics of higher education in South Korea.

In his book *Education Fever: Society, Politics, and the Pursuit of Schooling in South Korea*, Michael J. Seth (2002) argues that "South Korea's education fever was the principal force that drove the country's extraordinary educational development"

(p. 6). He accomplished this purpose by providing sufficient data to prove this argument. He also argue that "this preoccupation with the pursuit of formal schooling was the product of the diffusion of traditional Confucian attitudes toward learning and status, new egalitarian ideas introduced from the West, and the complex, often contradictory ways in which new and old ideals and formulations interacted" (p. 6). The book provides a depth understanding about how Korean society perceives education.

In the book Higher education in Korea: Tradition and Adaptation, John C. Weidman and Namgi Park (2000) systematically describe the higher education system, provide data heretofore unavailable in the English language, present a fundamentally Korean view of the important issues in their country's higher education system, and build alternative theoretical perspectives to analyze the development of a higher education system in a very competitive society. The authors argues that the reforms of higher education initiated in the 1995 or so called 5.31 reforms aims at deregulation and liberalisation of Korean education system from the government control and they also identified that this policy direction was well accepted by the Korean society. The authors also argue that the reform policies were aimed at internationalisation and globalisation of Korean education.

1.3. Statement of the Problem

Korea has attainted remarkable achievements in education over the last four decades and the quality of its basic education has been internationally acclaimed. In the last two decades Korea has embarked upon a series of reforms in education. The concern is that Korea must have a higher quality, more diversified, flexible and responsive higher education system to meet the future needs of the nation. Higher education in Korea is not prepared for demographic changes: an ageing population, a projected population shortage in the working age population by 2020, a shrinking college population, and continued population concentration in the Seoul Metropolitan area. Korean students are increasingly going to foreign universities for their undergraduate education but Korean universities are not attracting foreign students or professors. There is a general concern with the quality of education. Industry CEO's are dissatisfied with the knowledge and skills of graduates. The Federation of Korean

Industries reports serious concerns about graduates' level of practical and field experience and creativity. According to Korean National Statistical Office, 49% of junior college majors and 40% of university majors were mismatched or badly mismatched with available jobs. Higher education is not well connected to business and industry. Therefore, internationalisation of Korean education system has increasingly gained policymaker's attention (OECD, 2007).

The series of reforms in higher education in South Korea, particularly the reforms which introduced in the post 1997 crisis period is to facilitate the transformation of the industrial economy of South Korea in to a knowledge based economy. The current study examine the causal relationship between the stages of economic development and higher education reforms in South Korea and also to understand the higher education reforms as strategy to internationalisation of Korean education system to improve competitiveness under the pressure of globalisation.

1.4. Rationale and Scope of the Study

The available literature on higher education in South Korea mainly deals with various reforms from a policy perspective. This study tries to understand the relationship between the different stages of economic development and the education reforms vis-à-vis globalisation and higher education, there by reflecting the higher education reforms particularly in the post crisis period as policy initiative of the South Korean government to transform the industrial economy of South Korea in to Knowledge based economy. The proposed study would examine the major achievements of Brain Korea Project and also study how has the project contributed in improving the competitiveness of the Korean economy.

1.5. Objectives of the study

The proposed study aims to:

- Study characteristics of higher education system in Republic of Korea
- Study the impact of internationalisation of ROK higher education
- Study the higher education reforms in ROK in era of globalisation
- Study the prudence and sustainability of the current higher educational system for the evolving ROK's economy.
- Study Brain Korea 21 project and its impact of higher education in ROK

1.6. Organisation of the Study

The study has been organised into the following chapters:

Chapter I: Introduction

Chapter I examines the concept of internationalisation of higher education by examining the literatures available and contextualising to the South Korea case It also explains the rationale and significance of the study, statement of problem and theoretical framework for the study.

Chapter II: Korean Education System: Historical Perspective

Chapter 2 presents historical background of the education system in Korea, influence of Confucian education system and western type system in the Choson period. It also provides background to pre- independence and post-independence education systems along with its evolution during different Presidential regimes.

Chapter III: Internationalisation of South Korean Education and Higher Education Reforms

Chapter 3 concentrates on the evolution process during the era's and the push and pull factors for the same. It provides with various school of thoughts regarding the internationalisation of education system, globalisation pressures and shift in the education system that reflected the changing nature of the Korean economy.

Chapter IV: Brain Korea 21: A Case of Higher Education Reform in South Korea

Chapter 4 presents a detailed analysis of the BK-21 project in order to develop knowledge based economy and its contribution towards better quality, higher productivity and creating an intellectual environment in the education system.

Chapter V: Conclusion

This chapter provides summery of finding.

Chapter II

Korean Education System: Historical Perspective

2.1 Introduction

During the last six decades Republic of Korea (ROK) has experience remarkable achievement in education, which is being considered as one of the major factor in ROK's miraculous economic development. In 1950, the number of students enrolled in higher education institutions was only 11,358. In 2002, fifty-two years later, the enrollment increased to more than 3.5 million. Currently, more than 95% of eighteen-year-old children graduate from high schools, and more than 70% of them advance to higher education institutions (Kim and Lee, 2004). The quantitative expansion of tertiary education was necessary for the promotion of the national industrialisation. This was regarded as the driving force behind the development of the national economy, as well as the fulfillment of the strong desire of the ROK people who regarded higher education as a means to enhance socioeconomic position on the basis of traditional social values (Lee, 2000).

The current higher education system in ROK is more influenced by the western education practices which have been introduced particularly in the post war period. However the higher education in Korea has long historic tradition and could be traced back to 4th century AD established during the Koguryo dynasty. The history of Korean higher education can be broadly categorised into four higher education traditions existed during different periods of Korean history. They are; the traditional Korean elite education (4th Century AD-1910), the higher education under the Japanese colonial period (1910-1945), Under US Military Administration (1945-1948) and higher education under Republic of Korea (1948 onwards). The higher education in the traditional Korea is better understood by examining the elite education practices under various Korean dynasties. This chapter traces various aspects of higher education in Korea during the above mentioned periods of Korean history.

2.2. Pre-independence Education System

2.2.1. Three Kingdom Period

The first type of formal higher education in Korea appeared in A.D. 372, when *Tae Hak* (Great School) was established following the Chinese model of higher education. During the reign of King Sosurim in Kokuryo, it was under the direct cultural influence of China and, even though the Korean language was completely different from the Chinese language, Chinese characters were used in official Kokuryo document. Pronunciations of the Chinese characters were also different in Kokuryo and the unique Korean alphabet (Hangul) was not developed until the fifteenth century (Weidman and Park, 2000).

Tae Hak was established concurrently with the introduction of Buddhism and was a nationally established educational institution dedicated to the purpose of training young men of aristocratic descent to be higher civil servants. The curriculum included classic Chinese texts in Confucianism, history, and literature, along with military arts like archery. Military strength was particularly prized in Kokuryo, probably necessitated by a need for defense against China from the north and possible aggression from the southern states of Paikje and Shilla. Along with military skills, instruction focused on Confucian classics, Chinese history, and literature (Weidman and Park, 2000).

Shilla unified the three kingdoms on the Korean peninsula in 676 and established the first *Kook Hak* (national college) in 682 under the reign of King Shinmoon (Hahn, 1963). *Kook Hak* in Shilla, like *Tae Hak* in Kokuryo, was completely modelled on the Chinese pattern (including programs, objectives, functions, administration, and control, as well as faculty and student composition). It was headed by a Kyong, or rector, under whose control three faculties or departments were established to teach Confucian classics, Chinese history, and literature using Chinese textbooks (e.g., *The Confucian Analects, The Book of Changes, The Book of Rites,* and *The Book of History and Chinese Anthology*). Portraits of Confucius and his disciples were imported from China in 717 under Queen Sunduk and dedication services were held in their honor. The early introduction of technical education on this

level may be traced to 692, during the time of King Hyoso (Lee, 1947). The maximum period of study at *Kook Hak* was generally nine years, but exceptions were allowed. Students with promising talents were permitted to continue their studies to the status of Nama and Great Nama, the equivalents of nondegree graduate status and master's level, respectively (Lee, 1959).

During the Three Kingdoms period, formal higher education in Korea was particularly influenced by culture and traditions in China. Technical education finds its roots in Shilla during the post unification period. The aim of higher education was primarily to train men for higher civil services and was exclusively provided for family members and close associates of the ruling dynasty.

2.2.2. Koryo Period, AD 918-1392

The higher education institution (Kook Ja Kam) that existed during the Koryo dynasty was first established in 992 under the reign of King Sungjong, the sixth ruler enthroned. King Sungjong worked hard for the improvement of education, issuing an Imperial Decree on Education, establishing positions for doctors in twelve local provinces of the country. Like *Taehak* and *Kukhak* in the Three Kingdoms, Koryo had educational institutions to foster the elite who lead its aristocratic society and to keep their hereditary political and economic privileges. Koryo already had elite schools in the capital, Kaeseong, and Pyoungyang in the first King Taejo's reign (918-943). According to the record of *Koryo-dokyung* (the Charted Account of the Koryo Kingdom) written by *Hsu Ching* (1091-1153) of Sung China, Koryo founded *Kukchagam* (the National Academy or University) and selected well-prepared Confucian officials. This institution included three colleges: *Kukchahak* (Higher Chinese Classical College), *Taehak* (High Chinese Classical College), and *Samunhak* (Four Portals College). Subsequently, during King Injong's reign (1122-1146), the institution added three colleges: *Yurhak* (Law College), Seohak (Calligraphy College), and *Sanhak* (Accounting College). The six colleges all came under the *Kukchagam.* Each college had different entrance qualification, curricula, and instructors. The curricula of *Kukchahak, Taehak,* and *Samunhak* were mainly the Chinese clashes: the Five Chinese Classics, the Classic of Filial Piety, and the Analects of Confucius. The other schools' curricula were each technical areas, such as

law, Chinese calligraphy, or accounting. The instructors of the first three institutions were *Paksa* (Learned Doctors) and *Chokyo* (Assistant Doctors), while the second three schools' were *Paksa* (Learned Doctors) (Lee, 2001).

Confucianism and Buddhism had a major contribution to Koryo society and politics through education. However, with the acceptance of Neo-Confucianism from China, Buddhism gradually declined and Confucianism aroused.

2.2.3. Choson Dynasty (AD 1392-1910)

The founders of the Choson Dynasty (1392-1910) accepted Neo-Confucianism as the basic principles of national politics and ethics for social and educational institutions. From the beginning of the Kingdom, its rulers emphasised Confucian education to train the civilian bureaucrats who could lead their people, and to educate the people who could follow Confucian ethics and values. For this reason, the ruling class suppressed Buddhism, Taoism, and other traditional folk beliefs, while they positively promoted Confucianism as the core of state policy and education.

Ohu-hakdang or *O-hak* (Five Schools) were established by King Taejong (AD 1411) in the capital city, Hanyang (today's Seoul), and *Hyang-Kyo* (Local Confucian Schools) in each *eup* (the seat of a town office) as the secondary level. Additionally, private institutions, *Seowon* and *Seodang,* were set up by provincial Confucian scholars and village volunteers. The former generally educated the talented local youth of the *Yangban* (the ruling class); the latter carried out elementary education for the country's boys of the *Yangban* and the commoners.

A new movement which was called *Silhak* (Practical Learning) for modernisation actually budded out in the late 17th to 18th century. A group of Choson scholars sought to devise practical ways to use academic knowledge to modernise the state. With the introduction of Western knowledge and values adopted by the Ching Dynasty (1644-1911/1912) of China, Choson scholars endeavoured to build a modernised country (Lee, 2001).

The beginning of modern higher education toward the end of the Yi dynasty is quite significant because it is not only the basis for present-day higher education, but, more important, it represented a shift from a Confucian to European model. The first missionaries came to Korea, then known to Westerners as "the hermit kingdom," in the nineteenth century. In the summer of 1832, Charles Gützlaff of the East India Company, a good friend of Dr. Robert Morrison, accompanied by H. H. Linsay arrived in Korea. Thus Charles Gützlaff became the first Protestant missionary to land in Korea (Savada and Shaw 1990). The first Catholic priest to come to Korea was Father Maubant (1835), and the first Protestant mission in Korea was opened by Dr. Horace N.Allen (1884). Prior to this, Roman Catholicism had entered Korea through the missionaries working in China, beginning in the seventeenth century. A Protestant missionary from America, Mrs. Mary R.Scranton, is credited with establishing the first modern private higher education institution in Korea. The Ewha Hak Dang in Seoul, later known as the Ewha Woman's University, was started in May of 1886 at Mrs. Scranton's house, with "a single woman student of dubious character" enrolled (Oh, 1964). At inception, this educational institution was hardly distinguishable from the lower-level schools. In fact, some of the schools established at the same time with similar scale or purpose were later differentiated into various types, ranging from primary through higher education. The Paijai Hak Dang in Seoul, established by H.G.Appenzeller under the Methodist Parent Board, initially combined both secondary and higher educational functions. There were departments of English, Chinese classics, and geography in the higher division of the school. Another private school, Sungsil Hak Dang, established in Pyongyang by the Methodist Mission in 1897, developed into a higher education institution, becoming the first such institution of modern times to use the title Dae Hak (College) in 1907. During this period, Protestant and Roman Catholic missions started theological seminaries to train their missionary workers.

