國際學博士學位論文

An Eclectic Approach to Enhancing the Competitive Advantage of Nations: Analyzing the Success Factors of East Asian Economies with a Focus on the Development of South Korea

國家競爭優位 向上을 위한 統合적 接近法:
東亞細亞 經濟의 成功要因에 대한 分析
- 韓國의 發展을 中心으로 -

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서울大學校 國際大學院
國際學科(國際通商專攻)
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An Eclectic Approach to Enhancing the Competitive Advantage of Nations: Analyzing the Success Factors of East Asian Economies with a Focus on the Development of South Korea

Ph.D. dissertation by

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Graduate Program in International Commerce
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Une approche éclectique de l'amélioration de la compétitivité des avantages concurrentiels des nations : une analyse des facteurs du succès des économies d'Asie de l'Est à travers l'exemple de la Corée du Sud

An eclectic approach to enhancing the competitive advantage of nations: analyzing the success factors of East Asian economies with a focus on the development of South Korea

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Abstract

An eclectic approach to enhancing the competitive advantage of nations: analyzing the success factors of East Asian economies with a focus on the development of South Korea

The classical economic theories focus on inherited advantages and their effective utilization when explaining economic development. However, countries that possess advantage show wide discrepancies in their levels of development; some have grown rich but others have stayed poor. In order to promote economic and social advancement of less developed countries (LDCs), developed countries and international organizations launched various development activities and programs. Despite these aids, however, their performances vary. This research is dedicated to find the critical factors that caused such different outcomes by mainly focusing on the case of Korea.

This dissertation consists of three main parts. In Part I, important economic and business literature on the elements of economic development and success are reviewed, followed by the limitations of the earlier studies. This naturally leads to the need of a new approach for explaining economic development. In Part II, a new approach called the ABCD framework by Hwy-Chang Moon (2012), is presented and a rigorous theoretical support is provided. Later, the validity of this new approach is tested statistically. In Part III, the economic developments of Korea's automobile and film industries are analyzed by using the newly proposed approach, with a special attention to government intervention and industrial policies. Lastly, a summary of the new approach, discussion on the results, and important implications derived from this research are presented.

International trade theories, which have the foundations from the work by Adam Smith, assume that a nation has an advantage and should focus on an intensive use of advantageous factors. However, these theories cannot explain two problems; first, the different level of economic development of countries with similar natural endowments and second, the development initiatives of a country that does not possess any advantage in factors of production.

Productivity theorists emphasized the importance of upgraded labor through education, training, capital investment, and technology progress derived from the best-practice. However,

productivity theories cannot fully explain the economic development of LDCs, since good universities, research institutes, or accumulated capitals for upgrading labor, or best-practices are not usually found in LDCs. As commonly known, during the 1960s and 1970s when the newly industrialized countries in Asia, such as Korea, took-off, they did not have these conditions.

Another popular approach is on culture. Scholars such as Hofstede (1997), Schein (1998), and Trompenaars (1998) treated culture as a national characteristic which does not easily change. This means the cultural approach cannot explain the difference between *ex-ante* and *ex-post* of economic development.

Porterian scholars such as Porter (1990) and Moon, Rugman, and Verbeke (1995, 1998) cleverly integrated the important variables determining a nation's competitiveness into one model and most other theories represent subsets of Porter's comprehensive model. While Porterian approach based on the diamond model brilliantly and systematically classified significant factors of economic development, it cannot explain the underlying force that strengthens or weakens each determinant of the diamond. Based on the empirical studies, Moon (2012) proposed a new framework which explains the fundamental factors that enhance the determinants of economic development. This is called the *ABCD framework* and consists of four factors: Agility, Benchmarking, Convergence, and Dedication.

Agility refers to how fast and accurately a process of business is done and has two sub-factors which are "speed" and "precision." Benchmarking is defined as "the search for an industry's best practices that will lead to superior performance." Under this perspective, benchmarking is categorized into two components—"imitation" and "global standard." Convergence is a good mixture of resources and capabilities, and is classified into "mixing" and "synergy-creation." Lastly, dedication means that people work hard and have extra commitment and loyalty for the work. This can is divided into "diligence" and "goal-orientation."

In order to prove statistically, this dissertation chooses relevant proxies that can represent each sub-factor and conducts an empirical test with statistical data. Each sub-factor of the ABCD is measured by two criteria, and the values of *Cronbach's Alpha* for the eight sub-factors are mostly larger than 0.7 except for diligence. This implies that the criteria measure well for each sub-factor, and the consistency is high among other criteria.

This study employs two statistical methods: ANOVA and regression. First, ANOVA is utilized to compare the difference between developed and developing countries in terms of four factors of ABCD. Then by using regression, the influences of these factors to economic development are analyzed. All of the four factors show significant difference between developing and developed countries. The dependent variable is GDP per capita, and the independent variables are the ABCD and control variables. The result of the test implies that each ABCD variable explains the difference in GDP per capita among countries.

The ABCD framework's applicability is also demonstrated to explain the development and evolution of two Korean industries: The automobile industry, one of the most important manufacturing industries, and the film industries, a resurging industry as part of the Korean Wave which has been attracting much attention from all over the world to Korea.

In 1955, Korea's automobile industry started with a car called "Sibal," built on the basis of an abandoned Willys Jeep and other spare parts from the U.S. military. A short time later, Korea started to assemble cars with imported CKD (completely knock-down) kit and to form partnerships with foreign companies. As time passed by, the whole industry changed its function from a simple assembler to automobile developer and the first Korean-developed automobile, Hyundai Pony was produced in 1976.

Although Korea's automobile industry faced turmoil during the Asian financial crisis in 1997, Korea's automobile companies were recovered quickly, increased production and exports. According to the International Organization of Motor Vehicle Manufacturers, Korea is the fifth-largest in the world measured by automobile unit production and Hyundai, with its affiliate Kia Motors, is the world's fifth-biggest auto maker by sales in 2013. Unlike other developing countries, Korean government encouraged to have its own national model car within relatively short time from the beginning of industrialization, despite the nation's lack of skills and technology. Under this government effort, partnerships with foreign companies were promoted, although the government prohibited direct investment by foreign companies into Korea.

Through CKD kits and partnerships with foreign companies, Korea could learn manufacturing skills and accumulate important technologies. Government aimed to have horizontal integration among manufacturers and auto-parts producers, and these companies formed vertical integration which accelerated car producing capability more effectively. Since

Korea did not have enough capital needed for economic development to start with, Korea was motivated with a strong desire for developing its own cars and exporting them to earn foreign hard currency.

Unlike the automobile industry that has prospered until today, the Korean film industry enjoyed a golden age between the late 1950s and mid-1960s. In the following two decades, there was a dark age due to interventions by the government's market-distorting policy. As a result, the market share of Korean films decreased unprecedentedly. Especially, their market share in 1993 recorded 15.9%, the lowest ever in the history, after Hollywood production companies began to distribute their films directly into Korea. From the late 1990s, Korea opened its market and changed its view on the film industry from cultural to commercial sector. In competition against foreign films, Korean films resurged and started to be recognized internationally. Particularly, along with dramas, the film industry was one of the strong drivers for *Hallyu*, the Korean wave, which implies the popular trend of Korea's entertainment industry.

There are two booms in the history of Korea's film industry: One, from the late 1950s to the mid-1960s and the other, after late 1990s until now. The agility, benchmarking, convergence, and dedication are useful to explain the success of this industry during these resurgent periods. A number of Korea filmmakers quickly learned American technology in the early phase. This allowed them to accumulate producing technology. With this technology, Korean film producers added Korean features to attract domestic audience. To achieve success from the early stage, the government employed various measures, aiming to make the industry self-sustainable by reinvesting profits gained from exportation.

From the late 1990s until now, the ABCD framework can explain the success of Korean film industry more evidently. Around this time, private companies and government worked together for the success of industry within fairly short time span by investing huge amount of money in the infrastructure and production. Having been influenced immensely by American films and Hollywood companies, Korea's film industry imitated the storyline of American films and their distribution channel. However, Korean films and companies did not just imitate Hollywood films and business strategies, but also added more Korean-ness. Behind all the measures, there is a high dedication to foster the industry and to achieve success. It is noteworthy that the industrial policy of Korea was always export-oriented to overcome and improve beyond the industry's current status.

Possessing abundant population, natural resources, and technology does not guarantee economic success. These concepts are included in the diamond model of Porter who emphasized the importance of competitive advantage of nations. However, this approach is limited to explain the initial development of East Asian countries as well as that of other advanced countries. The ABCD framework explains more comprehensively the economic achievement of these countries. Through rigorous theoretical review, statistical analysis, and case studies, these strategic variables are proven to be useful in enhancing industrial, corporate and national competitiveness. These findings can also give important implications for the economic planning of other countries.

Keywords: ABCD framework, K-strategy, economic development, Korean economy, Korea's automobile industry, Korea's films industry, Korea, competitive advantage

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Résumé

Une approche éclectique de l'amélioration de la compétitivité des avantages concurrentiels des nations : une analyse des facteurs du succès des économies d'Asie de l'Est à travers l'exemple de la Corée du Sud

Pour expliquer le développement économique, les théories économiques classiques se sont concentrées sur les avantages hérités ou sur l'utilisation effective de ceux-ci. Cependant, les performances des pays bénéficiant de ceux-ci montrent des disparités dans le développement : certains sont riches, d'autres sont pauvres. Afin de promouvoir le développement économique et social des pays les moins développés, les pays économiquement avancés et les organisations internationales ont lancé différentes activités et programmes de soutien. En dépit de ces aides de nature technique et financière, leurs résultats varient lors qu'on les compare. La présente recherche cherche à découvrir les raisons essentielles qui assurent un devenir différent de chaque pays, partir du cas de la Corée du Sud.

La thèse comporte trois parties. La première consiste en un *survey* de l'importante littérature économique et de gestion consacré aux raisons du développement et du succès économique. De ce survol de la littérature et de ses limites, il ressort la nécessité d'une nouvelle approche. C'est l'objet de la partie deux, elle expose un modèle original d'interprétation et plus éclectique, le modèle ABCD de Hwy-Chang Moon (2012). Par la suite, la validité de cette approche nouvelle est testée et démontrée statistiquement. Dans la partie trois, grâce à cette nouvelle approche, il est procédé à une analyse de deux cas, l'industrie automobile coréenne et celle du cinéma, avec une focalisation sur l'intervention publique et la politique industrielle du gouvernement. Enfin, l'ouvrage s'achève par un résumé puis une discussion de la nouvelle approche, y compris des implications critiques.

Les théories du commerce international ont commencé avec Adam Smith, affirmant que les pays bénéficient d'un avantage, en se concentrant sur l'allocation en facteurs avantageux. Ces théories se fondent sur les avantages existants. Cependant, elles ne peuvent pas expliquer deux problèmes : d'abord, l'existence de niveaux différents de développement de pays bénéficiant de condition naturelle comparable, ensuite, les initiatives de développement de la part de pays qui n'ont d'avantage dans aucun facteur de production.

Les théories de la productivité insistent sur l'importance de l'élévation de la qualité du

facteur travail apportée par l'éducation, la formation, l'investissement en capital et le progrès technologique résultant de bonnes pratiques. Néanmoins, les théories de la productivité ne peuvent expliquer totalement le développement des pays les moins développés, depuis que sont apparus de bonnes universités ou instituts de recherche ou l'accumulation de capitaux pour améliorer la qualité de la main-d'œuvre et autres bonnes pratiques, que l'on observe habituellement dans le pays développé. En effet, dans les années 1960 et 1970, certains pays d'Asie, comme la Corée du Sud, ont décollé bien qu'ils n'aient pas répondu aux conditions pré-requises.

D'autres recourent aux affiches culturalistes. De nombreux spécialistes, tels que Hofstede (1997), Schein (1998) et Trompenaars (1998) ont considéré la culture comme un caractère national qui ne peut pas aisément changer. Cela montre que l'approche culturelle ne peut expliquer les différences entre les développements *ex-ante* et *ex-post*.

Des tenants de la vision porterienne tel que Porter lui-même (1990), puis Moon, Rugman et Verbeke (1995, 1998) ont cherché à intégrer les différentes variables déterminant la compétitivité d'une nation à partir d'un modèle plus ou moins défalqué du modèle général de Porter. Tel est le cas du modèle diamant (« Diamond Model ») qui classe de façon systématique les facteurs du développement, même s'il ne peut expliquer les forces internes qui renforcent ou affaiblissent chacun des déterminants du diamant.

Se fondant sur des approches empiriques, Moon (2012) a proposé un nouveau et éclectique/schéma d'explication susceptible de déterminer les facteurs fondamentaux qui agissent sur les facteurs du développement économique. Il s'agit du modèle ABCD fondé sur quatre facteurs critiques : soit, en anglais, *agility*, *benchmarking*, *convergence* et *dedication*.

Agility désigne la façon dont la rapidité du processus des affaires peut s'adapter aux besoins de clients. Il se décompose en deux sous-facteurs, « rapidité » et « précision ». Le *benchmarking* se définit comme la recherche des meilleures pratiques pour une industrie afin de lui permettre d'accéder d'une performance supérieure à traverse deux voies l'imitation et l'innovation. Dans cette perspective, le *benchmarking* recouvre deux composantes, à savoir « imitation » et « standard global ». La *convergence* (mot identique en français) se fonde sur une association de ressources et de capacité aussi bien que sur un environnement externe qui assure le développement durable au niveau de l'entreprise ou de la nation. « Mix » et « synergie-création » sont les deux sous-facteurs de la convergence. Enfin, *dedication* (ou

attachement à l'organisation) montre que les employées (ou chaque partie de l'organisation) travaillent d'autant plus dur qu'ils sont loyaux et plus facilement qu'ils éprouvent un attachement externe pour leur organisation. Ces facteurs peut-être divisé entre « diligence » et « adhésion aux buts de l'orientation ».

Afin de démontrer statistiquement la validité du modèle la présente étude emploie deux méthodes statistiques d'analyse par ANOVA et regressioin. La première utilise le T-test dans le but de comparer les différences entre pays développés et en développement sous l'angle des quatre facteurs ABCD. En pratiquant l'ANOVA, il est possible d'analyser lesquels de ces facteurs affectent la détermination des différences observées dans le PIB par tête entre les pays. Tous les quatre autres facteurs montrant des différences entre pays développé et en développement.

La variable dépendante est le PIB par tête et les variables indépendantes sont les variables d'ABCD et les variables contrôlables. Le résultat des tests impliquent que chaque variable explique la différence de développement économique entre les pays. L'applicabilité du modèle ABCD est ainsi démontrée pour expliquer le développement et l'évolution de deux industries coréennes, l'industrie automobile et l'industrie cinématographique. La démonstration insiste sur les politiques et les stratégies qu'elles impliquent.

En 1955, l'industrie automobile coréenne a démarré avec une voiture appelée « Sibal » construite sur la base d'une Jeep Willys et d'autres pièces détachées issues des surplis militaires américaines. Peu de temps après, la Corée a démarré l'assemblage de voitures importées sous forme de kit CKD et en partnership avec des compagnies étrangères. Avec le temps, l'industrie toute entière est passée d'une situation de simple « assembler » à une stratégie de « développeur » : la première voiture coréenne entièrement développée dans le pays, la Hyundai Pony, a été produite en 1976. Bien que l'industrie automobile coréenne ait eu à faire face à un désastre durant la crise financière coréenne de 1997, les compagnies automobiles coréennes se sont bientôt relevée et ont accru leurs production grâce à l'exportation. Conformément à l'Organisation Internationale des Constructeurs d'Automobiles, la Corée est le cinquième producteur mondial et Hyundai, avec sa filiale Kia Motors, est le cinquième plus important producteur par le montant de ses ventes en 2013.

Depuis le début, contrairement aux autres pays en voie de développement, le gouvernement coréen a essayé d'obtenir son propre modèle automobile en un temps court et en

dépit d'un retard technologique. Dans ce contexte, des partnerships avec des compagnies étrangères ont été développés tandis que le gouvernement interdisait les investissements directs en Corée. A travers les kits CKD et les partenariats avec les compagnies étrangères, la Corée a pu acquérir les compétences nécessaires à la construction et accumuler les technologies. Le gouvernement a avisé à ce que se réalise une intégration horizontale chez les industriels entre constructeurs et fournisseurs de pièce détachée afin d'accélérer la capacité à produire des automobiles. Au tout début, tant que la Corée n'avait pas assez de capital pour assurer son développement économique, la nécessité de développer des véhicules pour l'exportation a constitué une bonne motivation et un but mobilisateur pour le gouvernement et les compagnies.

L'industrie cinématographique coréenne a connu un âge d'or de la fin des années 1950 au milieu des années 1960. En revanche, les deux décennies suivantes ont été un âge sombre en raison des interventions d'un gouvernement inexpérimenté et des distorsions du marché introduites par une politique protectionniste. En conséquence, la part de marché des films coréens a diminué. En particulier, la part de marché occupée par ces mêmes films a enregistré en 1993, avec un score 15.9 %, son résultat le plus bas jamais atteint dans l'histoire, ceci après que les entreprises de film de Hollywood aient commencé à distribuer leurs films directement en Corée. À partir de la fin des années 1990 au contraire, la Corée a ouvert son marché et a changé sa position quant à l'industrie cinématographique, qui de seulement culturelle, s'est aussi ouverte à la commercialisation. À travers la compétition avec les films étrangers, le film coréen a ressuscité et a commencé à être reconnu internationalement. L'industrie cinématographique, accompagnée avec *dramas*, s'est affirmée comme l'un des vecteurs majeurs de la vague coréenne, le *Hallyu*, attestant de la popularité des divertissements coréens à l'extérieur du pays.

Il y a eu deux booms dans l'histoire de l'industrie cinématographique coréenne : le premier, de la fin de 1950 au milieu des années 1960, et le second, de la fin des années 1990 à aujourd'hui. Les facteurs ABCD (*agility*, *benchmarking*, *convergence* et le *dedication* ou attachement à l'organisation) peuvent aisément être identifiés pendant ces deux périodes. Un certain nombre de cinéastes coréens ont promptement assimilé les techniques et le savoir-faire américains, sous le couvert de l'armée des États-Unis au cours de la première période. À ces technologies, un certain nombre de producteurs de film coréens ont ajouté des caractéristiques coréennes afin d'attirer de nouveaux publics sur la marché domestique. Afin d'atteindre à un

succès dès la première étape, le gouvernement a employé différentes mesures afin de faire de l'industrie cinématographique une activité auto-soutenue et durable : ceci, en réinvestissant les profits gagnés de l'exportation.

De la fin des années 1990 à aujourd'hui, le modèle ABCD semble tout à fait à même d'expliquer le succès de l'industrie cinématographique coréenne. Durant cette même période, les entreprises privées et le gouvernement ont collaboré ensemble pour assurer le succès de cette industrie, ceci en une période assez courte, mais en investissant beaucoup dans l'infrastructure et la production. Ayant été influencée immensément par des films américains et des entreprises de Hollywood, l'industrie cinématographique coréenne a imité le scénario des films américains ainsi que les circuits de distribution directe introduits par les entreprises américaines. Par la suite, les films coréens et les entreprises productrices n'ont pas juste imité les films d'Hollywood et les stratégies des compagnies américaines, mais ont aussi développé des caractéristiques plus spécifiquement coréennes. Derrière toutes ces mesures, s'est manifesté un haut degré de mobilisation des personnels afin de favoriser cette industrie et d'en faire un succès. La politique industrielle de la Corée demeurait toujours à vocation exportatrice afin de surmonter les défis du marché et continuer de s'améliorer sans se résigner au *statu quo*.

Le fait de posséder une population nombreuse, des ressources naturelles abondantes et une technologie compétitive ne garantit pas le développement économique. Ces concepts sont inclus dans le modèle de diamant de Porter qui souligne l'importance de l'avantage concurrentiel des nations. Cependant, il souffre d'évidentes limites lorsqu'il s'agit d'expliquer le développement initial des pays de l'Asie orientale aussi bien que d'autres pays avancés. Le modèle ABCD explique mieux et sous tous les aspects l'accomplissement du développement économique de ces pays. Grâce à un *survey* de la littérature théorique, à une analyse statistique et à des études de cas, il a été démontré que ces variables stratégiques sont très utiles dans la perspective d'une amélioration de la compétitivité industrielle sous l'angle à la fois des entreprises et de la nation. Ces résultats peuvent aussi avoir des implications importantes pour la planification économique d'autres pays que la Corée du Sud.

Mots-clés: modèle ABCD, K-stratégie-K, développement économique, économie coréenne, industrie automobile coréenne, industrie cinématographique coréenne, Corée du Sud, avantage concurrentiel
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PART III. DEVELOPEMENT OF KOREAN INDUSTRIES

Tables and Figures

Tables

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Abbreviations

AIPL	Automobile Industry Protection Law (자동차공업보호법)
CDMI	Coalition for Diversity in Moving Images
CFPC	Chosun Film Production Co. Ltd (조선영화주식회사)
CKD	Completely Knock-down
DC	Developed Country
ECA	Economic Cooperation Agency
FDI	Foreign Direct Investment
FPL	Film Promotion Law (영화진흥법)
FPM	Film Policy Measure (영화시책)
FTA	Free Trade Agreement
GMK	General Motors Korea
GNP	Gross National Product
HCI	Heavy-Chemical Industry
IMD	International Institute for Management Development
IMF	International Monetary Fund
IQ	Import Quota
KAICA	Korea Auto Industries Cooperative Association (한국자동차산업협동조합)
KAMA	Korea Automobile Manufacturers Association (한국자동차산업협회)
KMPPC	Korean Motion Picture Promotion Corporation (영화진흥공사)
LDC	Less Developed Country
MITI	Ministry of International trade and Industry of Japan (日本通商産業省)
MPEAA	Motion Picture Export Association of America
MPL	Motion Picture Law (영화법)
MSA	Mutual Security Agency
M&As	Mergers and Acquisitions
NICs	Newly Industrialized Countries
NUMMI	The New United Motor Manufacturing, Inc.
OECD	Organisation for Economic Co-operation and Development
OICA	Organisation Internationale des Constructeurs d'Automobiles (International Organization of Motor Vehicle Manufacturers)
OLS	Ordinary Least Squares
PMPVPA	Promotion of the Motion Pictures and Video Products Act (영화 및 비디오물의 진흥에 관한 법률)

PPEC	Public Performance Ethics Committee (공연윤리위원회)
SAIC	Shanghai Automotive Industry Corporation
SMEs	Small and Medium-sized Enterprises
SQ	Screen Quota
SUV	Sport Utility Vehicle
UKFP	Union of Korean Film Promotion (영화진흥조합)
UNCTAD	United Nations Conference on Trade and Development
UNKRA	United Nations Korean Reconstruction Agency (국제연합한국재건단)
USTR	U.S. Trade Representative
WEF	World Economic Forum
WTO	World Trade Organization

Introduction: The Need for a New Approach

For nations, the most important concern is to achieve prosperity. It seemed that the economic achievement for the prosperity depended on inherited advantages, such as natural resources, abundant labor force, capital, or an accumulation of outputs with the resources aforementioned. Thus, the classical economic theories focus on inherited advantages or an effective utilization of them (Porter, 1990a; Cho and Moon, 2013). However, performances of countries possessing similar advantage show wide discrepancies in development; some are rich but others are poor. The world has been more bipolarized between developed and less developed countries (LDC),[1] after the Second World War.

In order to promote economic and social advancement of LDCs, developed countries (DC) and international organizations launched various development activities and programs such as the Colonial Development and Welfare Act in the United Kingdom (U.K.), overseas development assistant (ODA) of Development Assistance Committee (DAC), Organisation for Economic Co-operation and Development (OECD), various measure of the World Bank and other regional development banks.[2] According to Easterly (2003), the beneficial impact of foreign aid for further economic development of LCDs remains a puzzle. In the meantime, aid agencies have misspent much of the valuable contributions and budgets by looking for "the Next Big Idea" that would enable aid to buy growth (p. 40).

LCDs have incredibly various social, institutional, cultural, historical, geopolitical, and economical backgrounds. Therefore, the idea of aggregating all these factors into a system or finding a commonality for economic development will help a nation's economic achievement. This is very meaningful for LDCs' take-off as well as DCs' further development. The

[1] Instead of the term "less developed," the term, "emerging market" was coined by an economist, Antoine van Agtmael, at the World Bank, with a thought by some to be politically incorrect (Financial Times, 2006 Oct. 20). A number of organizations and scholars employ terms, such as "advanced" and "developing" for "developed" and "less developed," respectively. For instance, the International Monetary Fund (IMF) classified countries into two, "advanced economies" and "emerging market and developing economies" (*see* http://www.imf.org/external/pubs/ft/weo/2013/02/weodata/weoselgr.aspx).

[2] *See* Führer (1996), for the detailed information regarding the history of development activities and programs.

performance—by itself or by foreign support—of each LDC varies when their economic and social progresses are compared (see Table 1).

Table 1. Economic and social progress of selected countries

Country	GDP per capita (US$)		Life expectancy (Years)	
	1965	2012	1965	2011
Argentina	1,271	11,573	65.67	75.84
Bangladesh	103	752	49.65	69.89
Brazil	258	11,340	56.92	73.35
Chile	700	15,452	59.24	79.31
China	97	6,091	51.29	75.04
Ghana	266	1,605	47.81	60.79
Hong Kong	677	36,796	69.56	83.42
India	122	1,489	45.14	65.96
Iran	246	*6,816	47.73	73.45
Jordan	532	4,909	56.55	73.59
Kenya	105	943	49.43	60.37
Singapore	516	51,709	67.09	81.89
South Korea	106	22,590	56.82	80.87
Nigeria	117	1,555	39.28	51.71
Pakistan	114	1,257	50.55	66.28
Peru	438	6,796	50.21	74.21
Philippines	187	2,587	59.33	68.39
South Africa	555	7,508	50.97	55.30
Thailand	138	5,480	57.52	74.01
Turkey	385	10,666	49.02	74.54
Vietnam	**239	1,755	62.00	75.46

Note: * is from 2011, and ** is from 1985.
Source: World Development Indicators, World Bank, http://databank.worldbank.org/data/views/variableSelection/selectvariables.aspx?source=world-development-indicators (accessed Feb. 20, 2014).

In 1965, Argentina's GDP per capita and the life expectancy outperformed other listed countries on Table 1. However, the GDP per capita and life expectancy of Brazil, Chile, Hong Kong, Singapore, South Korea (hereafter Korea), and Turkey reach or overpass those of Argentina later. Someone might argue that Chinese Taipei (hereafter Taiwan), India, Iran, Jordan, Pakistan, Philippines, Korea, Thailand, and Vietnam received immense aids from the U.S. during 1952 and 1961 as part of the Mutual Security Act,[3] which was directed for the economic development of the aforementioned countries.

However, their economic and social performances were disappointing, except Korea.

[3] The aid program is administered by the Mutual Security Agency (MSA) created through the transformation of the Economic Cooperation Agency (ECA) which administered Marshall Plan aid (Führer, 1996).

Besides, everything about foreign aid seems to be controversial (Wittholz, 1999). While existing studies have proven that aids have succeeded in promoting economic growth in some countries, although it has failed in many cases (Barjot and Dreyfus, 2011). There are also different perspectives regarding the effect of aid on economic development. For example, Papenek (1973), Levy (1988) found that aid correlates positively with investment and economic growth, whereas Durbarry, Gemmell, and Greenaway (1998), Hansen and Tarp (2000, 2001), Lensink and White (2001) and Dalgaard, Hansen, and Tarp (2004) argued that aid has no absolutely positive relationship with economic growth.[4]

On the contrary, Friedman (1958), Bauer (1972, 1991), Griffin and Enos (1970), Mosley (1980), Mosley, Hudson, and Horrell (1987), Dowling and Hiemenz (1982), Boone (1994), and Kanbur (2000) converge in saying that aid fails to induce growth (Wittholz, 1999; McMillan, 2011). Therefore, it is better to find better causes that satisfactorily explain the outstanding economic and social progress of countries.

One striking point can be found from a comparison made between Kenya and Korea. In 1965, GDP per capita of these countries were approximately the same level, e.g., US$ 105 for Kenya and US$106 for Korea, while those in 2013 are US$943 and US$22,590 respectively; GDP per capita of Kenya has risen almost nine-fold in the past 50 years, on the contrary, 213-fold for Korea's GDP per capita (see Table 1).

Another interesting point can be found by comparing Korea with Ghana. According to Huntington (2000), they had roughly comparable levels of GNP per capita; similar industrial composition and they were receiving comparable levels of economic aid. However, almost 50 years later, Korea had become one of the G-20 economies with globally competitive multinational corporations (MNCs) while achieving stable democracy and institutions. No such changes had occurred in Ghana (p. xiii).

How did Korea achieve prosperity by augmenting the standard of living, despite severe difficulties, such as natural resource scarcity, the Japanese occupation period, the Korean War, and political turmoil? More generally, how can a resource-scarce LDC achieve an

[4] Dalgaard, Hansen, and Tarp (2004) found that there is an evidence that aids flows and rapid growth have positive relationship. However, having a positive relationship between them does not mean the aid is a critical cause of economic development.

economic success? Many scholars have conducted research to find how economic prosperity can be achieved from the resource-based or macroeconomic perspectives. In fact, national prosperity is not inherited; it does not grow out of a country's natural endowments, its labor pool, its interest rates, or its currency value, as classical economists insist (Porter, 1990a: 3).

Some are highlight improvements of specific domain or sector, such as education, infrastructure, health care, and others. These are, however, subsets of the whole economic picture. Others emphasize country-specific factors, for example, unique geopolitical situation, diplomatic relations, and other relevant circumstances, but these are difficult to generally apply for economic development. This complexity brought profound challenges that cannot be solved by any single field of study. Therefore, a trans-disciplinary or multidisciplinary approach is needed to provide solutions. This research is dedicated to answer the reasons of economic development with a trans-disciplinary approach and tried to draw critical implications that can be generally applied to economic development, notably LDCs, and their social progress.

This dissertation consists of three main parts; in Part I, in order to find the reasons of economic development and success, existing studies of important economic and business are reviewed and limitations of these studies and related theories are presented. Consequently, the need of a new approach to explain economic development is raised. In Part II, a new approach of a business management view, ABCD framework by Hwy-Chang Moon (2012), is proposed and more theoretical back-ups are provided. Later, the validity of this new approach is proved statistically. In Part III, by using the newly proposed approach, the economic development of Korea's automobile and film industries are analyzed by focusing on government intervention and its industrial policy on business and economy. Lastly, a summary of the new eclectic approach, discussions on the results, and critical implications of this research are presented.

PART I

FOUNDATIONS

Existing economic and business theories have limitations in explaining the development of East Asian countries. In this part, various economic and business theories, such as international trade theories, productivity theories, structuralist theories, government leadership, cultural approach, sociological perspective, country-specific rationales, and others are presented. Furthermore, their critical problems and limitations to explain the economic development of East Asian countries, notably South Korea, are discussed. The need for a new comprehensive approach is highlighted.

1. Rationales for Economic Prosperity 1: Classical Approaches

All economic theories are aimed fundamentally in achieving prosperity. The philosophy of Adam Smith disserted in *The Wealth of Nations* is consistent with this proposition. Smith's (2005[1776]) seminal work, showed all forms of economic activities and phenomena, such as international trade, monopolies, government interferences on exports and imports, regulating wages, and even strategic management (Cho and Moon, 2000). Although various economic theories arose from dissatisfaction with Smith, they are, however, in line with achieving economic success through the improvement of productivity.[5] In this chapter, important economic and business literature is reviewed and limitations are discussed.

1.1 International trade theories[6]

Although Adam Smith (2005[1776]) showed various economic fundamentals, activities, and phenomena, the most important messages are productivity and improving it through the form of trade.[7] International trade allows a nation to raise its productivity by eliminating the need to

[5] *The Wealth of Nations* (Smith, 2005[1776]) consists of five books; Book I is about the causes of productive power of labor; Book II is for capital stocks, its accumulation; different progress of opulence in different nations, resulted from capital accumulation, is in Book III; to restrict government interference in the economy process and to promote industrial expansion, the systems of political economy are dealt in Book IV; and lastly, Book V is about the revenue of the sovereign or commonwealth. Classical economists concentrated instead on Books I and II, where they took issue with various aspects of Smiths' theory of production and distribution, discussed the nature of value, or debated the merits of Smith's distinction between productive and unproductive labor (Tribe, 1999).

[6] General descriptions of various international trade theories are based on Cho and Moon (2000, 2013).

[7] Smith said that "the annual labor of every nation is the fund which originally supplies it with all the necessaries and conveniencies of life which it annually consumes, and which consist always either in the immediate produce of that labor, or in what is purchased with that produce from other nations" (Smith, 2005[1776]: 8) and "by opening a more extensive market for whatever part of the produce of their labor may exceed the home consumption, it encourages them to improve its productive power, and to augment its annual produce to the utmost, and thereby to increase the real revenue and wealth of the society" (Smith, 2005[1776]: 357).

produce all goods and services within the nation itself (Porter 1990a: 7). The concept of trade existed in the era of mercantilism, but it views trade as a zero-sum game in which a trade surplus of one country is offset by a trade deficit of another country. Contrary to mercantilism, Smith sees trade as a positive-sum game. Through trade, all trading partners can benefit if countries specialize in the production of goods in which they have absolute advantages. Although Smith views trade as a positive-sum game, a superior country with absolute advantages in all goods might have no benefits from international trade.

Ricardo (1817) extended absolute advantage theory to comparative advantage theory. According to Ricardo, the superior country should specialize where it has the greatest absolute advantage and the inferior country should specialize where it has the least absolute disadvantage. One important implication of this theory is that even if a country did not have an absolute advantage in any good, this country and other countries would still benefit from international trade. The principle of comparative advantage is the difference in labor productivity between individuals, regions, or nations, but he did not satisfactorily explain from where the difference originated.

While labor is the only factor of production in the Ricardian model, Heckscher-Ohlin model (Ohlin, 1967) proposes two factors of production, capital and labor. They emphasize that countries differ from each other due to different products which are based on the difference of production factors possessed. This means production methods, such as a combination of capital and labor, are different although these theories have an assumption that technology is identical among countries. The Heckscher-Ohlin model has expanded by three important theorems: the factor price equalization theorem, the Stolper-Samuelson theorem, and Rybczynski theorem (Cho and Moon, 2000, 2013) and directly and indirectly influenced various scholars, such as Leontief (1953), Kreinin (1965), Vanek (1963), and many others.

These international trade theories assume that a country has an advantage that is already possessed or that is inherited.[8] On a closer view, the theories are firstly focused on goods produced by using a factor of production [labor in the Ricardian case] and on extensive use of two or more factors [in the Heckscher-Ohlin and other extension] (Porter, 1990a). They

[8] Although Ricardo's comparative advantage argues that an inferior country should specialize where it has the least absolute disadvantage, the view is still based on utilization of existing advantage.

rarely consider the improvement or enhancement of factor *per se* or evolution of products.[9] Thus, their theories are fundamentally based on existing advantages.

As a counterpart of production side, neoclassical economy focuses on market based on the function of supply and demand. By the interaction of supply and demand, prices, outputs, income, and distribution are spontaneously determined. This concept also involves "economic agents," households or firms that optimize all the business behavior, subject to all relevant constraints (Goodland and Ledec, 1987).

Related to export, many policymakers from the developing countries see that participation in global value chains (GVCs) is an important element of their economic development strategy (United Nations, 2013). They recognize that GVCs act as routes to market for export products and services. Production for exports directly generates value added and contributes to various aspects of economic development. In longer term, GVCs can provide opportunities for industrial upgrading as the value chain expands.

Nonetheless, policymakers and the development community must recognize that GVCs also entail risks. Not all the potential benefits of GVCs materialize automatically; local value added contributes to the economic development. Hence, employment and income generation may well be limited through the use of foreign value added in exports. Taking advantage of GVC participation and upgrading opportunities are dependent on the development of productive capacities, technology, and skills (Barjot, 2002). There are many other potential pitfalls for countries in GVC participation.[10] Thus, participation in GVCs can provide various options for economic development, but this does not necessarily mean successful economic achievement by LDCs.

Overall, the existing international trade theories are based on "comparative statics." They focus on the consequences to be expected when a country shifts from autarky to free trade. They do not intend to explain the dynamics of either production factors which induce a country to shift from the initial to the final situation, that is, which are the true sources of different

[9] Smith and Ricardo referred trade of goods, such as trade of cheese and wine, whereas Hechscher and Ohlin and other scholars were dealt with trade of goods based on the utilization of production factors, e.g., labor and capital, and their combination.

[10] *See* United Nations (2013).

productivity. When they try to do so, they use “residual” factors (climate, natural resource, technological progress, education, etc.) approach which is not convincing as shown in the following sections.

1.2 Productivity theories

Myint (1958, 1977), Hollander (1973), and Bloomfield (1975) expounded Smith’s trade theory. In fact, Myint identified “productivity” theory in *the Wealth of Nations*. According to Smith, by expanding the size of the market, foreign trade allows greater division of labor and its attendants increase productivity (Maneschi, 2002), meaning that the wealth or outcome remains on the function or efficiency of the division of labor, rather than the level or quality of individual productivity. This approach based on economies of scale has been greatly expanded by Lancaster (1979) and Krugman (1979) in the context of imperfect competition in markets.

Leontief (1953) conducted an empirical analysis to see if the theory of comparative costs, as many other economic theories, is valid by comparing fifty industrial sectors. Through this analysis, he found that U.S. workers are 300 percent more productive than others. In his work, he recognized the existence of other factors, such as education or climate and suggested that these factors may be operative in other economies for an increase of productivity.

Various scholars, such as Abramovitz (1956) and Solow (1957) are also in line with Leotief’s consideration and asserted that increasing the amount of a specific production factor such as capital or labor is not sufficient for sustained economic growth (Kriiger, Cantner, and Hanusch, 2000). For example, Abramovitz (1956) realized that the division of labor is limited by the extent of the market when the market is limited or if the whole globe becomes one single market. This is based on an assumption that the market is a closed system. Importantly, there are other possibilities to improve productivity, such as input increase, improvements in skill and managerial capacity which reflect training and other capital investment, or income motivation for expenditures for food, clothing, and some recreation.

Besides the classical factors, labor and capital, Solow (1957) used the term “technical changes” which is a shorthand expression for any kind of shift in the production function. Thus, slowdowns, speedups, improvements in the education of the labor force, and all sorts of things

will appear as "technical change." Posner (1961) also recognized the existence of technical changes, but his term is narrower than that of Solow.

Meanwhile, economists, such as Smith, Marx, Marshall, and Samuelson, have always recognized the central importance of technological innovation to economic growth and welfare, which had been largely ignored until Rosenberg (Teece, 1992).[11] Later, Grosskopf (1993: 172) highlighted the importance of technology by asserting that productivity is inevitably caused by technological progress. Also, Kriiger *et al.* (2000), Binswanger (2001) was in line with Grosskopf, reaffirming technological innovation as a main force fostering economic growth: technological progress increases the productivity of the factors of production.

At this point, it is necessary to define what technological progress is and how to achieve technological progress. Nishimizu and Page, Jr. (1982) defines technological progress as the change in the best-practice (production frontier). Kriiger *et al.* (2000) is consistent with Nishimizu and Page, Jr. (1982). They argued that the movements of the best-practice frontier function itself reveal information about technological progress. From these definitions, a presence of best-practices is a must in order to progress technology.

Neo-Schumpeterian economics is also in line with this view. It noticed the "meso level" of an economic system in which the decisive structural and qualitative changes take place and can be observed. To understand the processes driving the development at the meso level, Neo-Schumpeterian economists put strong emphasis on knowledge, innovation and entrepreneurship at the micro level with theories aforementioned. Particularly, innovation is identified as the major force propelling economic dynamics (Hanusch and Pyka, 2007).

From these productivity theories, two important productivity enhancers can be drawn; upgraded labor by education, training, or capital investment and technology progress derived from the best-practice. This point was the focal conclusion of a study on the "East Asian Miracle" by World Bank (1993) and was instrumental in changing the views on how to analyze development.

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[11] Stiglitz (1987), in the Brookings Papers, lamented that "while it is the dynamic properties of capitalism […] that constitute the basis of our confidence in its superiority to other forms of economic organization, the theory—at least the version we teach our students—is based on a model that assumes an unchanging technology" (Teece, 1992).

However, these two also cannot fully explain the economic development of LDCs, such as Hong Kong, Singapore, Korea, and Taiwan. Also known as the newly industrialized countries (NICs) in Asia with good universities and research institutes, accumulated capitals for upgrading labor and best-practices can be usually found in developed countries. However, in 1960s and 1970s when NICs started to enter the free market system, they did not have these prerequisite conditions.[12] Thus, it is necessary to find reasons how some countries have upgraded labor and technology progress.