The second stream of modern higher education developed with the establishment of professional schools particularly geared to the needs of a modern technological society (e.g., foreign language, medicine, telegraphy, industry, mining, and agriculture). The first private school of this kind was the English Language School established by P.G.von Mollendorf, a German, and taught by T.E.Halifax, an Englishman. Then in 1885, Kwang He Won (the House of Civilized Virtue) was

established upon the recommendation of Dr. H.N.Allen of the Presbyterian Mission. In 1886, the Royal School was started as a government institution to teach English. There were thirty-five students from the royal family, and the instructors were G.W.Gilmore, D.A.Bunker, and H.G.Hulbert, all from the New York Theological Seminary. In addition to English, natural science, mathematics, economy, and geography were taught. This school had to be closed in 1894 because of financial and other difficulties. In 1891, a Japanese language school was opened in Seoul, and in 1894, concurrent with the general reform movement in government, a new order was promulgated regulating foreign language schools. In 1896, several foreign language schools (Russian, French, German, and Chinese) were opened. In 1889, the Kyungsung Professional School of Medicine and the Commercial and Industrial School were established, followed by a mining school in 1890. The Lawyer's Training Institute was opened in 1895 and in 1922 was reorganised into the Kyongsung Professional School of Law. The Postal Affairs School and the Electric Affairs School were established in 1897. In 1906, a school of agriculture and forestry was started at Suwon, near Seoul, which later developed into the Suwon Professional School of Agriculture and Forestry. Many of these schools continued to exist during the period of Japanese rule, 1910–1945 (Weidman and Park, 2000).

A Korean national, Young-ik Lee established a modern, private higher learning institution, the Posung Jummoon Hakkyo (Posung Professional School) in 1905. When it was founded, this private institution had two-year courses in law and economics. In 1915, the college was reorganised into the Posung Professional School of Law and Commerce, which was further developed by Sung-soo Kim into the present-day Korea University.

2.2.4. Japanese Colonial Period

In colonial Korea, a simple and practical education system of education was conducted which was thought to be appropriate for a political and economic structure. The educational principle of assimilation was to be firmly adhered to, suppressing the nationalistic feelings of Koreans and turning them into "loyal subjects" of the Emperor and of the Japanese Empire. The educational system was made parallel, at least in its general framework, to that of Japan. Accordingly, in 1911, the Japanese

colonial government proclaimed the Korean Educational Ordinance in accordance with the so-called Imperial Rescript (The Japanese Emperor Meiji Prescript).

The Regulations for Private Schools, circulated simultaneously with the Regulations for the Professional Schools in 1915, embodied stricter supervision of private schools through attaching strict conditions concerning the teachers to be employed and the courses to be taught. The Educational Ordinance let higher education institutions, such as Christian missionary colleges, lose their college status and be downgraded to non-degree granting schools, there was no modern university education in Korea until Keijo Imperial University (now evolved into Seoul National University) was set up by the Japanese in Seoul in 1924 (Lee, 2002). The admission of the Korean people was strictly limited, and only very few Koreans, who were by and large the offspring of pro-Japanese persons or rich people, attended Keijo University, as many scions of pro-Japanese and rich people enrolled at Japanese vocational or teachers' schools.

The department of law and literature as well as the medical department became the main characteristics of the university even if the Keijo University was qualitatively almost the same as other universities in Japan. The primary motives of the establishment of this university were to offer higher education for the Japanese in Korea, to forestall the growing Korean nationalism, and to indoctrinate the Korean elite as a pro-Japanese person or group.

Many Confucian learned men were actually reluctant to accept Western education, so that they stuck to the Confucian educational tradition at village schools. During World War II (1937-1945), the Japanese regime announced three educational principles of its administration of profound understanding of the national mission, strengthening Japanese and Korean unity, and dedication to labour for realisation of national goals. Japanese used two educational systems to discriminate between Japanese and Koreans. Those were: an educational system for persons using Japanese and the other for persons using Korean. In 1939, there were only 1.31 Korean high school students for every 1,000 Koreans, while there were 32.70 Japanese students enrolled in high schools for every 1,000 Japanese in Korea. Inequalities were greater at colleges and at a university: there were only 0.27 Korean students in colleges and

teachers' training seminaries for every 1,000 of Korean population, and 7.20 Japanese students for every 1,000 Japanese in Korea; and there were 0.0093 Korean students enrolled in university for every 1,000 Koreans, while 1.06 Japanese university students per 1,000 of Japanese population in Korea (Lee, 2002). Abe (1971) states, that the two colonial principles of assimilation and discrimination were seen to have been ever present as Koreans exerted great independent and separate efforts for their own education in difficult conditions, even initiating the People's University Campaign, but having all their efforts failed in the face of the Government-General's educational policy. The built-up Korean energies for education, especially higher education, under Japanese rule served as a powerful factor bringing about the explosive development of education in the post-liberation era.

2.3. Post-independence Education System

2.3.1 Education during Syng-Man Rhee Administration

The transformation of South Korean society during the Rhee era was of revolutionary magnitude because of the convergence of a number of forces. A major force for social change was the greatly enhanced opportunity for education. Although Japan had introduced a modern education system to Korea, opportunities for Koreans were purposely limited, particularly at the secondary and university levels. Educational opportunities were greatly expanded immediately after the Japanese defeat, and the trend continued through the Korean War and afterwards. Higher education provided more opportunities for upward mobility to a large number of young people. This opening also meant greater political awakening among the young, particularly in view of the strong emphasis placed on democratic values and ideas by teachers and intellectuals. For the first time, Korean youths were provided open access to democratic ideas both at school and through the mass media. These Western ideas became the norm against which to judge the government in power when the exigencies of the war period were removed (Matles and Shaw 1990).

The first ROK President Syng-Man Rhee established modern, democratic educational system including the Education Act (1949). The single line school system, which is 6-year elementary school, 3-year middle school, 3-year high school,

and 4-year University (6-year medical college), were established and is now maintained to offer equal educational opportunity. During the period from 1945 to 1961, before the economic boom, indicate that ROK substantially expanded education. School enrolments at all levels increased extremely rapidly from 1945 to 1965, except during the period of the Korean War. One unique feature of Korea's educational expansion in this early period is that school enrolments increased not gradually but, rather exponentially. The first major increase occurred in 1946 just after the Liberation when primary school enrolments jumped from 1.4 million to 2.2 million, and secondary school enrolments increased from 8,000 to 13,000. This high growth of enrolments was unparalleled in the history of Korea. The growth of enrolments at the lower levels of education brought, in turn, uneven increases in enrolments at the higher levels. Enrolments in secondary schools, as increasing numbers of students graduated from primary schools, rose from 267,000 in 1951 to 740,000 in 1952. Reflecting the earlier two jumps in enrolments in primary and secondary schools, colleges and universities also experienced two major increases in enrolments, first from 1953 to 1954, and then from 1959 to 1961 (Lee, 1996). Because the government has only been able to make small expenditures in education during the period, a substantial part of educational costs was financed by private sources.

There had been a strong demand for education, which was attributable to strong social and economic motivations. As a consequence of the Liberation and the Korean War, Korea's traditional system of social classes was destroyed, and thereby necessitated erecting a new system. Because of the unusual homogeneity of Korean society in terms of race, culture and language, education seemed the key factor that the people considered to obtain higher social levels. Thus, the people's demand for education was high because of strong desire for social mobility. The desire for social mobility was also closely associated with economic motivation. Education was considered as a key factor for people to get into good occupations that often guaranteed both economic rewards and social status. It is common in Korean firms for workers' salaries to be largely determined by their educational level at the hiring stage, and then to steadily increase with seniority. Beyond the role played by Japan on education in Korea, there was a major effort made by the United States. The U.S. Army Military Government in South Korea during 1945-48 contributed to expansion

of educational opportunities. During this period the role of the Korean government was not considered significant, as its financial resources were limited. The share of GNP of total central government expenditures on education was only 0.9 percent in 1954, although the share increased steadily to 2.5 percent in 1960 (Lee, 1996).

2.3.2. Education during Park Chung Hee Administration

President Park Chung Hee's era can be termed as one of educational expansion and economic growth. From the 1960s to the 1980s, higher education expanded to meet the national demand for manpower in Korean society. With the rapid growth of Korean economy, the Korean government strengthened the education of overseas Koreans and tried to foster highly qualified manpower through overseas training and study. In the 1960s, the Park Chung-Hee government strengthened its authoritarian control over educational policy making while establishing the developmental regime. Control over both general and vocational education has been vested in the Ministry of Education (MOE [SK]), while the Ministry of Labour (MOL[SK]) has had jurisdiction over vocational training. Centralised control embraced private as well as public schools and colleges through the Private School Law, and it extended to admission procedures, student quotas, tuition fees and tight regulations over curriculum, textbook publishing, and revenue and expenditures (Ashton, 1999). In the realm of formal education, in the late 1960s, Park abolished the middle school entrance examination, which had strengthened the hierarchical distinction among middle schools and the larger society and had become excessively competitive. Responding to the widespread thirst for learning among young factory workers, Park required factory owners to educate their workers in night schools and validated night school diplomas as legitimate educational certificates. All these decisions, the popular texts highlight, were made in the face of fierce opposition from students, intellectuals, and politicians, as well as Park's own bureaucrats.

The Economic Planning Board (EPB) was established in 1961 as the core of the developmental state mechanism, and has remained the central institution in the Korean developmental state since that time (Ashton, 1999). The coordinating role of the EPB was vital in that vocational education and training were split between the ministries of Education and Labour respectively. Within the Ministry of Labour,

jurisdiction for the national technical qualifications was passed to the Korea Technical Qualification Testing Agency, and the Korea Vocational Training Management Agency was founded for the integration of vocational training, skills Olympics and national training qualification testing in 1977 (Creigh, 1996).

The slogans for the 1960s were 'education for economic development' and 'nation-building through education'. The latter was to consolidate the new developmental regime while the former aimed to support the economic growth needed for legitimacy of the regime (Adams and Gottlieb, 1993). Since 1962 educational sectoral plans have been drawn up by the Ministry of Education in co-operation with the Economic Planning Board. The new institutional arrangements introduced under President Park enabled the linkages between economic policy and education and training policy to be consolidated.

Education Reconstruction Plan (1962–6) was the first five-year plan to have been developed alongside the Five-Year Economic Development Plan. The state encouraged quantitative expansion of education during the 1960s, with the result that middle-school enrolments increased substantially at a time of growing population. The quantity of teachers and facilities expanded alongside students. Steps were taken to invest in technical and vocational education soon after universal primary education was attained (Gill and Ihm, 1996). During 1962–6 there was a decrease in student quotas while two-year junior colleges were increased period and limits were put on higher education with a reduction in the number of four-year institutions. Vocational high schools were established in the 1960s to provide craftsmen for labour-intensive light industries that were the backbone of the early export-oriented push. An important consequence of the close institutional links between the economy and the skill formation systems was that a virtuous circle of mutually reinforcing supply and demand for skills was more easily supported. The demand for skilled labour increased, along with the rapid export-oriented growth of the economy. In turn, the improved prospects for educated labour raised the demand for education (Ashton, 1999).

In the second five-year educational plan 1967–71, priority was given to the expansion of science and technical education. During this period, the expansion of

less popular vocational education was higher than that of academic education, signaling successful implementation of the strategy. In addition to the promotion of vocational education, during the second five-year plan, the government anticipated the advent of skill shortages with industrialisation by starting up a public training system, primarily to provide skilled craftsmen and operatives. The government took the lead, since enterprises were unwilling to provide or did not accept the need for training the need for more technicians to support the engineers and professionals was also to be met by the junior colleges (MOE, 1996). The number of these colleges increased during the period of the fourth plan (1976–81), and throughout the 1970s they churned out ever increasing numbers of applied science graduates. By 1980, more than one in three junior college students were studying engineering or the natural sciences. In this period, the strong tide of demand for education reached the tertiary level with considerable force. The government curbed this demand by the addition of the nationwide Preliminary Examination for College Entrance (PECE) to the individual entrance examinations held by universities from 1969 to 1979 (Gill and Ihm, 1996). Private tutoring was prohibited, more as a response to the social problem caused by excessive competition for tertiary places and the inequities that this caused in the system. But supply was raised partly by the opening of new air and correspondence universities. The number of students in higher education also rose dramatically to reach about one million students in 1980 (Ashton, 1999).

2.3.3. Education during Chun Doo Hwan Administration

Following the assumption of power by General Chun Doo Hwan in 1980, the Ministry of Education implemented a number of reforms designed to make the system fair and to increase higher education opportunities for the population at large. In a very popular move, the ministry dramatically increased enrollment at large. The number of high school graduates accepted into colleges and universities was increased from almost 403,000 students in 1980 to more than 1.4 million in 1989. This reform decreased, temporarily, the acceptance ratio from one college place for every four applicants in 1980 to one for every three applicants in 1981. In 1980 the number of students attending all kinds of higher educational institutions was almost 600,000; that number grew almost 100 percent to 1,061,403 students by 1983. By 1987 there were 1,340,381 students attending higher educational institutions. By 1987 junior colleges

had an enrollment of almost 260,000 students; colleges and universities had an enrollment of almost 990,000 students; other higher education institutions enrolled the balance (Matles and Shaw 1990).

A second reform was the prohibition of private, after-school tutoring. Formerly, private tutors could charge exorbitant rates if they had a good "track record" of getting students into the right schools through intensive coaching, especially in English and in mathematics. This situation gave wealthy families an unfair advantage in the competition. Under the new rules, students receiving tutoring could be suspended from school and their tutors dismissed from their jobs. There was ample evidence in the mid-1980s, however, that the law had simply driven the private tutoring system underground and made the fees more expensive. Some underpaid teachers and cash-starved students at prestigious institutions were willing to run the risk of punishment in order to earn as much as W300,000 to W500,000 a month. Students and their parents took the risk of being caught, believing that coaching in weak subject areas could give students the edge needed to get into a better university. By the late 1980s, however, the tutorial system seemed largely to have disappeared.

A third reform was much less popular. The ministry established a graduation quota system, in which increased freshman enrollments were counterbalanced by the requirement that each four-year college or university fail the lowest 30 percent of its students; junior colleges were required to fail the lowest 15 percent. These quotas were required no matter how well the lowest 30 or 15 percent of the students did in terms of objective standards. Apparently designed to ensure the quality of the increased number of college graduates, the system also served, for a while to discourage students from devoting their time to political movements. Resentment of the quotas was widespread and family counter pressures intense. The government also abolished the quotas in 1984 (European Union 2009).

2.3.4. Education During Rho Tae-Woo Administration

President Rho Tae-Woo's administration implemented some of the reform projects proposed by PCER of the previous government and suggested further reforms like establishing an educational system to meet the demands of international society, extending the compulsory education period into middle school, endowing universities

with more decision rights to the student admission quotas, enhancing education for the reunification of South and North Koreas, improving a teachers training system, fostering cooperation between industry and colleges, enhancing the quality of higher education, and reorganising the teachers' personnel system.

2.3.5. Education During Kim Young Sam Administration

Korea had undergone a series of educational reforms, but the most comprehensive education reforms were started in 1993 under the Kim Young Sam's government. It considered education reform as one way to solve the problems from the previous era as well as an inventive way to cope with the new trends in globalisation (Lee, 2004). President Kim proclaimed that he would show a resolute determination to become, the first and foremost, an "Education President" because he believed that education was the means by which Korea could be turned into a first-class nation (Park, 2000). During the 1990s, the notions of an "era of globalisation" and "educational reform" prevailed in Korean society and were important stimuli for Korean social change. According to President Kim's national policy for globalisation, the construction of an educational system that would meet the requirements of the global society became a key purpose of educational reform (Lee, 2006). In fact, the Presidential Commission on Education Reform identified globalisation and the use of information technology for education as two major priorities for educational reform (Forest and Altbach, 2006). The Presidential Commission on Education Reforms, which was organised in 1995, also drew attention to the problems in education. Their first concern was that students would lose their creativity because the matriculation examination for college only emphasised memorisation. Their second concern was that educational policy was a top down process and regulation- centered (Lee, 2004).

From 1995 to 1997, the Presidential Commission on Education Reform announced four educational reform blueprints, reflecting an emphasis on globalisation. First, on May 31, 1995, the Commission announced 48 educational reforms encompassing all levels of schooling, from elementary and secondary education to higher and life-long education. The Commission suggested that the central government increase public funding for education from 4.11 percent of the

GNP in 1995 to 5 percent of the GNP in 1998 in order to achieve its desired educational reforms (Lee, 2006). The core goals of the educational reforms were to construct the fundamental basis to develop into an open and life-long learning society and a school-based management system that includes parents and communities in decision-making at school sites, promote the development of diversified and differentiated higher education, attain competent teachers and, invest public funding of five percent of GNP in education.

On February 9, 1996, the Commission announced 30 new educational reforms. The primary goals of the second set of reforms were to construct a new vocational education system of adapting to the change of social circumstances, to introduce a new elementary and secondary educational curriculum that meets the requirements, for example, the cultivation of creativity and diversity, of the 21st century, knowledge-based society, and to revise or create educational laws to achieve educational reforms.. A little more than six months later, on August 20, 1996, the Commission announced 24 more education reforms. The third set of reforms included to the enhancement of autonomy in local education, the reform of the current teachers' professional development training system and, initiate projects for the use of information technology in education.

Eighteen more educational reforms were enacted on June 2, 1997. The fourth set of reforms suggested the inclusion of kindergarten education within the public education system, the promotion of citizenship education and, the improvement of public adaptability to an information society. Once the Commission had suggested a blueprint for educational reform, it was left to the Ministry of Education to carry out the creation and implementation of specific practice plans for the 120 reforms. President Kim supported the educational reforms with an unprecedented pledge by increasing national funding for education from 4.11 percent of the GNP in 1995 to 5 percent in 1998 (Lee, 2006). In February 1998, President Kim completed his 5-year Presidential term, and the era of the "Education President" ended.

2.3.6. .Education During Asian Financial Crisis and Beyond

The so called East Asian miracle of sustained high levels of economic growth and modest inflation was built on the four pillars of hard work, high savings rate, emphasis on education, and budgetary surpluses (Hunter et al., 1999). However, the Asian financial crisis of 1997-99 exposed certain longstanding weaknesses in ROK's development model, including high debt/equity ratios, massive foreign borrowing, and an undisciplined financial sector (Trollvik 2002). The foreign exchange crisis was a watershed for implementing aggressive policies to draw foreign investment. A separate special act for FEZs and Jeju Free Economic City (FEC) stipulated that only "nonprofit educational foundations" were permitted to establish foreign schools. Although the introduction of the special act paved the way for foreign schools in free economic zones, there remained difficulties in attracting foreign schools. This was due to complex authorisation procedures, restrictions on founders and excessive regulations on school operation. While the intent of introducing free economic zones and Jeju Special Self-governing Province was the promotion of foreign investment, foreign schools were still subject to the Private School Act.

Applying for approval required unnecessary formalities such as lists of teachers and school charters, contradicting the purpose of encouraging foreign schools through simplified application procedures. Besides, limiting approval to "nonprofit educational foundations" did little to help vitalise the education market. Although, this law was intended to simplify the establishment of foreign educational institutes, it failed to overcome this limitation.

Confronting unprecedented economic hardship, the unemployment rate showed upward movement from 2.6 percent in November 1997 to 7.9 percent in December 1998. Most of those who became unemployed and who suffered from the economic crisis were low-wage workers with a low level of education. Major causes behind large-scale unemployment were the financial-economic crisis and the ensuing depression and restructuring. Sixty-three percent of the laid-off workers were either temporary or daily labourers, or the newly recruited staff members of small companies tended to be more susceptible to dismissal than those at big firms. The Korean government proposed a 'shift from a materials-oriented manufacturing economy to a knowledge-based economy' as one of its 'six major policy goals' in

1998. Then, it announced building a 'society with a creative knowledge-base' as its core task in national politics, putting the creation of a knowledge-based society on its political agenda. In 1999, the effort to build a knowledge-based society became more noticeable and was selected as one of five political objectives. The Ministry of Education formulated a five-year plan for educational development in March 1999 to prepare for a knowledge-based society (Moon and Kim, 2001).

2.4. Conclusion

Historical factors such as Confucianism, Christianity, and nationalism had a great influence on the development modern higher education in Korea. In particular, religion has played a significant role in the planning of the national education policy as well as in the development of contemporary Korean higher education. With Buddhism, Christianity has become one of the two representative religions in contemporary Korean society and leads the private colleges and universities in current Korean higher education. Confucianism did not contribute to establishment of Confucian institutes in modern Korean higher education; but it maintains a constructive relationship with Buddhism and Christianity. Confucianism does not directly contribute to the development of current Korean higher education, but Confucian socio-ethical principles and values are the principal axes of organisational culture in higher education administration.

Many facets of Korean society and government – and of course family life – are in line with Confucian principles and methods, simply in a more updated form to function in the Twenty-first Century. The educational system is no different. Education was a vital and fundamental part of the Confucian ideal for a state. In fact, in a Confucian state scholars were the most highly respected class of people. To achieve success in the civil service examinations, one had to first spend a great amount of time in rigorous study and 'self-cultivation,' a popular theme in Confucian thought.

At the head of the Korean system is the Ministry of Education, whose main function is policy making and evaluation. Therefore this body governs the behaviour

of all institutions in the country. This type of vertical structuring is very similar of Confucian ministries, and the effect is thereby echoed within the educational institutions themselves. The highest level administrators of Korean schools and educational institutes are typically authoritarian men. This again reflects the feeling of male superiority found in Confucian texts and traditions. But it is not just in the case of the highest administrators where this is seen within the educational system in South Korea. In fact, it appears that it is prevalent on all levels.

The OECD reveals that in 1999 in South Korea from a total of 354 higher education institutes employing 55718 teaching staff, 8505 were women, and 47213 were men. As Confucianism has always been favourable towards men, it can be assumed that it is more likely that men will transmit Confucian sentiments onto others.

The concept of filial piety in Confucian thinking refers most specifically to the respect a child has for their parents, and the care they show for them. The teachers also expect unquestioning obedience from their students. Within the classroom, the teacher takes on the role of the parent in a two-layer hierarchy, and the students are effectively in the role of children. Pupils are expected to show gratitude to their teachers. Independent discussion and thought around the topic are discouraged, with almost all lessons being conducted by rote learning in Korea. The contemporary Korean education system does indeed reflect many traditional Confucian concepts. Of course, Korea has undergone many drastic upheavals and changes since it was officially run as a Confucian state, such as the colonisation by Japan, the Korean War, military authoritarian rule, the switch to full democracy and the Asian Financial Crisis in 1997. In South Korea, being a university graduate is considered a requisite for a successful life, whereas a more western view would be that anyone can achieve success, despite not attaining at the highest level in all areas – such as standard education. However, study and teaching methods at university in ROK show little difference with those prior to higher education, and this is one of the contributing factors to the relatively low international opinion of ROK universities (Jambor, 2009). Rote learning remains abundant, and little prestige is placed on developing as an individual – both a Confucian and 'western' ideal – depends on what the student actually does while at university. In the case of ROK, the achievement is all in

attending the 'right university,' something which is decided by a single exam at the end of high school.

Pre independence, the education system in Korea has primarily been influenced by China and subsequently by Japanese ideologies. However, post independence the influence of western type education is evident. During the decades, the education system has contributed much to the economic progress and development of the country and its linkage with the social order has proved successful to meet the labour requirements of the economy. However, with the experience of financial crisis and pressure of globalisation the government has realised that the country can sustain its growth and advantage only if it transforms itself from a manufacturing oriented economy with low skilled labour to knowledge based economy with high skilled labour. Realising that the higher education system is too rigid to respond to the external social and economic changes, the government has made various attempts to diversify and specialise the ROK higher education system.

Chapter III

Internationalisation of Korean Education and Higher Education Reforms

3.1. Internationalisation and Globalisation

Internationalisation and Globalisation has undoubtedly influenced our higher education in many aspects. The term 'globalisation' is also being used interchangeably with 'internationalisation'. The European Union has adopted the following definition of globalisation: "Globalisation means that the flows of goods, services, capital, technologies and people are spreading worldwide, as countries everywhere open up to wider contact with each other."

Knight (1997) describes 'globalisation' and 'internationalisation' as, "Globalisation is the flow of technology, economy, knowledge, people, values, ideas……across borders. Globalisation affects each country in a different way due to a nation's individual history, traditions, culture and priorities." "Internationalisation of higher education is one of ways a country responds to the impact of globalisation yet, at the same time respects the individuality of the nation." Globalisation refers to global economic integration of many formerly national economies into one global economy, mainly by free trade and free capital mobility, but also by easy or uncontrolled migration. While, Internationalisation refers to the increasing importance of international trade, international relations, treaties, alliances (Daly, 1999).

According to Gray (1999), Globalisation can mean many things. On the one hand, it is the worldwide spread of modern technologies of industrial production and communication of all kinds across frontiers – in trade, capital, production and information . . . Globalisation also implies that nearly all economies are networked with other economies throughout the world.

According to Cox (1993), globalisation exhibits "two principal aspects". One is the global organizations of production involving complex transnational networks of production, which take advantage of costs, markets, taxes, and access to suitable labor as well as political security and predictability. The other principal aspect is global

finance, which involves a very large unregulated system of transactions in money, credit, and equities.

Waters (1995), sees globalisation as 'a social process in which the constraints of geography on social and cultural arrangements recede and in which people become increasingly aware that they are receding'.

Giddens (1994) argues that globalisation is about the transformation of time and space because of the emergence of instantaneous global communication and mass transportation. Globalization is restructuring the ways in which we live, and in a very profound manner (Giddens, 1999). Internationalised and fast-growing information industries produce knowledge goods and services. Today's massive movements of capital depend on information, communication, and *knowledge* in global markets. And because knowledge is highly portable, it lends itself easily to globalisation.

Stiglitz (2002) argue that globalisation has brought huge benefits – East Asia's success was based on globalisation, especially on the opportunities for trade, and increased access to markets and technology. Globalisation has brought better health, as well as an active global civil society fighting for more democracy and greater social justice.

Various scholars have tried to provide a comprehensive definition of globalization and the same can be interlinked with internationalisation and factors affecting them. The remaining chapter provides the linkage between globalisation, internationalisation and higher education and its relevance to South Korea.

3.2. Internationalisation of Higher Education

Internationalisation and globalisation are key factors that shape Higher Education and research strategies and give rise to both cooperation and competition. Comparative researchers have made the critical observation that the twentieth-century expansion of higher education is a worldwide phenomenon. Internationalisation was perceived, from the 1980s, as a means of enhancing the quality of education and research.

Global institutional and cultural change paved the way for hyper-expansion of higher education. Higher education can also be seen as a consumption good that might especially be desired by individuals in societies where basic needs have been met. The core proposition is that the expansion of higher education is strongly affected by national economic development. The expansion of higher education in countries aids in coordinating or controlling relationships in the world.