[12] Many literatures argue that South Korea had skilled manpower, mentioning the result of education progress in 1980s or 1990s. However, the initial level of education was low when Korea took-off for economic development; (1) during the occupation era (1910-1945) the limited educational and occupational choices were available to Koreans (Song, 1990) and the Korean War devastated the whole peninsula; (2) in 1960, the education level of East Asian countries, including Korea, was similar to that of Latin American countries, and much lower than those of industrial countries (Collins and Bosworth, 1996); (3) Korea started its economic development plan in 1960s. In the mid-1970s, South Korea was already on the way to developing a powerful heavy industry sector, although the World Bank felt that Korea was over-ambitious and voiced its doubts about the chosen strategy (Toussaint, 2006). All of these evidences weaken human capital related theories as a supportive explanation for Korea's economic development.

2. Rationales for Economic Prosperity 2: Modern Approaches

2.1 Dynamic approaches

Classical economists said that productivity can be enhanced by expanding the size of market.[13] Thus, expanding the market size by trade, notably by export, has been promoted for Asian NICs' export-oriented policy (Balassa, 1978; Cline, 1982; Sachs and Warner, 1995).[14] Owens and Wood (1997) and Wood and Berge (1997) assumed that economic growth by export is associated with different categorization of goods—primary or manufactured goods. They also found that exporting manufactured goods has inherently greater growth potential than exporting primary products, because of faster technical progress and more scope for learning-by-doing.

This is very meaningful, since traditional studies did not differentiate manufactured goods from primary goods. The Prebisch-Singer thesis is further advanced based on the exportation of primary and manufacturing goods. Singer (1949) and Prebisch (1950) generally proposes that the net barter terms of trade between primary and manufactured goods have been subject to a long-run downward trend (Toye and Toye, 2003)

According to the structuralist view, this difference of goods is due to structural changes caused by growth, rather than by outcomes of a process of capital accumulation and by rising per capita incomes. Moreover, the growth process may be punctuated by periods of discrete shifts in resource allocation. Furthermore, the structural changes require skill-specific infrastructure for new capabilities which, when established, generate new comparative advantages (Justma and Teubal, 1991: 1167)

Thus, this structuralist view needs several prerequisite conditions which can be hardly found at the beginning stage of a LDC. As a result, this view cannot fully answer the questions: why and how countries transform and diversify its industrial portfolio to sectors where they do not have significant advantages under the similar prerequisite conditions. For example, Korea

[13] Smith, *see supra* note 7. Also, this is directly related to international trade theory that mentioned in chapter 1.1.

[14] Some argues that export and economic growth are not related, but this view is less highlighted in the field of international trade. *See* Rodrik (1994, 1995).

tried to develop steel, electronics, petrochemicals, and automobile industries at the beginning of economic development although the country did not have enough capital, technology, and natural resources. However, Korea achieved economic success by overcoming all of these disadvantages.

Another point needed to be mentioned is that among manufacturing exporting countries in 1960s, such as Taiwan, Hong Kong, Korea, Pakistan, Israel, Mexico, and Puerto Rico, all did not have achieved economic success (Keesing, 1967). Thus, market expansion based on export and diversifying industrial portfolio cannot fully explain the economic development.

The concept of path dependence is that a small initial advantage or a few minor random shocks along the way could alter the course of history (David, 1985). When path dependence was introduced into economics during the 1980s, it has been a controversial subject since then (Tatum, 2012). Path dependence may help explain why some countries achieved economic success while others do not (Easterly, 2001). For example, while standard economic growth models predict that LDCs should catch up with DCs, it has not happened in practice (Page, 2006). This can be well explained by path dependence. However, North (1990) argued that country's success depends on the proper build-up of institutions, behaviors, and law.

Skocpol (1985), Johnson (1982), Deyo (1987), Amsden (1989), Wade (1990), Gereffi and Wyman (1990), and Koo and Kim (1992) emphasized the importance of government leadership in formulating and implementing policies. On the contrary, Sunkel and Zuleta (1992) and Green (1996) argued that excessive intervention of government deteriorates economic growth, providing examples from Latin America countries. Balassa (1988), Chen (1989), Hughes (1988), World Bank (1989), and Porter (1990a) are also against government intervention.

Traditional economists advocated a minimal role of a government because the economic role of the government in the 18th century had been highly distorting (Tanzi and Schuknecht, 1997).[15] However, more and more scholars, with institutional approach, have recognized the necessity of government role on certain conditions (Arrow and Debreu, 1954; Keesing, 1967; Rodrik, 1992). Moreover, some scholars supported a strong role of government

[15] *See* Keynes (1926).

highlighting economic achievement of Japan and Asian NICs (Stiglitz, Jaramillo-Vallejo, and Park, 1993; Cerny, 1997; Barjot and Park, 2012).

Particularly, Stiglitz (1989) approached the government role in two different aspects—DCs and LDCs. He argued that government intervention may matter a great deal in LDCs because they have underdeveloped markets and imperfect information.[16] Stiglitz (1996) even treated government as the catalyst for growth without necessarily providing a great deal of resources. He also contrasted differences of government intervention between East Asian economies and the countries of the former Soviet Union; governments of East Asia promoted and used market while former Soviet governments replaced markets. Thus, the role or influence of government should be revisited to develop a new approach to enhancing the competitive advantage of nations.[17]

Rostow (1959) criticized the static assumption of classical economic theories and provided a dynamic theory of production. He argued that there are five basic stages of economic development: the traditional society, the preconditions for take-off, the take-off, the drive to maturity, the age of high mass consumption. For development, he emphasized the preconditions which required radical change in three non-economic residuals: social overhead capital, technical revolution in agriculture, and expansion in imports.

However, Rostow's stage model has been criticized in various aspects due to the discontinuity of development and sequence of stage. Furthermore, he argued that all countries should follows the same development path (Walsh, 1967).[18] He treated modernity as an equivalent to the model of western capitalistic society, which signified that this is only one possible model of development. Therefore, this stage model cannot be replicated to other countries such as countries in Latin America, Africa, or Asia (Reyes, 2001).

Gerschenkron (1962) introduced the concept of "economic backwardness." In particular, he argued that a country's industrialization has a different experience depending on

[16] *See* Stiglitz (1996).

[17] On the protectionist view, the success or failure of economic development can be explained by protectionist measure of government. Every country has been protectionist, but some have been much less protectionist and have used much better instruments than others. However, this thesis is not about analyzing the role of government as a source of protectionist measures.

[18] *See* Itagaki (2007).

its degree of economic backwardness when industrialization begins. Furthermore, he argued that countries can skip much of the pre-requisite stage as suggested by Rostow (1959). This is because the more backward countries the greater the need to find a substitute for missing pre-requisites. In other words, this backwardness acts as a good motivation to escape from current status for the better (Gillespie and Peerenboom, 2009).

For instance, economically more backward countries have faster industrial growth, greater stress on producer or capital goods compared to consumer goods, larger scale of plants and of firms, greater emphasis on up-to-date technology, less role played by agriculture, and more active role by the government. However, this cannot explain the existence of severe regional differences within countries and the remarkable development of specific countries among LDCs.

2.2 Sociological and other approaches

Another significant approach often discussed in economic growth is culture. For example, from the previous comparison between Korea and Ghana (see Table 1), Huntington (2000) considered culture as the main cause of difference in economic performance. Harrison (2000[1985]) also pointed out that culture had been a primary obstacle to development. This implies that unproductive culture should be changed in order to develop. However, many scholars, such as Hofstede (1997), Schein (1998), and Trompenaars (1998), treated culture as a national characteristic which cannot be changed. Thus, business should adapt management fit to local culture.

More specifically, MacFarquhar (1980), Morishima (1982), and Balassa (1981, 1988) spotlighted the fact that Asian NICs shared common cultural background of Confucianism. Furthermore, having an assumption that Protestantism is superior to Confucianism, they argued that certain aspects of Confucianism have functional equivalents of the Protestant work ethic.

However, Berger (1988: 8-9) pointed out, the cultures of Asian NICs are composed of much more than the Confucian heritage, and these other elements have greatly contributed to the types of work ethic. Also, it is not clear if these elements can really be located exactly in the Confucian influence of culture (Kim, 1994: 88). More critically, cultural aspects, including

Confucianism, cannot satisfactorily explain economic slowdown in the 19th century and fast growth in the 20th century of Asian NICs while these countries kept the same and unchanged Confucian values for centuries.

Furthermore, if the economic development is due principally to Confucianism, the implication derived from the case of Asian NICs is hardly applicable for other countries. Such as African, Latin American, and Middle Eastern countries; unless they change, adopt, or embrace the Confucian value into their culture. This is almost impossible to be realized.

Porter (2000a) focused on "economic culture" which is a subset of culture, recognizing the complex link between economic culture and economic progress. He further argued that unproductive side of economic culture should be changed to achieve development. His approach on culture is more valuable because it can be manageable and be modified in order to achieve prosperity. On business view, the approaches of Hofstede, Schein, and Trompenaars are rather passive and rigid, while Porter's ideas are more active and flexible. Interestingly, Porter (2000a) mentioned that a strong government may impose a productive economic culture, at least for a time. However, he did not further concretize the business cultural aspect for economic development.

Along with culture, several sociological views are also importantly treated for economic development, such as democracy and population composition. First of all, the relationship between economic development and democracy is not confirmed yet. A few number of scholars said that democracy promote economic development, whereas Barro (1997: 1-11) argued that political rights do not have an effect on growth and that democracy is not the key to economic growth. Robinson (2006) stated that although these two are correlated, there is no direct influence between them. Burkhart and Lewis-Beck (1994), Przeworski (2004), Gerring, Bond, Barndt, and Moreno (2005) and many others insisted that there is a tendency where economic development leads to democracy, but not the other way around.

According to theorists, population compositions are also directly related to the pool of labor force and market size which affect economic development. Thus, increase of labor force and market size can induce economic growth, but it could also cause sluggish productivity growth. A good example is the American economy during the 1980s. As a consequence of the postwar baby boom, more women employment, and immigration provided firms with larger market and abundant labor pool.

American companies enjoyed this unprecedented favorable condition, but it slowed down the automation of production factors and sophistication of market. This lack of sustained commitment to core business weakened American companies' competitiveness and the U.S. soon faced economic recession in the early 1980s (Porter, 1990a: 522). This shows that the population composition is not a critical determinant in achieving economic development.

There are also Korea-specific literature, such as the role of Korean government, political situation, and international relations. For example, Henderson (1992), Woo-Cummings (1998), are Coates (2000) pointed out that Cold War situation and its effects in Korea, such as America's support or competition against North Korea, for the main reasons of Korea's economic achievement. Whereas Cline (1982), Amsden (1991, 1994), World Bank (1993), Kreuger (1995), Sachs and Warner (1995), and Kuznets (1998) emphasized the Korean government's role, e.g., direct intervention in industries, market-friendly, or export-oriented policies. However, most Korea-specific reasons are either hardly applicable to other countries or are merely subsets of aforementioned economic or business theories, which do not satisfactorily explain the economic development of Korea.

3. Rationales for Economic Prosperity 3: Porterian Approaches

Porterian scholars such as Porter (1990) and Moon, Rugman, and Verbeke (1995, 1998) cleverly integrated the important variables determining national competitiveness into one model and most other theories represent subsets of Porter's comprehensive model. While Porterian approach based on the Diamond Model is brilliant and systematically classified significant factors for economic development, it cannot explain the behind force that strengthen or weaken each determinant of the diamond.

3.1 The diamond model

In his remarkable work, *the Competitive Advantage of Nations*, Porter (1990a: 1) raises the basic question of international competitiveness: "Why do some nations succeed and others fail in international competition?" As its title suggests, the book is meant to be a contemporary equivalent of *the wealth of nations* (Ryan, 1990: 46; Moon, Rugman, and Verbeke, 1998). The diamond has four interrelated components: (1) factor conditions, (2) demand conditions, (3) related and supporting industries, and (4) firm strategy, structure, and rivalry, and two exogenous parameters (1) government and (2) chance (Moon *et al.*, 1998). Porter argues that nations are most likely to succeed in industries or industry segments where the national *diamond* is the most favorable.

According to Porter, brief definitions of the four determinants are as following: (1) factor conditions are the nation's possession of factors of production, such as skilled labor or infrastructure, necessary to compete in a given industry; (2) demand conditions are the nature of home demand for the industry's product or service; (3) related and supporting industries are the presence or absence of supplier industries and related industries in the nation that are internationally competitive; and last (4) firm strategy, structure, and rivalry are the conditions in the nation governing how companies are created, organized, and managed, and the nature of domestic rivalry (p. 71).[19]

[19] Since 1998, Porter has used "context for strategy and rivalry" instead of "firm strategy, structure and rivalry."

Each determinant can be further specified into two sub-determinants: Factor conditions are specified into "basic" and "advanced." Demand conditions consider both "size" and "quality" of the market. Related and supporting industries represent internationally competitive "supplier industries" and other pertinent "related industries." Lastly, firm strategy, structure, and rivalry refer to the nature of "domestic competition and conditions" with regard to organizing and managing businesses (Cho and Moon, 2000; Parc and Moon, 2013).[20]

Other two exogenous parameters are defined as follows: (1) regarding government, Porter (1990a) declared that it was tempting to make government the fifth determinant (p. 126) and argued that government can influence (and be influenced by) each of the four determinants either positively or negatively (P. 127); (2) chance events are occurrences that have little to do with circumstances in a nation and are often largely outside the power of firm to influence. It also creates discontinuities that allow shifts in competitive position (P. 124).

This model cleverly integrates the important variables determining national competitiveness into a single model. Most other theories represent subsets of Porter's comprehensive model (see Table 3-1).[21] However, Porter fails to incorporate the effects of multinational activities in his model (Dunning, 1992). To solve this problem, Porter's original diamond model has been extended to *the generalized double diamond model* (Moon, Rugman, and Verbeke, 1995) whereby multinational activity is formally incorporated into the model (Moon *et al.*, 1998).

See Porter (1998), Porter (2000b), and Porter and Stern (2001), for example.

[20] For further information regarding explanations of each determinants, *see* Porter (1990) and Cho and Moon (2000, 2013).

[21] Factors of production are often described in very broad terms such as land, labor, and capital, but can be grouped in to a number of broad categories: human resources, physical resources, knowledge resources, capital resources, and infrastructure. *See* Porter (1990: 74-75).

Table 3-1. Comparison between Porter's diamond model and other theories on critical determinants of nation's competitiveness

	International trade theories	Productivity theories	Export policy supporters	Government's role supporters
FC	XXX	XXX	X	
DC			XXX	
R&S		X		
SSR				
Gov.	X			XXX
Chance				

Note: FC-Factor conditions, DC-Demand conditions, R&S-Related and supporting industries, SSR-Firm strategy, structure, and rivalry, Gov.-Government

3.2 The generalized double diamond model

In the generalized double diamond model, Moon *et al*. (1998) defines national competitiveness as the capability of enterprises engaged in value-added activities in a specific industry in a particular country to sustain this value added over long periods of time in spite of international competition. This sustained value-added activities in specific industries in a particular country may result from both domestically and foreign-owned enterprises.

Moon *et al*. (1998) argues that theoretically, two methodological differences between the diamond model and the generalized double diamond model are important. First, sustainable value added in a specific country may result from both domestically owned and foreign owned firms; Porter does not incorporate foreign activities into his model as he makes a distinction between geographic scope of competition and the geographic locus of competitive advantage (Porter and Armstrong, 1992).

Second, sustainability may require a geographic configuration spanning many countries, whereby firm specific and location advantages present in several nations may complement each other. Porter (1986, 1990a), in contrast, argues that the most effective global strategy is to concentrate as many activities as possible in one country and to serve the world from this home base. Porter's global firm is just an exporter and his methodology does not take into account the organizational complexities of true global operations by multinational firms

(Moon, 1994).

This new model, the generalized double diamond model, developed and extended has led to two important extensions to Porter's original framework. First, the new model explicitly incorporates multinational activities, whereas Porter's original diamond considers mainly the impact of traditional home-based activities. Second, the new approach easily allows us to operationalize the competitiveness paradigm, whereas Porter's original approach is hard to operationalize. In the generalized double diamond approach, a comparison of the sizes and shapes of the domestic and international diamonds reveals major strategic differences (Moon *et al.*, 1998).

Moon *et al.* (1998) disserted that most other theories represent subsets of Porter's comprehensive model. This means Porter's diamond model is more comprehensive than any other theories and models, integrating important determinants of economic development. In addition, the generalized diamond model incorporating internationalization, can provide large scope. The diamond is a mutually reinforcing system and the effect of one determinant is contingent on the state of others (Porter, 1990a). However, it still had limitations to explain how these important determinants can be developed and strengthened.

4. The Need for a New Approach to Competitive Advantage

By reviewing the existing theories, it is found that they do not reflect the current dynamics of world economy, although they provided the basis of economic activities. Their limits were summarized in this section and the need for a new approach is emphasized. For a better solution, the ABCD framework of K-strategy framed by Moon (2012) is introduced.

4.1 Problems of existing theories and need for a new approach

Through literature review, the limitations of classical theories have been laid out by drawing attention to several questions; first, why a country is capable of optimally using its allocation of factors to achieve economic development while others are not, (2) why a nation is able to perceive its comparative advantages to optimally (or better) utilize and comparative disadvantage to overcome for upgrading industrial structure, while others are not, (3) why a nation is capable of choosing the optimal (or better) public policies, while others are not, and (4) why some countries have productive economic and business cultures, while others are not.

Can Porterian approach provide sufficient answers to the above questions? Surprisingly, most similar and related questions can be found in Porter's *the Competitive Advantage of Nations*; why does a productivity difference or technology gap emerge? Why do nations with a more slowly developing or small home market for a product often emerge as world leaders (p. 17)? Why do some […] nations advance and prosper (p. xxxiii)? Why is innovation continuous in many national industries […] (p. 17)? What is a proper role of government for economic development?[22] And what is the role of productive economic culture?[23] To answer these questions, he used the diamond model which is the most fundamental contribution of its extensions.

To these questions, Porter (1900a) argues that the principal economic goal of a nation is to produce a high and rising standard of living for its citizens. The ability to do so depends

[22] Although this question is not outwardly in *the Competitive Advantage of Nations*, however a descriptive answer can be found related to this question on pp. 126-129.

[23] Regarding this question and its answer can be found in Porter (2000a).

not on the amorphous notion of "competitiveness" but on the productivity with which a nation's resources (labor and capital) are employed. Productivity is the prime determinant in the long run of a nation's standard of living (Porter, 1990a: 6). To make it brief, prosperity or a high standard of living lies in productivity. It is noteworthy that prosperity does not depend on competitiveness which is different and distinguished from productivity.[24]

However, on the same page Porter stated that "the only meaningful concept of competitiveness at the national level is national productivity. A rising standard of living depends on the capacity of a nation's firms to achieve high levels of productivity and to increase productivity over time. […] Sustained productivity growth requires that an economy continually upgrades itself. A nation's firm must relentlessly improve productivity in existing industries by raising product quality, adding desirable features, improving product technology, or boosting production efficiency" (p. 6). Therefore, his concept of prosperity or a high standard of living is extended from "pure" productivity which is a function of labor and capital to "productivity and its increase over time." This means, he focuses on sustained productivity growth based on existing advantage and resource-scarce LDCs hardly have this.

Furthermore, he argued that competitive advantage against foreign rivals underpins the process of upgrading national productivity (p. 9), and to sustain advantage, firms must achieve more sophisticated competitive advantages over time, by providing higher-quality products and services or producing more efficiently, which he translated into productivity growth (p. 10). Regarding competitive advantage, firms should have the most dynamic and challenging home environment that stimulates and prods firms to upgrade and widen their advantages over time (p. 71). This competitive advantage is based on four determinants of the diamond model.

Although he provides comprehensive answers, there are limits in emphasizing the optimal utilization of all the important determinants of national competitiveness. Basically, he does not answer how a country can enhance, strengthen, or create the determinants and how countries can upgrade and widen their advantages which already exist within country.

Thus, at this point, the real question one may raise should be: "How does a certain

[24] On xii, Porter clearly said that "in my theory, competitiveness and prosperity are not a zero-sum game. Many nations can simultaneously improve their productivity, and with it their wealth." Thus, it is clear that competitiveness and prosperity are different concepts.

country accomplish similar economic goals through means of different strategies, relying upon whatever resources available, cultural or otherwise?" Moreover, one still is left with the question on "linkage" between the "different strategies." These questions may be difficult to answer, but they are the essential questions that need to be tackled squarely and adequately. For this answer, Hwy-Chang Moon (2012) proposed the ABCD framework of K-Strategy with a rigorous research and investigations on the historical and empirical evidence in the process of Korea's economic development.

PART II

NEW APPROACH

In this part, the ABCD framework of K-Strategy, proposed by Moon (2012, 2014), is introduced as a new approach. This eclectic approach is theoretically underpinned to expand its explanatory power from the case of Korea's economic development to other nations' cases. In addition, the validity of the ABCD framework is tested and proved.

5. The ABCD Framework

Various explanations were introduced by Western scholars to explain the economic growth and development of East Asian economies that stem from to different economic backgrounds. The ABCD framework of K-Strategy, created by Hwy-Chang Moon (2012, 2014) based on historical evidences of Korea's economic development, was to address this holistically. In this chapter, the ABCD framework is introduced and more theoretical back-ups are provided in order to enhance the validity of the ABCD framework.

5.1 The dynamics of the economic forces[25]

The Asian NICs have showed spectacular economic growth over the past half of the century. According to World Bank, GNP per capita Korea was behind Sudan, ranking 99th; Taiwan was below Zaire, ranking 85th; Hong Kong and Singapore were 40th and 38th respectively in 1962. Later, these Asian NICs achieved impressive economic growth. Brazil and Mexico also experienced substantial economic growth in the 1960s and 1970s (Jenkins, 1994). However, all of these countries encountered economic crisis: Latin American NICs in 1980s and Asian NICs in the late 1990s. Asian NICs soon overcame the crisis but Latin American NICS struggled for long time.

As mentioned above, these countries have similar backgrounds; however, one group of countries overcame the economic difficulties and is showing outstanding economic development while the other group is experiencing stagnant economic development. As seen in Part 1, the existing studies could not explain the economic development of Asian NICs comprehensively.

In this regards, Moon (2012, 2014) created the ABCD framework of K-Strategy, based on the comprehensive historical evidence of Korea's economic development, which introduced key drivers of Korea's rapid development. The ABCD framework is built upon a rigorous study of earlier economic and business theories and models, and the foundation of the ABCD

[25] The descriptions for the ABCD framework and its definitions are based on Moon (2012, 2014).

framework incorporates basic understandings from earlier classical approaches such as Adam Smith to modern scholars such as Michael Porter.

The ABCDs of K-Strategy provide comprehensive steps on the experience of the Korea's economy and business growth. The ABCDs of K-Strategy consists of four factors and eight sub-factors; agility (speed and precision), benchmarking (imitation and global standard), convergence (mixing and synergy), and dedication (diligence and goal-orientation).

5.1.1 Agility: Speed and precision

Through Korea's economic development, the commonly found forces in government actions, private companies' strategies, and the general public are speed and precision. The combination of these two characteristics has played a significant role in making Korea an economic powerhouse. Moon (2012, 2014) refers to the combination of "speed" and "precision" as "agility."

Speed

This intangible asset of "speed" had been mostly neglected in the traditional economic paradigm that investigates on advantages. However, speed has played a significant role at both the national and corporate levels when Korea's history and path to development are closely observed. In 1960s and 1970s, in order for Korean government to overcome poverty as quickly as possible, the government pushed industrialization by incorporating the value of speed.

Speed has been one of the greatest drivers for growth of companies as well. Its importance can be also found in the practice of business. During the same period, Korean firms were lacking capitals. Since natural resources were not innate, Korean companies had to create its own competitive advantage or sources. Given this unfavorable condition, Korean companies had no choice but to create their own competitiveness.

By importing resources and adopting technologies, Korean people worked faster in order to make up for the lack of natural resources to outperform other countries in speed competitiveness. The Korean people willingly accepted this challenge and succeeded under pressure by working hard in hopes of prosperity. In this manner, Korean companies focused on speed to reduce the production cost by lowering production time.

Precision

Despite the benefits from speed, speed without precision can cause great risks and danger. If precision is undermined in the manufacturing process, a number of recalls on cars, realignment of the value chain of car models, and dissatisfaction by consumers can all cause a company to eventually have pay additional, unnecessary costs to win back consumers' trust all. Corruption is also possibly caused due to a lack of proper measures and precise descriptions of rules. In order to become a developed country, precision is the additional necessary component alongside speed.

Korea is also famous for its shipbuilding industry. Korean shipbuilding industry is very interesting since it survived the fierce competition between Japan, where the high technology for shipbuilding is prevailing, and China, where the cheap labor for the industry is abundant. Despite this rivalry, Korean firms were able to win more number of contracts and become the best player in the industry.

According to one Korean expert in shipbuilding industry, Korea was able to succeed because Japan's so-called *monozukuri* (artisanship) consumes too much time and is not able to sufficiently incorporate certain specific customer needs; China, on the other hand, is not precise enough for shipbuilding even though they have cheaper labor. Korean shipbuilders have both—they can build ships faster than any other shipbuilders with relatively higher precision. In short, Korea's shipbuilding industry has been competitive because of its speed and precision.

Many western scholars tend to overlook the importance of precision and only focus on speed when evaluating Korea's competitiveness. Although Korea does not have the most state-of-the-art technologies, Korea could outperform other countries through speed and an appropriate level of precision. The most advanced technology alone does not guarantee success because there are many other factors to consider: cost, convenience in use, compatibility, and commerciality. On the other hand, a prudent combination of speed and precision, which is referred to as agility on a combined basis, can bring about exceptional success as it has done for Korea.

5.1.2 Benchmarking: Imitation and global standard

If the history is carefully examined, taking leadership as the first-mover may not always be the

best strategy. This does not mean that firms should not try to innovate or avoid being the first mover. However, it is important to recognize that many successful firms often accumulate resources and capabilities more efficiently through benchmarking rather than innovation (Moon, 2010). Furthermore, in contrast to earlier belief in the power of breakthrough innovation, incremental improvements and advancements are what drives market and industry development. Groundbreaking innovation is not realistic in everyday life even in rapidly changing industries. Benchmarking becomes much more important as firms need to constantly imitate and learn from best practice to anticipate the fast changing business environments.

Imitation[26]

Imitation is the most efficient way to follow and supersede earlier best players. Given that there are high costs for developing new technologies and inefficiencies related to resource allocation which first movers encounter, being the first mover may not be the best strategy for all types of firms. However, there is more than simply imitating in benchmarking—it is different from being a "copycat." Society tends to praise and appreciate only big innovations and drastic changes that are revolutionary whereas the efforts of many players in the market that make *incremental* changes are disregard. In addition, many in academia and practice tend to devalue the relatively minor improvements as *strategy* (Porter, 1996).

When a company or a nation, even an individual, tries to emerge out of poverty and reap development, there are many problems, barriers, and costs. A company or government may be lacking capacity by itself, a small pool of human resources that the society or the market desires or even a lack of discernment to make good decisions. In the initial stages of

[26] Imitation and counterfeit are similar but different. Counterfeits do not copy the original product perfectly, but only mimic or forge what appears externally. More specifically, counterfeit products imply that a different company in the same industry embezzles technology, design and unique ideas. In technical terms, a counterfeit is a product that violates the regulations of intellectual property rights, making it an illegal criminal act. Therefore, counterfeits should be prevented in society. Imitation, on the other hand, is something that is different from a counterfeit and something that we have seen throughout history. If you only mimic the best, you are counterfeiting, but if you mimic *and* add your own alpha (i.e., by delivering higher values by lowering prices or changing certain features or contexts to improve an existing leading product), you are imitating. This can be seen across various studies and fields (Moon, 2010). *See* Moon (2012, 2014).

development, it would be difficult to acquire the ability to control related fields and set accurate strategies.

In the case of Korea, the government and business neither had the experience nor infrastructure after the war. To overcome this extremely fragile status, what Korea did was to learn from the experience of Japan who had undergone radical changes with the shift to capitalism and democracy (Barjot, 2011; Barjot and Park-Barjot, 2012). Also, since Korea did not know which products would sell well in the markets, imitating the products of foreign companies was a practical procedure. The easiest and most effective way to do this was by imitating other already successful companies.

For example, Samsung, one of the *chaebols*, started off and grew by learning and imitating Japanese firms, eventually surpassing those earlier companies that had once licensed technology and trained employees for Samsung (Barjot and Park-Barjot, 2010; Park-Barjot and Barjot, 2010). Hyundai Motors (hereafter Hyundai) also grew by imitating the American auto makers and by studying the operation systems and technologies of Japanese auto makers. Now, Hyundai's performance is as successful as its former leaders as it emerge as the fifth largest auto maker in the world.

Global standard

A perfectly imitated product with unique and differentiated quality improvements can eventually transcend the original leader and receive greater recognition. Afterwards, Samsung focused on investing in the semiconductor business and in 1992, developed the world's first 64M DRAM, and gradually rose as the world's top company in the market. Samsung invested heavily in this technology, surpassing the Japanese and American rivals in technology and market share.

Eventually, Samsung became the world's best company for flash memories by 2003. According to the Semiconductor Value Chain Service at IHS, Samsung is expected to record $33.46 billion in semiconductor revenue in 2013, attaining 10.5% of the total global semiconductor market revenue. As seen in Table 5-1, Samsung ranked 2nd in the world, which is two times the revenue of Qualcomm.

Table 5-1. World top 20 suppliers of semiconductors (2013)

Rank	Company	Headquarters	Revenue	%
1	Intel	U.S.	46,960	14.8
2	Samsung Electronics	Korea	33,456	10.5
3	Qualcomm	U.S.	17,341	5.5
4	Micron Technology	U.S.	14,168	4.5
5	SK Hynix	Korea	13,335	4.2
6	Toshiba	Japan	12,459	3.9
7	Texas Instruments	U.S.	11,379	3.6
8	Broadcom	U.S.	8,121	2.6
9	STMicroelectronics	Switzerland	8,076	2.5
10	Renesas Electronics Corporation	Japan	7,822	2.5
11	Infineon Technologies	Germany	5,096	1.6
12	Advanced Micro Devices (AMD)	U.S.	5,076	1.6
13	NXP	Netherlands	4,658	1.5
14	Media Tek	Taiwan	4,434	1.4
15	Sony	Japan	4,394	1.4
16	Freescale Semiconductor	U.S.	3,958	1.2
17	nVidia	U.S.	3,612	1.1
18	Marvell Technology Group	U.S.	3,281	1.0
19	ON Semiconductor	U.S.	2,740	0.9
20	Analog Devices	U.S.	2,677	0.8
Top 20 Companies			213,043	67.0
All Others			104,833	33.0
Total Semiconductor			317,876	100.0

Notes: 1) Unit: US$ Million; 2) Table presents the preliminary estimate of global semiconductor market share in 2013; the rank is ordered according to the revenue value.
Source: Moon (2014) [originally from IHS (2013)].

Through the imitating process, Korea became one of the countries that lead global standard. Table 5-2 shows the top 20 foreign countries in terms of the number of patents granted by the U.S. Patent and Trademark Office over the past 50 years. On this list, Korea ranked 6th, which is well ahead of many other developed countries.

Table 5-2. Top 20 patentees granted by the U.S. patent and trademark office

Rank	Country	Number of Patents	Rank	Country	Number of Patents
1	Japan	902,998	6	Korea	103,895
2	Germany	360,194	7	Canada	103,617
3	UK	146,564	8	Switzerland	60,659
4	France	134,641	9	Italy	53,495
5	Taiwan	104,954	10	Sweden	46,816

Note: The number represents patents granted during the period of January 1, 1963 to December, 31 2012.
Source: Moon (2014) [originally from U.S. Patent and Trademark Office].

5.1.3 Convergence: Mixing and synergy-creation

According to the resource-based view, firms need to have a bundle of resources and capabilities that are valuable, rare, inimitable and costly to imitate to differentiate themselves from others (Barney, 1991, 2001). However, in practice, such resources do not guarantee high performance of firms. In more recent years, scholars have focused on firms' capacity of learning[27] or environmental adaptation.[28] Yet they have not emphasized how they can manage such changes quickly. For an entire firm to be competitive, the resources should be adaptable and resilient to the changing environments. They need to collaborate with other firms to co-develop and co-maintain their position in the market.

Mixing

This mixing strategy is revealed in Korea's national economic development process. Some scholars (Amsden, 1991; Amsden and Hikino, 1994; Kuznets, 1988) argued that Korea's economic growth was possible due to direct government intervention and anti-market policies. Ironically, the World Bank (1993) and Krueger (1995) stated that pro-market policy of the government is what enabled Korea's growth.[29] It would be most accurate to say that Korea has properly mixed various policies under the goal of fast industrialization. The government did regulate the economy but pro-market policies and the expansion of market autonomy were also granted whenever necessary. The government took on simultaneous positions by mixing the two different economic policies in order to be most effective.

Regarding firm-level view, earlier studies show that scholars perceive the

[27] Some major concepts are related to learning-by-doing (e.g., Arrow, 1962), project execution capabilities (e.g., Amsden and Hikino, 1994) and absorptive capacity (e.g., Cohen and Levinthal, 1990).

[28] Capabilities for environmental adaptation are associated with the studies on dynamic capabilities (e.g., Teece, Pisano, and Shuen, 1997) and absorptive capacity (e.g., Cohen and Levinthal, 1990; Zahra and George, 2002).

[29] Park (2006) argued that at the beginning of economic development in 1960s, the U.S. government advised the Korea's economic plan. The Key points focused on minimizing government's role and emphasizing more free market system. Thus, on American scholar's view, government's intervention and free market system are rather contradictory than complementary. *See* Park (2000).

diversification strategy as a method to maximize existing advantages while reducing risks.[30] Unfortunately, these arguments are mostly true only in advanced nations. In developing countries, the market is not efficient and operative, as these countries lack professional executives, CEOs or shareholders. Therefore, firms in developing countries do not generally have the luxury of finding other stable sources of income.

In this sense, the diversification strategy of Korean companies is a distinctive case. First of all, Korean companies did not possess any substantial advantages in resources or technology. This meant that these companies entered markets that were not related in preliminary stages. A good example of this would be Hyundai CEO Chung Ju-Yung's gradually expanding and diversifying business to the auto repair, shipbuilding, construction and auto manufacturing industries.[31]

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[30] Scholars such as Teece (1983) claimed that companies tend to expand to other industries if a resource or technology exceeds the capacity of the already existing business. These scholars stated that if there is a surplus of capacity such as resources or technology, a company that has competitiveness makes use of this excess in other areas. Therefore, according to these scholars, it makes most sense if a company diversifies in related sectors that can best utilize its current capacities. For example, Coca-Cola should enter the bottling business while selling beverages since bottling is closely linked to the Cola business.

Through related-industry diversification, a company can also maintain its advantage on products or similar products by launching them to the market, eventually gaining brand loyalty and increasing market share (Markham, 1973; Baumol, Panzer, and Willig, 1982; Montgomery, 1994). Thus, a company can prevent other rivals from entering the market through related-industry diversification by raising the barrier to entry. This is the context behind Coca-Cola's continuous launching of energy drinks, water, and other juice beverages.

Williamson (1975) argued that companies diversify in order to efficiently allocate resources or capital, or to reduce transaction costs with other companies. On the contrary, Lewellem (1971) and Perry (1998) saw diversification as an additional income source to existing industries. An example of this would be the electronics manufacturer GE, which changed its business portfolio in order to reduce transaction costs and secure a stable income source for capital procurement. GE now expanded its business to lighting and electronics, as well as appliances, medical equipment, and air flight engines.

[31] Another reason that *chaebols* chose unrelated industry diversification is that there was greater demand than supply at the beginning stage of development. Consumers in the developing stage do not look for good quality products that have a price premium; they look for basic products that can fulfill their needs. Therefore, it is important for firms to maximize their sources of income rather than focusing solely on the relationship among businesses. Also, Korean companies lacked capital in the developing stage. Earlier studies discussed the

Synergy-creation

Although these business operations are unrelated diversification, the company made the structure and performance more related and interwoven through cross-investment. Firms in preliminary stages tend to dive into unrelated industries due to insufficient capabilities and an absence of a mature consumption market and lack of capital. Afterwards, as firms experience development with time and growth, they focus more on synergy-creation through related-industry diversification.

From the beginning to the intermediate phase of development, Korean companies had been engaged in related diversification strategy that created synergies from diversification or mixing. The reclamation work at Seosan using the *Chung Ju-Yung Way* can be seen as the result of synergies created from a diversified business portfolio. Also, the power behind Samsung in overcoming the global recession was that its businesses in several different industries mutually supported each other. For instance, when one business was in trouble, the profits from another business compensated for its loss and vice versa. Through this approach, *chaebols* in Korea were able to benefit from the well-designed business portfolio.

On the other hand, when there is an incorrect mixing of the portfolio, a company would most likely face many deficits. For instance, Sony failed with its venture into the software industry because it was a bad combination of ingredients. Samsung Electronics and Sony were once similar firms, but Sony's new business plan had put the company into financial troubles when it entered music, movie, and video game industries.

5.1.4 Dedication: Diligence and goal-orientation

The sources of economic development and firm competitiveness are examined by focusing on non-organic resources such as technology. It is undeniable that technology contributes to the

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diversification strategy as maximizing excessive capital, but Korean companies had to engage in unrelated diversification in order to make up for their capital needs. Samsung, for example, gained profits through producing sugar and apparel, and the profits from these sectors were re-invested in other industries such as electronics.

growth of an industry and firm. Yet, what is more important is the productivity of the people who make, trade and manage these technologies along with other resources. A firm's productivity is closely tied to employees' motivation and capabilities. For this matter, scholars have long looked for sources that could increase employees' performance. The first source was work motivation, which has been the main interest of scholars in industrial organizational theories since the 1930s. Therefore, as an outcome of motivation or dedication of workers, we should look into the diligence and goal orientation of people.

Diligence

Diligence characterized in the example above is what allowed Korea to join the OECD in the late 1990s, although it started as one of the world's poorest countries in the 1960s. The average annual growth rate of Korea since the 1960s after the start of its economic development was approximately 6%. Countries such as Taiwan, Singapore and Hong Kong also showed similar economic success but the size of their economies are much smaller than that of Korea. Korea is the only country with over 40 million people that was able to demonstrate such rapid economic development.

Much of Korea's success is attributable to the Korean people's diligence (Barjot, 2014). According to OECD statistics, Korea has the second longest average working hours per worker in a year. Korean workers work 325 hours more than the OECD average (see Table 5-3).

Table 5-3. Working hours by OECD countries (2011)

Country	Hours	Country	Hours	Country	Hours
Mexico	2,250	United States	1,787	Sweden	1,636
Korea	**2,090**	Italy	1,772	Switzerland	1,636
Chile	2,047	New Zealand	1,762	United Kingdom	1,625
Greece	2,039	Iceland	1,731	Luxembourg	1,600
Russia	1,979	Japan	1,728	Belgium	1,576
Hungary	1,976	Portugal	1,711	Denmark	1,548
Poland	1,938	Canada	1,698	Ireland	1,541
Estonia	1,924	Austria	1,696	France	1,482
Israel	1,920	Australia	1,693	Norway	1,421
Turkey	1,864	Spain	1,685	Germany	1,406
Czech Republic	1,830	Finland	1,680	Netherlands	1,382
Slovak Republic	1,793	Slovenia	1,649	**OECD Average**	**1,765**

Note: Average working hours per worker in one year.
Source: Moon (2014) [originally from OECD Statistics (2011)].

Goal-orientation

Goal-orientation is crucial in that it provides direction for diligence. Koreans have always enjoyed quoting, "You can live only when you have the spirit of *death or nothing*." This quote has been more famous after the admiral Yi Sun-shin said it in the battlefield during the Japanese invasion of Korea in 1592. In the past, when Korea heavily focused on achieving economic development, the government and firms worked with the mindset of "*to die if we fail*."

The government office buildings were always lit with busy workers throughout the night and the employees of trading companies traveled across the world without any vacations. From a corporate perspective, the CEO of POSCO, Park Tae-jun, used to teach his employees the spirit of *Right Face (turn)* in a similar context.[32]

Korea's future will look a little different compared to what it has been through over the past 60 years. Now, Korea does not need to live by pushing its limits in order to survive or become an advanced country. However, it is still necessary that Koreans work with a solid and strong goal-oriented mindset to continuously reap economic growth. Otherwise, the Korean

[32] Right side of POSCO is facing the East Sea. The spirit of *Right Face* signifies work hard to achieve the goal set, otherwise die by drowning in the East Sea. The CEO Park emphasized this since the initial investment to POSCO was from Japan as a part of compensation for the Japanese Occupation over Korea, which is a cost of many Korean people's lives.

people could be subject to the mistakes of Japan's "lost decades."

5.2 Theoretical back-ups[33]

This eclectic approach is theoretically underpinned to expand its explanatory power of the ABCD framework which is based on historical evidences from the case of Korea's economic development. By doing so, this framework can be theoretically backed up with the validity of applicability to other nations' economic development cases.

5.2.1 Agility: Speed and precision

Most of existing studies concentrated on the speed of manufacturing (Sharifi and Zhang, 1999) and organizational management (Boehm and Turner, 2004). As industry matures and technology develops, firms are pressured to constantly deal with shortening lifecycles of products and technologies. At the same time, they have to produce various products by targeting multiple market segments. Firms can no longer sustain their business by possessing one popular technology or product. Thus, dealing with the market and technology changes with agility has become very important in business today.