Globalisation is itself a complex force that affects all aspects of our global and national education systems. On the one hand it is the pull towards cooperation, social cohesion, social harmony, transparency, equity and to enabling greater numbers to participate in higher education. On the other hand are the financial issues, the neo-liberal agenda that calls for competition, free trade, the dominance of the market. Education policy both reflects and reinforces national values, beliefs and purposes. Governments are moved to 'steer' higher education in the hope of repositioning it to increase effectiveness and efficiency. Considerable interest has been shown by government in support of the claim that a graduate education brings with it enhanced earning power, but the drivers from government for an expansion of the higher education systems stem much more from a concern to be economically competitive in international terms. The demand for access to higher education and to participation in it is a characteristic of the cultural rationale. The demand is fuelled by the Internet, by the ways in which the knowledge economy works, and by the urging of governments who see it as essential to produce a highly skilled workforce to meet the needs of the international labour market (Eggins2003).

Peter Scott (1998), pointed out that 'all universities are subject to the same processes of globalization – partly as objects, victims even, of these processes, but partly as subjects or key agents of globalisation'. By linking university knowledge to the workings of individual and organisational life, increases the apparent utility of higher education for a wide range of social roles. Human capital and manpower planning theories suggested that everyone might become more productive through increased education, and traditional standards were cast as undemocratic and unprogressive (Schofer and Meyer, 2005). In the age of global capitalism, universities have been reduced to a technical ideal of performance within a contemporary

discourse of 'excellence'. While it is one of the functions of the university to produce technicians or men of affairs for the state, the state must protect the university to ensure the rule of reason in public life. The crisis of the idea of the modern university has been brought about largely by changes in the nature of the capitalist system, through attempts by governments to structurally adjust their national economies to the new conditions, and by consequent shifts in the production of knowledge that leads to the de-territorialisation of knowledge and intensified knowledge flows. The globalisation of the labour function is formulated in terms of both the production of technically skilled people to meet the needs of global corporations and the ideology of lifelong learning, where individuals can 're-equip themselves for a succession of jobs over a working lifetime'. The vertically integrated university is a product of brand image, government policy, history and historical economies of scale in support services (Peter, 2007).

Globalisation represents the next stage of democratisation, globalisation threatens democratisation with increased social inequality and increased inequality in access to the high quality of education needed to develop democracy to that next level. Globalisation may also weaken the power of the national state or regional governments to control economic development and the demand for education to the degree that they could in the past. Globalisation may even pose a threat to decreasing the quality of education in many societies, or at least posing major barriers to increasing educational quality.

While many centralised regimes have used their control to expand education, centralised control allows the possibility of constraints on educational expansion, which may be done for reasons such as costs, strict manpower planning, and desire to engage in political exclusion. In current scenario, knowledge and skills now stand alone as the only source of comparative advantage. Knowledge is valued for its strict utility rather than as an end in itself. A knowledge driven economy is one in which the generation and the exploitation of knowledge has come to play the predominant part in the creation of wealth. It is not simply about pushing back the frontiers of knowledge; it is also about the more effective use and exploitation of all types of knowledge in all manner of activity. The new global knowledge economy is not just a universalisation of capitalism after the collapse of actually existing communism, it

also involves the rise of finance capitalism, supported by the emergence of new information and communications technologies, and a series of international agreements concerning the liberalisation of world trade.

Globalisation is having significant impact on knowledge formation because it revalues different types of knowledge, particularly the knowledge associated with higher levels of education. The discourses of the knowledge economy points to the new insights flowing from the economics of knowledge, economics of information and the economics of education. Two of the main bases of globalisation are information and innovation, and they, in turn, are highly knowledge intensive. Internationalised and fast-growing information industries produce knowledge goods and services. Today's massive movements of capital depend on information, communication, and knowledge in global markets. And because knowledge is highly portable, it lends itself easily to globalisation.

Globalisation increases the demand for education, especially university education, and this increases pressure on the whole system for higher quality schooling. Governments in a global economy need to stimulate investment, including, in most countries, foreign capital and increasingly knowledge intensive capital, which means providing a ready supply of skilled labour. This translates into pressure to increase the average level of education in the labour force. The payoff to higher levels of education is rising worldwide as a result of the shifts of economic production to knowledge-intensive products and processes, as well as because governments implement policies that increase income inequality. Rising relative incomes for higher educated labour increases the demand for university education, pushing governments to expand their higher education systems, and, correspondingly, to increase the number of secondary school graduates ready to attend post-secondary. The WTO regime and the General Agreement on Trade in Services have important implications for higher education. International competitiveness also demands that nations sustain and enhance the quality of their higher education systems, even as they expand them. It can be defined as a process associated with increasing economic openness, growing economic interdependence and deepening economic integration in the world economy (Chang, 2003).

Higher education is also in the early stages of globalisation, both through the increasing mobility of students and faculty and the rapid growth in international partnerships among universities. Markets and globalisation are shaping the content of higher education and exercising an influence on the nature of institutions that impart higher education. Changing labour markets and demographics combine to create major changes in universities as well. The role of the university is undergoing a transition in late modernity as a result of structural shifts in the production and legitimation of knowledge. Universities, traditionally, have been concerned principally with two main functions: research or the production of knowledge, and teaching or its dissemination and acquisition.

Students and parents display strong revealed preferences to demand higher education that makes young people employable. The popularity and the availability of courses are thus being shaped by markets. The employability of students is not simply a force that is pushing to create more places for vocational courses in higher education. Higher rates of return (both private and social) to higher education have important effects on the rest of the educational system and on income inequality. Higher socio-economic status (SES) students are those who get access to "better" schools in regions that are more likely to spend more per pupil for education, particularly in those schools attended by higher socio-economic class pupils. Competition for such higher-payoff education also increases as the payoff to higher education increases, because the stakes get higher. Higher SES parents become increasingly conscious of where their children attend school, what those schools are like, and whether they provide access to higher levels of education. If rates of return to university are pushed up by globalisation, intensifying the competition for access to higher education, higher-educated, higher income parents tend to step up the amount they spend on primary and secondary school to assure their children's university enrollment.

3.3. Internationalisation of Higher Education in Korea

3.3.1. Historical Overview

The quantitative expansion of tertiary education between 1945 and 1970 was necessary for the promotion of the national industrialisation. This was regarded as the

driving force behind the development of the national economy, as well as the fulfillment of the strong desire of the Korean people who regarded higher education as a means to enhance socioeconomic position on the basis of Confucian social values. In the development of Korean higher education, the relationship between government and higher education has been inseparable: the former has acted as a demander to activate higher education to produce human capital and scientific technology, whereas the latter has served as a supplier of human resources to work for the development of national economy (Lee, 2000).

The liberation of Korea from Japanese occupation (1910-1945) on 15 August 1945 was a turning point in the history of Korean education. Under the U.S. Military rule (1945-1948), the military government made radical reforms to democratise higher education, as well as to eradicate the remnants of Japanese colonial education. After the Military *Coup d'etat* in 1961, the Korean government strongly recognised the necessity for educational reform in order to industrialise the country as well as to build national identity. In answer to the strong need for educational reform, the government strengthened legal and administrative systems of higher education under its uniform control (Lee, 1999).In March 1985, the Presidential Commission on Education Reform was created under the direct supervision of the President to reconsider educational competitiveness.

3.3.2. Gradual Shift to Reforms

From 1990 to the present, the qualitative improvement in higher education had been a principal goal of national policy. The entrance competition-dependent schools and universities did not supply adequate manpower to the business community which had to compete with foreigners on their own home ground. This idea led to a widely-supported view that the overly state-controlled educational system had to be "democratised," "liberalised," and "decentralised" (Kim and Jung 1994.).

Korea had undergone a series of educational reforms, but the most comprehensive education reform was started in 1993 under the Kim Young Sam's government. "New Korea Creation," Kim Young Sam's 1992 presidential campaign slogan was replaced by "*segyehwa*" as he began his regime. Actually, his emphasis on

"*segyehwa*" represented the state's strategic response to domestic and global changes affected by the increasingly deregulated capital flow and the international commodification of labour.

The *segyehwa* campaign set South Korea's attempt in the twenty-first century as its principal goal, and identified productivity, flexibility, fairness and autonomy as new guiding principles for national economic management. Its target was not limited to the economic domain, but extended to entire segments of society ranging from education, law and foreign policy to politics, culture, environment, and the quality of life. Particularly in relation to higher education, the educational reform policies emphasised the importance of 'diversification/specialisation, liberalisation and quality improvement of university education'.

In February 1994 the Presidential Commission on Educational Reform [PCER] was organised, which highlighted two important tasks in higher education, the strengthening of international competitiveness, and the improvement of the college entrance examination system.

The First Reform Plan, the Committee for the Promotion of Educational Reform was organised under the direct supervision of the Prime Minister on August 1995. This committee released the succeeding three reports which elaborated on 120 specific reform tasks between February 1996 and June 1997. As for higher education reform, the 2nd Reform Plan in February 1996 released the following amendments: construction of a new vocational education system, introduction of a professional graduate school system, and reformation of education related laws. The 3rd Reform Plan in August 1996 achieved the following: heightening the autonomy and accountability of private colleges and universities, using information technology and building virtual institutions, and restructuring the social education system based on an open policy for diversified access and participation. To allow more diversity and speciality, individual institutions were now given more autonomy to develop their own programmes in order to make their own niche in the higher education market. The 4th Reform Plan in June 1997 implemented: innovations in university management, improving high quality and changing a semester system-- promotion of research university, supporting local junior colleges and universities, innovation of

college entrance systems, etc (Kim, 2005). Among the 120 specific reform tasks planned by the Commission, one third of the tasks 10 were already completed.

The environment was even more favourable for education reform in 1998 when the next President Kim Dae Jung took over in the wake of the November 1997 financial meltdown. The crisis aroused an even stronger public opinion for economic and educational reforms aiming to terminate the statist political economy which, by excessive state control, obstructed development of a free market economy and deprived the economic actors of market competitiveness. Kim Dae Jung, therefore, promised a thorough education reform, of which goals remained the same: liberalisation, decentralisation, *segyehwa*, and the termination of entrance competition.

In spite of an unheard-of-event, "Economic Crisis," 11 in November 1997, the government had constantly pursued core educational reform tasks that were planned by the former government (Lee, 2000). In addition to the external/ global drive for reform, South Korea was hit severely by the East Asian financial crisis(AFC), and the poor work habits and lack of problem-solving ability among the Korean elites were clearly revealed in the post-crisis period. Acknowledging the fact that the existing system was developed to serve the needs of the organization of production in an industrial society, there was a strong need to reform the higher education system to cope with challenges of the growing knowledge economy.

In order to dynamically perform the reform tasks, the government set up the Presidential Commission for New Education Committee (PCNEC) in July 1998. The Commission printed a blueprint of educational reform, "A Five Year Plan for Educational Development," on March 11, 1999. The Plan generally adopted the previous reform plans that focused on building an open educational system, establishing student-centered or clientele-centered education, achieving the equal educational access, strengthening vocational or social education, promoting the quality of university, heightening information-oriented or high-technology education, and increasing the school-based management.

In 2000, there were 135 private institutions out of a total of 161 higher education institutions in South Korea. However, the high proportion of the development of the private sector in higher education shows that the ROK government had not allocated sufficient resources to promote the development of higher education and that parents have been heavily burdened with tuition fees. The socio-economic and socio-political changes resulted from the financial crisis in East Asia, together with the growing impact of globalisation, and accelerated the need to make the ROK higher education system more creative, innovative and adaptive to pressures and challenges generated by the globalisation processes.

3.3.3. Bottlenecks in Educational Reforms

State intervention in society in South Korea is so extensive and intensive that its influence is felt at all tissues of social fabric, so much so that it is often questioned whether the country really has a "civil society" in the sense of a collectivity of self-seeking individuals (McVeigh, 1998).

Finance was one of the most serious problems which was related to the soaring numbers of schools and students, and directly challenged the policy makers who pursued to contain educational expansion in order to prevent pressure for additional financial responsibility. The state initially attempted to address this problem by inducing additional investment from the owners of private institutions but in vain. The state chose to transfer the burden to the parents by gradually increasing tuition fees. The account concerning the purposes of seeking education addresses the society which South Korean scholars characterize by the word *hangnyogchuyi.* This refers to a method of assessing individuals' merit by considering the last school they have attended, preferring university graduates to high school graduates and graduates from a prestigious university to those from other universities. This method is so widely employed that not only the employer who interviews job applicants but also the mother who looks for a bridegroom for her daughter, rely on it. H*angnyogchuyi* is widespread and a university degree is "a ticket to the social elite" (Pak 1997). Another serious problem was that more money had to be spent for education outside the formal educational institutions than inside, and this entirely at parental burden. While the state's student quota and tuition fee control, together with curricular and textbook

control, restricted the freedom and autonomy of education, entrance competition and the subsequently rising demand for education, on the other hand, guaranteed student supply and, thereby, tuition fee-generated revenues. Although such revenues were limited, they allowed the institutions to run education programs without or with insufficient state funding if only they did not spend more than absolutely necessary. The schools and universities thus settled in a low-cost mode of operation. In ROK, however, statist policies have eliminated education while keeping private schools and universities under private ownership. The state's uniform control of education deprived private schools and universities of autonomy and independence and turned those institutions to pseudo-public institutions, or "institutions of public education" (*konggyoyuggigoan*). Financially, this meant an additional burden on the state side, because the difference between the tuition fee-generated revenues and the reasonable cost of operation (including profits in one form or another) had to be paid out by the state given that the latter set limits on revenues. While 83 percent of the students in higher education were enrolled in private institutions, state grants for such institutions accounted for less than 2 percent of their operation cost. Financial irregularities in private schools and universities were frequent despite, or because of, state supervision and control.

When the state decided to raise student quotas and new school and university licenses, the benefit was often distributed via personal connections. As a result, some institutions received additional student quotas and approval of new programs even though they did not possess necessary infrastructures. Licenses were often issued to those who did not have resources necessary for opening a school or university and even to those with no experience in education.

By 1993, the structural problems had deteriorated to such a degree that many South Koreans considered their educational system to be in a major crisis. The entrance competition-dependent schools and universities did not supply adequate manpower to the business community which now had to compete with foreigners on their own home ground. The policy makers of the civilian governments understood that their nation's prosperity in an era of globalisation depended on having a viable educational system and, for this, it was essential to liberalise and decentralise the existing educational system. The process of policy making, however, guided them to

policy measures which maintained the existing educational system and left its structural problems unaddressed.(Kim, 2005)

The reform measures which the civilian governments employed did not bring significant changes to the existing educational system. The most important reason for this was their obvious underestimation of the magnitude of promised reforms. Liberalisation meant that excessive state control of education would be withdrawn and the educational actors schools and universities, teachers and professors, and students and their parents would be allowed to operate freely and responsibly. Decentralisation implied the transfer of power from the central authority to local residents. Finally, the termination of entrance competition meant the abolition of established state policies to control the curriculum and textbooks, student selection, tuition fees and student quotas, and the state entrance examination.

The governments of the civilian leaders were not literally "civilian" by the nature of their power basis. Kim Yong Sam, the politician from the South Kyongsang Province received endorsement from the voters in his province and the urban middle class. He grasped power by allying with Roh Tae Woo of the second-generation military group supported by the North Kyongsang Province and Kim Chong Pil of the first-generation military group supported by Chungchong Provinces. The civilian leaders' weak power bases, on their own, had restrictive effects on available policy options. Education was "public by nature" (*kyoyug-yi konggongsong*) and the state's extensive and intensive intervention in education was a pre-requisite for the integrity of the educational system.

PCER's approach to solving the problems did not differ from that of the previous military era. It stated that entrance competition was caused by the simple fact that student places were in short supply. It widened the narrow university gates by increasing student quotas and new university licenses until supply met demand. This was exactly what the policy makers of military regimes had been saying whenever they decided to increase the supply of student places at times of crisis.

It only sought to "mend" the institution for improved efficiency through a newly-created National Institute of Educational Evaluation (KIEE). The effects of

implementing PCER recommendations were what had actually happened repetitively during the military years: persistent entrance competition, further expansion of education, and further enhanced pressure for increased state funding for education. By 1998, thus, the total of student quotas in higher educational institutions had grown to the capacity of accommodating 94 percent of the year's high school graduates. The institutions of higher education, however, managed to attract only 84 percent of them (Kim,1999).

The surplus of student places created new problems for policy makers to deal with. Since the high participation rate in higher education was due to the drive toward universities and colleges triggered by intense entrance competition, the students who managed to enter one such institution included many who could not remain there due to financial reasons. The student places vacated by such students were filled with those transferred from other universities. Here, most students in less popular universities continued to look for opportunity to move to a more popular university. Thus, the over-supply of student places inflamed an unprecedented crisis for the universities which had been relying on the student supply guaranteed by entrance competition. In reaction, the PCER in 1997 devised a policy agenda for "research-focused, graduate school-centered universities". Kim Dae Jung government took over this program and implemented it with a new name, "Brain Korea 21" (or "BK21"). In doing so, it also followed the military elite's footsteps on the road to mass education at the level of graduate studies.

3.4. BK21 and NURI

Realising that the higher education system was too rigid to respond to the external social and economic changes, the government made various attempts to diversify and specialise the Korean higher education system. One of the reform strategies was the launch of Brain Korea 21 (BK21), which aimed to formulate the creative and advanced knowledge-based environment necessary for the twenty-first century by improving the quality of graduate programmes and encouraging research activities. Building a world-class university has been a long-held desire of South Korea. 'Brain Korea 21'(BK 21) project of South Korea was designed to enhance the academic competence of universities. Although the BK 21 project gave priority to national universities, which were perceived to have ripple effects of educational

reform nationwide, there were 46 private universities selected among 71 universities which applied for the BK 21 project. After one and a half years of participating in the BK 21 project, Seoul National University became the top 55th (2,202 articles) in the world in terms of the number of articles published in SCI journals in 2000 and now Seoul National University strives for being within the top 40 universities in the world by 2010.Through New University for Regional Innovation (NURI) Project, the government tried to strengthen the capabilities of colleges and universities located outside the Seoul Metropolitan area by project. This innovative $ 1.4 billion project was allocated for five years from 2004 to 2008.

The NURI Project, which was aligned with the major national policy of "Balanced Development of the Nation," focuses on: 1) reinforcing capabilities of local colleges and universities and 2) linking capacity-building of local colleges and universities to promoting and facilitating the development of regional economy. Specifically, the NURI project aimed to develop college curricular by specialised areas, which is closely aligned to characteristics of the regional economy, thereby improving competitiveness of colleges and universities. The NURI project also aimed to promote regional development by training high quality manpower; this project cultivated college graduates through various educational programs according to the demands of labour market as well as needs of regional industries and these highly qualified college graduates were expected to invigorate the regional economy. Another essential purpose of the NURI project was to establish a collaboration system, called the Regional Innovation System (RIS), in which higher education institutions, local governments, research institutes, and corporations build partnerships for mutual development and improvement.

The NURI project was implemented by the following strategies. First, the project was planned and implemented in region-led, decentralised, and bottom-up manner. Second, to enhance investment efficiency, the NURI fund was distributed in lump-sum package including wages, operation costs, equipment purchase fees, scholarships, and repair cost. Third, the project was managed by the performance-based management system. The BK21 Project and the NURI Project were crucial players in the planning of the advancement of national power through nurturing a highly skilled workforce, as well as through the improvement of national

developmental equilibrium[1]. In order to further progress both the BK21 Project and the NURI Project, and observe the changes that are inevitable with the comings and goings of eras, the BK21-NURI Committee (BNC) was formed. BNC was established in August 2006 as an assessment and management body within the Korea Research Foundation in order to effectively manage and support the Brain Korea 21(BK21) and New University for Regional Innovation (NURI) projects, which aim to nurture a qualified workforce.

3.5. Conclusion

Lot of scholars have defined globalisation on various parameters ranging from free flows of goods, services, capital and technology between the nations to massive movements of knowledge which ultimately leads to globalisation. However, internationalisation is perceived as the realisation of importance of international alliances in today's world. By internationalisation of education, a country can face the globalisation pressures and match up to the global benchmarks, thus creating and sustaining its comparative advantages in terms of a knowledge economy. Historically, reforms in higher education have been to formulate national identity and cater to the demands of the then developing nation. The major reforms in higher education took place in 1990's when the leadership of Korea realised the importance of education to prepare itself against globalisation pressure. The socio-economic development of Korea contributed to sustained demand and importance of higher education.

AFC proved to be an eye opener for the civilian government in terms of its educational policies which were not much different from those in military leadership. Higher education which was initially confined to elite strata of the society and was aimed towards preparing civil servants evolved from one necessary for preparing technically qualified labour required for industrialisation to that of preparing highly skilled and qualified manpower for a knowledge based society.The segyehwa campaign set the pace for strategic reforms, responding to domestic and global changes. In 1994, Presidential Commission on Educational Reforms strengthened the international competitiveness and improved the college entrance examination system.

[1] For more information on BK 21 and NURI visit BK21 and NURI committee website http://bnc.krf.or.kr/home/eng/bnc/chairman.jsp

PCER phased out reforms in stages and amended the necessary laws to increase the autonomy of accountability of private colleges and universities. However, post-AFC the vulnerability of the Korean education system was exposed, which led to formulation of Presidential Commission for New Education Committee (PCNEC) in July 1998. To overcome the shortcomings of the earlier reforms, the committee adopted five year plan model for a dynamic change in education scenario. It refocused the agenda towards research and clientele centered universities so as to reduce the burden on the educational structure and stakeholders. Currently, BK21 and NURI are the two vital projects which are being implemented by the government to meet its objectives of a world class educational system.

Chapter IV

Brain Korea 21: A Case of Higher Education Reform in South Korea

Education has been a key factor in the rapid economic growth of Korea over the past four decades. Since the 1960s, the government-led economic development plans have been directly reflected in education policy and planning. The Korean government has been generally successful in providing and expanding the education system based on the industrial needs of human resource. As a result, Korea's education system developed in tandem with the various stages of economic development. The focus of the government's educational plan has moved from primary to secondary education and finally to the tertiary level, according to the nation's economic advancement. The rapid expansion of education in terms of quantity and, to a lesser extent, quality is the most salient feature of Korean educational development during the country's industrialisation.

However, the recent transition to an advanced KBE (Knowledge based economy) and the problems in the educational system that originated in the industrialisation process required a new policy framework in education. Until now, the full potential of Korea's human resources has not been fully realised because of the rigidity and inflexibility of the education and training systems. The pool of human resources in Korea is large enough, because of efforts to expand educational opportunities, but the availability of adequately and appropriately trained human resources is limited. From this point, Korea's education and training systems have failed to play their required roles. Therefore, establishing a new system of education and training that meets the skill requirements for a KBE is a new challenge for Korea.

4.1 Internationalization of Higher Education and Korean University Reform

Korea has achieved a stage of mass higher education, but it is not easy to see any differences among colleges and universities. Because most institutions of higher learning are interested in quantitative expansion, they underestimate the important missions given to them, such as quality assurance and specialisation in unique characteristics. Now, similar departments, colleges, and graduate programs can be easily found in almost all universities. To make the higher education system more

diverse, the government pushes colleges and universities to identify their unique strengths and then revise their curriculums, strategic focus, and missions accordingly. During 1998–2002, approximately W 730 billion were granted to support universities' restructuring activities. Furthermore, the government announced a University Restructuring Plan (2004). The key objectives of the plan are to (a) lay the foundation for improving the quality of higher education beyond the growth in quantity, (b) improve the efficiency of tertiary education investment, (c) develop human resources that meet the needs of society, and (d) support development of Korean universities to become world-class institutions (MOE & HRD/KEDI 2004b, 2004c). To achieve these goals, the government provided W 80 billion to 23 institutions of higher education in 2005 and will continue to support them until 2008 if they maintain their qualifications for the project.2 In addition to the financial incentives, colleges and universities undergoing restructuring or downsizing will be given favourable credits on applications for government-funded higher education projects, such as BK21 and NURI.

University academics in ROK have experienced structural and cultural changes in the last decade given the government higher education policy of internationalisation framed by perceptions of globalisation. The vision of this policy was clear: to upgrade major South Korean universities to the level of a global standard of excellence and solidify ROK's reputation as one of the region's "knowledge economies" (Kim, T. 2000). The ways to realise this goal included new rules of competition among universities for the available national research funds and a new evaluation system for measuring good academic performance (Kim, T. 1996; 2000). For instance, in 1999 the government embarked upon the Brain Korea 21 (BK21) project, which was to last for seven years with an investment of US$ 1.2 billion. The aim was to improve graduate schools at the top universities, strengthen regional institutions and upgrade academic research. The last goal was to be achieved by a benchmarking project that measured local institutions against foreign, mainly Anglo-American, counterparts. The "global standard" specified relied upon the number of international publications and the international ranking of research universities on the basis of internationally published Scientific Citation Indices (SCI).

4.2 Brain Korea 21

BK21 is a national human resource development project initiated by Korean Ministry of Education in 1999 that aims to fulfill the demand for high-quality human resources, which Korea will need to, thrive in the fierce competition of the knowledge-based society of the 21st century. The ultimate objective of the project is to meet the needs of the times for creative and high-quality R&D human resources. The seven-year project, which started in 1999, has contributed greatly to improving the research capability of universities and developing excellent human resources. During the seven year period of the BK 21 project period, universities involved have changed their administrative systems and improved student selection methods to move toward becoming research-oriented institutions. For example, they enhanced research capability by introducing pay for performance based on professors' research achievements, thus creating a favourable environment for research.

The second phase of the BK21 project began in February 2006, and is scheduled to continue until 2012. Based on the research infrastructure built during the first phase of the project and the "selection and concentration" strategy, the second phase will focus on the S&T sector that will have more direct impacts on nation's economic development. Support will be provided for the development of high-caliber researchers in particular, students in their master's degree and doctoral programs, international exchange and cooperation, and innovative curriculum development.

BK21 seeks to nurture globally competitive research universities and graduate programs and to breed high-quality research manpower in Korea. BK21 recipient research groups are selected at the beginning of each seven-year phase. To qualify for BK21 funding, a research group must satisfy several conditions. It must have a doctorate program with enrolled PhD candidates. The number of faculty members participating in the research group must be at least seven for liberal arts and social science groups, ten for basic science groups, and 10–25 for applied science groups. Participating professors must also produce or exceed a minimum average number of publications for the prior three years. All research groups must secure matching funds from their universities equal to at least 5 percent of the level of BK21 funding that they seek. Applied science and interdisciplinary science research groups must secure

matching funds from industry sources equal to at least 10 percent of BK21 funding. Regional university research groups must secure matching funds from local government equal to 3 to 5 percent of BK21 funding, depending on discipline.

BK21 funding covers scholarships and stipends for graduate students, postdoctoral scholars, and contract-based researchers but does not cover professors' labor cost or costs of equipment and facilities. BK21 funding is not project-based. Research groups are supposed to find other funding for research projects, equipment, and facilities. The award size is basically proportional to the size of the department. BK21 recipients receive a fixed stipend every month.