The resource-based view (e.g., Lieberman and Montgomery, 1988) talks about the first mover advantage, which is achieved by possessing superior resources or capabilities compared to rivals. However, first-mover advantages are neither sustainable nor durable, with such advantages deteriorating faster in industries that change fast. Therefore, the competitiveness of first-mover advantages is limited to stable industries with low competition and long industry lifecycles.

In fast changing environments, firms need to exploit economies of speed, together with economies of scale and scope by providing products and services through faster innovation and delivery (Ito and Rose, 2004). Stalk, Jr. (1988) even argued that time management should be another source of competitive advantage. Therefore, early entrance coupled with fast-track

[33] This part is based on Moon (2014).

management processes will accelerate firms' resilience to market disturbances and changes.

However, speed should be accompanied with precision. Precision refers to the accuracy in all processes of business to make sure the products and services meet customers' needs. Quality has become a growing concern for firms competing in the global markets (Lakhal, 2009), which has forced firms to spend significant efforts to improve the quality of their products and services. In this fast changing business environment, "precision" techniques, together with "speed" management, have become more important than ever for creating and maintaining competitive advantage.

5.2.2 Benchmarking: Imitation and global standard

The word "benchmarking" is often defined as "the search for an industry's best practices that will lead to superior performance" (Camp, 1989; Moffett, Anderson-Gillespie, and McAdam, 2008). Traditionally, benchmarking has been regarded as a practice of promoting imitation, but recently, more studies suggest that benchmarking enhances firms' abilities to acquire and create new knowledge and gives rise to innovation (Massa and Testa, 2004). Therefore, benchmarking has better connotations than a mere imitation of firms and incorporates the properties of innovation. Under this perspective, *benchmarking* is categorized in two components—imitation and global standard.

Scholars used to depreciate the essence of imitation and only respect innovation. However, imitation does not necessarily imply carefree duplication of the original product and also does not necessarily mean low quality. It is possible for imitation to appear with higher quality and a lower price versus the original products or brand (Brondoni, 2012). Also, at the level of nation's economic development, Gerschenkron (1962) argued the importance of late-comer advantage from imitation.

Imitators are able to become successful because they do not incur risks made by the new inventions and skip some of the innovators' costly processes. In other words, imitation can be more cost effective and efficient and even serve as the driver of innovation since the savings can be used in other areas to innovate and bring the next technological generation (Shenkar, 2010).

Porter (1996) introduced the concept of "productivity frontier," which refers to the

sum of all existing best practices placed on the productivity frontier, as well as the other counterpart concept such as operational effectiveness (OE), which means doing the same things better than rivals. However, Porter stated that unique strategic positioning (SP) is the only important procedure for sustainable growth. However, creating value can come from incremental changes as well. It should be noted that innovation is never created easily. New and competitive resources are based on and come from an accumulation of resources and capabilities (e.g., Barney, 1986).[34] The most effective way of innovation should be to imitate the state-of-the art "global standard" of today and to substantially advance it to the new "global standard" of the next generation.

5.2.3 Convergence: Mixing and synergy-creation

Convergence is composed of two sub-factors, "mixing" and "synergy creation." In general, scholars from advanced countries that are used to well-developed industries perceive horizontal diversification as unrelated diversification, and as a risky and ineffective business strategy. Their view is that companies can only maintain their advantages through related-industry diversification where they are able to launch similar products in related markets, to eventually gain brand loyalty and increased market share (Markham, 1973; Baumol, Panzer, and Willig, 1982; Montgomery, 1994).

However, there are studies with different perspectives on the relationship between diversification and the performance of firms in emerging markets, by arguing that unrelated diversification as a response to market failure in emerging markets can be profitable (Khanna and Palepu, 1997; Ramaswamy, Li, and Petitt, 2004). This view states that the important criterion should be how the mixing creates synergies for increasing profits or enhancing competitiveness, and not how a business portfolio is aligned in seemingly related fields in terms of standard industrial classification.

The mixing strategy will not be sustainable if firms cannot exploit the synergistic benefits from it. Diversification will stop when the synergy benefits become zero (Zhou, 2011). The synergy effect implies that the combination of businesses within a firm or with other firms

[34] This is the underlying assumption of the resource-based view (e.g., Barney, 1986).

allows a firm to achieve superior performance than its single business competitors. This is because the combination allows firms to get better access to strategic assets, which enhance firms' cost or differentiation advantages (Markides and Williamson, 1996).

From the above discussions, the conditions for success in the "synergy-creating mix" can be provided as follows. First, the strengths of mixed businesses should be compatible to each other. Second, their strengths and weaknesses should be complementary, so that the benefits from exploiting the advantages and avoiding the disadvantages with each other can be maximized. Third, there should be an efficient and expanded network system to support connection and operation. Lastly, their partnership should deliver higher values to the market or consumers than those of single players or products.

5.2.4 Dedication: Diligence and goal-orientation

The view on the sources of competitive advantages has shifted over time. Traditional sources of success, such as technology, financial resources, and strategic position, still provide competitive advantages, but they become less important than in the past because these factors can be utilized across national borders in the globalized economy. In this changing business environment, some other sources of competitiveness have risen.

For example, the organizational culture that looks at how people are managed became an increasingly important source of competitive advantage (Pfeffer, 1994) nowadays. If employees work harder, they will be more loyal and are more likely to have extra commitment for the firm (Ncube and Steven, 2012). Therefore, although the wages and skills of workers are the same, their competitive advantages will be different depending on their dedication to work. Dedication is then divided into diligence and goal-orientation.

The effects of diligence are mediated by psychological processes such as goals and self-efficacy (e.g., Bandura, 1986, 1997). Diligence and goal-orientation re-enforce each other to maximize task performance and efficiency. A large number of studies have shown that the more difficult the goal, the higher performance one will achieve (e.g., Lee, Tan, and Javalgi, 2010). There have been extensive studies (e.g., Button, Mathiu, and Zajac 1996; Farr, Hofmann, and Ringenbach, 1993; Lin and Chang, 2005) on the implications of goal-orientation for industrial organization and psychology.

Furthermore, Dweck (1986) identified two types of goals, learning orientation and performance orientation. The former is to develop one's competence, while the latter is to demonstrate one's competence. In business, goal-orientation, together with diligence, is very important where these two sub-factors of dedication reinforce each other.

5.2.5 Comprehensiveness of the ABCD framework

As introduced in the literature review presented above, there have been a number of studies on advantages. These studies are related to the factors and sub-factors of the ABCD framework. However, they have been developed independently, so they do not provide an eclectic view of competitiveness and only touch upon parts of the ABCD framework. In addition, despite the number of existing studies, some parts of the ABCD framework have been missing or less emphasized in existing literature. As in Table 5-4, the ABCD framework encompasses important earlier business concepts and provides more holistic, integrative, and in-depth guidelines for enhancing competitive advantage.

Table 5-4. Distinction and comprehensiveness of the ABCD framework compared with other business concepts

Factors/Sub-factors	Concepts
Agility	**Early (Leader) vs. Fast (Follower)**
Speed	- First-mover advantage vs. Latecomer advantage (Economies of speed)
Precision	- Process techniques and product technologies
Benchmarking	**Blue Ocean vs. Red Ocean**
Imitation (learning)	- Resource-based view vs. Absorptive capacity (Economies of learning)
Global standard	- Efficient catch-up and improvement
Convergence	**Specialization vs. Combination**
Mixing	- Related diversification vs. unrelated diversification (Economies of diversity)
Synergy-creation	- Combinative capability and Creating shared value
Dedication	**Inspiration vs. Perspiration**
Diligence	- Creativity vs. Laboriousness (Economies of hard-working)
Goal-orientation	- Strong motivation and extra commitment

Source: Moon (2014).

6. Empirical Evidences

Based on the previous theoretical support on the ABCD framework, five hypotheses are formulated as follows:

Hypothesis 1: Countries with higher level of ABCD have higher level of economic development.

Hypothesis 1-a: Countries with higher level of "agility" have higher level of economic development.

Hypothesis 1-b: Countries with higher level of "benchmarking" have higher level of economic development.

Hypothesis 1-c: Countries with higher level of "convergence" have higher level of economic development.

Hypothesis 1-d: Countries with higher level of "dedication" have higher level of economic development.

Hypothesis 1-e: Countries with higher level of "agility," "benchmarking," "convergence," and "dedication" have higher level of economic development.

6.1 Operationalization of ABCD

In order to conduct a statistical test by measuring the function of the four factors of the ABCD vis-à-vis prosperity—a result of economic development, the eight sub-factors should be quantified. Each sub-factor is measured by two proxy variables, based on the concept of the ABCD framework explained in the previous chapters. The rationales for choosing two criteria under each sub-factor are explained as follows.

6.1.1 Agility

Speed

The sub-factor, "speed" emphasizes the efficiency and fast process of management. The two

proxies to measure *speed* are *starting a business* and *broadband subscriptions*,[35] "Starting a business" of *Ease of Doing Business Index* is most related to the concept of speediness. Hence, *starting a business* is select as an indicator for the first criterion of *speed*. Therefore, the higher score in *starting a business*, the speedier the government administration process is. The formula for the calculating the standardized score is (country score-sample minimum)/(sample maximum-sample minimum) X 100.

The second criterion for *speed* is *broadband subscriptions*.[36] The high speed Internet increases the distribution of information and ideas, and facilitates the development and adoption of innovation process, thereby accelerating economic growth (Czernich, Falck, Kretschmer, and Woessmann, 2011). Also, Sambamurthy, Bharadwaj, and Grover (2003) and Huang, Quyang, Pan, and Chou (2012) articulated that IT infrastructure is considered the enabler of firms' operational agility. The calculation of broadband subscriptions index is the same as that *starting a business*.

Precision

This sub-factor emphasizes the quality of products and the accuracy of the management process. There are two criteria for measuring *precision*, including *local supplier quality* and *corruption perception index (CPI)*. *Local supplier quality* is a survey data, which measures the quality level of local suppliers. This criterion is chosen because the quality of local suppliers, which is related to the quality of components and materials, affects the quality of finished goods. Therefore, the higher the local supplier quality is the higher quality of products is.

CPI measures the corruption level of a country's public sector. The higher score of

[35] *Ease of Doing Business Index* measures the efficiency of various aspects of the government regulatory which facilitates firms' speed and ease of doing business. *Ease of Doing Business 2014* is composed of 10 indicators: Starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency. Starting a business is composed of the number of procedures and the time (days) of starting a business. Specifically, the value of two components are transform to the standardized score from 0 to 100, and the average of the two components score are calculated, which is regarded as the final score of starting a business.

[36] The broadband subscriptions is also a composite index including two components, fixed broadband Internet subscriptions and per 100 population and mobile broadband Internet subscriptions per 100 population.

CPI means less corruption or more transparency. Corruption occurs when there are violations in the processes of abiding by the established rules and regulations. These series of corruption related processes eventually hinder precision. Therefore, less corrupted countries will demonstrate higher level precision.

6.1.2 Benchmarking

Imitation

The two criteria to measure the degree of imitation (or learning) are foreign direct investment (*FDI) and technology transfer* and *firm-level technology absorption*. The first criterion, *FDI and technology transfer* is a survey data, which measures the extent of FDI bringing new technology into the country. MNCs are the major creators of new and advanced technologies, and play an important role in narrowing the gap between the developed and less developed countries in terms of technology (UNCTAD, 2010).

FDI is an important source to diffuse technological progress for further development. However, imitation- the learning behavior—depends on the absorptive capacity of the host countries (or home-based companies). Therefore, another criterion of "Firm level technology absorption" is chosen. This is also survey data and it measures "the extent of firms' adoption of new technology in a certain country."

Global-standard

This sub-factor emphasizes creating or achieving new best practices at the current time. Two criteria for measuring this sub-factor are *innovation capacity* and *availability of latest technologies* which are both survey data. *Innovation capacity* means "the capacity of firms in generating new products, processes, and services," while *availability of latest technologies* signifies the level of the latest technology availability of in a country."

The innovation capacity and latest technologies can be achieved by imitating or learning. This concept is very much related to Porter's (1996) concepts of operational effectiveness (OE) and strategic positioning (SP). The OE is close to imitation (learning), while SP is similar to global-standard.

6.1.3 Convergence

Mixing

The two criteria to measure *mixing* are *value chain breath* and *international distribution*. *Value chain breath* measures the width (narrow or broad) of firms' presence in the value chain of a business. The more diversified the value chain activities are, the higher the possibility of mixing is.

On the other hand, "international distribution" measures whether the international distribution and marketing are owned and controlled by domestic companies. If it is controlled by the domestic companies, it is more likely for the firms to have a broader scope of activities, and thus firms have a higher degree of mixing.

Synergy-creation

There are two criteria for "synergy-creation," *cluster development* and *university-industry collaboration in R&D*. These sub-factors emphasize positive effects on the performance of firms through creating synergy among firms and other various institutes. Cluster is a good channel to facilitate the firms' synergy creation. Furthermore, university-industry collaboration is critical to develop and advance cutting-edge technologies nowadays.

6.1.4 Dedication

Diligence

This sub-factor signifies the level of hard working. Hard working can also be measured by the productivity of workers, which means the output per hour produced by a worker. Therefore in order to produce higher output, the worker has to have higher commitment. This higher commitment and productivity are related to "worker motivation" and "labor relations."

Worker motivation refers to the level of workers' motivation. If workers are more motivated, they are more likely to work harder. *Labor relations* represent whether labor-management relations are good or not. This is important since it is critically related to the productivity of firms.

Goal-orientation

The basic idea of "goal-orientation" is that business or work with a concrete aim will be more effective and induce better outcomes. Therefore, in order to measure *goal-orientation*, this study selects two criteria, which are *value system* and *flexibility and adaptability*. *Value system* represents whether the system of the society supports the competitiveness.

Flexibility and adaptability means the level of flexibility and adaptability of people when faced with new challenges. If people have strong goal-orientation, they will be more likely to adapt successfully to the changing environment.

6.1.5 Reliability analysis

Each criterion has different unit and value. In order to accurately compare and apply each factor, standardization is necessary; therefore, the score ranges from 0 to 100. The value of each sub-factor is the average of two criteria that consists of the sub-factor. For instance, speed has two criteria, *starting a business* and *broadband subscriptions.* These two are standardized and the average score of these two becomes the value of the sub-factor, *speed*. Along the same lines, agility, one of the ABCD, is the average of its sub-factors, speed and precision.

Since measuring then ABCD had never been conducted before. It is necessary to check if these two sub-variables measure the same concept. For this purpose, *Cronbach alpha* can be utilized. For example, if the alpha's value is higher than 0.70, it is usually assumed that the reliability of sub-variable choice is high. The ABCD framework has four factors which are comprised of the eight sub-factors; thus, two sub-factors for one factor. The description and *Cronbach alpha's* values are listed in Table 6-1.

Although most researchers generally considered an alpha value of 0.70 as the acceptable level of reliability coefficient, lower coefficient is also acceptable (Nunnally, 1978; Sekaran and Bougie, 2010). Thus, it can be concluded that data collected from this study is reliable and have obtained the acceptable level of internal consistency (Ibrahim, Ghani, and Embat, 2013).

Table 6-1. Descriptions of proxies and *Cronbach's alpha*

	Proxies	Explanations	Source	Data Type	*Cronbach's alpha*
Speed	Starting a business	Means of days and procedures for starting a new business	World Bank	Hard	0.610
	Broadband subscriptions	Average means of fixed broadband internet subscriptions and mobile broadband internet subscriptions	WEF and INSEAD	Hard	
Precision	Local supplier quality	Q: In your country, how would you assess the quality of local suppliers?	WEF	Survey	0.878
	CPI	Corruption perception index	TI	Survey	
Imitation	FDI and technology transfer	Q: To what extent does foreign direct investment (FDI) bring new technology into your country?	WEF	Survey	0.700
	Firm-level technology absorption	Q: In your country, to what extent do businesses adopt new technology?	WEF	Survey	
Global-standard	Innovative capacity	Q: Is Innovative capacity of firms (to generate new products, processes and/or services) high in your economy?	IMD	Survey	0.864
	Availability of latest technologies	Q: In your country, to what extent are the latest technologies available? [1 = not available at all; 7 = widely available]	WEF	Survey	
Mixing	Value chain	Q: In your country, do companies have a narrow or broad presence in the value chain? [1 = narrow, primarily involved in individual steps of the value chain; 7 = broad, present across the entire value chain]	WEF	Survey	0.867
	International distribution	Q: To what extent are international distribution and marketing from your country owned and controlled by domestic companies? [1 = not at all, they take place through foreign companies; 7 = extensively, they are primarily owned and controlled by domestic companies]	WEF	Survey	
Synergy-creation	Cluster development	Q: In your country, how widespread are well-developed and deep clusters (geographic concentrations of firms, suppliers, producers of related products and services, and specialized institutions in a particular field)?	WEF	Survey	0.840
	University-industry collaboration in R&D	Q: In your country, to what extent do business and universities collaborate on research and development (R&D)? [1 = do not collaborate at all; 7 = collaborate extensively]	WEF	Survey	
Diligence	Worker motivation	Worker motivation in companies is high.	IMD	Survey	0.896
	Labor relations	Labor relations are generally productive.	IMD	Survey	
Goal orientation	Value system	Q: Does the value system in your society supports competitiveness?	IMD	Survey	0.770
	Flexibility and adaptability	Flexibility and adaptability of people are high when faced with new challenges	IMD	Survey	

6.2 Variables

Dependent and explanatory variables are classified as follows and the reasoning is described. In order to analyze the pure contribution of ABCD to the economic development, the control variables, which are extracted from existing theories, are added and reasoning is explained. Especially, resource is added as a control variable to meet the aim of this research: economic development of countries without significant inherited resources or advantages.

6.2.1 Dependent variable

The dependent variable for the empirical test is GDP per capita. Following the existing literature, GDP per capita is often employed to measure the economic wealth of a country (Judge, Fainshmidt, and Ill, 2014). However, there are several measurement which are similar to GDP per capita: normal GDP per capita, real GDP per capita, GDP per capita in terms of PPP.

Preceding studies often chose real GDP per capita to adjust for the inflation in a certain period. However, as mentioned before, this study aims to compare the economic wealth across countries. Thus, this study chose GDP per capita adjusted for purchasing power parity (PPP), which takes into account of the differences in price levels across countries. As a result, GDP per capita in PPP terms makes it more comparable among countries.

6.2.2 Explanatory and control variables

The four explanatory variables are agility, benchmarking, convergence, and dedication. To assess the relationship between ABCD and the level of economic development, four variables—mean years of schooling, government expenditure, openness, and resource—are controlled. The first three control variables are commonly used by most exiting studies. Nonetheless, *resource* is a country specific variable, it is also treated as a control variable in this study since the main argument of this study is about economic development of countries that do not have significant advantages.

Mean years of schooling equal the average number of education years received by people in ages 25 and older (UNDP, 2103). Government expenditure is measured by its share

in total GDP. This variable represents the government size. Openness is the average of trade openness (trade as a share of GDP) and FDI openness (FDI as a share of GDP). Existing studies often selected trade openness for controlling the internationalization level of the country. However, as there are two main tools of internationalization, trade and foreign direct investment (Moon and Parc, 2014), this study incorporates FDI to measure the openness. The last control variable, *resource*, equals the total natural resources rents as a share of GDP. The total natural resources rents are the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents.

6.3 Data and samples

The data for the empirical test are compiled from various sources published by international organizations, such as World Bank (2014), UNCTAD (2010), World Economic Forum (WEF, 2010, 2011, 2012), and the International Institute for Management Development (IMD). Regarding Taiwan, as some data cannot be collected from the statistical database of international organizations (e.g., World Bank), its data are obtained from *Taiwan Statistical Data Book* published by Council for Economic Planning and Development of Taiwan (2013) (see Table 6-2).

Table 6-2. Descriptions of variables

Variables	Explanations	Year	Data Type	Sources
GDP per capita (PPP)	US$	2010-2012	Hard	IMF World Economic Outlook Database
Mean years of schooling	The average number of years of education received by people in ages 25 and older	2010	Hard	UNDP, Human Development Report 2013
Openness (Trade, FDI)	The average trade and FDI openness	2010-2012	Hard	UNCTAD statistics
Resource	Total natural resources rents as a share of GDP	2010-2012	Hard	World Development Indicators, World Bank

In contrast to most existing studies which focus on the relationship between factors and the economic growth during certain period, this study aims to investigate the elements of the ABCD that affect the level of economic development at cross country level within a certain

time. Due to the data unavailability of previous years, the most recent data (e.g., 2010, 2011, and 2012) are selected for comparison (except for *mean years of schooling*, only 2010). This three-year-average is employed in order to lessen the volatility of data to the external economic environmental changes (see Table 6-2).

For the empirical test, 59 countries are selected (see Table 6-3) by considering the availability of data as mentioned above. For the country selection, a sample of 59 countries is selected from the dataset of IMD (2012) and WEF (2014). Among these 59 countries, 32 are classified as advanced countries by World Economic Outlook of the IMF. Furthermore, the total GDP of these 59 countries account for 92.7% of the world GDP in 2012, hence these countries can be regarded as the representative economies of the entire world.

Table 6-3. Sample countries

Argentina	Denmark*	Israel*	Norway*	Spain*
Australia*	Estonia*	Italy*	Peru	Sweden*
Austria*	Finland*	Japan*	Philippines	Switzerland*
Belgium*	France*	Jordan	Poland	Taiwan*
Brazil	Germany*	Kazakhstan	Portugal*	Thailand
Bulgaria	Greece*	Korea*	Qatar	Turkey
Canada*	Hong Kong*	Lithuania	Romania	UAE
Chile	Hungary	Luxembourg*	Russia	Ukraine
China	Iceland*	Malaysia	Singapore*	UK*
Colombia	India	Mexico	Slovak Republic*	USA*
Croatia	Indonesia	Netherlands*	Slovenia*	Venezuela
Czech Republic*	Ireland*	New Zealand*	South Africa	

Note: * represents the advanced countries

6.4 Analysis methodology

This study employs three statistical methods to assess the relationship between the factors of ABCD framework and the level of economic development. For the first phase, cluster analysis is used to group the 59 countries into distinct clusters by utilizing *agility*, *benchmarking*, *convergence*, and *dedication* as clustering variables.[37]

[37] Continuous variables of ABCD are transformed into categorized variables by using cluster analysis in order to solve the multi-collinearity problem in the regression model. Please refer to "6.5.3 Results for Regression

For the second phase, one way ANOVA test is conducted to examine whether these country groups are significantly different from one another. Firstly, the groups and the level of ABCD are compared to countercheck if the groups are well divided. Secondly, the difference in economic achievement among groups is analyzed: the higher the level of ABCD, the better the economic development (or achievement as a result).

For the third phase, an ordinary least squares (OLS) regression is conducted to examine the ABCD factors' size of effect on the degree of economic development. In the following section, the results by using each statistical method are presented.

6.5 Results

6.5.1 Results for cluster Analysis

This study employs hierarchical clustering method, because (1) the sample size is relatively small (n=59) and (2) the appropriate number of clusters is not known beforehand. The Ward's method with Squared Euclidean Distance is used to classify the countries by entering the four variables of *agility*, *benchmarking*, *convergence*, and *dedication*. The optimal number of clusters is determined by the clustering coefficients (or fusion coefficients) created at each stage of clustering process by combining the most similar clusters.

Clustering coefficient measures within-cluster sum of squares. Hence small coefficients mean the relatively homogenous clusters are combined with each other, while large coefficients mean that the dissimilar clusters are combined (Hair, Jr., Anderson, Tatham, and Black, 1995). Therefore, the process of cluster formation is usually stopped when there is a sudden increase in coefficients. Figure 6-1 shows the clustering the scree plot of fusion coefficients (or the distance between clusters) against the number of cluster. It suggests that the three-cluster solution is best for the group division.[38]

Analysis."

[38] When the number of clusters is four, two out of four groups do not know statistically significant difference. Thus, the three group cluster is ideal for this analysis.

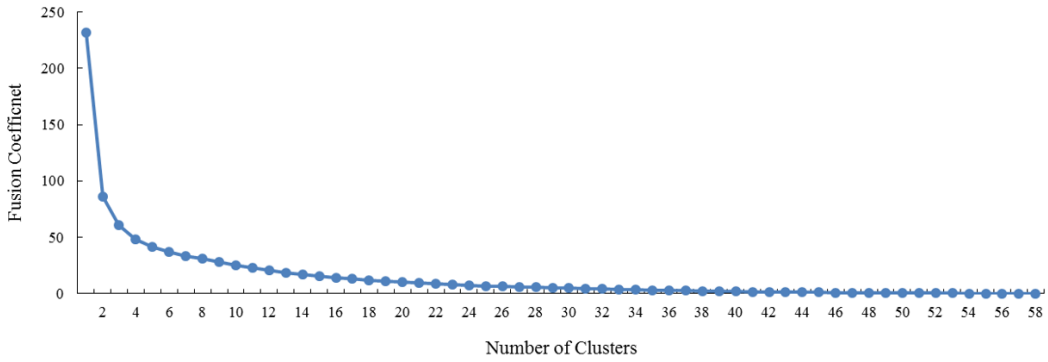


Figure 6-1. Plot of fusion coefficients against the number of clusters

The list of countries in the different clusters is listed in Table 6-4. The numbers of countries included in the three clusters are 9, 24, and 26. The countries in Cluster 1, with lowest level of ABCD, and 2, with medium level of ABCD, are mostly developing countries, while countries in Cluster 3 are mostly developed countries. Cluster 3, which has the highest level of ABCD, has the highest level of economic development, while Cluster 1 and 2 being in similar levels of around US$15,000.

Table 6-4. Countries in the three clusters

	Cluster 1 (n=9)	**Cluster 2 (n=24)**		**Cluster 3 (n=26)**	
Country	Argentina	Brazil	Lithuania	Australia	Luxembourg
	Bulgaria	Chile	Mexico	Austria	Malaysia
	Croatia	China	Peru	Belgium	Netherlands
	Greece	Colombia	Philippines	Canada	New Zealand
	Kazakhstan	Czech Republic	Poland	Denmark	Norway
	Romania	Estonia	Portugal	Finland	Qatar
	Russia	France	Slovak Republic	Germany	Singapore
	Ukraine	Hungary	Slovenia	Hong Kong	Sweden
	Venezuela	India	South Africa	Iceland	Switzerland
		Indonesia	Spain	Ireland	Taiwan
		Italy	Thailand	Israel	U.A.E.
		Jordan	Turkey	Japan	U.K.
				Korea	U.S.A.
PPP (Mean)	US$15,099.38	US$16,605.69		US$42,449.29	

Regarding the four factors of the ABCD, Figure 6-2 shows the substantial difference among the three clusters. The score of Cluster 1 is the lowest, Cluster 2 is at the middle level,

and Cluster 3 has the highest level in all the four factors of ABCD.

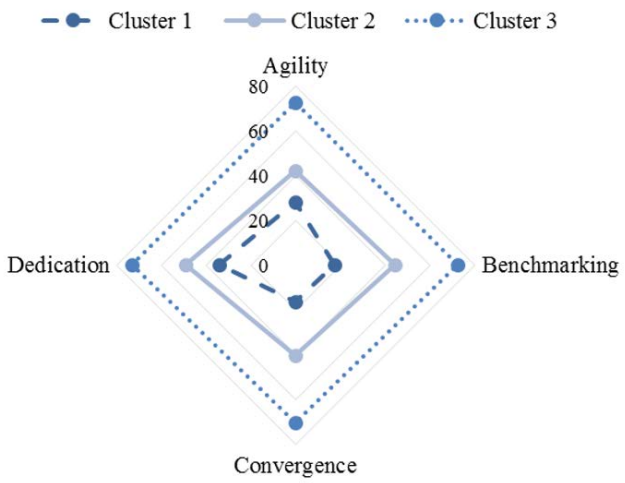


Figure 6-2. The ABCD of the three clusters

6.5.2 Results for ANOVA

In order to verify if the groups are well divided, five one-way ANOVAs are conducted to examine between-cluster differences. For the five ANOVAs, the cluster membership (Cluster 1, 2, and 3) is the independent variable and GDP per capita in terms of PPP, agility, benchmarking, convergence, dedication are dependent variables. Table 6-5 presents the results of ANOVA test on the three-cluster solution. The values of F-statistic for all five tests show significance at 1% level, indicating that the three clusters are different in terms of the five dependent variables.

Table 6-5. ANOVA test of three-cluster solution

	Cluster membership			Scheffe's test	F-value
	1 (n=9)	2 (n=24)	3 (n=26)		
1.GDP per capita (PPP)	15099.38	16605.69	42449.29	(3, 1) (3, 2)	32.903***
2.Agility	32.15	46.75	75.62	(1, 2) (2, 3) (1, 3)	65.533***
3.Benchmarking	17.25	44.30	72.29	(1, 2) (2, 3) (1, 3)	184.413***
4.Convergence	16.22	40.15	70.56	(1, 2) (2, 3) (1, 3)	106.999***
5.Dedication	34.00	49.24	73.24	(1, 2) (2, 3) (1, 3)	41.297***

Note: The number listed in the parenthesis represents the clusters for which the means are significantly different; For the variable of "benchmarking," because the assumption of homogeneity of variance is violated, Dunnett T3 method is used for post hoc comparison; ***p<0.01.

Scheffe's test was employed for *post hoc* multiple comparison to detect which pairs are significantly different. For GDP per capita (PPP), it shows significant difference between Cluster 3 and Clusters 1 or 2. Hence, GDP per capita of Cluster 3 is significantly higher than Cluster 1 or 2, but it cannot say that the GDP per capita of Cluster 2 is significantly higher than Cluster 1. For the four factors of ABCD, it shows significant differences for all the three pairs. In other words, Cluster 3 are significantly higher than Cluster 2, which is also significantly higher than Cluster 1.

6.5.3 Results for Regression Analysis

Table 6-6 provides the descriptive statistics and the correlation matrix for all the variables. As expected, the logarithm of GDP per capita (PPP) has a positive relationship to the four explanatory variables (*agility, benchmarking, convergence*, and *dedication*), as well as three control variables (average means of schooling, government expenditure, and openness). According to Cooper and Schindler (2003), the correlation coefficient, higher than 0.80, is suspected to have a multi-collinearity problem. As shown in Table 6-6, the correlation coefficients among *agility*, *benchmarking*, and *convergence* appear to be higher than 0.80. This implies that while placing the three variables simultaneously in the same regression model, there might have a multi-collinearity problem.

Table 6-6. Correlation matrix and descriptive statistics for all variables

	1	2	3	4	5	6	7	8	9
1. Ln_PPP	1								
2. School	0.593***	1							
3. Government expenditure	0.331**	0.449***	1						
4. Openness	0.368***	0.164	-.176	1					
5. Resource	-0.196	-0.290**	-0.425***	-0.217	1				
6. Agility	0.829***	0.596***	0.459***	0.308**	-0.425***	1			
7. Benchmarking	0.662***	0.310**	0.278**	0.328**	-0.302**	0.838***	1		
8. Convergence	0.617***	0.230*	0.257**	0.202	-0.304**	0.792***	0.866***	1	
9. Dedication	0.361***	0.138	-0.040	0.313**	-0.099	0.545***	0.746***	0.678***	1
Max	11.49	13.30	28.59	250.20	34.76	86.56	84.68	90.90	88.27
Min	8.21	4.40	6.68	13.44	0.00	2.79	3.99	5.22	17.19
Mean	10.01	10.11	17.38	56.27	5.36	53.73	52.51	49.90	57.49
St. dev.	0.72	1.91	5.36	43.41	7.88	21.61	21.36	22.65	19.43

Note: N=58 for the variable of "School" and "Resource," and N=59 for other variables; *p<0.10, **p<0.05, ***p<0.01; two-tailed tests.

Table 6-7 shows a set of results based on multiple regression models. Model 1 includes the control variables only. From Model 2 to Model 5, the four factors were rendered into the multiple regression in sequence in order to examine the impact of each factor of the ABCD on the dependent variable. The variance inflation factors (VIF) test is conducted to check the multi-collinearity. The adjusted R^2 values and F-statistics show that all of the five regression models provided a good fit to the data. Also the adjusted R^2 of Model 2, 3, 4, and 5 improved significantly compared to Model 1.

As the VIF values for all the variables included in the multiple regression are less than 5, it indicates that there is no multi-collinearity problem (Montgomery and Peck, 1982). The estimates on the four factors of the ABCD framework are all positive and statistically significant at the $p<0.01$ level, supporting the first four hypotheses (hypothesis 1-a, 1-b, 1-c, and 1-d).

However, when all the four explanatory variables of *agility*, *benchmarking*, *convergence*, and *dedication* are entered in one regression model, only two variables, *agility* and *dedication*, appeared statistically significant, while the other two variables, *benchmarking* and *convergence*, are not statistically significant. However, if the VIF values are examined, *agility* (VIF=7.833) and *benchmarking* (VIF=7.415) exceed 5. Also the sign of dedication becomes negative ("-"). This suggests that there is multi-collinearity problem in Model 6.

Table 6-7. Multiple regression results (dependent variable: GDP per capita, PPP)

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**
Intercept	7.273***	7.521***	7.062***	6.923***	6.939***	7.808***	7.956***
School	0.171***	0.061*	0.151***	0.162***	0.164***	0.061	0.111***
Government expenditure	0.035**	0.006	0.018	0.020	0.035**	-0.001	0.023
Openness	0.006***	0.003**	0.003**	0.004***	0.005**	0.003**	0.003**
Resource	0.011	0.021***	0.015*	0.018**	0.012	0.023***	0.008
Agility		0.027***				0.027***	
Benchmarking			0.016***			0.002	
Convergence				0.015***		0.003	
Dedication					0.008**	-0.009**	
D1							0.724***
D2							-0.076
F-value	11.610***	31.701***	18.507***	20.017***	10.750***	21.608***	16.940***
R^2	0.467	0.753	0.640	0.658	0.508	0.779	0.666
Adjusted R^2	0.427	0.729	0.606	0.625	0.461	0.743	0.627
N	58	58	58	58	58	58	58

Note: *p<0.10, **p<0.05, ***p<0.01.

In order to overcome the multi-collinearity problem while testing the overall effect of the ABCD on economic development, cluster membership is used as the explanatory variable in the regression model instead, as the cluster membership is generated using the four variables of the ABCD. However, as there are three cluster members, the categorized variable is transformed into two dummy variable (Cluster 3 as the reference category). For the first dummy variable, Cluster 3 is given the score of 1, and for the second dummy variable, Cluster 1 is given the score of 1. Model 7 shows that the first dummy variable is significant at the 1% level, while the second dummy variable is not significant.

6.6 Discussion

This study examined the relationship between the ABCD and the economic development level based on the recent three-year data. The findings are consistent with the arguments articulated in the theoretical part and suggest that the ABCD are important factors to the economic development. However, this does not show strong evidence while comparing the Cluster 1 and 2 as presented in the results of both ANOVA and the Model 7 of multiple regression.

Cluster 2 has higher level of ABCD than Cluster 1, but the economic development level does not show significant difference. The reason is that the nine countries included in Cluster 1 are mostly the resource rich countries. If the average resources rents as a share of GDP is compared between Cluster 1 and 3, it is 11.34 for Cluster 1, while 4.03 for Cluster 2, thus no more than 50% of that of Cluster 1. The similar results are shown in Model 7 on regression analysis, as the second dummy variable does not show significance.

Therefore, in the developing countries (Clusters 1 and 3) the resource does become an important source of economic development. However, this does not mean that the ABCD is not important in developing countries. Cluster 3 does not enjoy from a similar rich endowment of resources as Cluster 1, but still has slightly higher GDP per capita in terms of PPP (although not higher at the statistically significant level). This implies a good news for those developing countries with poor resource endowment.

Moreover, in terms of the influence of natural resource, it is not significant in the model with control variables only, but when ABCD variables are entered into the regression

model, the signs appear to be positive (“+”) and statistically significant in all the models (except Model 5). Many existing studies argued that the curse of natural resource does not occur because of its presence, but because of other factors which are more important for the economic development.

In other words, the rich endowment of resources crowds out other important factors that catalyze or propel economic development. This means, given that other conditions are equal, possession of resources should have a positive effect on economic development. The ABCD can, thus, be considered with other conditions. For example, other conditions with the ABCD factors, the influence of natural resources are positive, and drive the national development to a higher level.

PART III

DEVELOPMENT OF KOREAN INDUSTRIES

The ABCD framework's applicability is demonstrated to explain the development and evolution of two Korean industries in this part. The first is the automobile industry, one of important manufacturing industries. The other is the film industry, a resurging industry as a part of the Korean Wave. Particularly, this part focuses on the policies and corporate responds. These two industries are chosen because they are less dependent on primary advantages and show high fluctuations within relatively short period. The ABCD framework also shows the interplay between government policies and private companies' reactions which will be carefully examined in this section

7. Korea's Automobile Industry[39]

This chapter demonstrates the applicability of the ABCD framework to explain the development and evolution of Korea's automobile industry, one of the important manufacturing industries in Korea. Particularly, the government policies and corporate strategies were importantly dealt with. The automobile industry shows very different results before and after the early 1980s. These differences of Korea's automobile industry are attributed from contrasting dynamics of the forces, the ABCD.

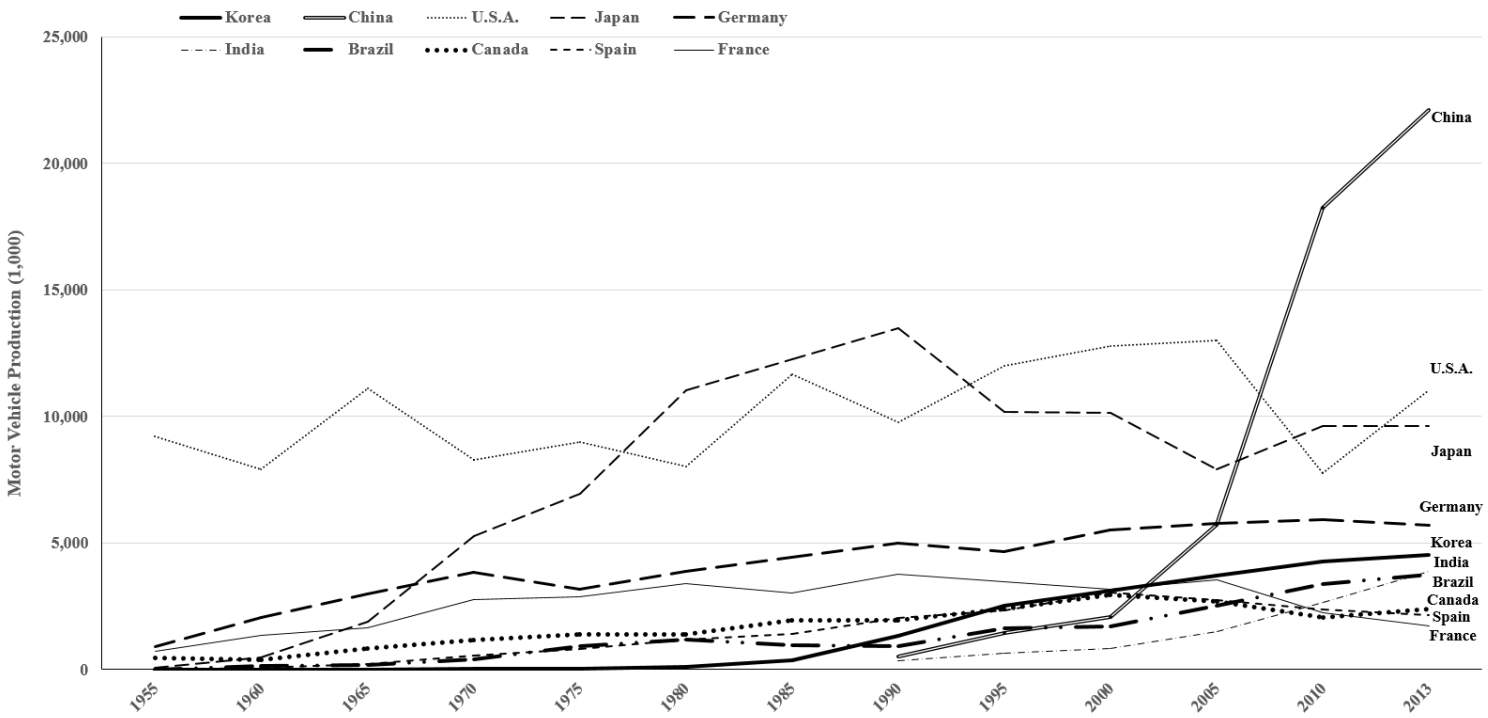
7.1 Introduction to Korea's automobile industry

In 1955, Korea's automobile industry started with the car called "Sibal (시발)," built on the basis of a Willys Jeep and other spare parts from U.S. military. A short time later, Korea started to assemble cars imported as CKD[40] through partnerships with Korean companies. As time passed, the whole industry changed its structure and function from a simple assembler to an automobile developer; the first Korean-developed automobile, the Hyundai Pony was produced in 1976.