Although BK21 funds scholarships and stipends for individuals, individual recipients are not selected on their own merit but on the merit of their department and university. Award selection criteria are based on the qualifications of the research group to which the individuals belong, the excellence of their department, and their university's commitment to the department, institutional reform, and research infrastructure. Applicant universities are supposed to choose their academic areas of concentration, make a commitment to investing in the infrastructure needed to promote the selected areas of concentration, and plan for such reforms as improving accountability over research funds and the faculty evaluation system. Through these rules, the program seeks to induce changes across a university to increase global competitiveness. Program funding allocations are made by academic discipline, geographical location, and scale of research group (MoE, 2006). By academic discipline, science and engineering receive 85 percent of the Phase II funds for large-scale research projects; liberal arts, social science, and interdisciplinary fields account for the remainder. In science and engineering, applied science accounts for about three-fourths of resources and basic science for the remainder (Seong et.al 2008).

By geographical location, about 25 percent of the total program budget is allocated for universities located outside the vicinity of Seoul. Regional universities compete in separate rounds in each academic field. Top universities, such as the Korea Advanced Institute of Science and Technology (KAIST) and the Pohang University of Science and Technology (POSTECH), although outside the vicinity of Seoul, are prohibited from applying for regional university support.

About 70 percent of the Phase II program budget is allocated to support department-level large research groups (*sa-up-dan*), in which 70 percent of the department's faculty members participate and the number of participating faculty exceeds the required minimum (Seong et.al 2008). Support for smaller-scale research teams accounts for about 20 percent of the BK21 Phase II budget, while support for professional schools and other expenses takes up about 10 percent.

The Phase I and Phase II programs are not much different from each other in their goals and missions, funding rules, and selection criteria. The few differences between the two are subtle and nuanced in emphasis. Whereas Phase I emphasized university-level excellence, Phase II emphasizes department-level excellence (Seong et.al 2008). Phase II emphasizes university-industry link more than Phase I. Institutional reforms are emphasized in Phase I more than in Phase II. A Phase II research group is based on a department of a single university, whereas the Phase I research groups originally started with investigators from multiple universities in the same academic discipline one leading university and one or more participating universities. However, during the course of the Phase I, investigators of each university were regarded as a separate research group and each university accounted for its performance at the end of the Phase I program, which is basically the same as in Phase II.

4.2.1 Significance of the program

BK21 is an unprecedented policy in terms of its scale and planning--ambitious in its attempt to reform and develop Korean higher education. Proponents argue that past policies in higher education finance have focused on distributing of limited resources fairly among all colleges and departments. BK21 will change the focus to efficiency of investment rather than equality of opportunity in the distribution of research funds. Supporters of BK21 also maintain that various research consortia supported by the project will create the intellectual foundation for Korean higher education and society. Furthermore, shifting the focus of higher education from undergraduate to graduate education will mitigate the overheated competition for entering top-tier universities.

BK21 has attracted a lot of attraction, in fact, than its relative share of resources might at first seem to warrant. By our calculations, Phase I accounted for only 5 percent of government R&D expenditures, 10 percent of university R&D funding from all sources, and just 1 percent of gross R&D expenditures in Korea. Yet the program's strategy of concentration resulted in awards that were much larger than those of other, project-based funding programs. BK21 funding is also relatively stable for longer periods (seven consecutive years) than other funding is. As a result, the award selection process is highly competitive. BK21 funding is a mark of prestige for its recipients because the award is based on the comparative ranking of universities and departments (Seong et.al 2008).

Given the high profile of the program, stakeholders including; universities, researchers, policymakers, and the National Assembly have all had great interest in it and in determining its effects on university R&D performance and human resource development. Unfortunately, key accountability questions have not been addressed well enough to satisfy all stakeholders; hence the extent to which BK21 is achieving its goals is still controversial.

Rapid growth in Science Citation Index (SCI) paper publication by Korean researchers is the most commonly used metric to demonstrate BK21 performance. However, whether the growth in SCI paper publication can be attributed to BK21, or to what extent, has not yet been proven. There are surveys and self-evaluation by recipient universities showing that BK21 has made a positive contribution. However, they are not well accepted as objective measures of program performance. In particular, the net impact of the program, i.e., the impact of the program above and beyond that of other concurrent trends and initiatives, has yet to be shown.

In the following sections the two phases of Brain Korea projects are discussed by examining the goal, mission, project design, strategy and major outcomes.

4.3 Brain Korea 21: Phase I (1999-2005)

The major objectives advocated by the phase I of BK 21 project are described as follows:

- Fostering world-class research universities which function as infrastructure in producing primary knowledge and technology, and promoting specialisation of local universities;
- Introducing professional graduate schools in order to cultivate professionals in various fields
- Transforming the higher education system in order to facilitate competitive growth among universities based on the quality of their students and academic productivities.

Towards nurturing world class graduate schools with enough capability to produce creative knowledge in strategically important sectors for ROK, the ROK government has invested 1.2 billion dollars in 7 years (1999 to 2005) during the Brain Korea project. In order to achieve this goal the BK21 project anticipated reforms in universities in student admission systems and professor performance review systems

Towards building world classes universities in Korea the BK 21 project has planned to support build world class graduate schools and the development of regional universities,

1) Nurturing the World-class Graduate School.

a. Target subject areas to be supported

BK 21 supported two subject areas broadly: 1) Natural and Applied Sciences and Technology and 2) Humanities and Social Sciences. The Natural and Applied Science and Technology included the fields of Information Technology, Biotechnology, Mechanics and Materials, Physics, Chemistry, Material Engineering, and so on. The Humanities and Social Sciences area involves Language, History, Philosophy, Law, Administration, Politics, Economics, Education, Psychology and others. The annual financial support for each team project ranges from 800,000 dollars to 6 million dollars for the area of Natural and Applied Sciences and

Technology, and from 150,000 to 750,000 dollars for the area of Humanities and Social Sciences.

b. Support for research infrastructure

Facilities: Facilities related to education and research in the graduate schools, such as Electronic Libraries, laboratories, guesthouses, and dormitories for married students were augmented.

Research: Universities were supported financially in establishing relations with world leading universities for International Exchange program or Collaborative Research program. The financial support includes scholarships, stipends for post-doctorate students and faculties. A performance-based promotion system was being introduced to ensure competition among professors.

2) Nurture Regional Universities

Developing regional universities in order to meet the needs of local industry - About 38 million dollars in 7 years (1999 to 2005) which demanded reforms in administration and a more competitive entrance models to higher education institutions to encourage highly-qualified regional high-school graduates to go to regional leading undergraduate schools and hence developing them in to world class graduate universities in these universities. To facilitate this goal the BK 21 program has adopted the following strategies;

a. Specialisation of regional universities

Human Resource: Training In order to meet the needs of local industry, practical major education to be strengthened and basic vocational education on foreign language and management of information was reinforced.

b. Support programs

Incentives: Highly qualified high-school graduates, who enter leading regional universities, were provided with opportunities to participate in overseas language programs. In order to facilitate the regional university graduates' advanced study, world-class graduate schools have 50% of quarter for regional university graduates.

Educational Environment: The participating regional university has to hire more professors to improve the student/faculty ratio. By forming coalitions with local government and companies, the universities should come up with a basis for further development. Financial support for laboratory and language labs should be provided to professors.

4.3.1 Expanding International Cooperation

The ROK universities and graduate schools selected for the BK 21 project are now actively seeking ways to improve themselves by benchmarking with a dozen productive international educational institutions recognised in their specialised areas. Additionally, efforts were made to forge international collaboration with institutions overseas through co-operation in a number of programs. Beside the collaborative projects, university professors and students who were selected under the project will be given opportunities to pursue their professional development at overseas universities of their choice on a long-term (six months or more up to one year) or a short-term (six months or less) basis.

4.3.2. Funding

The ROK government to has projected budget of $1.2 billion for a period of 1999-2005for the implementation of Brain Korea 21 Phase I. Main features of the funding is given as follows

- Part I was to upgrade graduate education to attain excellence in teaching and to promote local universities. It focuses on three specific areas: science & technology, humanities & social science, and local universities. A total of $170 million has invested annually for this purpose.
- Part II was to enhance the research capability of graduate schools, with a total budget of $41 million has invested.

- Part III was to build infrastructure for academic research and to provide financial support to all academic areas, with a particular emphasis on basic disciplines. A total fund of $42 million was reserved for this purpose. Funding for each task area was provided through a rigorous evaluation process of the applications submitted by universities and colleges.

In order to match government's funds, every unit of BK21 projects at the selected university was expected to raise funds from research foundations, industries, and other private sectors.

The grant structure of each BK21 award is as follows. About 70– 80 percent of BK21 funds goes for scholarships and stipends to graduate students, postdoctoral researchers, and contract-based research professors. The remainder is spent on international collaboration and other expenses, much of which also benefit recipient students and researchers. BK21 funding can support professors for their participation in international workshops and seminars only when they accompany graduate students. Therefore, professors who participate in the BK21 program need to find other project-based funding to cover their other research costs, including those for their own labor, travel expenses, equipment, and other overhead costs. While BK21 funds are not tied to specific projects, other government R&D programs provide project-based funding. In other government programs, professors are the award recipients who are contractually responsible for the award and who allocate the research funds over such different expenses as labour costs and equipment.

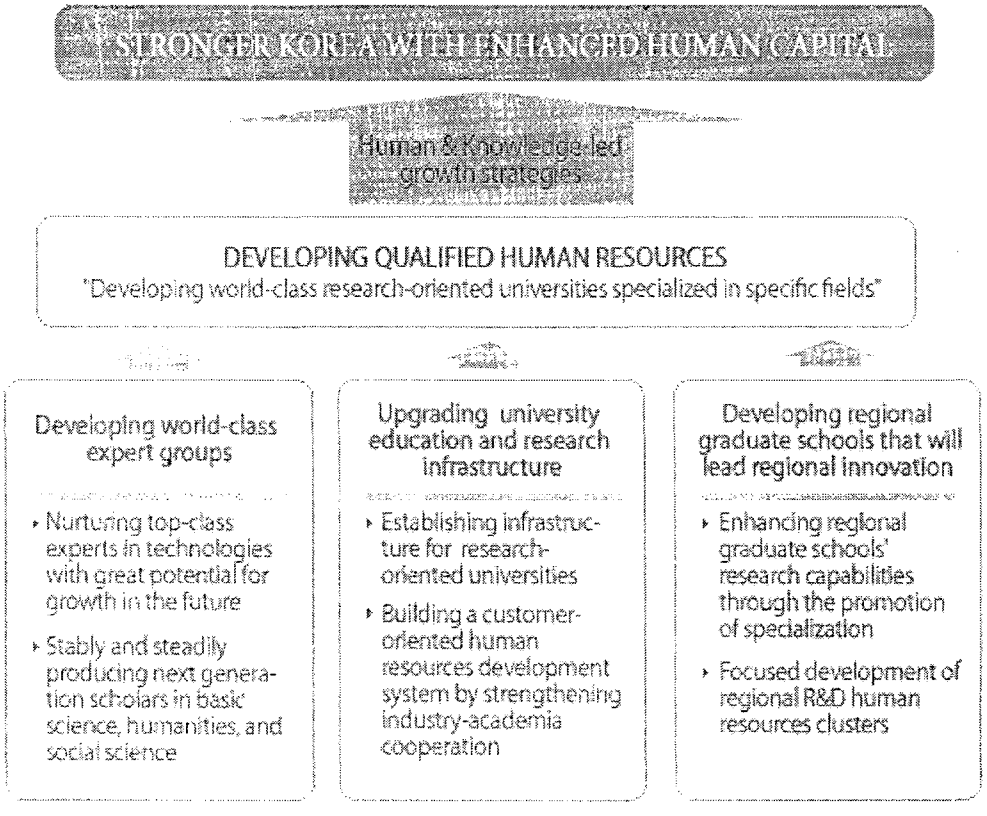
4.4. Brain Korea 21: Phase II (2006-2012)

The second phase of BK 21 was begun in the year 2006. The second phase of BK 21 according to MoE (2006) notes that the ultimate goals of the program are (1) nurturing creative research manpower for the future and (2) fostering research universities specialised in specific academic disciplines. "Creative" and "research manpower" are both key words for these goals, particularly in nurturing academic

manpower specifically, and not just highly skilled workers generally, who can create new knowledge and new technology.

The related goals for BK21 includes providing graduate education to the next generation of workers and increasing the quality and quantity of ROK university research. The logical explanation for the relationship between the two goals of nurturing creative research manpower and fostering research universities with specialties in selected disciplines, according to the Korean Education ministry is as follows. "The BK21 Phase II program is a research training program. High-quality research training is the key element of BK21 Phase II. Research and human resource development cannot be separated for advanced degree programs. To supply top-notch research manpower, Korea needs high quality graduate schools to train them. To foster high-quality graduate schools, there should be enough high-quality students and faculty and research activities." (MoE 2006). The BK21 phase II program is intended to promote linkage to industry labour demand, through students and staff exchanges and co-development of curriculum, especially in applied science fields.

Fig 4.1 Brain Korea 21 Vision



(Source: Korean Research Foundation)

Table 4.1: Brain Korea Phase II: Goals

Major BK21 Phase II program goals	1. Increase size and capability of research manpower pool	2. Foster globally competitive research universities	3. Strengthen local universities and enhance university-industry collaboration for innovation
Metrics			
Outputs	1. Human resource production	1. Improve graduate school infrastructure	1. University-industry linkages
	2. Research quantity and quality	2. Promote an environment for competition within and between universities	2. Regional graduate school promotion
		3. Promote signaling for faculty and graduate students	
Outcomes	1. Employment of highly educated workforce	1. International university prestige	1. Industrial research quantity and quality
		2. National prestige	2. Labor productivity

(Seong et.al 2008).

4.4.1. Mission

To achieve program goals, Phase II sets forth three missions: (1) fostering world-class research groups to nurture next-generation scientists and engineers; (2) establishing infrastructure both physical facilities and institutional arrangement, such as an improved faculty evaluation system and accountability over research funds to help research universities meet their own needs for high-quality manpower as well as those of industry; (3) promoting regional universities that will lead to innovations in those regions.

The third mission may appear to be unrelated to the other two, particularly the first goal for fostering "world-class" research groups. Nevertheless, MoE (2006) claims that promoting regional universities can serve the R&D and human resource needs of regional industry, particularly to the extent that certain academic specialties are developed to support regional industry. The third mission may also help address

equity concerns, because most leading higher education institutions in ROK are in the Seoul area (KRF, 2007).

Phase II emphasises links between universities and industry much more than Phase I did. These links are stressed in the mission to meet industry demand for highly skilled labor, in the milestones for technology transfer, and in the selection criteria for recipient departments. This emphasis stems from Phase I program evaluations (MoE, 2005, 2006a, and 2008) claiming that BK21 was biased toward research performance and hence undervalued links between universities and industry as well as the economic contribution of universities.

Emphasising the economic contribution of universities may not be always compatible with the goal of nurturing globally competitive research universities in ROK. Perceived excellence, as reflected in rankings of prestige, and actual excellence, as demonstrated by publications, both matter to top international universities. Pursuing such excellence requires considerable long-term investment, with benefits that may not always be large enough to justify the cost of obtaining it (Brewer, Gates, and Goldman, 2002).

4.4.2. Strategy and Design of BK 21 Phase II

BK21's official strategy is to pick "winners" and concentrate support on them. Phase I funding was mostly concentrated in Seoul National University (SNU), providing an opportunity for SNU to upgrade its research and graduate training. Phase II funding, however, is spread over a much larger number of institutions. The top five recipients of Phase II funding were SNU, Yonsei University, Korea University, Sungkyunkwan University, and Pusan National University. These schools account for 44 percent of the Phase II program budget. During Phase I, the top five recipient universities SNU, KAIST, Korea University, POSTECH, and Yonsei accounted for 53 percent of the BK21 program budget, with SNU alone accounting for 34 percent .

The strategy of concentration appears to be a natural option, given BK21's limited resources and the large-scale investment needed for a graduate school to become globally competitive. Brewer, Gates, and Goldman (2002) show that

universities successfully seeking to gain prestige pursue a concentration strategy, whereas universities that have already obtained prestige tend to distribute resources more evenly.

BK21 provides sizable and stable funding to recipients over the seven-year program period. The scale of each award is much larger for an individual group than that of other project-based research funding programs. For example, a science and engineering research group is eligible for annual funding between 1.5 billion and 7 billion KRW in the Phase II BK21 program. During Phase I (1999-2005), annual average funding for a science and engineering research group was 1.77 billion KRW, with a maximum award of 6.82 billion KRW and a minimum of 0.38 billion. In contrast, other project-based research funding to universities is quite small. The KSF's Basic Science Research Program, for example, provided average funding per project of less than 0.1 billion KRW (about US$100,000) in 2005. By concentrating its support on a few selected groups, BK21 can account for a significant portion of the total research funding of a recipient university.

BK21 encourages specialisation" within the recipient universities so that they can concentrate resources and support on selected areas. Applicant universities are supposed to choose their academic areas of concentration, make a commitment to investing in infrastructure needed to promote the selected areas of concentration, and plan for reforms, such as improving accountability for research funds and the faculty evaluation system. BK21 seeks to induce changes across a university. While the unit of support is a department-level research group, recipients are selected not only for the excellence of their department but also for their university's commitment to the department, institutional reform, and research infrastructure. BK21 mechanisms are relatively unique in their combination of stipend and research funding selection on the basis of department and university merit. BK21 funds are designed to subsidize a university's R&D costs, lower the cost of getting PhDs and master's degrees, and stabilise the income of post-doctoral students and young researchers in early career transition. While BK21 funds scholarships and stipends for individuals, individual recipients are not selected for their own merit but on the merit of their department and university.

BK21's unit of support is the department-level research group. Students and young researchers are matched with faculty members to form a research group. To qualify for BK21 funding, a research group must satisfy several conditions. It must have a doctorate program with enrolled PhD candidates. The leader of the research group should be a faculty member who can lead the group until the end of the BK21 program period; that person should not lead other large-scale government-funded research projects. Participating professors should also have had a minimum average number of publications in the prior three years. Not all individuals participate in a department's BK21 program. The bottom third of faculty and graduate students in the department (as determined by such measures as number of publications) do not participate, but individual participants can be replaced over time, so as to ensure performance from each team member. The leader is the only permanent member of the research group.

Selection criteria are announced before the selection process starts so that applicants may estimate their expected rankings by research merit, training, links to industry, university reform and specialisation, and, for regional university groups, regional development (Seong et.al 2008). Award selection is based on the ranking of merit BK21's "competition rule." Research groups are ranked within each academic discipline. Ranking criteria are weighted differently for different groups.

4.5 Criticisms of BK21

As any other public project BK21 was also came under severe criticism. Controversies around BK 21 need to be carefully examined for successful and effective reform. BK21 is an unprecedented policy in terms of its scale and planning. Past policies in higher education finance have focused on the distributing of limited resources fairly among all colleges and departments.

BK21 has changed the focus to efficiency of investment rather than equality of opportunity in the distribution of research funds. In addition, shifting the focus of higher education from undergraduate to graduate education is expected to mitigate the overheated competition for entering top-tier universities.

There were concerns among the ROK academician and policymakers about the possible negative impacts of the BK 21 project. Perhaps, the strongest concern may be the issue of 'selection and concentration' vs. a balanced development among universities as well as among subject areas. If the traditional top universities are selected and supported by BK21, the principle of "selection and concentration" will prevent most professors in nonselected colleges and universities from getting their research funded. Rather, BK21 may reinforce the traditional university pecking order, which has long been perceived as an obstacle in the development of ROK higher education. Furthermore, the governmental investment concentrated on the given subject areas and specialised areas may be detrimental to the balanced development of various academic fields.

Other concerns involve discriminatory financial support for national vs. private universities, insufficient support for basic academic fields, and aggravated college entrance competition due to reduced undergraduate student enrollment.

Another major concern was regarding the fear of loosing institutional autonomy. Criticising the overdependence on government funding would have a negative impact on the autonomy of academic institution as every selected university must undertake educational reforms under the direction of the Ministry of Education, such as reducing the number of undergraduate students, hiring professors for teaching graduate courses, improving the university curriculum, and so on. According to E.J. Lee (2000), the government-controlled and development-oriented educational reform will reduce the intellectual freedom and autonomy of universities in the long run.

4.6 The Impact of BK 21 Korean Higher Education

This section aims to provide an analysis of the impact of BK 21 on Korean higher education by summarising various evaluation studies of BK 21. Despite of many, the BK21 project has been fruitful in at least the following three ways: 1) changes in university atmospheres and improvements in research activities of graduate schools, 2) attainments of the project goals, and 3) progresses in the university system reform. These conclusions were made by a number of evaluation studies of BK 21 by different agencies and researchers (KISTEP 2007, Oh et al. 2005, Lee et al. 2005, B. J. Kim et al. 2005, KRF 2007, Seong et.al. 2008 and Shin 2009)

KISTEP (2007) reported that the annual growth rate in the number of Science Citation Index (SCI) papers from 1999 to 2005 was 12.8 percent for the science and engineering research groups. Oh et al. (2005) and KRF (2007) found that many science and engineering research groups in Phase I were comparable to benchmark universities in number of SCI papers per faculty member. Many research groups published more than they had planned. The quality of papers by BK21 research groups, however, was below that of benchmark universities, as measured by impact factors. KISTEP (2007) found that SCI papers for postdoctoral researchers and research professors had increased by 33 percent during the Phase I program period, and those for graduate students had increased by 32 percent both greater rates of increase than the 9 percent increase for faculty members. Oh et al. (2005), Lee et al. (2005), B. J. Kim et al. (2005), and KRF (2007) also found that the quantity and quality of BK21 graduate student research had increased. B. J. Kim et al. attributed this to the greater opportunities for presentations and publications that BK21 graduate students enjoyed, as well as to the greater flexibility and motivation to produce research that BK21 grants provided.

Greater competition among universities and faculty members was also commonly seen as a positive result of the program. Lee et al. (2005) claimed that, prior to the BK21 program, lack of competition was a problem in university community. B. J. Kim et al. (2005), Lee et al. (2005), and KRF (2007) all found that the competition induced by BK21 led faculty members to become more committed to research. B. J. Kim et al. (2005) and B. K. Kim et al. (2005) also found that introducing performance-based faculty evaluation system further intensified competition for publication among faculty members. The evaluations also cited improved research and education conditions. Lee et al. (2005) and B. J. Kim et al. (2005) found that departments receiving BK21 support had more teaching assistants and research assistants than before. Oh et al. (2005), B. J. Kim et al. (2005), and Lee et al. (2005) also found that as the number of postdoctoral and contact-based researchers increased, the student-faculty ratio improved.

Lee et al. (2005) and B. J. Kim et al. (2005) found that graduate students greatly appreciated the benefit of international exchange. B. J. Kim et al. added that

such collaboration gave graduate students more confidence to compete internationally and that international exchanges improved the quality of research and education in the recipient graduate departments. Other areas of change mentioned included institutional reform and university-industry collaboration. Among institutional reform efforts induced by BK21, performance-based faculty evaluation systems and centralised management of R&D funds were among the most appreciated (Lee et al., 2005, KISTEP, 2007). During Phase I the university-industry link were not appreciated as well. Many of the existing studies even contended that weak emphasis of this link was one of the limitations of Phase I, while others said that Phase I helped establish a university-industry network.

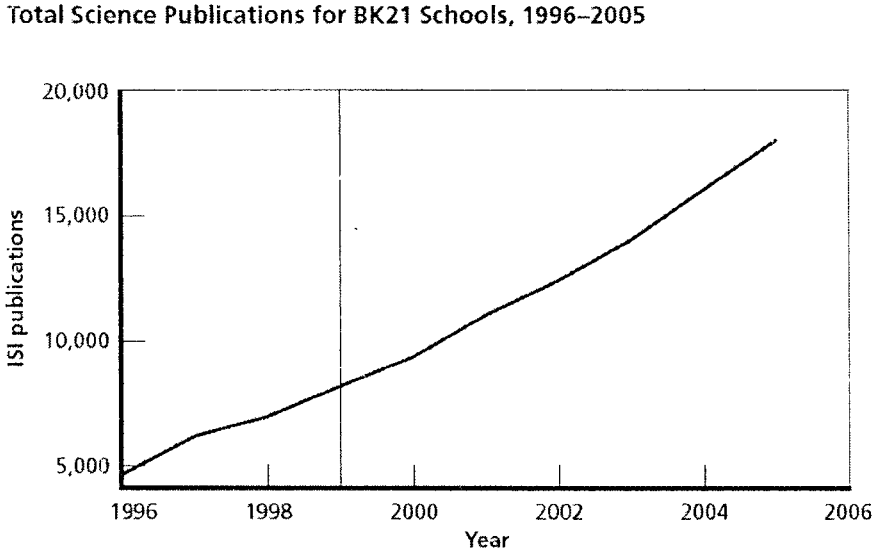


Fig 4.2 Source: Seong et.al. (2008)

All Korea Science Publications, 1996–2005

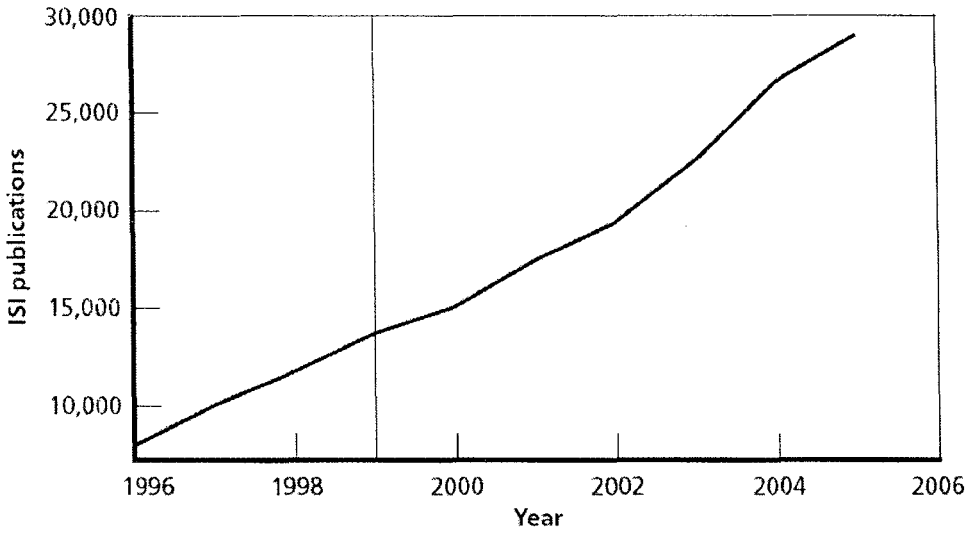
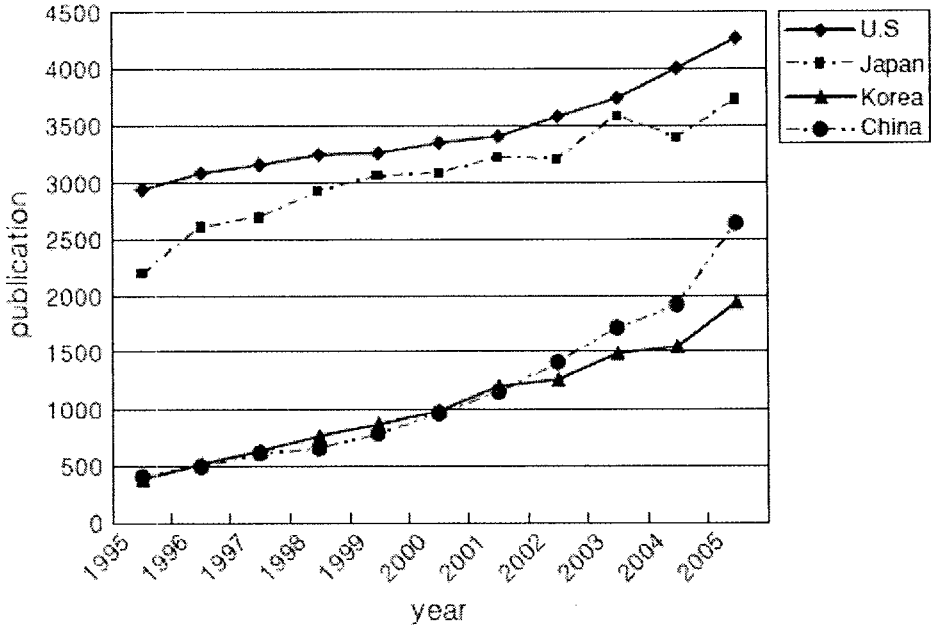