Although Korea's automobile industry faced turmoil during the Asian financial crisis of 1997, Korean automobile companies quickly recovered and have increased production due to increased demand on exports. According to the International Organization of Motor Vehicle Manufacturers (OICA, 2013), Korea is the fifth-largest in the world measured by automobile unit production and Hyundai is the world's fifth-biggest auto-maker by sales along with its affiliate, Kia Motors (hereafter Kia) in 2013 (Reuters, 2014 April 2) (see Table 7-1a and Table 7-1b).

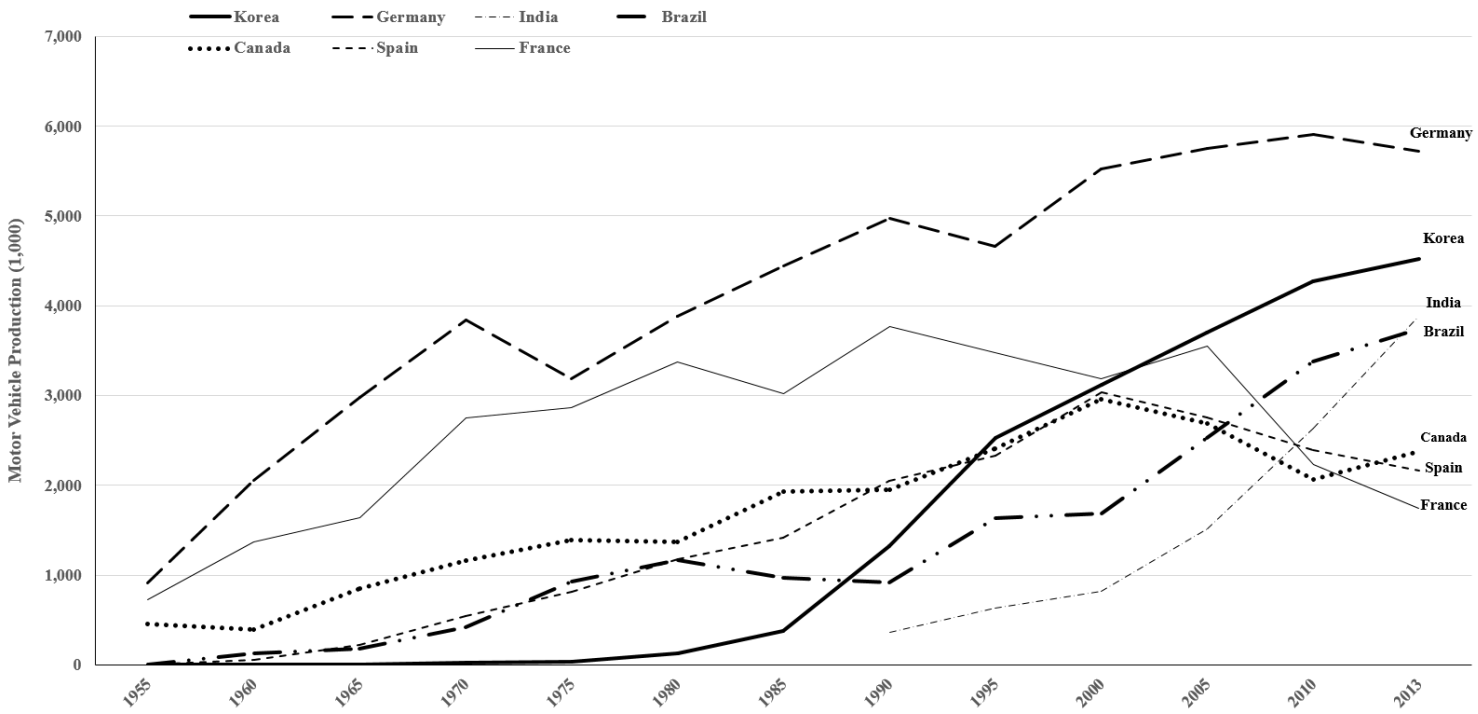
[39] The term "automobile industry" refers to the assembly and production of parts and components, passenger cars, and commercial vehicles.

[40] Completely knock-down (CKD): completely disassembled cars are shipped and then assembled locally.



Note: *West Germany before 1990.
Source: OICA, Production Statistics, http://www.oica.net/category/production-statistics/ (accessed March 22nd, 2014).

Figure 7-1a. World motor vehicle production top 10 (by country)



Notes: 1) *West Germany before 1990; 2) China, the U.S.A., and Japan was eliminated.
Source: OICA, Production Statistics, http://www.oica.net/category/production-statistics/ (accessed March 22nd, 2014).

Figure 7-1b. World motor vehicle production (top 4-10 countries)

By utilizing the double diamond model, Sardy and Fetscherin (2009) analyzed the competitiveness of Korean automobile companies and compared it with that of China and India. The selection of proxies to analyze the industry was arbitrary without any good reasoning for the choice. Based on these proxies, they concluded that the Chinese automobile industry is as competitive as that of Korea, and by contrast, India is less competitive than Korea's automobile industry.

Although Sardy and Fetscherin (2009) conducted a research on the competitiveness of Korea's automobile industry more comprehensive than any, it faces limitation to explain how the industry gained competitiveness on the four determinants in the domestic and international scope. This is because the diamond model and its extension evaluate only the current status of the industry. In order to explain the dynamics of evolution and development, Moon's (2012) ABCD framework with historical approach is employed.

Korean automobile companies have an important role in the history of Korea's economy, where entrepreneurs and businesses operated under a comprehensive system of government guidance at the initial stage of economic development. The government intervened in the industry to enhance the competitiveness (Green, 1992; Kim, 1997). In this regards the history of Korea's automobile industry by regime to analyze the core reasons of Korea's automobile industry development should be reviewed.

One last important point is the fact that successful development of automobile industry is very unique in recent history. After the Second World War, no country other than Korea fostered the emergence of indigenous automobile manufacturers. Furthermore, to date, Korea is the only country, among developing countries, with an indigenous auto-manufacturing base capable of competing in the international market (Abrenica, 2002). Therefore, a rigorous research on Korea's automobile industry is very meaningful.

7.2 From liberation to Rhee Syngman regime (1945-1960)

Rhee Administration focused on fostering parts and components industry, rather than auto-manufacturing *per se*. Korea did not have much technology to produce cars, so abandoned

military vehicles were rebuilt for civilian use. Especially, during the Korean War, small enterprises established businesses for maintenance and repair of the U.S. and Korean military vehicles. On the government's perspective, one of important conflicting issues for the industry during this period was foreign currency. The more cars, the more petroleum needed. Thus, the industry could not have a decisive position for further development.

7.2.1 Domestic and international circumstances

When Korea was liberalized, there was not much industrial infrastructure in the South. Also, most of the infrastructure was devastated during the Korean War. Korea is not a natural resource-endowed country and also lacked technology capacity. The only source that Korean could take advantage of was relatively abundant unskilled labor. Thus, economic development policy reforms rested on prior institutional reforms and capabilities (Haggard and Pang, 1994).

Korea depended heavily on foreign aid and financial assistance from the United Nations Korean Reconstruction Agency (UNKRA, 국제연합한국재건단) and members of the UN, principally the U.S. However, the economic stabilization was hampered due to considerable proportion set apart for defence expenditure (Deger, 1986). On the other side, the government also tried hard to promote industrial development, such as textile and cement, emphasizing power generation.

However, the reduction in direct aid from the U.S. in 1957, caused a shortage of raw materials for import-dependent industries due to lack of capital. This led to an overall economic decline. Furthermore, the ruling party paid more attention to political survival than to economic development in the late 1950s. Eventually, although the Rhee Administration set up a comprehensive Seven-Year Economic Development Plan in January 1960, it could not be implemented because of resignation of President Rhee.

On the other side of the globe, the automobile industry was one of the most promising businesses in the U.S. and American companies soon expanded its power all over the world. Meanwhile, Japan increased car production rapidly and the government promoted the public to own cars in the mid-1950s (Barjot, 2013). In the late 1950s, Japanese automakers entered the U.S. market and competed against American and European companies in the U.S. market.

7.2.2 Evolutions of policies and business/corporate strategies

After liberation, the U.S. Military Government was established. During this period, abandoned military vehicles and their parts and components were recycled for civilian use. This became a humble recycling business and stimulated parts and components industries inside Korea. In this context, Joseon Automotive Industry Association (조선자동차공업조합) and Joseon Association of Automotive Suppliers (조선 자동차부품 대책 위원회) were formed. Later, Korea's automobile industry Association was established, integrating auto mechanics with production businesses. During this period, the market was created by government, notably for the military use.

In 1950, the Ministry of Commerce, the Ministry of Transport, and the Ministry of National Defense designated thirteen specific auto-parts and promoted localization of them. These thirteen were prohibited from import. This is the first industrial policy that the Korean government initiated. However, because of the Korean War, this plan was not fulfilled. The total number of cars in Korea was 16,431 in 1949 and almost 75% of them was destroyed by 1951 (KAMA and KAICA, 2005: 1111). This sudden decrease in market size and "imported" parts and components hampered the development of Korea's automobile industry and disassembled U.S. military vehiclesthat were transferred to private ownership or abandoned; interestingly, this provided important source for spare parts.

The first Korean car, *Sibal* was built in 1955 and in the same year Shinjin Industry[41] and Ha Dong-hwan Motors Workshop were established; more cars were rebuilt from abandoned U.S. military vehicles and the number of cars increased gradually (see Table 7-1). However, on May 8th 1957, situation became unfavorable for the industry when the government announced "5.8 line policy" to limit the number of automobiles in Korea to save foreign currency spent on importing gasoline. Gas was put on rations due to the lack of foreign currency to purchase it; spontaneously, demand decreased and only few foreign cars were imported.

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[41] It is necessary to distinguish Shinjin Motors (신진자동차공업) from Shinjin Motor Co. (㈜신진자동차). Shinjin Motors was formerly Shinjin industry (신진공업) which was established in Feb. 1955 and changed its name to Shinjin Motors in Jan. 1966, which later became GMK, Daewoo Motors, and GM Daewoo consequently. Shinjin Motor Co. was formerly established in Apr. 1974 as Shinjin Jeep Motors (신진지프자동차) and renamed as Shinjin Motor Co. in Mar. 1979. It became Geohwa Co. (거화) in Mar. 1981 and was merged to Dong-A Motors (later SsangYong Motors) in June 1985. *See* appendix "3. Evolution of Korea's automobile companies."

Table 7-1. Production of *Sibal* (1955-1961)

	1955	1956	1957	1958	1959	1960	1961	Total
No.	7	74	372	140	430	550	662	2,235

Notes: 1) Data of 1958-1961 are estimated by KAMA; 2) *See* appendix "3. Evolution of Korea's automobile companies."
Source: KAMA and KAICA (2005), originally from Korean Development Bank (1961). Industry of Korea.

During this period, many automobile service centers and "producers" were founded which later transformed to large companies that actually manufacture cars. However, the development of the industry became stagnant; the industry's proportion to Gross national product (GNP) was not significant and did not much improve (see Table 7-2).

Table 7-2. Presence of the automobile industry in Korea (1953-1958)

Yr.	GNP	% of automobile industry to GNP	% of automobile industry to total manufacturing industry
1953	8,563	0.12	1.44
1954	9,077	0.12	1.36
1955	9,473	0.14	1.29
1956	9,427	0.14	1.09
1957	10,339	0.16	1.26
1958	10,996	0.14	1.06

Unit: 100 million hwan
Source: KAMA and KAICA (2005), originally from Korean Development Bank (1961). Industry of Korea.

7.3 Park Chung-hee regime 1 (1962-1972)

The real development of the industry was initiated in 1962 with the Automobile Industry Protection Law (AIPL, 자동차공업보호법) as a part of the first Five-year Plans. However, the law was not consistent due to a shaky condition of the industry. In order to achieve *the economies of size*[42] of auto companies, the inexperienced government intervened seriously by integrating

[42] Economies of scale describe how productivity increases when the firm increases its scale of production. Economies of size describe the impact on cost per unit of output when production increases in a cost minimizing way. "Economies of scale" is a technical term that describes the properties of the production function. "Economies of size" is an economic term that describes the behavior of the (long run) cost function (Rasmussen,

small companies. During this period, Park Administration focused on restructuring unorganized facilities, improving related systems and regulations, and increasing localization of auto-parts and manufacturing. Despite various efforts, the fruitful development was not achieved.

7.3.1 Domestic and international circumstances

President Park Chung-hee took over the government; however, his military regime was disapproved by the U.S. Thus, he had to cope with the abrupt suspension of economic assistance from the U.S.[43] In this context, Park believed that the huge trade deficits should be reduced for self-sustainment of Korea and Park Administration formulated and implemented a series of Five-year Economic Development Plans since 1962.

In the 1960s, Korea targeted all industries to export to gain foreign currency and encouraged the accumulation of factors, particularly skills and technology (Dollar and Sokoloff, 1994). During this period, Korea achieved rapid growth in manufacturing sectors, notably the light industry. For further economic take-off, Korea desperately needed more foreign currency. Therefore, a unique policy, which made Korea different from other industrialized countries, appeared and applied to most of its industries: state exercises over private companies (Amsden, 1989: 14). The main discipline of this unique policy penalized poor performers and rewarded only good ones in order to push private companies for better performance.

Also, the government devaluated Korean won from KR₩130 to KR₩255 to US$1 in May, 1964, to gain more foreign currency through intensive exportation by 96% (Moon *et al.*, 2012). This increased the exportation of Korea considerably. Besides gaining foreign currency, private companies formed partnerships with foreign companies and enhanced its production technology. In the late 1950s, Japanese auto-makers began its expansion in the U.S. and its fast growth surprised American automakers. The U.S. introduced Chicken Tax and imposed 25% of tariffs on imported light trucks from Japan in 1964. Despite the tariff, Japan could still expand its market share in America.

2013: 111-112).

[43] Most of the South Korean budget was made up of the counterpart fund originating from U.S. aid (Kim and Baik, 2011).

7.3.2 Evolutions of policies and business/corporate strategies

Right after the coup d'état in 1961, the Park Chung-hee Administration set forth economic plans for the automotive industry in 1962 with the "AIPL," a part of the First Five-year Development Plan. This law aimed to protect Korea's automobile industry. The Ministry of Trade and Industry had the authority to prohibit importation of foreign cars (except cars imported as CKD), subsidized loans, export subsidies, tax incentives, and tariff- and tax-free for imported components which could not be produced in Korea (Truett and Truett, 2012).

Also, AIPL offered special favor to selected companies in the industry. Around this time, many auto-manufacturers appeared, such as Saenara Motors, Kia industry, and Ha Dong-hwan Motors Co. One of the great beneficiaries was Saenara Motors which had a technology partnership with Nissan, backed up by huge capital of Chairman, Park No-jung.[44]

Behind the rationales of this law were to accumulate and earn more foreign currency by localizing auto-parts production and fostering parts and components sectors, which would eventually induce to importing less and exporting more. Despite the efforts, this law was not effective unlike the government expected. From corporation view, importing auto-parts was less expensive than developing them domestically. Companies focused on more importation of auto-parts and development of parts and components became slow-down and hampered.

In this regard, the Park Administration applied several different ways of management. In the end of 1963, the government announced Unification Plan (자동차공업 일원화 방안) to establish a "national champion," unifying all the automobile companies into one. This was intended for effective development but was not done due to complicated administrative

[44] Regarding the appearance of Saenara Motors, Green (1992: 413-414) described that "the impetus for the AIPL came neither from the government bureaucracy nor from the private sector; rather, it was the product of political lobbying by Kim Jong-pil, the director of the newly created Korean CIA, on behalf of Nissan Motors, which along with its local partner Saenara Motors (founded by Park No-jung, a Korean resident of Japan), sought access to the nascent Korean market." On the other hand, KAMA and KAICA (2005: 145) delineated that an important senior official visited Taiwan and was surprised by advanced Taiwanese automotive industry. This is why he decided to promote automotive industry in Korea. His team benchmarked Taiwanese case and contacted Nissan which had a partnership with Yue Loong, the largest automotive company in Taiwan at that time.

process.[45] Therefore, in August 1964, Automotive Industry Comprehensive Promotion Plan (자동차공업 종합육성계획), a more feasible plan was introduced—one single integrated assembly line with many auto-parts producers to meet the entire domestic demand. To realize this plan, Shinjin Industry (renamed as Shijin Motors in 1966) was chosen and under-performing Saenara Motors was merged into Shinjin.

Also, the government strengthened the authorization standard for auto manufacturers, such as partnerships with foreign companies, certain level of foreign investment, site size, and machines. However, the localizations of auto-parts and production was still not fruitful (see Table 7-3).[46] So, in 1969, the government introduced "Automotive Industry Promotion Law." The government set up three steps to develop automobile industry: completion of assembly plant (1967-1968), establishment of an engine manufacturing plant (1970-1973), and production of 100% Korean-developed car (1973-1976).

Table 7-3. Vehicle production (1962-1972)

	1962	**1963**	**1964**	**1965**	**1966**	**1967**	**1968**	**1969**	**1970**	**1971**	**1972**
No.	1,777	1,254	249	141	3,430	6,604	17,657	30,994	28,819	23,002	18,648

Source: KAMA and KAICA (2005)

Furthermore, the government banned importation of foreign cars and parts. This is because various models were imported as CKD and importers kept bringing new models. Due to this insufficient quantity of imported cars, Korea auto-parts companies had to produce various parts and components without economies of scale. This is what led the Park Administration to promote localization through mass-production.

The administration believed that Automotive Industry Promotion Law could have expanded the economies of scale and high-volume with a few basic models, thus avoiding

[45] At the beginning, the government intended to develop the industry through competition of firms. However, insufficient capital discouraged and hindered the development. The government tried to unify a number of automobile companies into a few large companies to boost the industry and improve localization of car production. *See* KAMA and KAICA (2005: 147).

[46] The government authorized Shinjin Motors under condition that the localization would reach 97% by May 15, 1965. However, it was only 21% in 1966 and 23.6% in 1967. The government was convinced that Shijin did not give much effort for localization under monopolistic situation (KAMA and KAICA, 2005).

multi-models in small quantity. Also, instead of vertical integration between assembly companies and spare parts producers, horizontal integration was pushed forward. The government even planned to establish an engine manufacturing plant by February 1970. During the period, parts producers gradually expanded its domestic market and gained technology due to the favorable import ban of selected parts and components alongside the partnership with foreign companies.

As the demand for automobiles gradually increased, oil consumption increased as well. Thus, the government raised the commodity tax for automobiles to 30% to decrease purchase of car, and eventually to decrease oil importation. Due to this action, the demand decreased immediately. Auto-manufacturers produced more cars than before although Korean economy became slower. To the auto makers, there was excessive competition in the domestic market. Meanwhile, parts manufacturers expanded its market to Southeast Asia since mid-1960s (KAMA and KAICA, 2005: 164). Around this time, other manufactures such as Hyundai Motors and Asia Motors (Hereafter Asia) joined the industry.

It is noteworthy that although Korea protected the automobile industry by banning imported parts and components as well as completed foreign cars, while pushing localization of production forward. Its intention is to nurture and upgrade the industry rather than to protect and maintain the *status quo*.[47] Furthermore, despite the weak competitiveness at the infant stage, the participants—car assembly companies, auto-parts producers, and the government—in the automobile industry were always looking forward to expand the market through export.

7.4 Park Chung-hee regime 2 (1973-1979)

The focus of government policies changed from localization of parts and components to development and exportation of Korean own model cars. Finally, under huge efforts, the government and Korea's automobile industry achieved what they had hoped. Hyundai produced

[47] According to KAMA and KAICA (2005), while having car manufacturers upgrade assembly skills by importing CKD kit, the government strongly promoted localization of parts and component. To nurture auto-parts sector, the government and corporate alliances, for example, kept renewing the list of banned auto-parts of which the localization was completed (p. 593).

100% Korean-produced cars and exported them abroad. Also, during this period, other auto-manufacturers started to produce automobiles. As their markets had expanded both domestically and internationally and had accumulated manufacturing technology, Korea's automobile industry passed the infant stage and entered the growth stage.

7.4.1 Domestic and international circumstances

Through the development of light industry, Korea had become a middle-income country from being one of the world's poorest countries. However, Korea recorded increasing trade deficit due to the importations of raw materials and machines for the light industry. Also, other developing countries followed the similar development path. Thus, competition in the world market became severe. In this regard, Korea had to find new industry for further take-off.

In this period, President Park introduced the Yushin Constitution[48] and wanted to further strengthen Korea's economy by fostering Heavy-Chemical Industry (HCI)—steel, non-ferrous metals, machinery, shipbuilding, electronic, and chemicals. Thus, government's industrial policies were favorable for HCI which increased industrialization.

To support this development further, Park Administration established a number of vocational schools, colleges, and research institutes, and modernized the rural areas. However, Korea's economy was suffering from two consecutive oil shocks in 1973 and 1979. More surprisingly, President Park was assassinated in 1979.

Japanese domestic auto market was growing and provided the U.S. military with military to support the Vietnam War. Especially, experiencing the first Oil Crisis, American consumer's buying behavior shifted from large and powerful to fuel-efficient cars. Japanese firms lined up with fuel-efficient small engine automobiles and were in a good position. To compete with Japanese companies, American firms looked for optimal out-sourcing site and started to invest seriously in Korea.

[48] "Revitalizing reform" in Korean, but it was more like a constitutional codification of a powerful rule (Lee, 1999; Kim, 2006).

7.4.2 Evolutions of policies and business/corporate strategies

On January 30th, 1973, policies for developing HCI were announced and it marked a major turning point in the Korean economy. As part of the HCI sectors, automobile industrial policy changed from localization of auto-parts to development of mass production system, particularly with substantial domestic contents (Truett and Truett, 2012).

Korean government realized that the automotive industry was in the vicious circle and tried to find a way to escape from it. Several points about this vicious circle can be highlighted as follows: quick model changes, small production, and consequent high cost which are due to CKD and importation (KAMA and KAICA, 2005). To overcome these problems, the government faced the need to manufacture Korean-developed car. As a result, the government implemented "Automobile Industry Promotion Plan (자동차공업육성계획)" on January 16th, 1974; import tariff raised from 150% to 250% to foster and motivate local firms.

The Park Administration set a goal to build a half a million vehicles annually by 1981 and was intimately involved with the production process of Korean-developed cars. The new rules included the exclusion of new entrants to the domestic market, tax reductions and concessions, promotion of vertical integration, preferential financing, and a decree that guaranteed a large market share for domestically-produced cars in order to establish a few companies with economies of size, thus several national champions (L. Kim, 1998; Kim and Kim, 2002).[49]

Due to the first oil crisis in 1973, Korean automobile producers had financial difficulties. However, this newly introduced measure to secure a large market share played a role as a good motivation; a firm can be a dominant player, if the goal is achieved. Korean companies took two different ways. One group followed a path to develop Korean cars at the beginning, in other words from zero base, and the other pursued to intensify gradual localization to reach 100% Korean-developed car (KAMA and KAICA, 2005: 204).

However, since these Korean companies did not have enough technology, they preferred to have partnership with foreign firms. Meanwhile, Korean assembly companies realized difficulties to cooperate with foreign MNCs since MNCs preferred to have Korean

[49] *See* also KAMA (1999).

companies as original equipment manufacturer (OEM) without transferring advanced technologies. In this context, Korean automobile producers wanted to develop Korean standard model automobiles and to expand their market overseas with indirect help from foreign companies.

On the other hand, auto-parts producers cooperated to establish an affiliated research centers within relevant sectors which were intended to reduce overlapping investment and to advance technology with a help of government investment. Assembly companies and auto-parts producers had tight relationship for efficient procurements, thus vertical systemization was accelerated.[50] It was a win-win partnership based on long-term contracts—although the government preferred horizontal systemization at the beginning of automobile industry development (Mukherjee and Sastry, 1996). Also, the expanding domestic market in the mid-1970 constructed favorable circumstance for the development.

It was Hyundai which lead the development of Korean standard model automobile. Hyundai chose a very different strategy from other existing manufacturers. Initially, Hyundai also wanted to have a partnership with foreign counterpart, such as Ford, for gradual localization of automobile production. However, dealing with foreign companies was complicated and Chairman Chung Ju-young Chung of the Hyundai Group decided to construct its own plant with the money earned from construction and shipbuilding.

Hyundai contacted Italian companies for designing cars and looked for British and Japanese auto-parts producers for engines and transmission. Furthermore, the company hired British staffs and engineers, sent Korean technicians to Mitsubishi, and designers to Italian companies. Through these tremendous efforts, Hyundai could produce its first Korean-developed car, Pony in June, 1974.

This bold attempt with high risks returned Hyundai the invaluable asset of independence and autonomy at a point when it was beginning to penetrate overseas markets in 1980s. Unlike Mazda- and Ford-affiliated Kia or GM-affiliated Daewoo, Hyundai could enter the world market and rise as one of the major automobile makers in the world (Cho, 1994).

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[50] Korean automobile companies could reduce the total time needed from scratch to market for a new car to about three years, which is very impressive compared to other competitors. In reality, they would save several millions of dollars and reduce risk significantly in the process (Lee, 2011: 430).

Also, around the time when Hyundai developed Pony, Kia also built a car called Brisa in the end of 1974, based in the Mazda Famillia. Brisa had the dominant share in the Korean market in 1975. During this period, Hyundai commercially produced Pony in the end of 1975. These two companies were in competition and tried to develop better models and cars. Eventually, Hyundai became the top dominant player with Pony in the domestic market by 1977 (see Table 7-4).

Table 7-4. Korean automobile production trends (1973-1979)

Yr.	Hyundai	Kia	Asia	Saehan	SsangYong	etc.	Total
1973	6,989	8,373	1,407	9,405	140	-	26,314
1974	8,992	14,482	740	6,076	161	-	30,451
1975	7,092	20,354	413	8,405	915	-	37,179
1976	19,289	20,250	262	8,491	1,253	-	49,545
1977	38,254	29,484	1,325	13,997	2,150	-	85,210
1978	81,779	45,746	2,161	26,769	2,503	-	158,958
1979	103,845	58,248	1,595	38,693	1,935	131	204,447

Source: KAMA and KAICA (2005)

7.5 From Chun Doo-hwan to Roh Tae-woo regimes (1980-1992)

Korean automobile industry started to push its production capacity since the early 1980s and tried to manufacture ahead of demand, anticipating that domestic and international market would grow. This over-investment strategy drastically reduced catching-up tie by accumulating technologies and by achieving economies of scale, coupled with competition against foreign cars in Korea and abroad (Lautier, 2001). Also, one important aspect is that Korean automobile companies were slowly getting out of government control and became more involved in relatively free market system. In this regards, Korean firms took advantage of inward and outward FDI.

7.5.1 Domestic and international circumstances

In 1980, the second oil shock, coupled with the political turmoil created by the assassination of President Park Chung-hee in 1979, surprised Korea that was way on its economic development

with the HCI initiatives. At that time, Korean domestic market shrunk and exports dropped almost by 16%. Particularly, the average capacity utilization rate sank to 34.3% in 1980 (Chu, 1994). The financial status of large conglomerates was deteriorating as well. When Chun Administration started, policy makers dealt with the excesses created by the HCI plan during the 1970s. Thus, the Korean government employed restrictive industrial policies and intervened in businesses of private companies.

The U.S. lost its competitiveness in manufacturing industry over the 1970s and faced an economic recession in the early 1980s due to emergences of European, Japanese and NICs. In order to reduce trade deficit, the U.S. government started to increase pressure on important trade partners to ask further importations of American goods and services. This pressure generated considerable tension in the global market.

The U.S. automobile industry has undergone tremendous structural change in 1970s and faced increasingly fierce competition from foreign manufacturers during 1980s. Particularly, Japan emerged as the world's leading producer of automobiles. On the other hand, the U.S. production share reached around 21%, dropping from almost 48% in 1960 and 76% in 1950 (Bryant University, 1998).

7.5.2 Evolutions of policies and business/corporate strategies

From the end of 1979 until 1981, the automobile industry faced a sudden crisis caused by domestic uncertainty after the assassination of President Park Chung-hee and the second oil shock. The domestic automobile demand decreased and the new government headed by President Chun Doo-hwan, considered that HCIs were overinvested. Thus, Automobile Industry Integration Action (자동차공업 통합조치) was announced on August 20th, 1980.

Several companies were ordered to stay out part of their business and merged with others to create a clear cut division of business. For example, Hyundai and Saehan were enforced to be integrated into a single company for producing passenger vehicles, while Kia was only for commercial vehicles (e.g., 1-5 ton trucks). By monopolizing their proper market, the government thought the economies of scale could have been assured during the economic difficulty.

Government poured tremendous attempts and various measures for several years to

intervene and construct industrial structure. However, it was not successful. The integration between Hyundai and Saehan, as a part of Automobile Industry Integration Action was not successful. GM owned 50% of Saehan and was still in charge of management. GM was not interested in equal partnership with Hyundai as the government and Hyundai had proposed (Steers, 1999). This policy put off automobile industry's growth for several years without fruitful outcome, although enormous inputs were rendered (KAMA and KAICA, 2005).

The Chun Administration acknowledged drawbacks of the integration action and later introduced the Automobile Industry Rationalization Plan (자동차산업 합리화 조치) on February 28th, 1981 and followed by the modification on July 26th, 1982. Korea Automobile Manufacturers Association (KAMA) and Korea Auto Industries Cooperative Association (KAICA) argued that these anti-market policies, that hinder free competition, affected negatively on the industry. The integration policy was nearsighted—merely to normalize the industry without any long-term plan and the idle assets and other uncountable assets of each company were huge (KAMA and KAICA, 2005: 220).

As market situation improved by expansion of foreign market, notably in Northern America, Hyundai was able to mass produce passenger cars and export to Canada in 1983 and finally to the U.S., the largest car market, in 1986.[51] The following year, Hyundai increased its sales in the U.S. by 56% despite 10% of the market downsizing. Thus, Korea had become the first developing nation to gain a significant presence in the American import car market (Green, 1992).

At this point in time, car makers started to invest in R&D in earnest to enhance the competitiveness facing competitions against foreign car makers abroad (KAMA and KAICA, 2005). Green (1992), Waitt (1993), and Catalan (2010), said that Korean automobile companies'

[51] Hyundai's market expansion to Canada attracted investment by U.S. big three toward Korea for producing small car, when the voluntary export restriction on imports of Japanese cars to the U.S. market hampered U.S. carmaker's offshore sourcing strategy in Japan. Ford and Chrysler wanted to catch up with GM which already had joint-venture with Daewoo. Ford approached Hyundai but failed although they successfully reached a joint-venture deal with Kia and its partner Mazda in 1985. In 1987, when the rationalization plan was cancelled, this cooperation started when Kia was officially allowed to resume production of passenger cars. Chrysler tried to have joint venture with Samsung in 1984, but it failed due to government's opposition of Samsung's entry in the industry (Chu, 1994).

production cost reduction and entry into the North American market were outcomes of the rationalization as a remedy for integration plan, due to the “relatively” fair competition.

Having considered the automobile industry to be a critical industry of Korea’ economic development, the government has been involved in the industry through a variety of policies, including export promotion and acquisition of technology. Moreover, the government intervened in this industry with policies designed to lower costs and rapid growth. Although the Park and Chun Administrations intervened aggressively in the industry, their policies differ from each other. The Park Administration had long-term plan, such as localization of automobile parts and home-developed cars, whereas the Chun Administration aimed to stabilize the industry and overcome the sudden and temporary crisis.

As the Automobile Industry Rationalization Plan was cancelled in 1987, Hyundai and Daewoo (Saehan changed its name to Daewoo Motors) could participate in producing commercial while Kia focused on the passenger vehicle production. These manufacturers were competing in domestic and the U.S. market. Also, by July 1st, 1989, new entrants were permitted; Halla Group, Daewoo Shipbuilding, and Samsung Heavy Industries (SHI) eventually entered the large commercial vehicle market (see Table 7-5).

Table 7-5. Korean automobile production trends (1980-1992)

Yr.	A	B	C	D	E	F	G	H	etc.	Total
1980	61,239	-	33,369	1,220	24,413	-	-	2,877	17	123,135
1981	70,051	-	36,039	2,129	20,411	-	-	4,454	-	133,084
1982	90,983	-	42,525	2,739	22,796	310	9	3,140	88	162,590
1983	108,117	-	63,638	8,309	35,146	135	31	5,518	125	221,019
1984	140,871	-	75,007	2,516	42,357	130	12	4,429	39	265,361
1985	240,755	-	84,931	3,480	44,935	46	4	3,998	13	378,162
1986	428,934	-	104,007	6,585	55,826	71	-	5,759	364	601,546
1987	606,816	-	197,094	7,412	162,225	167	-	5,662	363	979,739
1988	647,387	-	249,473	14,245	162,788	80	-	8,688	994	1,083,655
1989	614,379	-	316,893	15,482	161,925	121	-	19,316	1,354	1,129,470
1990	676,067	-	396,325	25,374	201,035	158	-	22,148	523	1,321,630
1991	767,090	3,006	425,296	28,020	207,826	40,316	-	24,663	1,601	1,497,818
1992	859,250	24,264	502,227	51,553	188,703	81,050	-	21,439	1,210	1,729,696

Notes: 1) A-Hyundai Motors Co.; B-Hyundai Precision & Industries Corporation; C-Kia Motors Co.; D-Asia Motors Co.; E-GM Daewoo; F-Daewoo Bus; G-Samsung Heavy Industry; H-SsangYong; 2) Data of 1982-1992 in Daewoo Bus are the production of Daewoo Heavy Industry.
Source: KAMA and KAICA (2005)

Furthermore, under the pressure by the U.S., the government accepted liberalization plan in 1985. However, strategic sectors such as automobile industry were governed by a new

Industry Development Law (공업발전법) enacted in 1986, which means the automobile importation would be liberalized at a planned pace. Also the tariff rate for imported small passenger cars dropped from 200% to 100% at the end of 1987 and to 30% in 1988.

7.6 From Kim Young-sam to Kim Dae-jung regimes (1993-2002)

Korean auto-manufacturers aggressively penetrated into foreign countries by market expansion and outward FDI. These strategies brought tremendous debts to companies. Due to the Asian economic crisis of 1997, Korean automobile companies had to experience restructuring process to overcome difficulties and to improve competitiveness. While Korea was looking for various measure to overcome the crisis, foreign auto-manufacturers could directly participate in Korea's automobile industry and its market. The restructuring and increase of export helped Korean companies to recover from the economic crisis.

7.6.1 Domestic and international circumstances

In the late 1992, Korea entered a new stage, from military to civilian government. Kim Young-sam Administration embraced freer market and globalization in 1994 (Bobrow and Na, 1999). As a result, government's economic policies became more market-friendly. These actions helped Korean economy for a further take-off, but Korea soon faced a severe economic crisis in the following year because of unstable and unprepared financial system to meet a new financial reform (Moon *et al.*, 2012).

During this period, Korea's automobile industry entered growth stage from enfant stage through gaining competitiveness. With expanded domestic and international markets, Korean auto manufacturers enjoyed unprecedented autonomy since the beginning of automobile industry with relatively lowered government intervention.

However, Korea's automobile industry faced severe restructuring processes during the economic crisis of 1997 with help of the International Monetary Fund (IMF). Furthermore, Kim Dae-jung, the successor of Kim Young-sam Administration continued industrial restructuring. He also promoted inward FDI and deregulated unnecessary restriction for business to make

more favorable business environment.

7.6.2 Evolutions of policies and business/corporate strategies

When Samsung Group (hereafter Samsung), one of Korean *chaebols* declared its participation in passenger vehicle manufacturing in the middle of 1993, incumbents were against Samsung's entry. The existing companies argued that the entry of Samsung would cause an excessive competition in marketing and sales, rather than technology and competitiveness.[52] Actually, since Samsung started its passenger vehicle business, Nissan had been a technical partner of Samsung including car-producing technology, facilities, and manpower (Park, 2003).

The existing participants also considered that there were already enough number of competitors in the small domestic market and Samsung would induce conflict in the industry when technician, researcher, parts suppliers, and others are taken away from existing manufacturers (KAMA and KAICA, 2005: 318-319).[53] Korean government was in line with this view (Lee, 2000). Nevertheless, Samsung successfully entered the passenger vehicle industry and built a manufacturing plant in Busan, the second largest city in Korea, with Samsung's aggressive lobbying, support by the Busan citizens (Kim and Kim, 2002; Park 2003; The Hankyoreh 21, 2004; KAMA and KAICA, 2005: 318-328).[54]

Meanwhile, the exportation to the U.S. decreased significantly from the late 1988 due

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[52] Officially, most of existing participants in the industry and KAMA were opposed to the entry of Samsung; however their solidarity were very weak. The biggest manufacturer in the market, Hyundai accepted fair competition and Daewoo was focused on ending the relationship with GM and looking for a technical cooperation with SsangYong. Kia was the only one that expressed dissenting opinions (Heo, 1994).

[53] According to KAMA and KAICA (2005), when one of Samsung's affiliate, SHI tried to enter the commercial vehicle industry, all of existing auto manufacturers bitterly opposed to SHI's participation. They argued that Samsung's intention is to enter the passenger vehicle market. This meant that Samsung would bring foreign CKD and technology, notably from Nissan, which is superior to Korean, due to lack of experience and skill to produce cars. Hence, existing players insisted that it would harm the whole Korea's automobile industry. Samsung confirmed that it would not enter the passenger vehicle market. However, Samsung Motors, for passenger vehicle, was founded in 1994 and produced first products in April 1998 (pp. 315-328).

[54] Kim and Kim (2002) said that as the entry of Samsung into the automobile industry, no more substantive government industrial policy was effective.

to quality problems. During this period, Korean auto makers diversified their exportation and tried to enhance quality of cars (see Table 7-6). The exportation bounded back in 1991 and surpassed the peak year, 1988. Particularly, from 1996 to 1988, the annual export growth rate reached 67% (KAMA and KAICA, 2005: 329, 332).

Table 7-6. Regional diversification of Korean automobile export (1988-1997)

	1988	1991	1993	1995	1997
North America	513,415	228,945	140,702	202,786	237,690
	(89.1%)	(58.6%)	(22.0%)	(20.7%)	(18.0%)
Western Europe	21,104	55,833	131,329	276,549	362,590
	(3.7%)	(14.3%)	(20.6%)	(28.3%)	(27.5%)
Eastern Europe	-	17,662	26,506	76,065	187,102
	-	(4.5%)	(4.2%)	(7.8%)	(14.2%)
Middle East and Africa	15,304	21,158	112,882	142,595	155,113
	(2.7%)	(5.4%)	(17.7%)	(14.6%)	(11.8%)
Asia-Pacific	17,905	52,171	132,029	115,093	173,648
	(3.1%)	(13.4%)	(20.7%)	(11.8%)	(13.2%)
Latin America	8,406	13,177	95,106	165,601	200,748
	(1.5%)	(3.4%)	(14.9%)	(16.9%)	(15.2%)
Total	576,134	390,362	638,557	978,688	1,316,891
	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)

Note: Unit-number of automobiles exported and %.

Hyundai, Daewoo, and Kia even competed against one another in foreign markets as well. On the other hand, the domestic market increased drastically from 1987 which offset the decrease of exportation to the U.S.; from 1987 to 1993, the growth rate of domestic market was 21% (KAMA and KAICA, 2005: 349). Since 1993, domestic automobile manufacturers started to compete over sales and marking as they worried when Samsung entered the industry.

However, the industry began to face difficult issues; air pollution issues in 1987, market liberalization pressure in 1993, stagnant domestic market growth but increased customer sophistication in 1994. Thanks to strong desire to export and tightened domestic regulation, Korea established emission control laws which were as demanding as that of American (KAMA and KAICA, 2005: 432) (see Table 7-7).

Table 7-7. Korean automobile production trends (1993-2002)

Yr.	A	B	C	D	E	F	G	H	I	Etc.	Total
1993	960,057	36,083	600,054	55,492	306,306	69,380		22,075	-	761	2,050,208
1994	1,134,611	39,430	619,875	55,586	347,747	65,998	1,121	46,375	-	920	2,311,663
1995	1,213,694	41,140	631,644	59,509	459,058	61,383	3,444	54,356	-	2,172	2,526,400
1996	1,281,762	60,228	703,116	53,657	458,237	174,437	2,804	76,940	-	1,533	2,812,714
1997	1,239,032	71,326	613,920	45,952	617,604	146,653	2,981	79,907	-	900	2,818,275
1998	770,558	74,938	362,947	26,549	392,593	239,738	994	44,186	41,593	398	1,954,494
1999	1,220,243	49,498	680,953	19,280	698,919	59,664	9,901	98,194	6,362	100	2,843,114
2000	1,525,167	-	803,394	-	624,534	-	15,943	116,879	28,787	294	3,114,998
2001	1,513,447	-	851,642	-	387,134	-	-	125,020	68,679	407	2,946,329
2002	1,702,227	-	871,812	-	293,897	710	882	161,014	116,963	79	3,147,584

Notes: 1) A-Hyundai Motors Co.; B-Hyundai Precision & Industries Corporation; C-Kia Motors Co.; D-Asia Motors Co.; E-GM Daewoo; F-Daewoo Bus; G-Tata Daewoo; H-SsangYong; I-Renault Samsung; 2) Data of 1983-99 in Daewoo Bus are the production of Daewoo Heavy Industry; and 4) data of 1993-2000 in Tata Daewoo is the production of Samsung Heavy Industry.
Source: KAMA and KAICA (2005).

Despite stagnation in the growth of domestic car market,[55] sales of foreign cars in Korea increased drastically since 1994. Although a number of foreign car sales increased, the number is not significant vis-à-vis that of Korean cars exported. Hence, since October 1993, the U.S. and E.U. started to press Korean government to open domestic car market to handle adverse balance of automobile trade. The government gradually lowered the imposed tax rate and tariff on imported cars and opened up the market. The opening was excelled after the Asian financial crisis in 1997.[56]

Although Korean companies enjoyed stabilization compared to previous years, they were not satisfied with the current success. In October 1992, Korean automobile manufacturers asked government to help launch strategic planning which is called later “Project X-5.” This plan aims that three main Korean car manufacturers can be listed within top 10 automobile producers by 2000 (KAMA and KAICA, 2005: 388). With tremendous endeavors of both private and public sectors, Korea became world’s fifth-biggest automobile producer in 1995.

[55] When Korea was growing at a slower pace in 1990s, the slow growth forced most Korean automobile companies to diversify their market portfolios, besides the U.S. market. They started expanding their business globally (Lee, 2011).

[56] According to Ebert and Montoney (2007), the domestic market in Korea was protected until the late 1990’s due to the government’s nationalist and protectionist policies. Therefore, Korean automobile firms dominated their domestic market with little competition from foreign companies until 1999.

Since 1987, Korean automobile giants had accumulated tremendous amounts of debt in their race to expand market. On July 15th, 1997, Kia was effectively placed under bankruptcy protection. Initially, the Korean government did not intervene seriously in the problem (KAMA and KAICA, 2005: 475), letting creditors negotiate around Kia. However, the negotiation was too slow and the government worried that it would affect and weaken Korea's financial system. Thus, in October 1997, Korean government decided to intervene in settling down the Kia crisis.

At the beginning, the government decided to run Kia as a state-owned corporation and then sell it later when Kia's financial situation improves. However, the workers' union and management of Kia, as well as the International Monetary Fund (IMF) which engaged in the Korean financial crisis on December 3rd, 1997, rebuked this deal. The newly elected President, Kim Dae-jung (1998-2003) argued that the way out of the crisis was to reform the government-bank-business nexus, induce inward foreign investment, and then increase exportation (Cummings, 1999: 17-44). Therefore, Hyundai, Samsung, and Daewoo, along with Ford, bid for Kia and Hyundai acquired Kia, outbidding Ford. Kia's net profit reached KR₩180 billion (approximately US$157 million) in the late of 1999 and discharged of bankruptcy in February 2000.[57]

When the IMF bailed out Korea during the crisis, "big deal," in which the *chaebols* swap subsidiaries for specialization, appeared to restructure the whole Korean industry. In January 1998, Daewoo examined the possibility of a big deal with Samsung over electronics and automobiles and suggested to map out a specific plan with Samsung in late November (The Korea Economic Daily, 2005). In December, the government also introduced a "Workout Program" which contained a big deal between Samsung and Daewoo (KAMA and KAICA, 2005: 475).

Instead of big deal with Daewoo, Samsung decided to file for court receivership in July 1999. Meanwhile, Samsung was looking for a foreign counterpart which could take over Samsung Motors. Exclusive talks took place between Samsung, Renault, a French automaker, and creditors began in January 2000 and Renault agreed to buy a 70.1% stake of Samsung. This French automaker became the first foreign carmaker to break into the Korean market. After the

[57] US$1 = KR₩1145.4 in 1999. *See* ETAXKOREA, http://www.etaxkorea.net (accessed April 10, 2014).

acquisition in April 2000, Renault renamed Samsung Motors as Renault Samsung Motors (Park, 2003).[58]

Because Samsung decided to be under the court receivership in 1999, Daewoo was left alone and the whole Daewoo Group, third largest *chaebol* at that time, ran into deep financial trouble. Since neither Korean company nor the government could afford to take over Daewoo, Korean government decided to sell it to a foreign firm. Finally, General Motors was the one who acquired Daewoo Motors in 2002. SsangYong, an SUV (sport utility vehicle) maker, was acquired by Daewoo in January 1998. However, due to Daewoo's bankruptcy, SsangYong carried out self-rescue measures only to be sold to Shanghai Automotive Industries Co. in 2005.

During the crisis, auto-parts sector were also in turmoil and this sector received a lot of FDI and through mergers and acquisitions (M&As). Korea's automobile industry became naturally globalized, both in automobile manufacturing and auto-parts sectors. After the Asian financial crisis, with the help of the depreciated Korean won, Korean automobiles had both price and quality competitiveness which was able through heavier investment in R&D. Exports to the U.S. increased since 2000 and it helped the recovery of Korea's automobile industry. Particularly, Hyundai made a grand stride in 1999 when it introduced a "10-year, 100,000 mile warranty" demonstrating significant quality and precision enhancement (CNN Money, 2007 Oct. 11).

Chang and Shin (2003) asserted that the measures to settle down the financial crisis should be interpreted as government leading M&As or restructuring. As mentioned above, however, at least for Korea's automobile industry, the Korean government was taking a wait-and-see attitude first. Only when the situations were in urgency, the government intervened actively to solve the problem at hand.

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[58] Renault remained a European-based company until the late 1990s and faced huddles in non-European markets, especially in Asia. During the same time, Nissan was almost bankrupt due to declining market share in Japan and around the world and needed to find a financial supporter. The strategic alliance between Nissan and Renault was made under these circumstances. During the big deal, Samsung preferred Renault because of its alliance with Nissan, believing that it would be much easier for Renault to take over Samsung under the Renault-Nissan alliance. Renault also believed that its takeover of Samsung would allow the Renault-Nissan alliance to achieve a broader base in Asia, including privileged access to Korean market (Park, 2003).

7.7 From Roh Moo-hyun to Lee Myung-bak regimes (2003-2013)

Internationalization of Korean automobile companies became more sophisticated: from simple market expansion to strategic production facilities to convert disadvantages to advantages (Moon and Roehl, 2001; Moon, 2002). Korean companies eventually achieved both quantities and qualities to attract consumers. Hyundai and Toyota are even in fierce competition in the U.S. market (The Asahi Shimbun, 2012 Jan. 20).

7.7.1 Domestic and international circumstances

During Roh and Lee's Administrations, globalization was further accelerated through free trade agreements (FTAs). In 2004, South Korea joined the trillion dollar club of world economies, and is currently the world's 12th largest economy. However, as the world experienced recession and the U.S. economy faced serious difficulties since 2006, Korea's export-based economy was hit hard by the 2008 global economic downturn, but quickly rebounded in subsequent years, reaching 6.3% growth in 2010 (Forbes, 2013 Dec).

Roh's regime tried to set up a welfare state in order to reduce the striking disparity in the standards of living between the rich and poor caused during the recovery process of the economic crisis in 1997. However, this measure brought more side-effects that hindered further economic development. Also, real domestic market faced difficulties. Thus, the government could not realize the desired economic achievement.

Lee Myung-bak regime employed economic policies to transform the vulnerable social and economic conditions to healthy ones. Also, the administration focused on balanced regional development as well as mutual developments of large conglomerates and small and medium-sized enterprises (SMEs). Lee Administration deregulated in order to accelerate globalization through FDI and FTAs.

During this period, many sudden changes occurred in the automobile industry throughout the world. The 2008 global financial crisis put the "Big Three" of the U.S. in difficult situation and, eventually, GM became bankrupt in 2009.[59] In the same year, China's

[59] GM, Ford, and Chrysler are often referred to as the "Big Three."

car market became the world's largest over-passing the U.S. market in terms of car sales numbers. One of the world's largest automobile manufacturers, Toyota also had a turbulent period due to Toyota recall crisis and Tohoku earthquake in the early 2011.

7.7.2 Evolutions of policies and business/corporate strategies

In 2004, Korea exported more than 2 million cars abroad for the first time (see Table 7-8). Since 2008, Hyundai entered European-dominated luxury arena by introducing a full-size luxury sedan, Genesis. As of 2013, Korea's automobile industry ranked 5th globally, measured by automobile unit production (OICA, 2013), while its domestic market size ranked 10th globally (as of 2012). Its export sales ranked 4th globally (as of 2012) (Invest Korea, 2013).

Table 7-8. Korean automobile export trends (2003-2012)

Yr.	A	B	C	D	E	F	G	Total
2003	1,012,134	528,750	256,147	1,045	329	15,406	1,127	1,814,938
2004	1,124,207	761,637	456,639	1,025	644	32,533	2,878	2,379,563
2005	1,131,211	838,513	544,809	1,016	1,408	65,521	3,610	2,586,088
2006	1,032,052	871,233	640,539	1,363	1,678	60,035	41,320	2,648,220
2007	1,076,084	840,822	807,729	1,613	1,846	64,073	54,971	2,847,138
2008	1,099,219	738,530	702,916	1,106	3,911	43,240	95,043	2,683,965
2009	911,088	736,024	429,259	1,662	1,907	12,747	56,175	2,148,862
2010	1,072,727	920,057	610,898	839	4,047	47,756	115,783	2,772,107
2011	1,204,155	1,075,871	656,425	1,284	2,605	73,630	137,738	3,151,708
2012	1,242,083	1,102,004	655,878	634	4,099	71,553	94,383	3,170,634

Note: A-Hyundai Motors Co.; B-Kia Motors Co.; C-GM Daewoo; D-Daewoo Bus; E-Tata Daewoo; F-SsangYong; G-Renault Samsung.
Sources: Korea Automobile Manufacturers Association (KAMA) and Korea Auto Industries Cooperative Association (KAICA) (2005) for 2003-2004, KAMA (2010) for 2005-2009, and Auto Morning (2014) for 2010-2012.

Also recently, the image of Korean auto-producers has improved significantly in the global market in recent years; Hyundai was even considered as a competitor of Toyota (The Asahi Shimbun, 2012 Jan. 20). Also, the sectors with competitive advantage have expanded from small to mid-large passenger cars. Outward FDI for production facilities have expanded as well to different regions, such as China, India, U.S., Russia, and Czech Republic.

From the beginning of the automobile industry, Korea always wanted to achieve significant development in auto-parts industry; but it was not very fruitful. However, as Korean auto-producers grew in recent years, the local automotive parts industry achieved exponential development. The growth of local auto-manufacturers' high performance both in domestic and

international markets has been very beneficial to the auto-parts sector. Korean auto-parts sectors has a relatively less negative impact than that of other rival countries even though global demand for automobiles decreased due to the global financial crisis (KAMA and KAICA, 2005; Invest Korea, 2013) (see Table 7-9).

Table 7-9. Korean automobile production trends (2003-2012)

Yr.	A	B	C	D	E	F	G	Etc.	Total
2003	1,646,385	852,263	400,578	4,541	4,721	151,696	117,629	57	3,177,870
2004	1,673,728	1,019,741	555,143	4,327	4,792	130,783	80,906	44	3,469,464
2005	1,683,760	1,105,170	646,788	4,626	4,657	135,901	118,438	10	3,699,350
2006	1,618,268	1,150,289	779,630	5,900	7,471	117,123	161,421	-	3,840,102
2007	1,706,727	1,118,714	942,805	6,288	11,175	122,857	177,742	-	4,086,308
2008	1,673,580	1,055,152	813,023	4,866	10,669	81,445	187,947	-	3,826,682
2009	1,606,879	1,137,176	532,191	4,015	8,131	34,703	189,831	-	3,512,926
2010	1,743,375	1,416,681	744,096	3,214	9,039	80,067	275,269	-	4,271,741
2011	1,892,254	1,583,921	810,854	3,210	9,346	113,249	244,260	-	4,657,094
2012	1,905,261	1,585,685	785,757	2,721	9,309	119,142	153,891	-	4,561,766

Notes: 1) A-Hyundai Motors Co.; B-Kia Motors Co.; C-GM Daewoo; D-Daewoo Bus; E-Tata Daewoo; F-SsangYong; G-Renault Samsung.
Sources: KAMA and KAICA (2005), KAMA (2010) for 2005-2009, and Auto Morning (2014) for 2010-2012

A number of local automotive parts producers received FDI, mainly in high-tech core parts. Nearly all of the world's top 10 auto-parts makers have invested in Korean auto-parts industry and maintained multiple subsidiaries in Korea (Invest Korea, 2013). Especially, Korea's advanced IT technologies help auto-parts industry as more IT technologies are being applied to vehicles and parts.

When the Big Three of the U.S., e.g., Ford, GM, and Chrysler, were undergoing the deterioration in the world economic situation and Toyota was faced with the recall crisis, Hyundai's diversified export strategy and quality-enhanced automobiles received greater spotlight due to the company's great stride. With newly equipped designing skills and quality-enhancing technology, Korean automobile companies have changed their images from cheap and efficient automaker to quality car-producers.

7.8 The Dynamics of the Forces

Through the history of Korea's automobile industry, the function of the four elements of ABCD

are interlinked and can be easily found in path of development. Regarding *agility*, Korean government kept changing its industrial plans for the industry very often in the early years at enfant stage. Some would argue that this is very inconsistent and not beneficial to sustain growth. However, at that time neither the Korean automobile corporations possessed appropriate technology, nor the government had an experience in the industry.

During this period, Korean government set up industrial plans, and observed the market reaction. When the government perceived negative effects, it kept changing regulations and laws to foster better business environment. Eventually, it showed positive outcomes even from the enfant stage. However, there were gradual slowdowns during the growth and mature stages as Korea's automobile industry experienced in the early 1980s when the government intervened in the industry and hindered the free-market function.

Also, Korean automobile companies poured tremendous endeavor to achieve appropriate quality for domestic and international markets. In the earlier period, corporations tried to make adequate parts and components to meet the needs under import-substitute policy. Also, after Hyundai began to sell its cars in Canada and the U.S., the company tried to enhance the quality. This effort was fruitful and let Hyundai enjoy the success of "10 years 100 000 mile warranty."

Besides, as Korean companies sold more in DCs, the auto-makers needed to meet the tightened emission regulations. This worked for Korea's automobile industry rather positively to have more precise procedure and technologies to make good engines. This precision-related effort changed the image of Korean car-producers from cheap auto maker to quality car maker.

However, this image and reputation are not from thin air. Korean auto-manufacturers had partnerships and alliances with foreign companies to learn and imitate advanced technologies and productions. For example, through CKD kit, Korean companies could learn assembly procedure. With partnerships and alliances, Korean firms learned the way of foreign sales and advanced technologies.

These Korean companies did not rest on the imitating stage. They further developed acquired technologies and skills from foreign companies. Korean-made car, engines, and even design have been developed. In recent years, Korea became one of the top leading nations in the automobile industry and Korean auto-makers became prominent players in the world automobile industry.

In order to complement disadvantage in technologies, Korean companies mustered available skills, technicians, finance, and managers from all over the world. After Korean manufacturers gained competitiveness, they went abroad to balance other disadvantages, such as expensive labor cost, remote locations from foreign markets, trade barrier, and lacking of new technologies. These disadvantages put Korean companies to mix all possible strategies to survive in the competitive world auto-market.

At the initial stage, Korean companies focused merely on the North American market. Later, they diversified its market portfolios to other countries, such as Europe and other emerging economies. When the world suffered from the 2008 World Economic Crisis, Korean companies were less affected compared to other world leading auto-companies. This diversification strategy was very synergetic and Hyundai and Kia maintained their strong presences in other countries.

Korea was in unfavorable conditions in the automobile industry. Technology and skilled labor were insufficient at the initial stage of development. All the raw materials for car production were imported. Also, the industrial infrastructure was shabby which was totally devastated during the Korean War. However, the government and Korean companies were ambitious with an ultimate goal - to be one of the top car-producing nation and top 5 global player. Their goal looked naive and irrational in the early time.

Nonetheless, to achieve these goals, Korean companies and government poured uncountable efforts and diligence. They were not satisfied with its dominance in the domestic market, but looked out to the world market. Also, the Korean people compared Korean companies with other world leading companies and push them to be better players. This analysis by utilizing the ABCD framework on Korea’s automobile industry is very meaningful, since this eclectic approach better explains the success of the industry which was developed in the nation with many unfavorable conditions for the automobile industry.

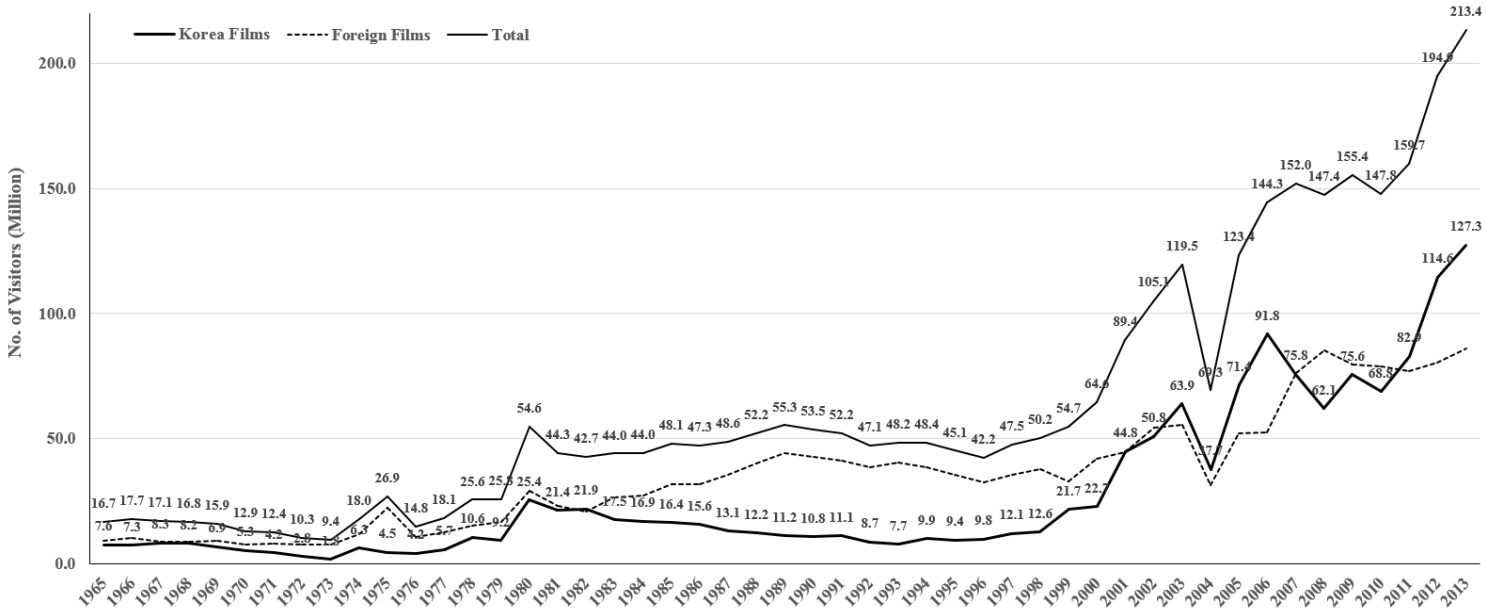
8. Korea's Film Industry

This chapter illustrates the applicability of the ABCD framework to explain the development and evolution of Korea's film industry, a resurging industry as a part of *Hallyu*—the Korean Wave. *Hallyu* is a new phenomenon which attracts a lot of attentions from all over the world. This chapter focuses on the government policies and corporate strategies with the ABCD approach. The film industry experiences two crises, in the mid-1970s and the early 1990s, and this industry is a good example showing the validity of the ABCD framework to explain the rise and fall of this unique industry. This case demonstrates the universality of the ABCD framework to service industries and the critical importance of the ABCDs in Porter's (1990) diamond (see Figure 8-1).

8.1 Introduction to Korea's film industry

Korea's film industry enjoyed a golden age from the late 1950s to the mid-1960s, but the following two decades were a dark age. Especially, the market share of domestic market in 1993 recorded 15.9%, the lowest ever in the Korean film history (CDMI, 2000; Lee and Bae, 2004). From the late 1990s, Korea's film industry resurged and started to be internationally recognized and became one of the drivers for *Hallyu* with the widespread popularity of dramas in the late 1990s.

Since the Korean Wave is fancy and fairly new, various scholars and renowned media outlets have tried to explain the competitiveness of Korean films. Most of them partially evaluated the competitiveness although the studies by Ko (2005) and Lee and Lee (2007) were more comprehensive by utilizing a good analytical tool, Porter's diamond model. However, Some of Ko's (2005) variables were misclassified under an inappropriate category and some of her strategic variables were not applicable to other actors and actresses (Parc and Moon, 2013). Meanwhile, some of Lee and Lee's (2007) variables are still controversial to explain the competitiveness of Korean films.



Sources: Jwa and Lee (2006) [1965-2003] and Korean Film Council, http://www.kobis.or.kr/kobis/business/stat/them/findYearlyTotalList.do [2004-2013] (accessed March 27, 2014).

Figure 8-1. Market size trends (Korean and foreign films, total) (1965-2013)

Parc and Moon (2013) incorporated the most critical variables; mostly from existing studies and several missing variables were newly added. They evaluated the competitiveness of Korean films and dramas by using the double diamond model, an expansion to Porter's diamond model by incorporating internationalization. Thus, based on existing studies and by using a good analytical tool, Parc and Moon (2013) provided the most comprehensive research on the Korean films.

However, these diamond approaches hardly explained how the four determinants have been strengthened and expanded. In other words, the diamond model and the expansion can only explain the current competitiveness which is an *ex post* and "input" factors. Thus, it is necessary to find the essential reason of the current competiveness of Korea's film industry, which is an *ex ante* and "process" factors. The ABCD framework (Moon, 2012) provides better explanation on how the film industry has gained competitiveness.

The evolution and development of Korea's film industry are closely intertwined with the difficult history of the country (Min, Joo, and Kwak, 2003; Robinson, 2005; INA Global, 2013 Sept. 30). Therefore, the history of Korea's film industry is delineated by regime. However, this research more focuses on economic aspect rather than political.

8.2 From liberation to Rhee Syngman regime (1945-1960)

Korea's film industry could not be well developed at the beginning by the Japanese Occupation government's strong censorship and the devastating Korean War. However, the industry achieved a notably rapid growth due to fast growing market and mass-absorption of American technologies and skill to produce films. Also, various storylines were tried: from Japanese cruelness, North Korean kidnapping, social concerns, and themes of Italian Neorealism (Paquet, 2007).

8.2.1 Domestic and international circumstances

During the Japanese occupation period, Japan tried to destruct all things that made Koreans distinctive from Japanese, such as native Korean culture, language, and customs. This cruel

experience transplanted Korean nationalism and its effects lingered in every parts of Korea. By the end of the World War II and collapse of Japan, the U.S. and the Soviet Union agreed to a joint occupation on South and North for trusteeship but the separation became the mutual political antagonism of the U.S. and Soviet Union in the aftermath of the war.

The Korean War (1950-1953) lasted until the middle of 1950s and devastated the whole infrastructure. Furthermore, it put South Korea in despair. The presence of political division, the war, and the ongoing Cold War brought serious atmosphere of security paranoia to South Korea and constantly feared another invasion from the North. Thereafter, security concerns legitimated extraordinary state control, which developed political cultures that were virulent and anti-communist to the North.

Also, series of insurgencies supported by North Korea and pro-communists before and after the Korean War attempted to throw the society into disorder. These backgrounds made the Korean government sensitive to any act or matters that are deleterious to the legitimacy of the regimes. Unfortunately, it was sometimes used as a mean to oppress political opponents and other parties. After liberation and the Korean War, in order to recover from the debris, Korean received direct and indirect supports and aids from the allied countries, notably from the U.S.

Regarding the world film industry, American film industry and its "studio system"[60] brought tremendous changes due to the Paramount case (Gil, 2010). The Paramount antitrust case was resolved by the U.S. Supreme Court in 1948. As a result, the five largest studios (MGM, Paramount, 20th Century Fox, Warner Brothers, and RKO) were forced to vertically disintegrate and separate production and distribution from exhibition. The Supreme Court also banned these and three other studios (Columbia, Universal, and United Artists) from using block booking as contractual practice (Gil, 2010: 171).

In order to overcome the difficulties caused by the case, Hollywood companies became more commercialized by replacing the Hollywood "movie moguls" by business

[60] The Hollywood studio system was established from 1920s to 1930s, which can be characterized as the vertical integration of, "picture palace," standardized production, and star system. The studios expanded their power from production to distribution and screening, which integrated all vertically. These studios even owned movie theaters. Especially, the "picture palaces," European styled luxury movie theaters, took three quarters of the whole revenue in the late 1920s (Jwa and Lee, 2006).

executives and accountants. Also, Hollywood studios were struggling with foreign films, independent production companies, freelance movie stars, and competition against television (Jwa and Lee, 2006). Japanese films industry had great success, particularly films produced by Akira Kurosawa who influenced the world cinema.

8.2.2 Evolutions of policies and business/corporate strategies

Korea has a long filmmaking history which goes back to one century. In 1919, Korea's first "film," *The Righteous Revenge*, a kino-drama in which actors performed against the backdrop of a projected feature, debuted at Theater *Danseongsa* in Seoul. Korea's first silent feature was produced in 1923, and cinemas became popular (Song, 2012). Despite the increasing popularity of local films, Japanese censorship oppressed and limited its growth, worried that films could be used as a tool for stimulating public uprising (Song, 2012). All foreign and domestic features were required to be submitted to the Japanese occupation government for approval before being screened, and Japanese police were present at theaters for screenings (Paquet, 2007; INA Global, 2013 Sept. 30).

Although the strong censorship limited the growth of Korea's film industry, several films, such as *Chunhyangjon*, a Korean version of Cinderella-like story, was popular due to the well-known story, advanced facilities, technologies, and technicians from Japan (Min *et al.*, 2003). Thus, Korean audiences were already exposed to good quality films at this time. From 1930, censorship became much stricter and most of the propaganda movies were made during this period. Also, the distribution and exhibition of films were solely authorized to Japanese and the profits from exhibition were not reinvested in Korean film production.

The occupation government integrated all Korea's film productions into one in January, 1940 and established Chosun Film Production Co. Ltd. (CFPC), which is the only authorized production in Korea. By 1942, Korean-language films were banned completely by the occupation government (Kim, 2007). Other Korean film productions were pushed to be integrated into Japanese film companies. This destroyed Korean film production almost entirely.

After liberation from Japan in 1945, The U.S. Army Military Government began to produce bimonthly news films and semi-documentaries with Korean filmmakers. They worked and were trained there. During this period, the industry did not have enough capital and any

good nationwide distribution channel. Small and medium sized productions formed several larger productions such as Enlightenment Film Association and the Goryo Film Company (Min *et al.*, 2003) and began to establish infrastructure.

According to Shin (2008), under the U.S. government from 1945 to 1948, the Korea's film industry underwent an intensive "Americanization" and Hollywood films were directly distributed to audiences. Thus, the Korean audiences were heavily exposed to American films and became accustomed to the Hollywood style (p. 43).

During the Korean War, whole film infrastructure was devastated and very few movies were produced. Many talented filmmakers either relocated to North Korea or were kidnapped. During the war, most Korean filmmakers joined and worked for the U.S. troops and were trained in military-based documentary production and became active after the war. After the war, Korea's film industry enjoyed a freedom of expression without severe government intervention until the coup d'état in 1961 (Min *et al.*, 2003).

In 1954, the first President, Rhee Syngman (1948-1960) declared to exempt film industry from taxation to revitalize the industry. In addition, foreign aid programs provided Korea with film technology and equipment. With the support, the Korea's film industry grew gradually and enjoyed a golden age in the late 1950s (Song, 2012). During this period, the number of domestic productions increased sharply from eight in 1954 to 108 in 1959,[61] so did the number of production companies, Korean films and imported foreign film, notably from Hollywood (Paquet, 2007; Song, 2012) (see Table 8-1). Since too many foreign films were imported, the government introduced import quota (IQ) system to control the annual number of imported film in order to protect domestic film industry. The government assigned this IQ to quality film producers or productions (Jwa and Lee, 2006: 93).

It is noteworthy to understand that after the war, new movie theaters increased rapidly and it was difficult for film producers to directly distribute nationwide. As a result, regional distribution system was adopted (Lee, 1981). This system initially facilitated the distribution of Korean film. However, it worked as a hindrance for capital accumulation for film productions when a film became a big hit. On the other hand, this system worked as risk sharing at the other situation (see chapter 8.5.2). Regional distribution system disappeared during the late 1980s

[61] During this period, data shows discrepancies indifferent sources.

and early 1990s, as Hollywood companies started direct distribution and Korean companies took counter-measurement.

Table 8-1. Number of domestic and foreign films (1951-1959)

Year	Hollywood	European	Others	Korean
1951	5	15	0	0
1952	45	19	0	11
1953	48	31	2	10
1954	109	43	0	18
1955	99	21	3	16
1956	135	15	1	36
1957	114	15	1	47
1958	174	25	25	92
1959	89	15	10	91

Source: Min *et al*. (2003: 152) (a compilation of data on the film industry, MPPC [1984]).

8.3 Park Chung-hee regime 1 (1962-1972)

Park Chung-hee administration utilized various measures to promote Korea's film industry. In this regards, the government intervened directly in the industry, such as controlling the number of imported films, their screening days, import-license authorization, and importer-producer integration as a reward and promoting system. The peak of Korea's film industry was 1968-1969 with 212 films (48.9% of market share) in 1968 and 229 films (43.0%) in 1969. Unfortunately, the aforementioned intervening measures could not have kept the golden age of Korean film. These measures hindered the proper function of film market and brought negative effect on Korea's film industry. Also, lots of economic and business factors significantly influenced these measures and brought unexpected results.

8.3.1 Domestic and international circumstances

In 1960, the second Republic was established by general election but it was replaced by a military coup led by the general Park Chung-hee in 1961. The new government was more interested in development and industrialization. Thus, it planned industrial policies and consequent economic development. As a result, Korea became one of the world's fastest

growing economies from the early 1960s, although many sectors experienced various trials and errors due to the inexperience of government at the beginning.

Especially, President Park directly mobilized the power of the state, nationalism, anticommunism, and patriotism in the service of economic development, national security, and nationalist cultural construction, facing the political tension between South and North Koreas and security crisis in the mid-1960 (Park, 1962; Park, 2009). Therefore, the government created a system that inventoried, classified, and protected national cultural properties such as ruins, temples, art objects, and crafts, as well as intangible cultural assets on the basis of their cultural and historical significance (Robinson, 2005: 22). These actions encouraged proponents of various schools of dance, music, and crafts.

During this period, foreign currency and reserve were extremely important, but they were scarce to reap economic development. In order to export more and to accumulate foreign currency, the government devaluated Korean won from KR₩130 to KR₩255—96% of depreciation—to US$1 in May, 1964 (Moon *et al.*, 2012). This brought various effects on different industries.

During this decade the studio system in Hollywood declined after the Paramount case. On the contrary, French film resurrected with the *Nouvelle Vague*—new wave—directors such as Jean-Luc Godard, Alain Resnais, François Truffaut, and Roger Vadim since late 1950s. Also, French film regained world recognition during this period as well.

8.3.2 Evolutions of policies and business/corporate strategies

After the military coup in 1961, the military government encouraged anti-socialist movies together with teenage melodramas. On the other hand, the American forces stationed in Korea opened the doors and transferred advanced filmmaking equipment and technology to Korean filmmakers and production companies. Due to this help, Korea's film industry could produce over 100 films annually. Around that time, Korea had one of the most dynamic movie industries in Asia; major works were exported to Southeast Asian countries where the production styles of Korean directors were copied by local producers (J. Kim, 1998: 130-135). Korean directors were even invited to Hong Kong to produce movies there.

In 1962, to protect and foster Korean films, the government instituted for the first time

a Motion Picture Law (MPL, 영화법).[62] Only registered productions can produce, import, and export films. Besides, *the Grand Bell Award*, the Korean equivalent of the American Academy Awards, was established to encourage producers to make quality films. The government assumed that this strategy would bring multiple benefits for productions: domestic films can be protected and profits from both quality domestic and imported foreign movies are reinvested in domestic film production.

In 1963, the MPL was first amended with strong government intervention; it rose the qualification standards of production companies and requested them to register to the government. The amended MPL stipulated various details of film production for registration, such as studio size, filmmaking equipment, and number of full-time film directors and employees.[63]

Also, the law requested that all production companies produce at least 15 films per year, and that the films should be commercial in nature. Only these registered production companies were allowed to import and export films; thus, producers, importer, and exporters are integrated. In addition, the government encouraged the film industry to form conglomerates and to reinvest profits gained from foreign market into domestic production capital.[64]

However, this action induced production monopoly in the film industry. Besides, these conglomerates soon realized that importing foreign films was more profitable than producing and exporting Korean films (Robinson, 2005; Paquet, 2005). Besides, the government restarted to allocate IQ portions to quality film producers or productions as reward in 1965 (Jwa and Lee, 2006).

The behind rational was to establish a self-sustaining system through forming large-sized, effective productions: producing high-quality movies to export and reinvesting the foreign currency earned by exportation in the film industry. However, small and medium sized

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[62] *See* MPL, http://www.law.go.kr/lsSc.do?menuId=0&subMenu=2&query=%EC%98%81%ED%99%94%EB%B2%95#liBgcolor46 (accessed April, 25, 2014).

[63] *See* 1st amended MPL, http://www.law.go.kr/lsSc.do?menuId=0&subMenu=2&query=%EC%98%81%ED%99%94%EB%B2%95#liBgcolor45 (accessed April, 25, 2014).

[64] According to Kim (2007), 65 small film companies were consolidated into 17 large companies. Jwa and Lee (2006: 96) provided more specific data: the numbers of small film companies were 71, 16, and 6 in 1959, 1962, and 1963, respectively.

productions could not make good quality films due to lack of capital and poor facilities. As a result, only the survivors were able to continue to produce films or merge with others. (Min *et al.*, 2003). This measure naturally banned independent productions that are usually small-sized. Once the productions were integrated for achieving economies of scale and the system, monopoly on production, IQ, and the market became sensitive issues.

The government devaluated Korean won (by 96%) in order to facilitate greater export of Korean goods. The devaluation doubled the import price of films and temporarily lowered the number of imported films in 1964. Despite the doubled devaluation, the number of imported films restored quickly in 1965, mainly due to high profitability of foreign films (see Table 8-2). Many cineastes complained about the demanding requirement for registration and arbitrary "import-authorization reward system" (Kim, 2013).

Table 8-2. Korean films industry trends (1962-1972)

Year	Korean films (share)	Foreign films (share)	No. of screens	Total admissions	Ticket price	Adm. per capita
1962	113 (n/a)	79 (n/a)	344	59,046,000	₩18	3.0
1963	144 (n/a)	66 (n/a)	386	96,059,000	₩20	3.6
1964	147 (n/a)	51 (n/a)	477	104,579,000	₩23	3.8
1965	189 (45.5%)	64 (54.5%)	529	121,697,000	₩23	4.3
1966	136 (41.3%)	85 (58.7%)	534	156,336,000	₩31	5.4
1967	172 (48.7%)	64 (51.3%)	569	164,077,000	₩41	5.6
1968	212 (48.9%)	63 (51.1%)	578	171,341,000	₩51	5.7
1969	229 (43.0%)	79 (57.0%)	659	173,043,000	₩63	5.6
1970	209 (41.4%)	61 (58.6%)	690	166,000,000	₩73	5.3
1971	202 (34.3%)	82 (65.7%)	717	146,000,000	₩80	4.6
1972	122 (27.2%)	63 (72.8%)	694	119,000,000	₩83	3.7

Notes: 1) Market shares are based on admissions in Seoul only; 2) Before May 3rd, 1964, US$1 was KR₩130; afterward US$1 was KR₩255 until November 1969 (96% of devaluation).
Sources: Koreanfilm.org, http://www.koreanfilm.org/kfilm60s.html for 1962-1969 and http://www.koreanfilm.org/kfilm70s.html for 1970-1971 (accessed May 21, 2014); data for market shares are drawn from Jwa and Lee (2006).

Therefore, the second amendment was passed in 1966.[65] The law loosened the required conditions for the registration and lowered the minimum annual number of film for maintaining registration: from 15 to two films per year. This is to enhance rivalry in the industry which was

[65] *See* 2nd amended MPL, http://www.law.go.kr/lsSc.do?menuId=0&subMenu=2&query=%EC%98%81%ED%99%94%EB%B2%95#liBgcolor44 (accessed April, 25, 2014).

distorted by monopoly of few companies.

Also, it set up the screen quota (SQ) system to preserve the days of showing domestic films at theaters—more than 90 days a year to screen domestic films. Foreigners and foreign companies could no longer import foreign films anymore. The IQ system were strengthened; the number of films imported should not exceed a third of the domestic films screened each year. Although many domestic films were produced and number of audience increased, their market share decreased steadily during 1967-1970 (see Table 8-2).[66]

8.4 Park Chung-hee regime 2 (1973-1979)

Various measures were applied during the 1960s which brought many side effects and put Korea's film industry on its wane. The government tightened regulations to promote the industry by lowering the number of imported films, enforcing SQ system, and inconsistency of importer-producer integration. These measures could not revive Korean film quality and eventually the whole size of Korean film market and market share of domestic films decreased during the 1970s.

8.4.1 Domestic and international circumstances

The 1970s in Korea was a turbulent time. Domestically, President Park wanted to further strengthen Korea's economy by enacting more central leadership. He prolonged the presidential term from four years to six years and unlimited the number of terms. This is the so-called the Yushin Constitution which President Park introduced to increase the power of the government.

The emerging economic development since 1960s emphasizing export-oriented policy brought rural-urban disparity in development priorities (Sumarto, 2006). To develop and modernize the rural areas, the government introduced *Saemaul Undong*, a new village

[66] According to Jwa and Lee (2006), the numbers of produced domestic film were 1,221, 1,132, 1,028, and 1,018 and their market shares in Seoul were 48.7%, 48.9%, 43.0%, and 41.4% in 1967, 1968, 1969, and 1970, respectively.

movement which is one of the famous legacies of President Park. The success of economic development provoked various social problems. In the end, various social groups participated in the movement to achieve better liberalism and improve human rights.

While Korea accelerated its economic development and kept HCI and the export-oriented policy, it was suffering from two consecutive oil shocks in 1973 and 1979. More surprisingly, President Park was assassinated in 1979. Internationally, the Vietnam War was ceased in 1975.

8.4.2 Evolutions of policies and business/corporate strategies

An earlier policy that allotted IQs on the basis of local production number caused filmmakers to crank out "quota quickies." Thus, the market was distorted with lower-quality domestic films. Later, the reward system, which meant that import licenses were given to productions that exported Korean pictures also failed (Kim, 2007).[67] Although it worked well for enabling the government to limit the import of foreign films, it completely failed its goal of boosting the productions and export of good quality domestic films.

Therefore, in order to accustom the surrounding situation and reduce side effects of MPL, the government passed the third amendment to the MPL in 1970:[68] minimum number of annual production increased from two to five, separation of film importer from producers, and establishment of Union of Korean Film Promotion to integrate and facilitate export and import films.[69]

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[67] This reward system regarding IQ is very complicated and inconsistent by period. For instance, during 1968 and 1969, for a film that won the best picture award held the right to import one foreign film. Other films were classified by genre, such as literary, education, and anticommunism. Films were evaluated by quality and certain score was given; grade A was 100, grade B was 80, and grade C was 60. After 1968, only films on education and anticommunism were qualified for the IQ allocation. This IQ system was exploited as a tool to limit various themes (Lee, 2006).

[68] *See* 3rd amended MPL, http://www.law.go.kr/lsSc.do?menuId=0&subMenu=2&query=%EC%98%81%ED%99%94%EB%B2%95#liBgcolor43 (accessed April, 25, 2014).

[69] Film exporters and importers were required to be registered with the Ministry of Culture and Information. Moreover, the Union of Korean Film Promotion, with government support, set up a specific policy on exports

Despite the efforts, the boom of Korean film of the late 1960s did not last long in 1970s and the public largely deserted the cinema for television (Jwa and Lee, 2006: 99). The number of admissions through 1970s drastically decreased (see Table 8-3).[70] The following two decades after the 1970s were a long and deep slump for the film industry (see Figure 8-2).

Table 8-3. Korean films industry trends (1973-1979)

Year	Korean films (share)	Foreign films (share)	No. of screens	Total admissions	Ticket price	Adm. per capita
1973	125 (19.3%)	60 (80.7%)	662	115,000,000	₩88	3.5
1974	141 (35.0%)	39 (65.0%)	626	97,000,000	₩104	2.9
1975	94 (16.7%)	35 (83.3%)	597	76,000,000	₩168	2.2
1976	134 (28.1%)	43 (71.9%)	580	66,000,000	₩207	1.8
1977	101 (31.6%)	42 (68.4%)	558	65,000,000	₩307	1.8
1978	117 (41.4%)	31 (58.6%)	488	74,000,000	₩389	2.0
1979	96 (35.7%)	33 (64.3%)	472	66,000,000	₩715	1.7

Notes: 1) Market shares of 1972-1973 are based on admissions in Seoul only and that of 1974-1979 is based on admissions in large cities (Seoul, Busan, Daegu, Gwangju, Daejeon, and Incheon).
Source: Koreanfilm.org, http://www.koreanfilm.org/kfilm70s.html (accessed May 21, 2014); data for market shares are drawn from Jwa and Lee (2006).