Fig 4.3 Source: Seong et.al. (2008)

Shin 2009, observes that the 1st BK 21 program has had a significant effect on the of research publications in Korean universities and the effects were different between universities associated with institutional mission type. He verifies this impact by comparing the ROK Universities with international peers in US, Japan, and China (Fig 4.4). In the comparisons, though the number of research publications by US research universities and Japanese peers are much higher than research universities at Korean and Chinese universities, although the gap between the two groups appeared to be narrower over the course of time and in the Korean case he argues was possible only with the influence of Brain Korea 21 project.

Fig. 4.4. Growth of research publication between Countries



(Shin 2009)

4.7 Conclusion

As the evaluations studies suggests the BK 21 program was successful in building research universities domestically; but these universities still cannot be considered equivalent to world-class research universities specially in United States. However the accomplishments of the BK 21 program should not be underestimated. The impact of BK 21 is not only on the growth of research publications but also has had a positive impact on the systems and entire culture of Korean higher education institutions. The adoption of the BK 21 program planted the seeds of a meritocracy in higher education institutions in ROK, changing the nature of faculty evaluations and the academic culture as well as research performance. In addition the human resource development should be considered when discussing the effects of the BK 21 program. As part of the BK 21 project, graduate students received assistantships during their graduate courses and any who completed their PhDs were offered a post-doctoral training opportunity. According to the White Paper, 9,716 PhD recipients were given the chance for post-doctoral training or contract-based faculty positions. This new generation of academics is now becoming fulltime faculty members; thus, any study of the results of the program should consider this range of impacts. Confidence emerged from growth in research and academic performance as the influence of BK -

21 Phase I, the Korean government made great strides toward its second BK 21 program in 2006. Also a seven-year project, the second BK 21 is expected to produce further accomplishments by the end of 2012. The potential for building world-class research universities in Korea, then, is great. After all, the ROK government has a strong desire to do so, and the South Korean economy requires knowledge production to reinforce and augment its place as one of the worlds leading industrialised economy.

Chapter V

Conclusion

The impact of globalisation on higher education has been multidimensional. Globalisation has made policy makers realize the importance of a reformed educational system which can cater to the needs and demands of the emerging social order. At the same time it has enabled balanced dissemination of quality of education across the world. The transformation of dependencies of economies on agriculture to industrial and now to service sector has highlighted the importance of human capital, information and education in the society. The globalisation process and the changing priorities of the people have aroused the governments to revise their approach to develop a robust education system. Education is an important tool to nurture the human capital of a country, which forms the basis of a knowledge based society. Today, world class skills are the need of the hour to maintain and sustain the competitiveness of the knowledge economy. Value addition chains have moved from low skilled activities to high skilled activities and standardisation has been applied to knowledge intensive occupations as well. Hence, the need of education does not complete with the university level but is required to be lifelong phenomenon now. Globalisation and internationalisation is not about making the existing culture and customs vanish but it's also the opportunity to bring these beautiful traditions in front of world. Technological advancements and innovations have changed the way education in which education is imparted. Information technology has been a prominent facilitator of development and utilisation of research facilities for scholars.

In ROK's context, different Presidential regimes have left their impression in terms of policy formation and the same is reflected in the changes pertaining to educational policies as well. President Kim Young Sam's entrance in the political sphere proved to be the historical milestone towards globalisation and educational reforms. He was the first civilian leader to replace the military leadership and strongly believed in his democratic approach to place ROK on a global platform. Until then, ROK's cultural nationalism dominated the globalisation programmes which were more reactive to global events rather than being proactive towards the development of the policies. The single spoke approach proved to be inconsistent with the demands of

globalisation. President Kim Young Sam countered this bottleneck by introducing Segyehwa campaign which was primarily aimed to inculcate globalisation as a nationalist goal amongst Koreans. With the help of this campaign Kim Young Sam pushed people to open to new reforms which are a part to be there in the global scenario.

The first step towards Kim's firm commitment for educational reforms was the re-establishment of Presidential Commission on Education Reforms. The Commission was aimed to address the educational problems faced by the people and equip them with the skills which were necessary to be competitive in the globalised world. The Commission presented a series of reports entitled 'Educational Policy Tasks for Establishing the New Education System,' which were submitted to the President. The blueprint prepared by the Commission reflected Kim's ideology of educational reforms and the opinion of the people as well. Kim also directed the various ministries to support and foster the implementation of reforms. PCER was composed by members belonging to non government agencies and from diversified social backgrounds. It ensured that the influence of government on policy formation was minimal and balanced attention was given to develop all the possible spheres of education.

In ROK, education has always been considered as an important means for social upliftment. People wanted the government to introspect the quality of Korean higher education and to review the regulations which hindered the development of Korean education system. Kim also proposed to fund the reforms by allocating a percentage of GNP, exclusively for education and emphasised on it to draw people support, make people's opinion count in decision making and to prepare them for the transformation towards knowledge based economy. The reforms were formulated with the objective of developing institutions which would be self- governing and would be able to provide education across dimensions. The Korean (ROK) government led diversified and differentiated development for higher educational institutes. The government presented four university models such as undergraduate vocation-oriented one, graduate special job-oriented one, undergraduate academy-oriented one, and graduate academy-oriented one. The government induced and supported financially the differentiated development of universities. In order to

consolidate an assessment system to support funding and other benefits according to assessment results for the quality improvement of higher educational institutes, the government strengthened the evaluation system of supporting public funding according to the results of evaluation to improve the autonomous competitiveness and the quality of education and research to colleges. Colleges were required to follow governmental diverse policies to procure the public funding. The government introduced a graduate school university system without undergraduate programs to bring up specialists in the specific fields such as international affairs and information technology. By 1996, Seoul Naltional University, Yonsei University and Korea University were established which were the initial graduate school universities.

The government also planned to set up universities which could provide a world class research and scholars in diversified areas of study. The focus of educational reforms had shifted from that of economic centered policies to develop vocational and high school education to that of developing quality of higher education with diversity to sustain the competitiveness. Industry interface between colleges and universities was promoted to support researchers and to nurture skilled manpower rather mere development of science and technology. However, the same still remained insufficient for years which were reflected by the gap between the demand and supply of skilled manpower.

Unlike the past, the educational reforms in 1990's were not inclined towards the attitude of anti-communism; rather they were developed to foster better cooperation between North and South Korea. Education was a key element to understand the realities of people living on both the sides of the 38th parallel and to promote dialogues between the two Koreas for better regional harmony and long term strategic relationships in Northeast Asia.

The role of the government has always been that of a regulator in the development of higher education. However, global pressures forced the government to pass more autonomy to the establishment of private higher education institutes and provoked increase flow of students for admissions from high school to colleges and universities. The government planned to make the establishment of a private university or college easier in order for those who satisfy the criteria of educational statutes to establish a private one and introduced the system of establishing a private

university by the pre-proposed criteria to induce the appearance of differentiated and diversified universities. In 1996, 18 private universities were established. The system played a key role in rapidly increasing the number of private university and its students. The number of universities was increased from 131 universities in 1995 into 171 in 2004 due to the increase of private universities, and private universities occupied 84.8 % of universities. The students of private higher educational institutes occupied 74.1 % of all students in 2004. They started to introduce the system that provincial qualified private universities can control their student quota that the Ministry of Education had previously controlled. Six universities in 1997 and 76 universities in 1998 could control their student quota according to the criteria of the Ministry of Education. This system also played a role in rapidly increasing the number of university students. Over four-fifths of high school graduates (81.3 percent) entered college or university in 2004. Especially, women and vocational high school students enrolling in colleges have been rapidly increased. Over nine-tenths (90.5 percent) of general high school female graduates entered colleges, and 57.6 percent of vocational school female graduates entered colleges in 2003. The university entrance examinations have been rigorous and intense competition because of quota system. Fierce competition led to mushrooming of private tutoring instituted in the country. The unaccounted cost of supplementary education was as high as 2.7% of GNP. The government also reformed a college admission system to alleviate the psychological and financial burden of parents and students and normalise the secondary education intensely focused on college entrance tests. It abolished the entrance written tests taken by individual university with subjects such as the Korean language, mathematics, and English to national and public universities. In addition, it recommended that universities consider more importantly the records of high school activities including academic grades and expand the entrance opportunities for disadvantaged classes as the graduates of farming and fishing villages and the disabled. In spite of the strong rules and regulation, privatisation initiated the expansion of the higher education with the help of heavy private funding. The success of the same was highlighted by the fact that over 80% of the high school students entered colleges or universities.

English being the most prominent language globally has been an integral part of the globalisation process. In the previous decades, English was taught for military purposes only because of US military presence in the country. Due to reluctant

language policies, ROK had already hampered its development to have a strong presence at an international level. Because of nationalistic goals, Koreans would be comfortable making English as their secondary official language but not to the extent of it threatening to replace Korean. Other countries like Japan have successfully inculcated English language in their culture and language to strengthen their relations with other countries. English classes were mandatory at the elementary school level but very few students opted for English only classes at the university level. Moreover, occasional use of English language at work place made the learning less lucrative at the university level unless and until someone was targeting an international level job. Post Asian Financial Crisis in 1997, the Korean government urged the native English speakers to assist Korean students in English language skills. The ROK Ministry of Education is strongly emphasising that Standard American English is the only target for English learners in ROK.

In 1999, taking in to consideration the socio-economic changes happening in the ROK, the government initiated the project of BK21. The objective was primarily to produce next generation leaders by supporting students in Master's or PhD degree courses and post graduate research work. It was a national attempt, by innovating universities to cultivate highly skilled and creative human resources for knowledge based society in 21st century. The project revised the entire atmosphere of higher education system in ROK by promoting meritocracy and academic competition in order to avail government support. The universities were supposed to match up the government provided funds with funds raised from private sector and industry. High standards of education and research were benchmarked to realise the long-held desire of Korea to build world class University.

Noticeable progress like increase in the number of articles published in international journals, increase in the acquisition of international and domestic patents, better employment of upcoming scholars, focused support to the target recipients and up gradation of regional university standard up to the national benchmark was accomplished against the advocated objectives. There were substantial improvements in both quality and quantity of research activities. In relation to the world wide average, there was a significant increase in the number of articles by Korean scholars published in SCI journals. The worldwide increase of articles by scholars all over the world was just 1.9%. But after the inception of the

project, the number of articles by Korean scholars increased by 15.6%. The universities also gave preference to professors who had high quality publications. Seoul National University was foreseen as a world class comprehensive research-oriented university. The rate of international and domestic patent acquisition went up by 30%. However, there were concerns about balanced development among universities as well as among subject areas. To address that, the government provided incentives to attract talent towards regional universities and industry. Moreover, while the project focused on special subject areas, especially high-tech areas, it also ensured funds for all subject areas and fields by the core area plan. BK 21 established an institutional framework for the development of research-oriented universities. The successful evaluation of phase I of the project encouraged the policy makers to formulate a more comprehensive phase II which could cater to the needs of Korea in the coming future. During phase II, more than 70% of BK21 budget will be allocated to graduate school students and post-graduate researchers in the form of direct financial assistance. Approximately 17% of all graduate students in ROK will benefit from BK 21 research scholarship which would enhance research capabilities. Also, the development of regional graduate schools would support balanced national growth.

Building world class universities has been a long-held desire of South Korea. The BK 21 project is a national endeavour of innovating universities to cultivate high-powered and creative Korean human resources for a knowledge-based society in the 21st century. BK 21 is a key project in reforming South Korea's higher education system and its implementation was owing to the increasing demand for internationalising higher education under the pressures of globalisation. From the beginning, the project has drawn considerable attention from higher education institutions as well as from various social sectors. It has been creating the intellectual atmospheres of universities and producing noticeable academic outcomes. Taking the BK project as an impetus for higher education reform, universities in South Korea should make long-term strategies to transform Korea in to a knowledge hub in the highly competitive globalised economy with the understanding and support from the government and society.

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