When the Yushin Constitution was enacted in 1972, the MPL was amended again, in 1973, in accordance with the constitution.[71] Especially, the government began to impose its ideology on cultural and economic sectors (Min et al, 2003: 50) by introducing Film Policy Measure (FPM, 영화시책, 1973-1989). The main objectives of the revisions and FPM were to support national and traditional cultures. Furthermore, FPM aimed to strengthen more government filtering on both domestic and foreign films due to the cold war and the political tension between two Koreas (Min et al, 2003; Jwa and Lee, 2006). Especially the FPM enforced the SQ systems from 30 days to 121 days.

Therefore, the crisis of Korean films was inevitable; foreign films, mainly from the

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and imports to promote domestic films overseas as follows: (1) a production should export four domestic films minimum and earn from them at least US$20,000 to qualify to import a foreign film; and (2) the Union would provide cash rewards to domestic films that showed for at least 60 days in a foreign market.

[70] Since the late 1960s, the main mass media became films and TV whereas it was radio broadcasting before (Oh, 2011).

[71] *See* 4th amended MPL, http://www.law.go.kr/lsSc.do?menuId=0&subMenu=2&query=%EC%98%81%ED%99%94%EB%B2%95#liBgcolor42 (accessed April, 25, 2014).

U.S., were gradually gaining market share (see Figure 8-2). Furthermore, 253 Korean films were exported under these conditions but most of them were sold at extremely cheap price in order to obtain import licenses for foreign films; these Korean films were never released overseas (Lent, 1990).[72] During this period, the market shares of Korean films are considered quite low given the large number of domestic films compared to the small number of imported films (Lee, 2005) (see Table 8-3).[73]

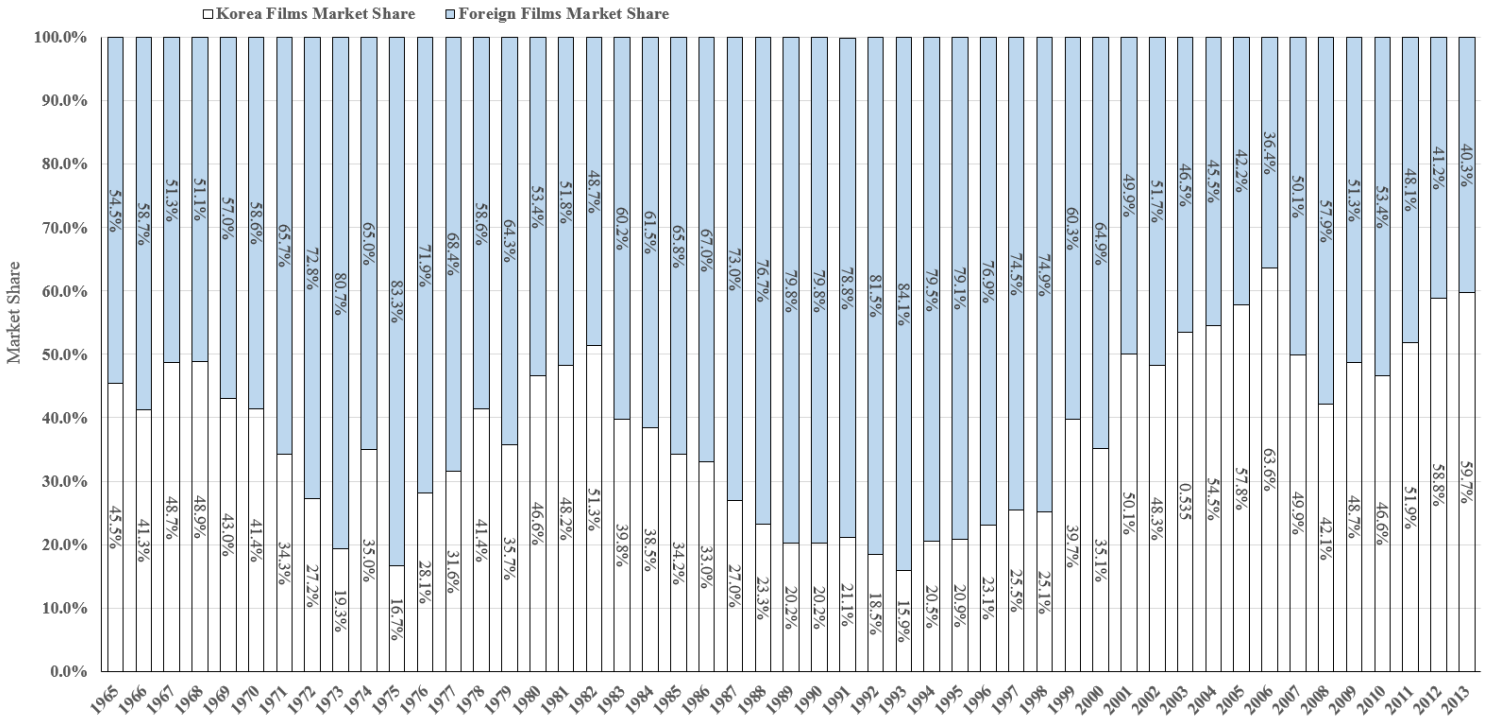
The market share of domestic films dropped even to 16.7%, the second lowest record since 1975, and the number of imported foreign films also decreased to 31 in 1978, the lowest ever. To encapsulate, low-quality quota quickies, small number of imported films, the vicious circle of these aforementioned factors and dissemination of television hindered the growth of domestic film industry.

8.5 From Chun Doo-hwan to Roh Tae-woo regimes (1980-1992)

Although Korea's film industry was at a stagnant stage, there were significant transformations which established the foundation for further take-off in the late 1990s and 2000s. These market-friendly measures seemed to be harmful to the film industry in the short term, but they made the film market size re-expanded and stimulated a need of radical change to survive.

[72] South Korean features had not been popular abroad, despite the efforts of the Korean Motion Picture Promotion Corporation, replacing the Union of Korean Film Promotion in 1973. In addition, in the early 1980s, most of exported films were sold to Southeast Asian countries and a few to Europe. Taiwan and Hong Kong were the major customers for years, importing some Korean movies for as little as US$200 (Lent, 1990).

[73] According to Jwa and Lee (2006), the market share of domestic films reached 16.7% in 1975 (p. 100).



Sources: Jwa and Lee (2006) [1965-2003], Korean Film Council, http://www.kobis.or.kr/kobis/business/stat/them/findYearlyTotalList.do [2004-2013] (accessed March 27, 2014).

Figure 8-2. Film market share in Korea by year (1965-2013)

8.5.1 Domestic and international circumstances

President Chun seized power in the aftermath of the suppression in May 1980 of an uprising in Gwangju, located in Jeolla province in the south-west of Korea and destroyed the hope for a more liberal political climate. In order to redress these problems, the government's supports on museums, academies for traditional arts, and reconstruction of ancient palaces, tombs, temples, and other architectural sites reached its height during the Chun's regime (Robinson, 2005: 23).

However, student movements for democratization continued and had become more institutionalized as time progressed. In 1987, students and workers joined for massive strikes and this forced the government to announce a number of important reforms: direct presidential election and guarantees for a free press. Eventually, Korea enjoyed unprecedented freedom of expression. Particularly, after the 1988 Seoul Olympics and the liberalization of overseas travel in 1989. These influenced the diversification of movie themes.

As Europe and Japan recovered completely from the damages of the World War II and the NICs emerged as new economic powers, the U.S. lost its competitiveness in manufacturing industry over the 1970s. In the end, the U.S. faced an economic recession in the early 1980s. In order to reduce trade deficit, the U.S. government started to increase pressure to important trade partners to further export U.S. goods and services, which generated considerable tension. Korea was targeted by the section 301[74] for lack of effective protection of U.S. intellectual property rights (Ahn, 2004).

8.5.2 Evolutions of policies and business/corporate strategies

By 1980, all signals in the film industry were showing record low performances. Most of all, the number of domestic films had decreased consistently over the previous decade, falling from 209 released films in 1970 to 91 in 1980 (see Table 8-4). In the early 1980s, only production companies were permitted to import films, and under the Quality Film Examination System the

[74] Section 301: It is a lapsed provision of U.S. trade law, first passed by Congress for two years in 1988 to spur the administration into tougher action against other countries' allegedly unfair trading practices (The New York Times Archives, 1993 April 9).

quotas were awarded to the winners of the Presidential Award in the Grand Bell Award, winners of the Prime Minister's Award, international film prize winners, or those selected by the Ministry of Culture and Public Information.

Table 8-4. Korean films industry trends (1980-1992)

Year	Korean films (share)	Foreign films (share)	No. of screens	Total admissions	Ticket price	Adm. per capita
1980	91 (46.6%)	39 (53.4 %)	447	53,770,000	₩957	1.4
1981	87 (48.2%)	31 (51.8%)	423	44,143,000	₩1,097	1.2
1982	97 (51.3%)	29 (48.7%)	404	42,737,000	₩1,300	1.1
1983	91 (39.9%)	26 (60.2%)	450	44,036,000	₩1,326	1.1
1984	81 (38.5%)	26 (61.5%)	534	43,917,000	₩1,352	1.1
1985	80 (34.2%)	30 (65.8%)	561	48,098,000	₩1,432	1.2
1986	73 (33.0%)	51 (67.0%)	640	47,279,000	₩1,533	1.1
1987	90 (27.0%)	85 (73.0%)	673	48,593,000	₩1,637	1.2
1988	87 (23.3%)	175 (76.7%)	696	52,231,000	₩1,847	1.2
1989	110 (20.2%)	264 (79.8%)	772	55,306,000	₩2,271	1.3
1990	111 (20.2%)	276 (79.8%)	789	53,459,000	₩2,602	1.2
1991	121 (21.1%)	256 (78.8%)	762	52,197,000	₩3,034	1.2
1992	96 (18.5%)	319 (81.5%)	712	52,000,000	₩3,471	1.1

Source: Koreanfilm.org, http://www.koreanfilm.org/kfilm80s.html for 1980-1989 and http://www.koreanfilm.org/kfilm90-95.html for 1990-1992 (accessed May 21, 2014); data for market shares, number of screens, and total admissions are from Jwa and Lee (2006).

From the mid-1980s, Korea's film industry undertook the first steps of a major transformation with several important developments. Firstly, in 1984, a fifth revision to the MPL loosened some of the regulations on Korean filmmakers (Pager, 2011):[75] independent producers were permitted under certain circumstances, and the government also repealed laws which had kept the film industry consolidated under a few large companies. Secondly, a new constitution enacted in 1988 led to the gradual flexibility on strict filtering.

Thirdly, the government also relaxed the IQ system. Instead if a company had the license to import, it must produce one domestic film per year. Since imported films draw more spectators than domestic films, this liberalization of importing foreign films brought a radical increase in the number of foreign films (Min *et al.*, 2003: 59).

[75] *See* 5th amended MPL, http://www.law.go.kr/lsSc.do?menuId=0&subMenu=2&query=%EC%98%81%ED%99%94%EB%B2%95#liBgcolor41 (accessed April, 25, 2014).

All the changes catalyzed the birth of film education. Before this change, the prevailing "education" was apprenticeship. In the late 1980s, the increase of film schools gradually broke the apprenticeship and provided students with quality education to prove their talents. It later influenced Korea's film industry drastically (Paquet, 2005).

Soon, an outside pressure pushed Korea to amend the MPL once more. The Motion Picture Export Association of America (MPEAA) complained to various restriction on film imports and Korea-US Film Agreement was signed later (Paquet, 2005). Fourthly, in 1986, as a part of a sixth revision,[76] a change in policy lifted the IQ system under the pressure of the U.S. Trade Representative (USTR) and allowed Hollywood companies to set up branch offices in Korea for "direct distribution" to local movie theaters (Shim, 2006).[77] Automatically, the IQ system was abolished (see Table 8-5);[78] for the compensation the SQ system was reinforced: 146 days—depending on various factors, 40 days can be cut if needed (Paquet, 2005).

The results of these two revisions were various. Firstly, by the late 1980s a new generation of young producers, who had received much of their film education at a series of lectures and workshops held at the German and French cultural centers in Seoul in the 1970s and 1980s (Paquet, 2005: 41), had entered the film industry and the number of production companies increased immediately.[79] These young producers would later assume a leading role in introducing new techniques in the production of feature films (Hwang, 2001: 23). Secondly, Korean films had to compete directly with Hollywood product for the first time.[80]

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[76] *See* 6th amended MPL, http://www.law.go.kr/lsSc.do?menuId=0&subMenu=2&query=%EC%98%81%ED%99%94%EB%B2%95#liBgcolor40 (accessed April, 25, 2014).

[77] UIP was the first to register in March, 1988, with four others to follow: 21st Century Fox in August, 1988, Warner Bros. in December, 1989, Columbia Tristar in October, 1990, and Disney (Buena Vista International) in January, 1993 (Paquet, 2005).

[78] Regarding the IQ, the evolution of the relationship between film exporters and importers is as follows: integrated by the first amendment in 1963, separated by the third in 1970, reintegrated by the fourth in 1973, and re-separated by the firth in 1984.

[79] There were only 20 productions in 1984 but it became 104 by 1988 (Paquet, 2005).

[80] Korea employed foreign film IQ system from 1962 until 1987 (Chung and Song, 2008; Paquet, 2007; Song, 2012). During this period, the SQ system was not effective although it existed.

Table 8-5. Evolution of Korea's IQ system

Year	Laws and related implementing ordinance (IO)	Conditions
1958.4	Notification No. 53 of the Ministry of Culture and Education	IQ reward system
1963.5	Article 6 of MPL (1st) Section 7-2 of IO	IQ reward system
1966.9	Clause 4 of Article 19 of MPL (2nd)	Foreign film imported : Korean film screened = 1:3
1970.9	Clause 2 of Article 24 of MPL (3rd)	Foreign film imported : Korean film screened = 1:3
1973.3	Article 26 of MPL (4th) Clause 2 of Section 5 of Regulations	Foreign film imported : Korean film screened = 1:3 -1/10 of foreign films in addition to the original 1/3, if needed
1985.7	Clause 1 of Article 6 of MPL (5th)	Abolishment of IQ system*

Notes: 1) Author updated and added more detailed information based on MPLs, IO, regulations, and Lee (2006); 2) Year is based on the month of implementation; 3) † Abolishment of IQ system was not clearly mentioned on the 5th Amendment of MPL. It was simply mentioned that the decision is on the Minister of Culture and Public Information. However, a number of scholars treated this as liberalization of IQ system and this research followed this tradition.

Over the next few years, market share of domestic films worsened (see Table 8-4). The SQ system, whereby theaters were obliged to screen Korean films for 146 days a year, remained the only protection against foreign competition at this time (see Table 8-6). Particularly, the direct distribution by Hollywood companies brought significant impact: the number of foreign films imported to Korea each year jumped almost tenfold, from 27 in 1985 to 264 in 1989 (Paquet, 2005). This direct distribution not only took over significant portion of market share, but also changed the distribution system which eventually dried up the investment for production.

The Korean distribution sector was divided into six regional markets, Seoul, Seoul metropolitan, Busan, Daejeon, Daegu, and Gwangju regions, and few regional distributors took over each region. Before making a film, a Seoul-based production obtained financing by pre-selling release-rights to regional distributors. Once the film was completed, it reached throughout out all regions. Since regional distributors owned the release-rights, they took the whole profit created for themselves. This system worked as risk-sharing for production and permitted production to make films with a comparatively small amount of money (Paquet, 2005).

However, Hollywood companies could directly distribute in Korea; once the movie is a big hit, a much higher profit margin directly goes to the only national-wide distributor, notably Hollywood companies. Due to this direct distribution, regional distributors could not take profits from screening foreign films. In order to overcome this unexpected outcome, Korean

production also imitated the distribution system of Hollywood companies. Eventually, the regional distributors lost their influence and lost their source of revenue. By 1992, it was clear that the whole Korean market became a single market (Paquet, 2005: 36).

Table 8-6. Evolution of Korea's SQ system

Year	Laws and related implementing ordinance (IO)	Mandatory screening days for Korean films
1966.9	Clause 3 of article 19 of MPL (2nd) Section 25 of IO	More than 90 days
1970.9 (1970.12)*	Article 25 of MPL (3rd) Section 33 of IO	More than 30 days
1973.2	Article 26 of MPL (4th)	More than 121 days
1974	FPM pf 1974	Sequential screening
1981	FPM of 1981	More than 165 days and sequential screening
1985.7	Article 26 of MPL (5th) Section 20-3 of IO	More than 146 days, with 20 day cut if needed and sequential screening
1996.7	Article 16 of FPL Section 19 of IO	More than 146 days, with 40 day cut if needed; abolishment of sequential screening
2006.10	Article 40 of PMPVPA† Clause 1 of Section 19 of IO	More than 73 days

Notes: 1) Author updated and added more detailed information based on MPLs, FPM, FPL, PMPVPA, and Jaw and Lee (2006); 2) Year is based on the month of implementation; 3) *Introductions of 3rd MPL and IO had a time lag; 4) † PMPVPA-Motion Pictures and Video Products Act; 5) Sequential screening: Consecutive screening ratio of foreign to Korean film should be 1 to 2. For example, if a foreign film were screened for one month, a Korean film should be screened for the next two months.

In this circumstance, Korean filmmakers had to compete with much more popular Hollywood films, lacked indigenous sources of finance. Therefore, the market share of domestic films remained at low levels and the bleak status of Korea's film industry did not change (Paquet, 2007), although the 1980s witnessed a slight relaxation in government filtering. Meanwhile, *chaebols* started to buy or rent movie theaters in regional areas to distribute directly their films (Paquet, 2005).

8.6 From Kim Young-sam to Kim Dae-jung regimes (1993-2002)

Experiencing "the Dark Age during the 1970s and 1980s, Korea's film industry finally met a new stage. The government intervened less in the industry and promoted the film production with supportive policies. Furthermore, commercialization of films, matching customers'

expectation, diversity, and technology enhancement through globalization and open-door policy eventually made Korean films competitive. One important point is the participation of conglomerates in the industry which served as a good financing source.

8.6.1 Domestic and international circumstances

In the late 1992, Korea entered a new stage, from military to civilian government. This political change brought creative energies by lowering the level of cultural and social filtering (Robinson, 2005). Thus, the society became more liberalized in expressing various ideas which had been filtered by the earlier governments. Also, Kim Young-sam administration embraced freer market and globalization in 1994 (Bobrow and Na, 1999). Government's economic policies became more market-friendly and Korea joined the WTO (World Trade Organization) in 1995 and the OECD in 1996.

These series of actions helped Korean economy for a further take-off. However, Korea soon faced a severe economic crisis in the following year because of unstable and less prepared financial system to meet a new financial reform (Moon *et al.*, 2012). Thus, a number of industrial restructuring processes were done with a help of the International Monetary Fund (IMF).

Furthermore, and Kim Dae-jung, the successor of Kim Young-sam administration continued the industrial restructuring and cultural support with greater enthusiasm. He also promoted inward FDI and deregulated unnecessary restriction for business to make more favorable business environment. Also, he suggested a master plan of "Cyber Korea 21," an informatization of Korea for further development in the nearer future.

These efforts were fruitful and as a result, *Hallyu* began in East and South-east Asian countries, particularly through internet. Korea received spotlights not only for economy but also for its cultural products. Many Asian countries started to purchase Korean films and dramas more than ever. Korea eventually realized the promising potential of the cultural industry and set up more supportive policies.

8.6.2 Evolutions of policies and business/corporate strategies

1990s was a dynamic decade for Korea's film industry. In the early 1990s, the industry faced a serious fear when the market share was on the bottom: 18.5% of market share in 1992, and 15.9% in 1993). Also, the directly distributed foreign films put the Korean film in to a corner. Korean companies responded immediately and pursued a newly invigorated drive towards commercial cinema which focused on profitable films not to lose money but to recover their budget, through screening, video distribution, or international sales (Paquet, 2005). Series of immediate actions helped a resurgence of the industry in the late 1990s (see Table 8-7).

Table 8-7. Korean films industry trends (1993-2002)

Year	Korean films (share)	Foreign films (share)	No. of screens	Total admissions	Ticket price	Adm. per capita
1993	63 (15.9%)	347 (84.1%)	669	48,230,000	₩3,711	1.1
1994	65 (20.5%)	382 (79.5%)	629	48,353,000	₩3,895	1.1
1995	64 (20.9%)	359 (79.1%)	577	45,130,000	₩4,268	1.0
1996	65 (23.1%)	382 (76.9%)	511	42,200,000	₩4,828	n/a
1997	59 (25.5%)	380 (74.5%)	497	47,520,000	₩5,017	n/a
1998	43 (25.1%)	290 (74.9%)	507	50,180,000	₩5,150	1.10
1999	49 (39.7%)	297 (60.3%)	588 (373)	54,720,000	₩5,230	1.17
2000	59 (35.1%)	343 (64.9%)	720 (373)	64,620,000	₩5,355	1.30
2001	65 (50.1%)	306 (49.9%)	818 (344)	89,360,000	₩5,860	1.90
2002	78 (48.3%)	266 (51.7%)	977 (308)	105,130,000	₩6,035	2.20

Notes: 1) Discrepancy of movie theater number and that of screens is seen since 1999 due to appearance of multiplex cinema is introduced in 1999. The number of movie theaters is added in the parentheses.
Source: Koreanfilm.org, http://www.koreanfilm.org/kfilm90-95.html for 1993-1995 (accessed May 21, 2014); data for market shares and number of screens are drawn from Jwa and Lee (2006); Admissions per capita of 1998 and 2002 are from Korean Film Council (Korea Film Council (2009).

In 1993, when the Hollywood movie, Jurassic Park, was released in Korea, President Kim Young-sam realized the economic value and potential of the film industry, referencing that this film was worth the sale of 1.5 million of Hyundai Sonata sedans. This shift in paradigm on film industry affected the future of Korea's film industry. Hence, the film industry eventually enjoyed from a supportive government, a stable economic environment, and rational film policy (Song, 2012).

A number of large companies entered the film making industry through joint investment on Hollywood film project but most of them experienced high failure rate. The

direct distribution of Hollywood companies put Korean large companies to look for another way for self-sustainability: an emphasis on making local films profitable. In this regards, the success of *Marriage Story* as known as "a planned movie" in 1992 shined the new way. The film was produced by a younger generation producer, Kim Eui-suk with 25% of financing from Samsung which is the first Korean *chaebol* to invest in film production (Paquet, 2005). The government supports made the film industry favorable and soon, other *chaebols* quickly pursued the same route and became an important financing source to Korea's film industry.

Also, video-cassette rentals and sales became a large and profitable industry since the mid-1980s. Cable TV market, scheduled to be launched in 1995, would be also a promising business. In this given situation, Korean conglomerates found investing in films from the production stage to the final distribution (of films and video-cassettes) lucrative. Around this time, large companies established entertainment companies, redirected their investment toward domestic film production. They also transformed the structure of the business, by introducing a vertically integrated system—financing, production, exhibition, and distribution, as well as video and cable televisions (Lee, 2005; Shim, 2006). New generation of producers, who equipped with business mind, would make full use of *chaebols'* financing capability (Paquet, 2005).

The government replaced the MPL with a Film Promotion Law (FPL) in 1996 and scaled down the restrictions by allowing more variety in themes of film than those of television. The FPL also introduced Film Promotion Fund to support domestic films. Furthermore, the government launched globalization programs to boost the country economically, politically, and socially, including the globalization of culture (Gills and Gills, 1999: 201; Hsiung, 2001: 139). On the other hand, the government began actively enforcing the SQ system in 1993 when the market share of domestic films recorded the lowest ever, 15.9% (CDMI, 2000; Lee and Bae, 2004) (see Figure 8-2).

Under the FPL, the Public Performance Ethics Committee (PPEC, 공연윤리위원회), a government board charged with the pre-screening and filtering of films continued to operate. However, in October 1996, the Constitutional Court of Korea (1995) ruled that pre-filtering film by the government violates the constitution. Hence, the first amendment was introduced: PPEC was replaced with a civilian board and rating system was introduced in lieu of direct filtering. Regarding the same issue, the second revision took place in 1999.

The Kim Dae-jung regime (1998-2003) made a big paradigm shift; film is not a subject to regulate and control anymore, but is a subject to promote (Jwa and Lee, 2006: 112). Thus, Kim's regime put into effect first Five-year Plans to build up its own culture industry with increased film promotion funds and supports (Shim, 2006).[81] Furthermore, the film production was reclassified from service to manufacturing industry; tax breaks and bank loans became possible again (Forbes, 1994; Kim, 2007). In addition, the government aided specific cultural areas by providing scholarships and equipment to many schools.[82]

Entry of *chaebols* brought positive impact on the film industry. Firstly, production budgets increased, which set up a basis to allow producing high-quality films. Particularly, average film production budgets have increased significantly during 1996 and 2003 by 372% (Korean Film Commission, 1999, 2002; Korean Film Council, 2004). Secondly, they put new emphasis on accounting which was placed on drawing up detailed budgets in advance and taking steps to encourage efficiency in film-making (Paquet, 2005)—financial efficiency and transparency was achieved.

Thirdly, to minimize risks, conglomerates preferred a few specific genres and well-known actors, which magnified the influence of the local star system: increase of salary and manufacturing stars. Fourthly, large companies invested in and enhanced local infrastructure for new technology, such as computerized special effects (Paquet, 2005). Lastly, large companies learned and imitated the strategy of Hollywood regional offices (Paquet, 2005); selection of target audiences, market survey, market research, a long period of script development, and pre-release marketing.

However, the profits from film and cable TV were not as high as *chaebols* expected despite several hit movies. Furthermore, due to the 1997 financial crisis, many *chaebols* such as Samsung, Daewoo, and SKC dropped out of the industry when the circumstance became severely unfavorable. Thus, a few mid-sized conglomerates, such as CJ and Lotte, remained

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[81] Government's financial support in film industry is specified in the MPL as early as 1962, however it was not significant; the fund increased from US$13 million to US$50 million and full supports were offered to the animation industry and independent filmmakers (Shim, 2006).

[82] The number of colleges dealing with careers in the area of culture has risen from almost none to 300 in 2004 (Kim, 2007).

and became eventually a major player today (Paquet, 2005). Despite the unfavorable conditions, Korean filmmakers were able to continue to tap various financial sources (Lee, 2005; Jin, 2006; Pager, 2011).[83]

Korean cultural policy made yet another big shift towards cultural diversity and globalization with an open-door approach towards Japanese culture (Pager, 2011). At the same time, a group of younger, more commercial minded filmmakers were also having their debut and their films marked a resurgence of the popularity for domestic films, leading up to the grand success of *Shiri*, the first big-budget action movie. Since then, Korea has entered a booming period that ranks as one of the most sudden and notable developments in recent world cinema (The New York Time, 2004 Nov. 15; Lee, 2005; Shim, 2006).

Eventually, Korean films gained commercial competitiveness and popularity in Asian market. The export of Korean films increased from 1999 (see Table 8-8). Domestically, with aggressive construction of multiplex theaters in the late 1990s helped the boom of competitive Korean films (see Table 8-7). Also, the increase of multiplex also influenced various age groups of audiences, particularly younger generations. Investors reflected this change swiftly by supporting younger authors and internet novels (Paquet, 2005).

Table 8-8. Korean films export trends (1993-2002)

Year	No. of exported films	Average unit price	Total export
1993	17	US$12,417	US$173,838
1994	14	US$44,349	US$620,879
1995	14	US$13,912	US$208,679
1996	14	US$13,467	US$404,000
1997	15	US$13,667	US$492,000
1998	30	US$93,144	US$3,073,750
1999	36	US$79,590	US$5,969,219
2000	33	US$185,625	US$7,053,745
2001	75	US$110,289	US$11,249,593
2002	38	US$112,422	US$15,014,181

Note: Data from 1996 are based on information collected from film producers that exported films.
Source: Korea Film Council unpublished document.

[83] There were venture capital and even innovative "netizen funds," where investors purchased individual shares priced online at just a few dollars each to finance a forthcoming movie production (Jin, 2006; Pager, 2011).

This changed the release strategy for films and the map of distribution operation, thus, wide release and multiplex chain as a norm. By 2001, Korea possessed one of the strongest commercial industries in the world outside of the U.S. or India. The commercial success of local films also helped to give new directors an opportunity to make their debut (Paquet, 2005: 33). The revival of Korean film catalyzed the emergence of multiplex cinemas in earnest. Besides, after the success of Shiri, other Korean blockbusters followed, such as *Joint Security Area (JSA)* in 2000 and *Friend* in 2001. As a consequence, Korean movies increased their market share up to 50, 1% in 2001 (see Figure 8-1).

8.7 From Roh Moo-hyun to Lee Myung-bak regimes (2003-2012)

From the late 1990s until 2006, Korea enjoyed its hay days for the first time without any turbulence. However, when Korea cut the SQ system by half, from 146 days to 73 days, most of cineastes was against this cut. They worried that the unprotected film industry would be dominated by Hollywood films. Through several years of adjustment and more direct competition against Hollywood movies, Korea's film industry has enhanced its competitiveness more and achieved unprecedented success both domestically and internationally.

8.7.1 Domestic and international circumstances

President Roh Moo-hyun continued most of the cultural policy of President Kim Dae-jung. The aftermath of 1997 Asian financial crisis enlarged and deepened the gap between the rich and the poor. To overcome this gap, Roh Moo-hyun administration set up labor-friendly policies which actually induced union activities which made Korean economy experience further difficulty.

On the other hand, Roh's administration further accelerated globalization through free trade agreements (FTAs) that encountered severe opposition from all sectors in the society. His aim-high policies did not achieve what he had wished for and Korea had economically difficult time for the first time since the recovery from the Asian economic crisis.

Lee Myung-bak regime started from vulnerable social and economic conditions. To

overcome the difficulties, the government looked for further globalization with more business-friendly policies. The administration expanded its market network through FTAs with more countries and deregulated business barriers. These efforts made Korea less affected from the 2008 Global Financial Crisis which led many European countries to serious economic turmoil.

8.7.2 Evolutions of policies and business/corporate strategies

In 2003 and 2004, *Silmido* and *Taegukgi: The Brotherhood of War* became the first two films to sell more than ten million tickets in the domestic market (Shim, 2006). This was an aftermath of experiencing the fierce competition with selectively well-made imported films, which made the Korea's film industry more focused on producing high-quality movies of various genres with strong story lines and enormous increase in the production budgets (Lee, 2005). Consequentially, the number of admissions and box offices revenues doubled between 2001 and 2007.

With the regional popularity of Korean dramas in Asia, notably in Southeast Asian, the demand for Korean films in the foreign markets increased. When the first international sales companies were set up in 2000, it resulted in an exponential growth in export sales (Shim, 2006). This means that Korean films became commercially viable in the domestic and regional markets. A new generation of directors also became acknowledged in Europe and the U.S., such as Park Chan-wook, Kim Ji-woon, Kim Ki-duk, Bong Joon-ho, Hong Sang-soo, and Lee Chang-dong.

In 2006, following the free-trade agreement negotiations with the U.S., the Korean government decided to lower the SQ system from 146 days to 73 days. Korean filmmakers have countered by claiming that the SQs are the driving force behind the industry's recent success. The same year, US$954 million worth of tickets were sold—an all-time record, and Korean movies enjoyed from a 63.8% share in the market (see Table 8-9).

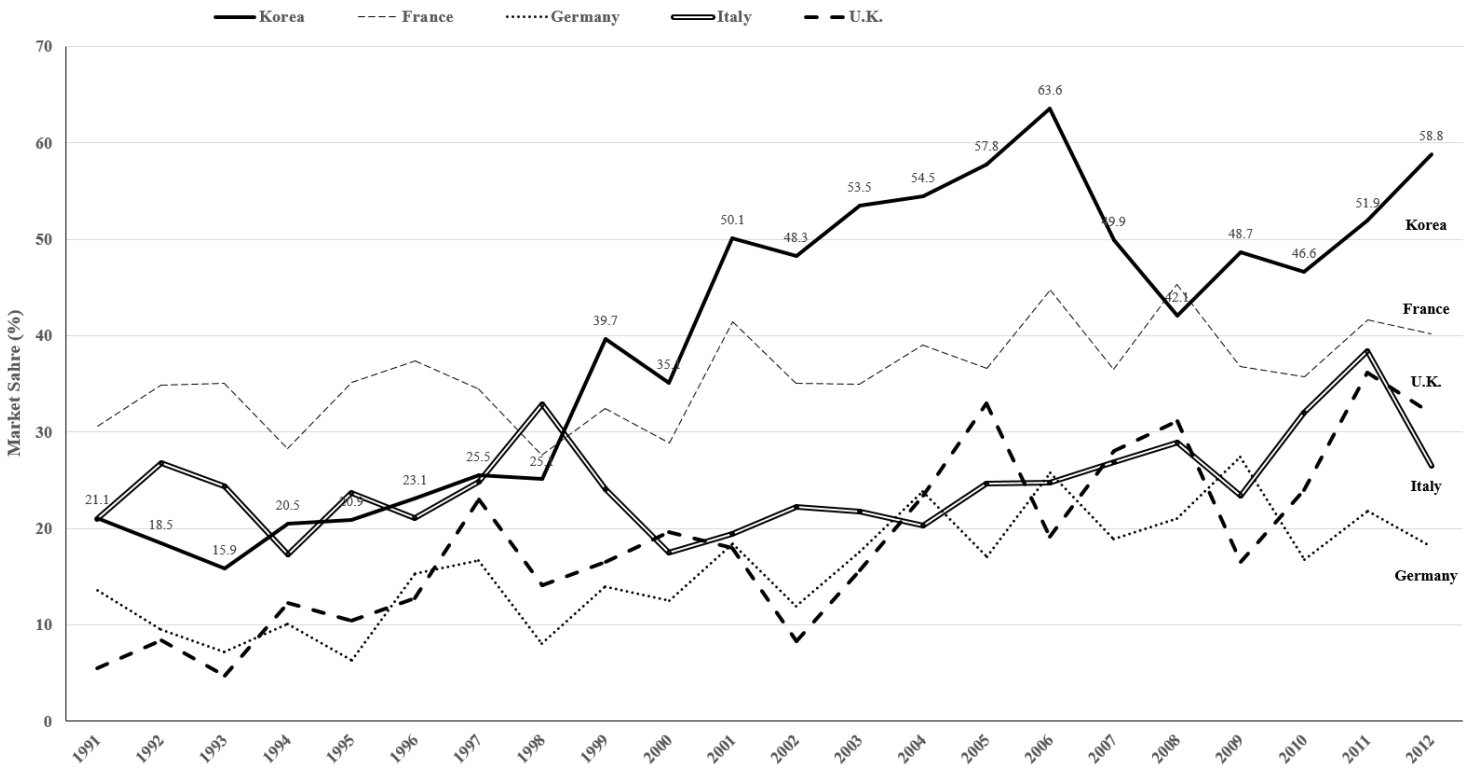
As the film industry became particularly lucrative, many production companies tried to enter the market. Consequently, 100 movies were produced in 2006. However, the rising production costs of films resulted in a decrease of net profit on investments, which started from 41.5%, in 2001 to -24.5% in 2006 and -45% in 2007 (Lee, 2005). Without cost competitiveness, export prices began to fall, and in 2006 overseas sales fell 70% from 2005. Particularly, sales to Japan alone plunged 83%.

The stagnation period started from 2007 ended in 2012, a record-breaking year for the Korea's film industry. 195 million tickets were sold in 2012, up by 22% from 2011. In the same year, Korean movies accounted for 58.8% of the market share and the movie business saw a 13% profit on investments, marking the first surplus in seven years. Also, the Korean film exports also went up 8.4% to a total of US$37.8 million, which marks the first time since 2008 that film exports were over US$20 million (Korean Film Council, 2014). In 2013, Korea's film industry overcame the previous record with 59.7% of market share and 213 million tickets were solder, which is the highest number of tickets sold in the history of Korea's film industry (see Table 8-9).

Table 8-9. Korean films industry trends (2003-2013)

Year	Korean films (share)	Foreign films (share)	No. of screens	Total admissions	Ticket price	Adm. per capita
2003	65 (53.5%)	175 (46.5%)	1,132	119,475,309	₩6,002	2.5
2004	74 (59.3%)	194 (40.7%)	1,451	135,166,175	₩6,287	2.8
2005	83 (58.7%)	215 (41.3%)	1,648	145,524,176	₩6,172	3.0
2006	108 (63.8%)	237 (36.2%)	1,880	153,413,510	₩6,034	3.1
2007	112 (50.8%)	281 (49.2%)	1,975	158,774,874	₩6,247	3.2
2008	108 (42.1%)	272 (57.9%)	2,004	150,830,679	₩6,494	3.0
2009	118 (48.8%)	243 (51.2%)	2,055	156,960,266	₩6,970	3.2
2010	140 (46.6%)	286 (53.4%)	2,003	149,182,008	₩7,834	3.0
2011	150 (51.9%)	289 (48.1%)	1,974	159,724,465	₩7,737	3.2
2012	175 (58.8%)	456 (41.2%)	2,081	194,890,587	₩7,466	3.8
2013	183 (59.7%)	722 (40.3%)	2,184	213,324,223	₩7,271	4.3

Source: Korea Film Council (2014 Jan. 23). 2013 Annual report.



Source: Korea Film Council, Source: Korean Film Council, http://www.index.go.kr/potal/main/EachDtlPageDetail.do?idx_cd=2444, based on official reports from each country (accessed March 23, 2014).

Figure 8-3. Market share comparison of selected countries (1991-2012)

Also, Korea's film industry has accelerated its globalization (Pager, 2011). Several Korean directors made their English-language debuts and Korean actors and actresses started to participate in foreign films. Also, the government welcomed foreign investment in the industry and supported foreign film shootings in Korea. There are even grants for foreign students studying Korean film and a range of well-produced filmmaker monographs (Variety, 2008 Feb. 8). Recent years, Korea is one of a few countries where domestic films dominate its market over Hollywood films (see Figure 8-3).

Recently, *chaebols'* domination in film industry has arisen as a hot issue in Korea as Le Monde (2013 Aug. 2) mentioned. Three main conglomerates—CJ, Lotte, and ShowBox—control more than 80% of Korea's film industry by becoming involved in the creation and the distribution of movies (Korea Creative Content Agency, 2013). Some argue that due to the domination, low-budget independent producers are rarely exposed to public. However, these conglomerates also help low-budget and independent filmmakers and conserve several screens only for these films. The good example is *Elegant Lies*, financed and distributed by CJ, which was released in March 2014 and maintained a strong showing at the Korean box office, despite a high competition with other Hollywood films, e.g., *Noah* and *300: Rise of an Empire* (The Hankyoreh, 2014 March 20).

8.8 The Dynamics of the Forces

By Western countries, Korea was considered the periphery of culture. This view started changing since late 1990s. With popularity of Korean films, dramas, and K-pop, Korea received spotlight as the powerhouse of culture. Interestingly, Korea is known for its long and unique history and traditional culture; its modern culture, notably pop culture, was not much discussed before. In this regards, it would be meaningful to see what changed the facets of before and after.

Since Korea had more focused on manufacturing industry, the film industry did not attract much attention from the government. Thus, there were not much investment and fund for the film industry. As the automobile industry experienced, the infrastructure for Korea's film industry was also destroyed during the war. However, during this period, most Korean

filmmakers joined and worked for the U.S. troops and were trained in military-based documentary production. This allowed a fast spillover of technology to Korea from the U.S.

Korean corporations also should be credited for the success of film industry. It was the corporations that put the industry in the stride when Korea faced free competition with foreign films, notably Hollywood. Korean productions and companies responded quickly to survive in the harsh condition. They quickly adopted the Hollywood style of film production system. Verticalization and lapidary preparation enhanced both speed of production and distribution and helped the producers meet the needs of audiences.

By imitating Hollywood distribution and production system, Korean companies could gain competitiveness vis-à-vis its rivals in domestic market. This allowed Korea's film industry to compete with Hollywood films on a relatively equal basis. However, Korean producers did not remain at simply copying the system. They made films with Korean-ness on top of Hollywood features. Eventually, Korea's unique films, distinguishing from other foreign films, gained its reputation and became popular overseas, particularly in Asian countries. Recently, Hollywood companies are trying to buy the copyright of the cover version of Korean films.

When Korea's film policies changed from being cultural to industrial, the government invested tangible amount in the film infrastructure, such as IT, facilities, graphic design, and education. This later helped the resurrection of Korea's film industry. This mixed infrastructure facilitated film producing and brought synergetic effect on production and quality. Furthermore, *chaebols'* verticalization enhanced film industry's competitiveness further.

During the early golden time of Korean film, Korean producers and productions worked very hard to expand the size of the market. For example, 212 films were made in 1968 and 229 films in 1969. This is before the appearance of "quickies" which were prevalent during 1970s. Korea's film industry had the best year in in the history of movie industry in 2013 and during this year 183 films were made. Thus, it is clear that Korean cineastes are highly arduous and diligent.

However, Korean film producers, productions, and now *chaebols* always aim to surpass the *status quo*. They try to make better films and export them abroad. In the early time, the only way to survive was exporting films be self-sustainable with limited help from the government. Later, they were more wealth-driven with industrial policies and business mind. Recently, Korea's film industry has enlarged its scope more. The industry interaction with

foreign productions and companies became greatly active. Korean film producers and cineastes collaborate briskly with others. This globalization enhances all the aspect of the ABCD and it enhances the competitiveness of Korea's film industry.

Conclusion

Many studies have attempted to explain the economic success of East Asian economies, particularly South Korea, but very few are satisfactory because economic success is a result of more than just economic factors. This dissertation is thus important as it takes an interdisciplinary approach, including economic policy, business strategy, and their histories. This comprehensive approach can explain how the economic policies work better with appropriate business strategies at the right moment of history.

While existing economic theories mostly deal with the "what" factors of comparative advantage (e.g., cheaper labor and higher technology), this dissertation adopts the "how" factors, which explain what kind of economic policy and business strategy make an economy more successful when it has similar comparative advantages compared to other economies. This is a new theoretical approach, called "the ABCD model" developed by Professor Hwy-Chang Moon and this study has statistically proven that this approach well explains economic development. This new approach does not replace but complement the existing theories to better explain the real world of economic success, particularly South Korea and other East Asian economies.

In addition to the statistical tests, this study has provided two cases studies of Korea's automobile and film industries. Despite varying industry characteristics between manufacturing and service sectors, it is shown through rigorous case analyses that both industries share common success factors that can be systematically explained by the ABCD model. This new model is thus proven as a useful tool for analyzing industry competitiveness.

Overall, this study has shown that the new approach is important as a tool for guiding economic development through rigorous conceptualization, statistical analysis, and case studies. This dissertation has a potential for further application to different units of analysis such as countries, industries and companies, as well as to other academic disciplines.

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Appendices

1. Data sets for ABCD

		1.1.1a			1.1.1b			1.1.2a			1.1.2b		
No.	**Country**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**
1	Argentina	26.00	26.00	26.00	14.00	14.00	14.00	9.60	10.50	10.90	6.10	11.70	20.90
2	Australia	2.00	2.00	2.00	2.00	2.00	2.00	24.20	24.30	24.30	53.10	73.00	96.20
3	Austria	28.00	28.00	25.00	8.00	8.00	8.00	23.90	25.40	25.00	24.90	42.60	56.30
4	Belgium	4.00	4.00	4.00	3.00	3.00	3.00	31.50	33.00	33.30	8.00	19.40	33.00
5	Brazil	120.00	119.00	119.00	15.00	13.00	13.00	6.80	8.60	9.20	6.30	20.90	33.70
6	Bulgaria	18.00	18.00	18.00	4.00	4.00	4.00	14.50	16.40	17.90	3.80	29.90	48.50
7	Canada	5.00	5.00	5.00	1.00	1.00	1.00	29.80	31.80	32.50	30.40	38.40	42.10
8	Chile	22.00	7.00	8.00	8.00	7.00	7.00	10.50	11.60	12.40	9.00	18.00	28.00
9	China	38.00	38.00	33.00	14.00	14.00	13.00	9.40	11.60	12.70	1.80	9.50	16.90
10	Colombia	14.00	14.00	13.00	9.00	9.00	8.00	5.60	6.90	8.20	3.70	3.70	5.00
11	Croatia	7.00	7.00	9.00	6.00	6.00	6.00	18.30	19.60	20.70	15.50	34.90	53.90
12	Czech Republic	20.00	20.00	20.00	9.00	9.00	9.00	14.50	15.80	16.40	3.80	43.40	52.10
13	Denmark	6.00	6.00	6.00	4.00	4.00	4.00	37.70	37.60	38.80	46.40	80.20	97.20
14	Estonia	7.00	7.00	7.00	5.00	5.00	5.00	25.10	24.80	25.50	25.90	42.00	76.90
15	Finland	14.00	14.00	14.00	3.00	3.00	3.00	28.60	29.50	30.30	60.70	87.10	106.60
16	France	7.00	7.00	7.00	5.00	5.00	5.00	34.00	36.00	37.50	18.10	36.60	51.80
17	Germany	15.00	15.00	15.00	9.00	9.00	9.00	31.70	33.10	33.70	15.40	34.80	40.80
18	Greece	19.00	10.00	11.00	15.00	10.00	11.00	19.90	21.60	24.10	4.90	40.60	45.70
19	Hong Kong	6.00	3.00	3.00	3.00	3.00	3.00	29.90	31.60	31.20	29.40	55.20	83.20
20	Hungary	4.00	4.00	5.00	4.00	4.00	4.00	19.60	22.20	22.90	10.10	11.90	24.20
21	Iceland	5.00	5.00	5.00	5.00	5.00	5.00	34.10	33.90	34.30	12.70	57.00	70.90
22	India	29.00	29.00	27.00	12.00	12.00	12.00	0.90	1.10	1.20	0.10	1.90	5.00
23	Indonesia	47.00	45.00	47.00	9.00	8.00	9.00	0.80	1.10	1.20	1.50	22.20	31.60
24	Ireland	13.00	13.00	10.00	4.00	4.00	4.00	21.10	22.00	22.70	35.40	59.40	65.90
25	Israel	34.00	34.00	21.00	5.00	5.00	5.00	25.10	24.80	25.30	55.80	40.60	53.00
26	Italy	6.00	6.00	6.00	6.00	6.00	6.00	21.90	22.10	22.10	16.80	33.30	52.20
27	Japan	23.00	23.00	23.00	8.00	8.00	8.00	26.90	27.60	27.70	64.60	101.30	115.10
28	Jordan	13.00	12.00	12.00	8.00	7.00	7.00	3.20	3.20	2.80	0.30	4.90	11.30
29	Kazakhstan	19.00	19.00	19.00	6.00	6.00	6.00	8.90	7.40	9.80	0.00	38.40	42.50
30	Korea	14.00	7.00	7.00	8.00	5.00	5.00	35.70	36.90	37.20	78.00	105.10	105.10
31	Lithuania	22.00	22.00	20.00	6.00	6.00	7.00	20.60	22.10	21.10	12.00	17.20	18.80
32	Luxembourg	19.00	19.00	19.00	6.00	6.00	6.00	33.20	32.90	32.40	17.60	66.70	80.60
33	Malaysia	17.00	6.00	6.00	9.00	4.00	3.00	7.30	7.40	8.40	10.40	12.30	13.40
34	Mexico	9.00	9.00	9.00	6.00	6.00	6.00	10.00	10.20	10.50	1.50	6.50	61.30
35	Netherlands	8.00	8.00	5.00	6.00	6.00	5.00	38.10	38.70	39.80	7.50	49.20	61.30
36	New Zealand	1.00	1.00	1.00	1.00	1.00	1.00	24.90	25.80	27.80	18.30	53.10	65.90
37	Norway	7.00	7.00	7.00	5.00	5.00	5.00	35.30	35.40	36.30	52.50	76.50	84.80
38	Peru	27.00	26.00	26.00	6.00	5.00	5.00	3.10	4.00	4.70	4.50	1.40	2.90
39	Philippines	38.00	35.00	36.00	15.00	15.00	16.00	1.80	1.90	2.20	2.30	3.40	3.80
40	Poland	32.00	32.00	32.00	6.00	6.00	6.00	13.00	14.70	15.50	31.30	49.60	63.50
41	Portugal	6.00	5.00	5.00	6.00	5.00	5.00	19.20	21.00	22.50	24.10	27.40	32.80
42	Qatar	12.00	12.00	9.00	8.00	8.00	8.00	8.20	8.70	10.50	9.60	70.30	61.80
43	Romania	10.00	14.00	10.00	6.00	6.00	6.00	13.90	15.20	16.20	9.40	14.10	27.00
44	Russia	30.00	30.00	18.00	9.00	9.00	8.00	11.00	13.10	14.50	3.40	47.90	52.80
45	Singapore	3.00	3.00	3.00	3.00	3.00	3.00	24.90	25.60	25.40	48.40	114.10	126.10
46	Slovak Republic	16.00	18.00	16.00	6.00	6.00	6.00	12.70	13.60	14.70	7.20	31.90	39.70
47	Slovenia	6.00	6.00	6.00	2.00	2.00	2.00	24.20	24.30	24.30	15.50	29.30	37.00
48	South Africa	22.00	19.00	19.00	6.00	5.00	5.00	1.50	1.80	2.10	5.80	19.80	25.20
49	Spain	47.00	28.00	28.00	10.00	10.00	10.00	22.90	23.80	24.40	18.60	41.60	53.60
50	Sweden	15.00	15.00	16.00	3.00	3.00	3.00	31.80	31.80	32.30	71.70	91.50	104.90
51	Switzerland	20.00	18.00	18.00	6.00	6.00	6.00	37.90	40.00	39.90	31.00	35.60	39.60
52	Taiwan	15.00	10.00	10.00	6.00	3.00	3.00	22.70	23.70	23.90	12.40	42.70	49.90
53	Thailand	32.00	29.00	29.00	7.00	5.00	4.00	4.60	5.00	8.20	0.70	0.10	0.10
54	Turkey	6.00	6.00	6.00	6.00	6.00	6.00	9.70	10.30	10.60	7.10	8.80	16.50
55	UAE	15.00	13.00	8.00	8.00	7.00	6.00	10.50	11.00	10.30	3.50	21.70	44.80
56	Ukraine	27.00	24.00	22.00	10.00	9.00	7.00	6.50	7.00	8.00	0.60	4.40	5.40
57	U.K.	13.00	13.00	13.00	6.00	6.00	6.00	31.60	32.70	34.00	38.20	52.60	72.10
58	USA	6.00	6.00	6.00	6.00	6.00	6.00	27.60	27.40	28.30	50.60	74.50	88.20
59	Venezuela	141.00	141.00	144.00	17.00	17.00	17.00	5.40	6.20	6.70	7.50	16.10	4.80

		1.2.1			1.2.2			2.1.1			2.1.2		
No.	**Country**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**
1	Argentina	4.40	4.30	4.10	2.90	3.00	35.00	3.90	3.90	3.60	4.40	4.50	4.30
2	Australia	5.50	5.70	5.50	8.70	8.84	85.00	5.20	5.10	5.00	5.90	5.80	5.90
3	Austria	6.30	6.20	6.10	7.90	7.79	69.00	4.80	4.90	4.90	6.00	5.90	5.90
4	Belgium	5.90	5.90	5.80	7.10	7.49	75.00	5.20	5.30	5.20	5.50	5.60	5.60
5	Brazil	5.20	5.10	5.00	3.70	3.77	43.00	5.20	5.10	5.20	5.20	5.20	5.20
6	Bulgaria	4.30	4.20	4.30	3.60	3.33	41.00	4.20	4.10	4.10	4.00	3.90	4.00
7	Canada	5.80	5.70	5.60	8.90	8.67	84.00	5.10	5.20	5.30	5.60	5.60	5.60
8	Chile	5.20	5.00	4.90	7.20	7.21	72.00	5.20	5.20	5.10	5.30	5.40	5.20
9	China	4.70	4.60	4.50	3.50	3.64	39.00	4.60	4.60	4.60	4.90	4.90	4.70
10	Colombia	5.00	4.90	4.80	3.50	3.45	36.00	4.90	4.80	4.60	4.50	4.60	4.40
11	Croatia	4.40	4.40	4.30	4.10	4.03	46.00	4.00	4.20	4.10	4.40	4.70	4.70
12	Czech Republic	5.40	5.40	5.40	4.60	4.37	49.00	5.30	5.30	5.30	5.40	5.20	5.10
13	Denmark	5.60	5.70	5.60	9.30	9.39	90.00	5.00	5.10	4.90	6.00	6.00	5.80
14	Estonia	5.10	5.00	5.00	6.50	6.35	64.00	5.00	5.10	5.20	5.30	5.50	5.50
15	Finland	5.40	5.50	5.70	9.20	9.40	90.00	4.30	4.20	4.40	6.00	6.00	6.10
16	France	5.70	5.70	5.50	6.80	7.01	71.00	4.90	4.90	4.80	5.60	5.60	5.50
17	Germany	6.20	6.00	6.10	7.90	8.05	79.00	4.50	4.30	4.60	6.00	5.90	5.90
18	Greece	4.50	4.50	4.50	3.50	3.39	36.00	4.10	4.00	3.90	4.40	4.60	4.40
19	Hong Kong	5.40	5.20	5.40	8.40	8.39	77.00	5.50	5.50	5.50	5.90	5.90	6.00
20	Hungary	4.60	4.60	4.60	4.70	4.56	55.00	5.20	5.40	5.40	4.80	4.90	4.80
21	Iceland	5.30	5.20	5.10	8.50	8.27	82.00	4.50	4.60	4.30	6.50	6.30	6.30
22	India	4.60	4.50	4.50	3.30	3.10	36.00	5.10	5.00	4.90	5.30	5.30	5.20
23	Indonesia	4.60	4.50	4.60	2.80	3.03	32.00	4.90	4.70	4.80	4.90	5.00	4.90
24	Ireland	5.30	5.20	5.30	8.00	7.54	69.00	6.30	6.40	6.40	5.50	5.50	5.50
25	Israel	5.40	5.50	5.20	6.10	5.81	60.00	5.20	5.30	5.30	6.10	6.10	6.20
26	Italy	5.10	5.20	5.20	3.90	3.91	42.00	4.00	3.90	3.80	4.30	4.30	4.30
27	Japan	6.20	6.20	6.10	7.80	8.04	74.00	4.70	4.70	4.70	6.30	6.30	6.20
28	Jordan	4.20	4.20	4.40	4.70	4.49	48.00	5.00	4.90	5.00	5.50	5.40	5.60
29	Kazakhstan	4.00	3.90	4.20	2.90	2.69	28.00	4.10	4.10	4.40	4.30	4.10	4.50
30	Korea	5.20	5.20	5.20	5.40	5.36	56.00	4.50	4.50	4.50	6.10	6.00	6.00
31	Lithuania	5.00	4.90	4.90	5.00	4.75	54.00	4.80	5.00	5.10	5.00	5.00	5.00
32	Luxembourg	5.20	5.40	5.10	8.50	8.51	80.00	5.50	5.30	5.60	5.70	5.70	5.60
33	Malaysia	5.10	5.30	5.20	4.40	4.31	49.00	5.30	5.30	5.30	5.50	5.60	5.60
34	Mexico	4.70	4.80	5.00	3.10	2.97	34.00	5.00	5.20	5.30	4.50	4.60	4.80
35	Netherlands	5.80	5.70	5.80	8.80	8.89	84.00	5.00	5.00	5.00	5.60	5.70	5.80
36	New Zealand	5.50	5.50	5.60	9.30	9.46	90.00	4.90	4.90	5.10	5.90	5.90	5.90
37	Norway	5.60	5.30	5.40	8.60	8.99	85.00	4.60	4.80	4.80	6.20	6.10	6.00
38	Peru	4.60	4.60	4.60	3.50	3.39	38.00	5.00	5.00	5.00	4.80	4.90	4.70
39	Philippines	4.40	4.40	4.50	2.40	2.64	34.00	4.40	4.70	5.00	5.00	5.10	5.20
40	Poland	5.00	4.90	4.80	5.30	5.48	58.00	5.00	5.00	4.80	4.60	4.30	4.20
41	Portugal	4.80	4.80	4.90	6.00	6.10	63.00	5.30	5.30	5.20	5.60	5.60	5.60
42	Qatar	5.70	5.30	5.40	7.70	7.16	68.00	6.00	6.10	6.10	6.10	6.00	6.00
43	Romania	4.00	4.00	3.90	3.70	3.61	44.00	4.70	4.50	4.30	4.20	4.10	4.10
44	Russia	3.80	3.80	3.80	2.10	2.45	28.00	3.90	3.70	3.60	4.00	3.80	3.60
45	Singapore	5.10	5.10	5.10	9.30	9.17	87.00	6.00	6.00	5.80	6.00	6.00	6.00
46	Slovak Republic	4.90	4.80	4.90	4.30	3.97	46.00	5.70	5.50	5.50	5.00	5.00	4.90
47	Slovenia	5.20	5.10	5.10	6.40	5.87	61.00	4.20	3.90	4.00	4.80	4.60	4.70
48	South Africa	5.30	5.20	5.10	4.50	4.08	43.00	5.00	5.00	5.00	5.40	5.50	5.40
49	Spain	5.20	5.30	5.20	6.10	6.23	65.00	4.90	4.90	4.90	5.20	5.20	5.10
50	Sweden	6.00	6.00	5.70	9.20	9.30	88.00	5.20	5.30	5.20	6.40	6.50	6.30
51	Switzerland	6.20	6.20	6.20	8.70	8.80	86.00	5.00	5.10	5.00	6.30	6.20	6.20
52	Taiwan	5.70	5.70	5.60	5.80	6.14	61.00	5.10	5.00	5.10	6.10	5.90	5.80
53	Thailand	5.00	4.90	4.90	3.50	3.38	37.00	5.00	5.00	4.90	4.90	4.70	5.00
54	Turkey	4.60	4.60	4.70	4.40	4.21	49.00	4.80	4.70	4.70	5.10	5.20	5.30
55	UAE	5.10	5.10	5.30	6.30	6.82	68.00	5.70	5.50	5.70	6.20	5.90	6.00
56	Ukraine	4.00	3.90	4.40	2.40	2.30	26.00	3.80	3.80	4.00	4.40	4.60	4.80
57	U.K.	5.20	5.30	5.40	7.60	7.78	74.00	5.30	5.20	5.00	5.70	5.70	5.70
58	USA	5.60	5.50	5.50	7.10	7.14	73.00	4.90	4.90	4.90	6.00	5.90	5.90
59	Venezuela	3.60	3.70	3.50	2.00	1.89	19.00	3.70	3.70	3.70	4.20	4.20	4.10

		2.2.1			2.2.2			3.1.1			3.1.2		
No.	**Country**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**
1	Argentina	4.60	4.92	5.33	4.70	4.80	4.30	3.20	3.30	3.40	3.90	3.90	3.80
2	Australia	6.05	6.57	6.23	6.10	6.10	6.20	3.40	3.50	3.20	4.50	4.20	4.00
3	Austria	7.25	7.24	6.88	6.40	6.40	6.30	5.70	5.70	5.70	5.30	5.30	5.20
4	Belgium	5.77	6.69	6.27	6.40	6.50	6.50	5.00	5.00	5.20	4.40	4.40	4.40
5	Brazil	4.93	5.00	5.05	5.50	5.40	5.30	3.70	3.80	3.80	4.60	4.50	4.40
6	Bulgaria	3.33	3.62	3.28	4.30	4.40	4.50	3.20	3.30	3.40	3.70	3.80	3.70
7	Canada	6.56	6.86	6.72	6.40	6.30	6.30	4.20	4.00	3.80	4.40	4.40	4.40
8	Chile	4.80	5.33	5.35	6.00	6.00	5.90	3.80	3.70	3.50	4.40	4.30	4.30
9	China	4.63	4.68	4.57	4.40	4.50	4.40	4.00	4.00	3.80	4.30	4.40	4.30
10	Colombia	4.94	6.02	4.06	4.70	4.80	4.60	3.50	3.70	3.60	4.10	4.20	4.10
11	Croatia	3.14	3.19	3.43	5.40	5.40	5.20	3.10	3.10	3.10	3.70	3.80	3.80
12	Czech Republic	5.27	5.79	4.73	5.50	5.60	5.50	4.30	4.30	4.50	3.50	3.60	3.60
13	Denmark	7.00	7.21	7.05	6.40	6.50	6.20	5.40	5.30	5.00	4.80	5.10	5.00
14	Estonia	5.24	5.12	5.29	5.80	5.90	5.80	3.70	3.60	3.60	3.90	4.00	4.00
15	Finland	6.61	6.66	6.95	6.60	6.60	6.60	5.30	5.60	5.60	4.60	4.90	5.00
16	France	6.38	6.14	6.19	6.40	6.40	6.30	5.70	5.50	5.40	4.80	4.80	4.40
17	Germany	7.16	7.60	8.00	6.30	6.20	6.30	6.30	6.10	6.10	5.50	5.30	5.30
18	Greece	4.12	4.11	4.37	5.20	5.30	5.20	3.40	3.30	3.30	4.10	4.10	4.00
19	Hong Kong	6.15	6.59	6.53	6.40	6.40	6.50	5.20	4.90	5.00	4.60	4.80	5.00
20	Hungary	4.61	4.13	4.41	5.50	5.50	5.20	3.80	3.80	3.50	3.70	3.70	3.60
21	Iceland	6.94	6.62	6.30	6.80	6.60	6.50	4.00	4.10	4.10	5.30	5.30	5.20
22	India	5.25	5.37	5.28	5.60	5.50	5.30	3.90	4.00	4.10	4.10	4.20	4.20
23	Indonesia	4.52	5.08	4.59	4.80	4.90	4.90	4.40	4.40	4.40	4.40	4.30	4.40
24	Ireland	6.77	6.98	7.00	5.80	5.90	6.00	4.90	5.10	5.10	4.00	3.80	3.90
25	Israel	8.22	8.00	8.10	6.40	6.30	6.20	4.60	5.20	5.00	4.10	5.00	5.10
26	Italy	5.54	6.17	6.55	5.00	5.00	5.00	5.20	5.30	5.10	4.30	4.20	4.10
27	Japan	7.02	7.00	6.67	6.30	6.30	6.30	6.30	6.30	6.10	5.60	5.70	5.60
28	Jordan	4.36	4.26	4.91	5.50	5.50	5.70	3.60	3.60	3.80	4.20	4.10	4.20
29	Kazakhstan	4.81	5.50	5.03	4.40	4.40	4.60	3.00	3.00	3.10	3.70	3.60	3.80
30	Korea	6.92	7.04	6.80	6.10	6.10	6.10	5.10	5.00	4.90	4.60	4.90	5.00
31	Lithuania	5.64	5.42	5.62	5.60	5.70	5.70	4.20	4.10	4.10	4.50	4.40	4.40
32	Luxembourg	6.15	6.49	6.35	6.20	6.30	6.40	5.10	5.00	4.90	4.20	4.10	4.30
33	Malaysia	6.89	6.75	6.90	5.70	5.80	5.80	4.80	4.80	4.90	4.80	5.00	5.00
34	Mexico	4.08	4.64	4.55	4.90	5.20	5.30	3.80	4.00	4.20	3.90	4.00	4.10
35	Netherlands	6.64	6.48	6.57	6.40	6.50	6.50	5.60	5.60	5.60	4.90	4.90	5.00
36	New Zealand	5.76	5.92	5.83	6.00	6.00	6.10	3.80	3.70	4.00	4.40	4.40	4.50
37	Norway	6.44	6.63	6.31	6.70	6.60	6.50	4.30	4.10	4.00	4.70	4.60	4.50
38	Peru	4.64	4.78	3.95	5.10	5.10	4.90	3.40	3.30	3.40	4.00	4.10	4.00
39	Philippines	4.84	4.90	5.02	5.10	5.20	5.20	3.70	3.60	3.60	4.30	4.20	4.20
40	Poland	3.74	4.98	4.75	4.70	4.60	4.60	4.00	3.80	3.80	4.10	3.90	3.90
41	Portugal	4.20	4.61	5.24	6.30	6.30	6.30	3.80	4.00	4.00	4.10	4.00	3.90
42	Qatar	5.12	5.86	5.47	6.10	6.00	6.10	3.30	4.40	4.90	4.20	5.10	5.40
43	Romania	4.15	5.15	4.52	4.30	4.20	4.20	3.00	3.10	3.30	3.60	3.50	3.60
44	Russia	4.00	4.14	3.19	4.20	4.10	3.90	3.00	2.80	2.80	3.70	3.60	3.50
45	Singapore	6.48	6.38	7.00	6.30	6.30	6.30	5.30	5.30	5.20	4.10	4.20	4.30
46	Slovak Republic	4.27	4.41	2.95	5.60	5.50	5.20	3.80	3.60	3.80	3.50	3.40	3.30
47	Slovenia	4.42	4.16	4.56	5.60	5.50	5.60	4.30	3.80	3.80	4.50	4.30	4.30
48	South Africa	5.43	5.32	5.06	5.50	5.70	5.70	3.20	3.10	3.20	4.60	4.60	4.50
49	Spain	4.68	5.43	4.63	5.80	5.90	5.90	4.40	4.50	4.50	4.20	4.30	4.20
50	Sweden	7.07	7.52	7.36	6.80	6.90	6.70	6.20	6.20	5.70	5.40	5.10	4.80
51	Switzerland	7.91	7.88	8.26	6.60	6.70	6.60	6.10	6.10	5.90	5.20	5.30	5.30
52	Taiwan	7.16	7.30	7.50	5.80	5.70	5.60	5.10	5.00	5.00	4.80	4.70	4.60
53	Thailand	5.15	4.90	5.29	5.10	4.80	4.90	4.10	4.10	4.20	4.30	4.30	4.20
54	Turkey	4.40	5.00	4.74	5.50	5.40	5.40	3.90	3.80	4.10	4.70	4.60	4.60
55	UAE	n/a	5.38	5.92	6.40	6.10	6.20	4.70	5.00	5.00	4.80	4.90	5.20
56	Ukraine	4.19	3.75	4.00	4.50	4.60	4.80	3.40	3.50	3.70	3.60	3.60	4.10
57	U.K.	6.72	6.49	6.60	6.40	6.50	6.50	5.30	5.40	5.40	4.70	4.80	5.00
58	USA	8.02	8.24	7.96	6.40	6.30	6.30	5.10	5.10	5.10	5.10	5.10	5.10
59	Venezuela	3.54	3.59	3.56	4.30	4.50	4.50	2.10	2.20	2.20	3.40	3.40	3.40

		3.2.1			3.2.2			4.1.1			4.1.2		
No.	**Country**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**
1	Argentina	3.60	3.50	3.30	3.80	3.90	3.80	3.70	3.64	4.38	4.51	4.49	5.15
2	Australia	4.50	4.10	4.20	5.10	5.20	5.10	6.36	6.77	5.42	6.52	7.05	6.49
3	Austria	4.60	4.50	4.80	4.90	5.00	4.90	7.37	8.20	7.45	7.77	7.73	7.73
4	Belgium	4.30	4.40	4.60	5.20	5.30	5.50	6.00	5.97	5.48	6.06	6.42	6.07
5	Brazil	4.50	4.50	4.50	4.30	4.20	4.10	5.68	6.40	5.98	6.07	6.59	6.27
6	Bulgaria	2.80	3.00	3.40	3.00	3.00	3.00	4.43	4.54	4.89	3.73	3.50	4.13
7	Canada	5.00	4.80	4.90	5.40	5.20	5.10	6.56	6.95	6.23	6.33	6.33	6.49
8	Chile	4.50	4.40	4.50	4.20	4.10	4.20	6.17	6.59	6.27	5.94	5.76	5.50
9	China	4.70	4.70	4.60	4.60	4.50	4.40	5.58	5.76	5.71	5.71	5.96	5.73
10	Colombia	4.00	4.10	3.90	4.00	4.10	4.00	6.02	6.67	5.94	5.39	5.87	5.12
11	Croatia	2.90	3.20	3.30	4.00	3.50	3.50	4.81	5.67	4.30	3.82	3.80	3.58
12	Czech Republic	4.00	3.90	4.00	4.50	4.50	4.50	6.18	7.11	6.80	5.21	6.05	5.87
13	Denmark	4.60	4.80	4.50	5.30	5.20	4.90	7.71	7.84	8.00	7.80	8.09	7.76
14	Estonia	3.10	3.30	3.50	4.20	4.30	4.40	7.00	7.12	6.84	5.82	5.28	5.68
15	Finland	5.10	5.30	5.20	5.60	5.60	5.60	6.39	6.53	6.63	6.69	6.76	6.98
16	France	4.20	4.20	4.50	4.00	4.20	4.40	4.71	4.09	4.30	4.71	4.42	4.78
17	Germany	5.00	4.90	5.10	5.20	5.20	5.20	6.51	7.10	7.69	6.65	7.24	7.39
18	Greece	2.90	2.80	2.90	3.00	2.90	2.90	4.74	4.56	4.38	4.23	4.40	4.07
19	Hong Kong	5.10	5.10	5.10	4.60	4.70	4.80	7.13	7.76	7.67	6.76	7.18	7.39
20	Hungary	2.90	3.10	3.20	4.30	4.40	4.30	5.26	6.17	5.69	5.16	5.24	5.03
21	Iceland	3.70	3.70	4.10	5.00	5.00	4.90	7.12	7.45	7.33	7.12	7.20	6.91
22	India	4.20	4.20	4.50	3.70	3.80	3.80	5.92	6.77	6.18	6.03	6.17	6.06
23	Indonesia	4.50	4.20	4.30	4.20	4.10	4.20	5.17	5.57	5.07	5.59	6.43	5.66
24	Ireland	4.10	4.20	4.60	5.00	5.00	5.10	6.31	6.98	7.69	6.18	6.94	7.15
25	Israel	3.50	3.70	3.90	5.10	5.40	5.40	6.35	7.06	6.93	6.70	7.28	6.76
26	Italy	5.50	5.40	5.30	3.50	3.50	3.60	4.73	4.80	4.99	4.69	4.77	5.20
27	Japan	5.40	5.30	5.20	4.90	5.10	5.00	7.78	7.66	7.81	6.82	6.88	7.35
28	Jordan	3.40	3.30	4.10	3.10	3.10	3.30	5.37	5.57	6.69	4.26	4.45	5.10
29	Kazakhstan	3.20	3.30	3.10	3.00	2.90	3.30	6.95	7.08	6.95	5.09	5.38	5.19
30	Korea	4.40	4.30	4.60	4.70	4.70	4.70	3.72	4.65	4.55	5.87	5.60	6.14
31	Lithuania	2.90	2.80	3.00	4.20	4.40	4.50	5.92	5.78	6.38	5.84	4.98	5.66
32	Luxembourg	4.80	4.70	4.50	5.10	5.00	5.00	6.93	6.70	6.84	6.66	6.39	6.61
33	Malaysia	4.80	4.90	5.00	4.70	4.90	5.00	7.61	7.64	7.53	7.46	7.09	7.27
34	Mexico	3.80	4.00	4.20	3.70	4.00	4.10	5.55	6.21	6.23	5.06	5.66	5.91
35	Netherlands	4.70	4.70	4.90	5.20	5.30	5.30	7.06	7.51	7.55	6.94	7.14	7.17
36	New Zealand	3.70	3.70	3.80	4.80	4.70	4.90	6.87	7.30	7.11	6.22	6.51	6.36
37	Norway	4.70	4.70	4.80	4.90	4.80	5.00	7.21	7.66	7.87	6.93	7.49	7.19
38	Peru	3.40	3.60	3.60	3.20	3.20	3.10	5.21	5.83	5.49	4.44	5.42	5.37
39	Philippines	3.70	3.80	4.10	3.30	3.40	3.50	6.36	5.98	6.37	6.05	5.92	6.58
40	Poland	2.90	3.00	3.20	3.60	3.60	3.60	5.61	5.71	5.21	5.15	5.00	5.08
41	Portugal	3.70	3.70	3.90	4.50	4.60	4.60	5.35	5.88	6.09	4.08	4.88	4.98
42	Qatar	4.60	5.10	5.10	4.50	5.30	5.40	6.80	7.38	6.97	5.50	5.85	5.72
43	Romania	2.80	2.80	3.10	3.10	3.00	3.10	5.82	6.77	5.65	5.59	5.95	4.85
44	Russia	3.20	3.20	3.00	3.70	3.50	3.40	5.49	5.46	5.81	4.55	4.14	4.46
45	Singapore	5.20	5.20	5.20	5.40	5.50	5.60	8.15	8.00	8.29	7.03	6.63	7.41
46	Slovak Republic	3.60	3.60	3.80	3.30	3.20	3.20	5.95	6.36	6.43	5.35	4.82	5.24
47	Slovenia	3.80	3.50	3.60	4.20	4.00	3.90	4.94	5.26	5.53	3.62	4.16	4.48
48	South Africa	4.00	3.90	4.00	4.60	4.60	4.50	4.57	3.59	3.63	4.19	4.06	4.04
49	Spain	4.50	4.00	4.10	4.00	4.10	4.10	4.88	5.24	5.18	4.12	4.95	4.65
50	Sweden	5.10	5.10	5.00	5.50	5.50	5.40	7.18	7.77	7.69	6.98	7.36	7.08
51	Switzerland	5.20	5.10	5.10	5.70	5.80	5.90	8.25	8.38	8.65	7.82	7.92	8.05
52	Taiwan	5.40	5.60	5.50	5.20	5.20	5.20	6.88	7.56	7.08	7.68	7.67	7.15
53	Thailand	4.50	4.10	4.20	4.10	4.20	4.00	6.44	6.97	6.98	6.44	6.79	6.86
54	Turkey	3.60	3.50	4.10	3.40	3.50	3.60	5.47	6.36	6.56	5.09	5.96	5.77
55	UAE	4.30	4.60	5.20	4.10	4.20	4.60	n/a	6.51	6.89	n/a	5.18	6.10
56	Ukraine	2.90	2.70	2.90	3.50	3.60	3.60	5.93	5.49	5.63	4.33	4.22	4.73
57	U.K.	5.00	5.10	5.10	5.60	5.80	5.80	6.48	6.72	6.81	5.22	5.70	5.78
58	USA	5.10	5.10	5.00	5.80	5.70	5.60	6.51	6.58	6.69	6.14	6.47	6.55
59	Venezuela	2.40	2.70	2.90	3.40	3.50	3.60	1.89	2.64	2.78	3.44	3.89	3.58

		4.2.1			4.2.2		
No.	**Country**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**
1	Argentina	3.19	3.57	3.27	6.87	7.08	7.19
2	Australia	7.45	7.46	7.09	7.18	8.14	7.31
3	Austria	6.16	5.48	6.00	5.92	6.08	5.73
4	Belgium	5.36	5.83	5.65	5.21	6.54	5.73
5	Brazil	5.59	5.87	6.02	7.90	8.08	8.38
6	Bulgaria	4.27	4.62	3.53	4.75	4.96	4.34
7	Canada	7.12	7.36	7.37	6.85	7.40	7.48
8	Chile	6.46	7.14	6.73	5.82	6.48	6.44
9	China	6.02	5.84	5.50	5.56	5.76	6.29
10	Colombia	5.52	5.67	5.04	5.86	6.22	5.15
11	Croatia	3.37	3.64	4.00	3.86	4.49	3.92
12	Czech Republic	5.03	4.97	4.83	5.64	6.00	5.20
13	Denmark	5.94	6.00	5.93	6.91	7.32	7.34
14	Estonia	6.36	6.18	6.39	6.47	6.74	6.95
15	Finland	6.02	6.47	6.35	6.17	6.59	6.77
16	France	5.25	4.72	4.48	4.33	3.95	3.80
17	Germany	5.72	6.56	6.97	5.45	6.11	6.00
18	Greece	4.40	4.29	4.13	6.05	5.71	6.33
19	Hong Kong	7.46	7.36	8.20	7.94	8.24	8.29
20	Hungary	3.58	3.39	3.79	3.89	3.78	4.58
21	Iceland	6.08	5.95	6.48	8.28	7.64	8.07
22	India	6.69	6.99	6.91	7.32	7.60	7.62
23	Indonesia	5.94	6.05	5.95	6.18	6.24	6.73
24	Ireland	6.80	7.44	7.38	7.38	7.88	8.46
25	Israel	7.42	7.66	7.02	8.18	8.25	8.05
26	Italy	3.94	4.25	4.49	6.15	6.71	6.83
27	Japan	5.81	5.83	5.72	5.45	5.09	5.47
28	Jordan	5.27	6.00	6.12	5.40	5.92	6.16
29	Kazakhstan	6.38	6.44	6.30	6.72	6.47	6.67
30	Korea	6.52	6.46	6.21	6.71	6.96	6.70
31	Lithuania	5.76	5.23	5.92	7.25	6.55	7.23
32	Luxembourg	6.09	6.33	6.13	6.12	6.04	6.32
33	Malaysia	7.61	6.88	7.54	7.83	7.58	7.58
34	Mexico	3.94	4.92	5.27	5.38	6.28	6.62
35	Netherlands	6.28	6.59	6.84	6.88	6.79	6.65
36	New Zealand	6.04	6.86	6.52	6.82	7.63	7.12
37	Norway	5.29	5.82	6.00	6.11	6.32	6.57
38	Peru	4.74	5.08	5.79	6.50	6.63	6.59
39	Philippines	5.10	5.84	6.21	7.70	7.88	8.10
40	Poland	5.13	5.07	5.16	7.16	7.25	7.19
41	Portugal	3.96	4.66	5.02	5.14	6.18	6.88
42	Qatar	7.11	7.51	7.20	6.30	6.68	6.47
43	Romania	4.97	5.62	4.41	5.00	6.25	6.52
44	Russia	4.66	4.00	4.38	5.46	5.69	5.66
45	Singapore	8.08	7.61	8.07	7.03	6.77	6.98
46	Slovak Republic	5.08	6.00	5.57	6.28	6.11	5.71
47	Slovenia	4.10	4.21	4.36	3.47	4.13	4.03
48	South Africa	4.48	4.81	4.96	5.59	5.76	6.38
49	Spain	3.70	4.53	4.65	4.80	5.69	4.89
50	Sweden	6.36	6.81	6.85	6.55	7.03	6.88
51	Switzerland	7.27	7.33	7.90	6.46	6.37	6.74
52	Taiwan	6.98	7.42	7.63	7.30	7.96	7.96
53	Thailand	5.84	6.04	6.24	6.70	6.97	7.15
54	Turkey	5.54	6.42	6.44	7.08	7.92	7.85
55	UAE	n/a	6.12	7.26	n/a	6.06	7.55
56	Ukraine	5.53	4.94	5.27	6.33	6.25	5.02
57	U.K.	6.57	6.41	6.35	6.11	6.28	6.91
58	USA	7.96	8.07	8.17	7.10	7.22	7.44
59	Venezuela	2.22	3.63	3.70	6.11	7.35	6.70

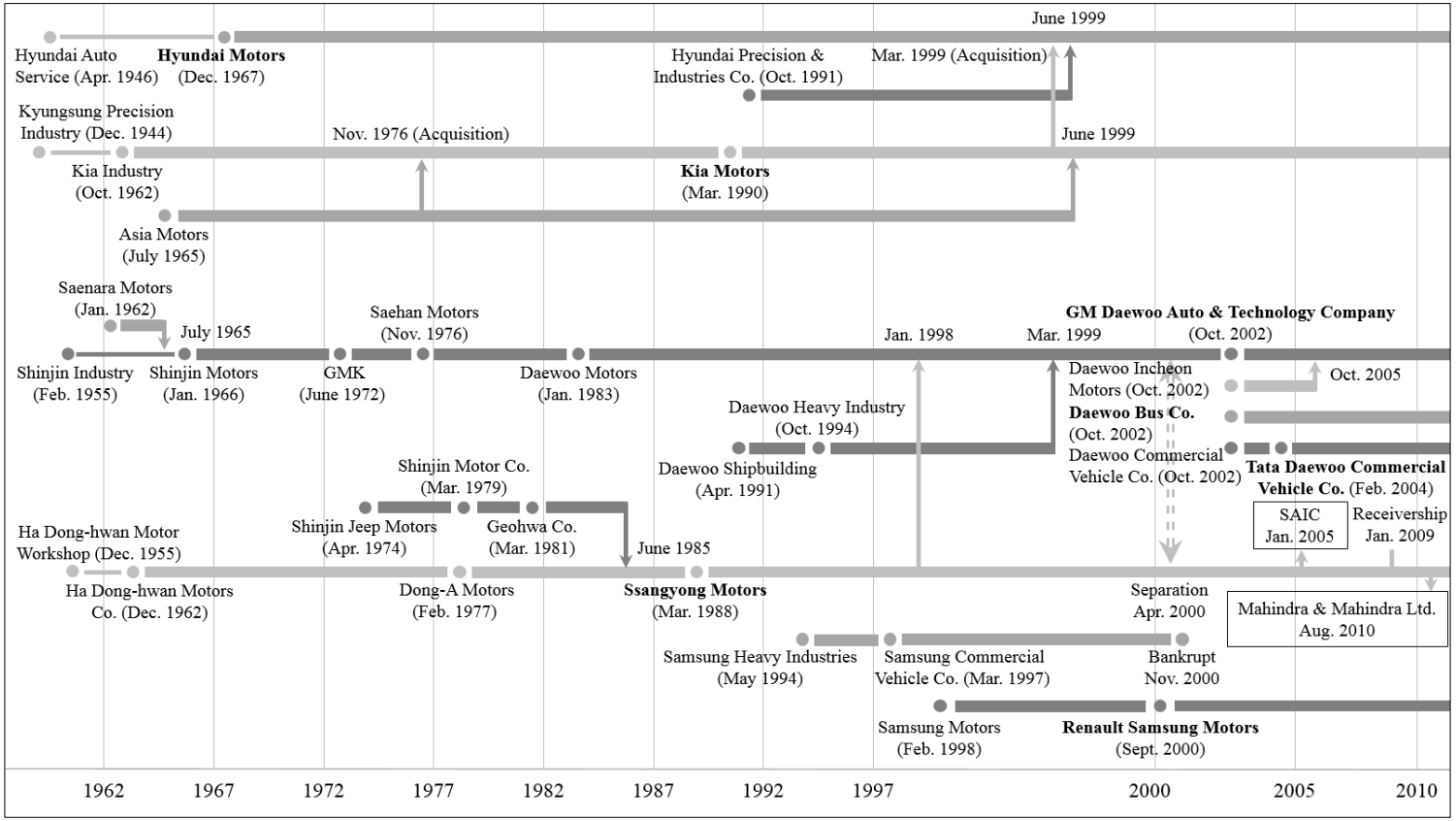
Notes: 1.1.1a: number of procedure for *Starting a business*; 1.1.1b: time (days) of *Starting a business*; 1.2.1a: fixed broadband Internet subscriptions per 100 population; 1.2.1b: mobile broadband Internet subscription per 100 population; 1.2.1: local supplier quality; 1.2.2: corruption perception index (CPI); 2.1.1: FDI and technology transfer; 2.1.2: firm-level technology absorption; 2.2.1: innovation capacity; 2.2.2: availability of latest technologies; 3.1.1: value chain breath; 3.1.2: international distribution; 3.2.1: cluster development; 3.2.2: university-industry collaboration; 4.1.1: worker motivation; 4.1.2: labor relations; 4.2.1: value system; 4.2.2: flexibility and adaptability.

2. Dependent (GDP per capita, ppp) and control variables

		GDP per capita (PPP)			School	Government expenditure			Trade openness		
No.	**Country**	**2010**	**2011**	**2012**	**2010**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**
1	Argentina	15921.64	17476.60	17917.44	9.30	13.09	13.93	14.90	40.64	41.98	37.88
2	Australia	39329.38	40501.69	41942.91	12.00	18.00	17.86	17.88	39.61	41.33	40.81
3	Austria	39304.59	41050.14	41907.85	10.80	19.47	18.97	19.01	103.11	109.94	109.57
4	Belgium	36352.51	37170.92	37448.29	10.90	24.26	24.42	25.00	156.84	168.59	169.34
5	Brazil	11215.68	11646.36	11875.96	7.20	21.15	20.68	21.31	22.32	24.08	26.04
6	Bulgaria	12851.93	13669.13	14076.37	10.60	16.23	15.70	15.51	116.62	132.70	136.53
7	Canada	40114.66	41515.28	42469.40	12.30	22.03	21.69	21.68	61.19	63.84	62.56
8	Chile	16002.08	17097.27	18181.56	9.70	12.29	12.10	12.10	69.53	72.89	67.99
9	China	7487.38	8304.53	9051.34	7.50	13.29	13.35	13.75	54.87	55.17	52.79
10	Colombia	9498.86	10207.90	10696.92	7.30	16.93	16.10	16.55	32.06	37.37	36.35
11	Croatia	17785.16	18129.89	18101.80	9.80	20.08	19.84	19.87	79.14	83.76	84.97
12	Czech Republic	25987.27	26916.13	27058.59	12.30	21.30	20.73	20.51	132.21	142.62	151.47
13	Denmark	35946.02	36872.14	37248.72	11.40	28.95	28.36	28.46	94.72	101.33	104.64
14	Estonia	18373.80	20524.26	22471.92	12.00	20.78	19.23	19.21	163.02	193.67	195.02
15	Finland	34167.81	35650.59	35739.86	10.30	24.74	24.45	25.11	79.92	83.43	82.67
16	France	33682.55	34870.66	35312.44	10.60	24.88	24.48	24.74	57.24	60.99	61.23
17	Germany	35797.01	38409.60	39335.17	12.20	19.53	19.14	19.29	89.68	96.59	98.56
18	Greece	27146.88	25852.41	24469.21	10.10	18.34	17.38	17.50	46.70	51.27	51.16
19	Hong Kong	46944.74	49732.42	50916.90	10.00	8.86	8.71	9.10	412.51	431.86	435.48
20	Hungary	18611.38	19329.03	19444.62	11.70	22.03	10.22	n/a	166.75	175.31	179.27
21	Iceland	36833.87	38464.09	39544.42	10.40	25.95	25.39	25.33	102.78	110.04	112.70
22	India	3457.13	3708.25	3899.56	4.40	11.44	11.39	11.76	47.02	51.49	53.72
23	Indonesia	4315.77	4620.04	4924.99	5.80	9.11	9.02	8.91	46.31	49.48	48.39
24	Ireland	38610.44	40045.77	40716.17	11.60	19.23	18.38	17.95	181.95	187.33	192.41
25	Israel	31557.93	32925.00	33877.95	11.90	23.25	23.03	22.90	72.04	75.11	76.26
26	Italy	30130.92	30770.03	30551.31	10.10	21.07	20.35	19.99	54.98	58.93	59.21
27	Japan	33980.53	34531.97	35723.53	11.60	19.72	20.39	20.46	30.33	32.44	32.53
28	Jordan	5716.89	5845.66	5968.41	8.60	20.53	22.88	22.56	116.82	119.44	116.95
29	Kazakhstan	11928.95	12887.10	13574.26	10.40	10.81	10.67	11.47	74.36	77.84	80.15
30	Korea	29457.52	30911.16	31949.86	11.60	14.47	14.04	14.05	105.04	113.62	111.28
31	Lithuania	18259.37	20195.36	21587.88	10.90	19.94	18.84	n/a	137.65	157.72	168.17
32	Luxembourg	76906.27	78079.91	77499.19	10.10	16.90	16.73	17.48	260.70	265.93	265.00
33	Malaysia	15018.36	15889.67	16862.34	9.50	12.23	13.01	13.51	170.15	167.43	163.08
34	Mexico	14021.21	14684.41	15343.58	8.50	11.66	11.58	11.63	62.20	64.55	67.17
35	Netherlands	40490.27	41480.69	41527.49	11.60	28.45	27.93	28.47	144.36	154.53	164.05
36	New Zealand	27709.96	28551.67	29608.78	12.50	20.06	19.81	19.48	55.68	58.24	55.86
37	Norway	51758.01	52638.40	54343.39	12.60	21.95	21.52	21.34	69.31	70.13	68.66
38	Peru	9273.45	9950.25	10595.90	8.70	10.61	10.24	10.82	47.11	52.14	49.09
39	Philippines	3945.23	4098.27	4379.67	8.90	9.72	9.70	10.53	69.10	55.07	56.27
40	Poland	18796.16	19843.23	20576.85	10.00	18.95	17.98	17.81	86.29	92.06	92.93
41	Portugal	23180.90	23311.23	23058.58	7.70	21.60	19.92	18.24	70.90	76.60	78.18
42	Qatar	90887.40	100374.33	100888.65	7.30	12.31	12.43	11.97	84.45	95.31	108.68
43	Romania	11860.12	12390.19	12722.14	10.40	7.13	6.31	6.59	76.64	82.13	81.92
44	Russia	15550.11	16537.29	17386.23	11.70	18.73	18.05	19.11	51.85	53.61	52.73
45	Singapore	58018.72	61413.00	62130.39	10.10	10.19	9.74	9.38	384.85	395.35	387.64
46	Slovak Republic	22033.55	23262.20	24042.25	11.60	19.61	18.12	n/a	160.17	177.84	186.23
47	Slovenia	27452.15	28145.49	27837.07	11.70	20.79	20.32	n/a	130.50	143.22	145.86
48	South Africa	10289.47	10725.03	11033.00	8.50	21.59	21.41	21.78	55.02	58.17	58.75
49	Spain	29188.89	29666.93	29670.35	10.40	21.47	21.24	20.18	56.86	61.67	63.16
50	Sweden	37942.82	39539.98	40294.05	11.70	26.66	26.55	26.92	90.57	91.89	89.24
51	Switzerland	43207.40	44366.03	45127.55	11.00	10.99	11.02	11.17	112.25	117.78	118.65
52	Taiwan	35296.32	37396.25	38462.17		11.70	12.00	12.00	139.32	144.54	138.65
53	Thailand	8673.68	8810.49	9502.93	6.60	12.96	13.26	13.58	126.92	139.29	139.73
54	Turkey	13177.76	14428.15	14811.68	6.50	14.34	13.93	14.84	48.30	56.25	57.61
55	UAE	27519.99	28300.15	29176.37	8.90	8.54	7.32	6.90	152.13	167.35	184.38
56	Ukraine	6627.22	7137.08	7296.07	11.30	20.33	18.23	19.52	104.10	113.33	108.65
57	U.K.	35348.94	35856.76	36333.99	9.40	22.65	21.94	21.86	62.33	65.61	64.99
58	USA	48294.15	49797.25	51708.98	13.30	16.86	16.26	15.69	28.82	31.61	31.49
59	Venezuela	12173.36	12734.70	13480.03	7.60	11.21	11.52	12.19	30.27	49.80	46.58

		IFDI openness			OFDI openness			Resource		
No.	**Country**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**	**2010**	**2011**	**2012**
1	Argentina	2.12	2.20	2.63	0.26	0.33	0.23	6.51	6.54	5.72
2	Australia	2.75	4.31	3.64	2.13	0.94	1.03	9.77	10.56	8.00
3	Austria	0.22	2.72	1.59	2.63	5.93	4.18	0.45	0.43	0.46
4	Belgium	18.16	20.09	-0.33	9.31	16.05	3.03	0.06	0.06	0.07
5	Brazil	2.26	2.69	2.90	0.54	-0.04	-0.13	6.14	6.44	6.26
6	Bulgaria	3.19	3.41	3.73	0.48	0.30	0.45	2.59	3.12	2.82
7	Canada	1.84	2.38	2.56	2.20	2.87	3.04	4.22	5.04	4.48
8	Chile	7.11	9.22	11.40	4.37	8.20	7.93	19.59	20.03	17.32
9	China	1.93	1.72	1.50	1.16	1.04	1.04	6.95	8.20	5.79
10	Colombia	2.36	4.03	4.32	2.39	2.49	-0.07	9.62	12.34	10.84
11	Croatia	0.73	2.40	2.19	-0.25	0.05	-0.17	1.56	1.69	1.57
12	Czech Republic	3.09	1.07	5.41	0.59	-0.15	0.68	0.69	0.85	0.64
13	Denmark	-3.70	3.82	0.92	-0.03	4.01	2.43	2.18	2.37	2.25
14	Estonia	8.42	1.16	6.73	0.75	-6.58	4.06	2.75	2.60	2.59
15	Finland	3.11	1.01	-0.72	4.29	1.85	1.82	1.41	1.28	1.40
16	France	1.31	1.39	0.96	2.51	2.14	1.42	0.17	0.16	0.19
17	Germany	1.74	1.36	0.19	3.68	1.45	1.97	0.20	0.23	0.20
18	Greece	0.11	0.38	1.15	0.52	0.59	-0.02	0.21	0.30	0.21
19	Hong Kong	36.89	39.51	28.99	43.90	39.41	32.64	0.00	0.00	0.00
20	Hungary	1.69	4.15	10.62	0.89	3.38	8.34	0.86	0.94	0.90
21	Iceland	1.96	7.90	3.75	-18.76	0.17	-24.39	0.00	0.00	0.00
22	India	1.26	1.91	1.38	0.95	0.66	0.46	6.21	6.79	5.63
23	Indonesia	1.94	2.27	2.26	0.38	0.91	0.62	8.45	8.90	7.13
24	Ireland	20.65	5.19	13.98	10.78	-1.94	9.04	0.20	0.17	0.14
25	Israel	2.53	4.56	4.34	3.98	1.36	1.32	0.30	0.42	0.29
26	Italy	0.45	1.56	0.48	1.59	2.44	1.51	0.19	0.22	0.24
27	Japan	-0.02	-0.03	0.03	1.03	1.83	2.06	0.03	0.03	0.03
28	Jordan	6.25	5.11	4.50	0.11	0.11	0.02	1.82	3.01	2.80
29	Kazakhstan	7.80	7.46	7.01	5.33	2.48	0.79	35.18	36.95	32.14
30	Korea	1.00	0.92	0.86	2.79	2.60	2.85	0.06	0.06	0.06
31	Lithuania	2.19	3.38	1.98	-0.02	0.13	0.95	1.10	0.97	0.97
32	Luxembourg	65.17	37.24	48.92	40.19	15.40	30.31	0.11	0.14	0.16
33	Malaysia	3.67	4.24	3.32	5.43	5.30	5.64	10.77	10.82	9.80
34	Mexico	2.07	1.86	1.08	1.46	1.05	2.18	7.59	9.09	8.56
35	Netherlands	-0.94	2.05	-0.03	8.76	4.89	-0.45	1.27	1.18	1.03
36	New Zealand	0.31	2.65	1.70	0.37	1.55	-0.29	2.41	2.42	2.10
37	Norway	4.03	3.75	2.57	5.58	5.22	4.20	13.27	13.64	11.95
38	Peru	5.37	4.56	6.05	0.17	0.06	-0.03	11.97	13.94	11.32
39	Philippines	0.65	0.81	1.12	0.31	0.24	0.74	3.90	4.42	3.50
40	Poland	2.95	3.68	0.69	1.54	1.40	-0.18	1.88	2.26	1.94
41	Portugal	1.16	4.69	4.20	-3.28	6.27	0.90	0.60	0.67	0.82
42	Qatar	3.67	-0.05	0.18	1.46	3.48	1.01	28.43	28.41	24.23
43	Romania	1.79	1.33	1.27	-0.01	-0.02	0.02	2.52	2.78	2.75
44	Russia	2.90	2.97	2.60	3.54	3.60	2.58	21.09	21.94	18.73
45	Singapore	23.58	21.52	20.95	11.14	10.10	8.53	0.00	0.00	0.00
46	Slovak Republic	2.03	2.23	3.08	1.09	0.51	-0.08	0.67	0.62	0.75
47	Slovenia	0.76	1.99	0.32	-0.45	0.22	-0.21	0.38	0.46	0.44
48	South Africa	0.34	1.47	1.17	-0.02	-0.06	1.12	8.06	9.38	7.85
49	Spain	2.87	1.81	2.05	2.72	2.47	-0.36	0.15	0.15	0.19
50	Sweden	-0.01	1.71	2.61	4.36	5.22	6.37	1.43	1.32	1.11
51	Switzerland	5.86	1.77	0.57	14.26	7.09	6.94	0.05	0.04	0.05
52	Taiwan	0.58	-0.42	0.67	2.69	2.74	2.74	NA	NA	NA
53	Thailand	2.68	2.10	2.20	1.31	2.22	3.05	4.29	4.50	4.31
54	Turkey	1.24	2.07	1.57	0.20	0.30	0.51	0.60	0.76	0.67
55	UAE	1.94	2.27	2.72	0.71	0.64	0.72	21.69	25.58	23.83
56	Ukraine	4.76	4.36	4.39	0.54	0.12	0.68	5.49	6.16	4.57
57	U.K.	2.23	2.11	2.56	1.74	4.39	2.94	1.55	1.53	1.24
58	USA	1.36	1.50	1.07	2.10	2.63	2.09	1.23	1.57	1.26
59	Venezuela	0.47	1.20	0.85	0.45	-0.36	0.65	20.46	33.84	28.78

3. Evolution of Korea's automobile companies



Notes: 1) The author draw and update this figure based on KAMA (2010); 2) Company names written in bold are currently operating; 3) SAIC-Shanghai Automotive Industry Corporation.

4. Motor vehicle production of Korea (1955-2012)

Yr.	A	B	C	D	E	F	G	H	I	etc.	Total
1955	-	-	-	-	-	-	-	-	-	7	7
1956	-	-	-	-	-	-	-	-	-	74	74
1957	-	-	-	-	-	-	-	-	-	372	372
1958	-	-	-	-	-	-	-	-	-	140	140
1959	-	-	-	-	-	-	-	-	-	430	430
1960	-	-	-	-	-	-	-	-	-	550	550
1961	-	-	-	-	-	-	-	-	-	662	662
1962	-	-	67	-	1,710	-	-	-	-	-	1,777
1963	-	-	191	-	1,063	-	-	-	-	-	1,254
1964	-	-	33	-	216	-	-	-	-	-	249
1965	-	-	35	-	106	-	-	-	-	-	141
1966	-	-	313	-	3,117	-	-	-	-	-	3,430
1967	-	-	1,294	-	5,310	-	-	-	-	-	6,604
1968	614	-	2,688	-	14,355	-	-	-	-	-	17,657
1969	7,832	-	4,376	-	18,686	-	-	100	-	-	30,994
1970	4,360	-	6,121	1,737	15,782	-	-	819	-	-	28,819
1971	3,546	-	5,912	3,037	9,590	-	-	917	-	-	23,002
1972	4,130	-	5,672	1,888	5,823	-	-	1,135	-	-	18,648
1973	6,989	-	8,373	1,407	9,405	-	-	140	-	-	26,314
1974	8,992	-	14,482	740	6,076	-	-	161	-	-	30,451
1975	7,092	-	20,354	413	8,405	-	-	915	-	-	37,179
1976	19,289	-	20,250	262	8,491	-	-	1,253	-	-	49,545
1977	38,254	-	29,484	1,325	13,997	-	-	2,150	-	-	85,210
1978	81,779	-	45,746	2,161	26,769	-	-	2,503	-	-	158,958
1979	103,845	-	58,248	1,595	38,693	-	-	1,935	-	131	204,447
1980	61,239	-	33,369	1,220	24,413	-	-	2,877	-	17	123,135
1981	70,051	-	36,039	2,129	20,411	-	-	4,454	-	-	133,084
1982	90,983	-	42,525	2,739	22,796	310	9	3,140	-	88	162,590
1983	108,117	-	63,638	8,309	35,146	135	31	5,518	-	125	221,019
1984	140,871	-	75,007	2,516	42,357	130	12	4,429	-	39	265,361
1985	240,755	-	84,931	3,480	44,935	46	4	3,998	-	13	378,162
1986	428,934	-	104,007	6,585	55,826	71		5,759	-	364	601,546
1987	606,816	-	197,094	7,412	162,225	167		5,662	-	363	979,739
1988	647,387	-	249,473	14,245	162,788	80		8,688	-	994	1,083,655
1989	614,379	-	316,893	15,482	161,925	121		19,316	-	1,354	1,129,470
1990	676,067	-	396,325	25,374	201,035	158		22,148	-	523	1,321,630
1991	767,090	3,006	425,296	28,020	207,826	40,316		24,663	-	1,601	1,497,818
1992	859,250	24,264	502,227	51,553	188,703	81,050		21,439	-	1,210	1,729,696
1993	960,057	36,083	600,054	55,492	306,306	69,380		22,075	-	761	2,050,208
1994	1,134,611	39,430	619,875	55,586	347,747	65,998	1,121	46,375	-	920	2,311,663
1995	1,213,694	41,140	631,644	59,509	459,058	61,383	3,444	54,356	-	2,172	2,526,400
1996	1,281,762	60,228	703,116	53,657	458,237	174,437	2,804	76,940	-	1,533	2,812,714
1997	1,239,032	71,326	613,920	45,952	617,604	146,653	2,981	79,907	-	900	2,818,275
1998	770,558	74,938	362,947	26,549	392,593	239,738	994	44,186	41,593	398	1,954,494
1999	1,220,243	49,498	680,953	19,280	698,919	59,664	9,901	98,194	6,362	100	2,843,114
2000	1,525,167	-	803,394	-	624,534	-	15,943	116,879	28,787	294	3,114,998
2001	1,513,447	-	851,642	-	387,134	-	-	125,020	68,679	407	2,946,329
2002	1,702,227	-	871,812	-	293,897	710	882	161,014	116,963	79	3,147,584
2003	1,646,385	-	852,263	-	400,578	4,541	4,721	151,696	117,629	57	3,177,870
2004	1,673,728	-	1,019,741	-	555,143	4,327	4,792	130,783	80,906	44	3,469,464
2005	1,683,760	-	1,105,170	-	646,788	4,626	4,657	135,901	118,438	10	3,699,350
2006	1,618,268	-	1,150,289	-	779,630	5,900	7,471	117,123	161,421	-	3,840,102
2007	1,706,727	-	1,118,714	-	942,805	6,288	11,175	122,857	177,742	-	4,086,308
2008	1,673,580	-	1,055,152	-	813,023	4,866	10,669	81,445	187,947	-	3,826,682
2009	1,606,879	-	1,137,176	-	532,191	4,015	8,131	34,703	189,831	-	3,512,926
2010	1,743,375	-	1,416,681	-	744,096	3,214	9,039	80,067	275,269	-	4,271,741
2011	1,892,254	-	1,583,921	-	810,854	3,210	9,346	113,249	244,260	-	4,657,094
2012	1,905,261	-	1,585,685	-	785,757	2,721	9,309	119,142	153,891	-	4,561,766

Notes: 1) A-Hyundai Motors Co.; B-Hyundai Precision & Industries Corporation (현대정공); C-Kia Motors Co.; D-Asia Motors Co.; E-GM Daewoo; F-Daewoo Bus; G-Tata Daewoo; H-SsangYong; I-Renault Samsung; 2) etc. from 1955 to 1961 is the production number of *Sibal* cars; 3) Data of 1962-1963 and 1964-1965 in GM Daewoo are the production number of Saenara Motors and Shinjim Motors, respectively; 4) Data of 1982-99 in Daewoo Bus are the production of Daewoo Heavy Industry; and 5) data of 1982-2000 in Tata Daewoo is the production of Samsung Heavy Industry.
Sources: Korea Automobile Manufacturers Association (KAMA) and Korea Auto Industries Cooperative Association (KAICA) (2005) for 1955-2004, KAMA (2010) for 2005-2009, and Auto Morning (2014) for 2010-2012.

5. Motor vehicle export of Korea (1975-2012)

Yr.	A	B	C	D	E	F	G	H	etc.	Total
1975	-	10	-	21	-	-		-	-	31
1976	1,042	117	-	177	-	-	5	-	-	1,341
1977	7,527	1,540	-	68	-	-	1	-	-	9,136
1978	18,333	5,073	-	2,859	-	-	72	-	-	26,337
1979	19,540	6,647	-	5,013	-	-	286	-	-	31,486
1980	16,244	4,735	17	4,164	-	-	92	-	-	25,252
1981	19,201	2,345	1,220	2,389	-	-	1,128	-	-	26,283
1982	17,698	903	1,003	514	-	-	219	-	265	20,602
1983	18,500	600	5,816	357	-	-	81	-	2	25,356
1984	50,376	1,072	99	673	-	-	71	-	59	52,350
1985	120,041	1,322	733	879	-	-	132	-	3	123,110
1986	302,134	1,476	1,595	859	-	-	305	-	-	306,369
1987	407,924	63,410	2,785	71,533	-	-	658	-	-	546,310
1988	407,719	78,340	2,652	86,438	-	-	574	-	411	576,134
1989	215,101	95,018	1,277	43,497	-	-	599	-	548	356,040
1990	225,393	85,823	805	34,160	-	-	794	-	125	347,100
1991	254,555	80,020	3,116	51,253	-	-	1,179	-	239	390,362
1992	282,511	103,023	9,480	54,653	3,766	-	2,613	-	109	456,155
1993	349,580	158,419	14,753	102,133	9,533	-	4,074	-	65	638,557
1994	392,959	210,469	17,803	99,774	8,804	-	8,047	-	87	737,943
1995	472,813	200,477	27,212	247,510	15,825	-	14,731	-	120	978,688
1996	551,274	252,244	28,061	298,236	55,887	-	24,429	-	26	1,210,157
1997	565,235	281,501	23,401	333,004	90,675	-	23,075	-	-	1,316,891
1998	519,556	234,136	13,086	401,379	181,484	-	12,519	-	4	1,362,164
1999	617,429	397,796	5,154	463,533	5,378	2,855	17,515	-	-	1,509,660
2000	827,606	439,486	-	383,693	-	3,514	21,143	1,000	-	1,676,442
2001	801,076	464,989	-	220,356	-	-	14,317	140	335	1,501,213
2002	928,068	442,083	-	126,572	117	98	12,315	293	-	1,509,546
2003	1,012,134	528,750	-	256,147	1,045	329	15,406	1,127	-	1,814,938
2004	1,124,207	761,637	-	456,639	1,025	644	32,533	2,878	-	2,379,563
2005	1,131,211	838,513	-	544,809	1,016	1,408	65,521	3,610	-	2,586,088
2006	1,032,052	871,233	-	640,539	1,363	1,678	60,035	41,320	-	2,648,220
2007	1,076,084	840,822	-	807,729	1,613	1,846	64,073	54,971	-	2,847,138
2008	1,099,219	738,530	-	702,916	1,106	3,911	43,240	95,043	-	2,683,965
2009	911,088	736,024	-	429,259	1,662	1,907	12,747	56,175	-	2,148,862
2010	1,072,727	920,057	-	610,898	839	4,047	47,756	115,783	-	2,772,107
2011	1,204,155	1,075,871	-	656,425	1,284	2,605	73,630	137,738	-	3,151,708
2012	1,242,083	1,102,004	-	655,878	634	4,099	71,553	94,383	-	3,170,634

Notes: 1) A-Hyundai Motors Co.; B-Kia Motors Co.; C-Asia Motors Co.; D-GM Daewoo; E-Daewoo Bus; F-Tata Daewoo; G-SsangYong; H-Renault Samsung; 2) Data of 1982-99 in Daewoo Bus are the export of Daewoo Heavy Industry; and 5) data of 1999-2000 in Tata Daewoo is the export of Samsung Heavy Industry.
Sources: Korea Automobile Manufacturers Association (KAMA) and Korea Auto Industries Cooperative Association (KAICA) (2005) for 1955-2004, KAMA (2010) for 2005-2009, and Auto Morning (2014) for 2010-2012.

6. Korean film industry trends (1960-2013)

Year	Released Korean films		Released Foreign films		No. of screens	Total admissions	Ticket price	Admission per Capita
	No.	Market share	No.	Market share				
1960	92	(n/a)	208	(n/a)	279	(n/a)	(n/a)	(n/a)
1961	86	(n/a)	105	(n/a)	302	58,608,000	₩12	2.3
1962	113	(n/a)	79	(n/a)	344	59,046,000	₩18	3.0
1963	144	(n/a)	66	(n/a)	386	96,059,000	₩20	3.6
1964	147	(n/a)	51	(n/a)	477	104,579,000	₩23	3.8
1965	189	45.50%	64	54.50%	529	121,697,000	₩23	4.3
1966	136	41.30%	85	58.70%	534	156,336,000	₩31	5.4
1967	172	48.70%	64	51.30%	569	164,077,000	₩41	5.6
1968	212	48.90%	63	51.10%	578	171,341,000	₩51	5.7
1969	229	43.00%	79	57.00%	659	173,043,000	₩63	5.6
1970	209	41.40%	61	58.60%	690	166,000,000	₩73	5.3
1971	202	34.30%	82	65.70%	717	146,000,000	₩80	4.6
1972	122	27.20%	63	72.80%	694	119,000,000	₩83	3.7
1973	125	19.30%	60	80.70%	662	115,000,000	₩88	3.5
1974	141	35.00%	39	65.00%	626	97,000,000	₩104	2.9
1975	94	16.70%	35	83.30%	597	76,000,000	₩168	2.2
1976	134	28.10%	43	71.90%	580	66,000,000	₩207	1.8
1977	101	31.60%	42	68.40%	558	65,000,000	₩307	1.8
1978	117	41.40%	31	58.60%	488	74,000,000	₩389	2.0
1979	96	35.70%	33	64.30%	472	66,000,000	₩715	1.7
1980	91	46.60%	39	53.40%	447	53,770,000	₩957	1.4
1981	87	48.20%	31	51.80%	423	44,143,000	₩1,097	1.2
1982	97	51.30%	29	48.70%	404	42,737,000	₩1,300	1.1
1983	91	39.90%	26	60.20%	450	44,036,000	₩1,326	1.1
1984	81	38.50%	26	61.50%	534	43,917,000	₩1,352	1.1
1985	80	34.20%	30	65.80%	561	48,098,000	₩1,432	1.2
1986	73	33.00%	51	67.00%	640	47,279,000	₩1,533	1.1
1987	90	27.00%	85	73.00%	673	48,593,000	₩1,637	1.2
1988	87	23.30%	175	76.70%	696	52,231,000	₩1,847	1.2
1989	110	20.20%	264	79.80%	772	55,306,000	₩2,271	1.3
1990	111	20.20%	276	79.80%	789	53,459,000	₩2,602	1.2
1991	121	21.10%	256	78.80%	762	52,197,000	₩3,034	1.2
1992	96	18.50%	319	81.50%	712	52,000,000	₩3,471	1.1
1993	63	15.90%	347	84.10%	669	48,230,000	₩3,711	1.1
1994	65	20.50%	382	79.50%	629	48,353,000	₩3,895	1.1
1995	64	20.90%	359	79.10%	577	45,130,000	₩4,268	1.0
1996	65	23.10%	382	76.90%	511	42,200,000	₩4,828	n/a
1997	59	25.50%	380	74.50%	497	47,520,000	₩5,017	n/a
1998	43	25.10%	290	74.90%	507	50,180,000	₩5,150	1.10
1999	49	39.70%	297	60.30%	588	54,720,000	₩5,230	1.17
2000	59	35.10%	343	64.90%	720	64,620,000	₩5,355	1.30
2001	65	50.10%	306	49.90%	818	89,360,000	₩5,860	1.90
2002	78	48.30%	266	51.70%	977	105,130,000	₩6,035	2.20
2003	65	53.50%	175	46.50%	1,132	119,475,309	₩6,002	2.47
2004	74	59.30%	194	40.70%	1,451	135,166,175	₩6,287	2.78
2005	83	58.70%	215	41.30%	1,648	145,524,176	₩6,172	2.98
2006	108	63.80%	237	36.20%	1,880	153,413,510	₩6,034	3.13
2007	112	50.80%	281	49.20%	1,975	158,774,874	₩6,247	3.22
2008	108	42.10%	272	57.90%	2,004	150,830,679	₩6,494	3.04
2009	118	48.80%	243	51.20%	2,055	156,960,266	₩6,970	3.15
2010	140	46.60%	286	53.40%	2,003	149,182,008	₩7,834	2.95
2011	150	51.90%	289	48.10%	1,974	159,724,465	₩7,737	3.15
2012	175	58.80%	456	41.20%	2,081	194,890,587	₩7,466	3.83
2013	183	59.70%	722	40.30%	2,184	213,324,223	₩7,271	4.25

Notes: 1) Market shares from 1965-1973 are based on admissions in Seoul only and that of 1974-1979 is based on admissions in large cities (Seoul, Busan, Daegu, Gwangju, Daejeon, and Incheon); 2) Multiplex cinema appears in 1999; 3) Sometimes, each source offers different data. The author compared and collected seemingly accurate data.
Sources: Koreanfilm.org, http://www.koreanfilm.org/kfilm60s.html for 1962-1969, http://www.koreanfilm.org/kfilm70s.html for 1970-1979, http://www.koreanfilm.org/kfilm80s.html for 1980-1989, http://www.koreanfilm.org/kfilm90-95.html for 1990-1995, http://www.koreanfilm.org for 1996-2002, and Korea Film Council (2014 Jan. 23) for 2003-2013; Admissions per capita of 1998 and 2008 are from Korean Film Council (Korea Film Council (2009).

7. Korean films export trends (1970-2002)

Year	No. of exported films	Average unit price	Total export
1970	253	US$2,878	US$728,014
1971	201	US$4,491	US$902,600
1972	86	US$5,606	US$482,137
1973	39	US$5,410	US$211,000
1974	22	US$10,264	US$225,800
1975	70	US$2,915	US$204,054
1976	44	US$2,973	US$130,810
1977	40	US$5,058	US$202,312
1978	28	US$7,697	US$215,508
1979	9	US$4,800	US$43,200
1980	16	US$18,188	US$291,000
1981	23	US$9,882	US$227,280
1982	41	US$9,919	US$406,683
1983	24	US$11,578	US$277,880
1984	6	US$15,953	US$95,720
1985	2	US$10,000	US$20,000
1986	9	US$14,200	US$127,800
1987	29	US$14,666	US$425,320
1988	34	US$17,347	US$589,785
1989	23	US$15,898	US$365,660
1990	13	US$121,487	US$1,579,326
1991	17	US$27,815	US$472,850
1992	14	US$13,993	US$195,900
1993	14	US$12,417	US$173,838
1994	14	US$44,349	US$620,879
1995	14	US$13,912	US$208,679
1996	14	US$13,467	US$404,000
1997	15	US$13,667	US$492,000
1998	30	US$93,144	US$3,073,750
1999	36	US$79,590	US$5,969,219
2000	33	US$185,625	US$7,053,745
2001	75	US$110,289	US$11,249,593
2002	38	US$112,422	US$15,014,181

Note: Data from 1996 are based on information collected from film producers that exported films.
Source: Korea Film Council (2000 Aug. 23). *1999 Film Industry Situation*.

Chronology

1. Korea's automobile industry

Yr.	Mo.	Korea's automobile industry	Mo.	Korea	Mo.	World
1936						• Automobile Manufacturing Industries Act of Japan - Strong government supports: tax exemption and subsidies - Efforts to break the American car monopoly in Japan
1937						• Establishment of Toyota Motor Co., Ltd.
1938						• Toyota introduced the kanban, or just-in-time production systems
1944	12	• Establishment of Kyungsung Precision Industry (경성정공,which later became Kia Motors)				
1945	12	• Establishment of Joseon Automotive Industry Association (조선자동차공업조합) and Joseon Association of Automotive Suppliers (조선 자동차부품 대책 위원회)	8 9	• Liberation from Japan • The U.S. Army Military Government		• Establishment of Tata Motors
1946	4	• Establishment of Hyundai Auto Service Co. (현대자동차공업사, origin of Hyundai Group)				• GM and Ford introduce auto financing programs: people can buy cars on credit
1948			8	• Establishment of the Republic of Korea with Syngman Rhee as President.		
1949	3	• Establishment of Korea's automobile industry Association (대한자동차공업협회)				• The first Volkswagen sold in the U.S.
1950			6	• Outbreak of the Korean War		
1952	2	• Kyungsung Precision Industry renamed as Kia Industry (기아산업)				
1953			7	• Armistice agreement		
1955	2	• Establishment of Shinjin Industry (신진공업사, precursor of Daewoo Motors)				• Citizen's Car Project is put underway by the Ministry of International Trade and Industry (MITI) of Japan
	8					
	12	• Production of *Sibal* car • Establishment of Ha Dong-hwan Motor Workshop (하동환 자동차제작소)			11	• Outbreak of Vietnam War

1956						• The first Japanese car is sold in the U.S.
1957	5	• Introduction of 5.8 line policy -Limited the number of automobiles				• Toyota Motor Sales, U.S., Inc. formed - Toyota entered the American market
1960			4	• Resignation of Rhee Syngman		
1961			5	• Military coup d'état by Park Chung-hee		
1962	1	• Establishment of Saenara Motors	1	• 1st Five-year Plans		
	2	• Establishment of Korea Auto Industries Coop. Association (한국자동차공업협동조합)				
	5	• Automobile Industry Protection Law (자동차공업 보호법) - Import prohibition on foreign cars and parts (abolished on Dec. 31, 1967) - Tax exemption for assembler - Import tariff exemption for parts and components				
	10	• Kia Industry allowed to produce automobiles				
	12	• Establishment of Ha Dong-hwan Motor Co. (하동환 자동차공업)				
1963	12	• Enforcement of Unification Plan (자동차공업 일원화 방안)	12	• Park Chung-hee as President		• Honda enters the car market
1964	8	• Introduction of Automotive Industry Comprehensive Promotion Plan (자동차공업 종합육성계획)	5	• Devaluation of Korean won: from ₩130 to ₩255 to US$1 (96%)		• Introduction of Chicken tax - A 25% tax on imported light trucks
1965	7	• Establishment of Asia Motors (아시아자동차공업㈜) • Shinjin Industry took over Saenara Motors	6	• Treaty on Basic Relations between Japan and Korea		
1966	1	• Shinjin Industry renamed as Shinjin Motors (신진 자동차공업㈜)				
1967	12	• Establishment of Hyundai Motors (현대자동차)		• 2nd Five-year Plans		
1969	12	• Automobile Industry Basic Promotion Plan (자동차공업 기본육성 계획) - Completion of assembly plant (1967-1968) - Establishment of an engine manufacturing plant (1970-1973) - Production of 100% Korean-developed car (1973-1976): localization of parts	11	• Devaluation of Korean won: from ₩291.4 to ₩304.4 to US$1 (4.4%)		

		and components and price cutting				
1970	1	• Automobile Industry Tripartite Plan (자동차공업 3 원화)	4	• Beginning of Saemaeul Movement		
1971			6	• Devaluation of Korean won: from ₩328.2 to ₩370.8 to US$1 (13%)		
1972	1	• Closure of small and medium sized-factories		• 3rd Five-year Plans		
			10	• Yushin Constitution		
	6	• Establishment of GMK				
1973	1	• Automobile Industry Promotion Plan (자동차공업 육성계획) - Import tariff raised from 150% to 250%	1	• Heavy-Chemical Industry Drive	10	• 1st oil shock
	10	• Automobile Industry Quartet Plan (자동차공업 4 원화)				
1974	4	• Establishment of Shinjin Jeep Motors	12	• Devaluation of Korean won: from ₩399 to ₩484 to US$1 (21%)		
	5	• Long-Term Automobile Promotion Plan (장기자동차 공업진흥계획) - 100% localization of production - Rationalization of assemblers - Separation of auto-parts from auto-manufacturing business				
	8	• Automobile Industry Tripartite Plan (자동차공업 3 원화)				
	10	• Debut of Hyundai Pony				
1975					4	• Cessation of Vietnam War
1976	7	• First export of Pony (to Ecuador)				
	8	• Kia Motors took over Asia Motors				
	11	• GMK renamed as Saehan Motors (새한자동차)				
1977	2	• Ha Dong-hwan Motors renamed as Dong-A Motors (동아자동차)		• 4th Five-year Plans		
1978						• Japanese automakers accounted for more than half the cars imported into the U.S.
1979	3	• Shinjin Jeep Motors renamed as Shinjin Motor Co. (㈜새한자동차)	10	• Assassination of Park Chung-hee	2	• 2nd oil shock
			12	• Coup d'état by Chun Doo-hwan		
1980	8	• Automobile Industry Integration Action (자동차 공업 통합조치) - Passenger car: Hyundai and Saehan - Commercial vehicle (less than 5 ton): Kia	1	• Devaluation of Korean won: ₩580 to US$1		
			9	• Chun Doo-hwan as President		

		- Commercial vehicle (5 ton and more): Free competition				
1981	2	• Automobile Industry Rationalization Plan (자동차산업 합리화 조치) - Passenger car: Hyundai and Saehan - Commercial vehicle (less than 5 ton) and light bus: Kia - Heavy vehicle: Dong-A - Military vehicle: Asia • Shinjin Motor Co. renamed as Geohwa Co. (거화)			5 7	• Voluntary export restraint introduced by Japanese automakers for U.S. market (removed in 1994) • Economic downturn in the U.S. begins
1982	1	• Lift of curfew				• Establishment of the New United Motor Manufacturing, Inc. (NUMMI) in Fremont, California - Joint-venture between Toyota and GM (opened in 1984)
1983	1	• Saehan Motors renamed as Daewoo Motors (대우자동차)				
	2	• Establishment of Hyundai's Canadian subsidiary				
1985	4	• Establishment of Hyundai's American subsidiary				
	6	• Dong-A Motors took over Geohwa				
1986	9	• SsangYong took over Dong-A Motors				
1987	1	• Partial cancellation of Automobile Industry Rationalization Plan	6	• June Democracy Movement		
	7	• Import liberalization for foreign automobiles (except 1,000-2,000cc)				
1988	3	• Dong-A Motors renamed as SsangYong Motors (쌍용자동차)	2 9	• Roh Tae-woo elected as President • 24th Olympic Games in Seoul		
		• Complete import liberalization for foreign automobiles				
	7	• Establishment of Korea Automobile Manufacturers Association (한국자동차산업협회)				
1989	6	• First Korean overseas manufacturing facilities (Hyundai: Bromont, Canada)				• Toyota debuts the luxury line Lexus LS
	7	• Complete cancellation of Automobile Industry Rationalization Plan			6	• Emission control legislation enacted in Southern California
1990	3	• Kia Industry renamed as Kia Motors				
1992	6	• Entry of Samsung Heavy Industry into Large commercial vehicle market				
	12	• End of Daewoo-GM partnership				

1993			2	• Kim Young-sam elected as President		
1994	4	• Samsung-Nissan partnership for passenger car				
1995	3	• Daewoo took over Avia of Czech Republic (50.2%)				
	5	• 1st Seoul Motor Show				
	9	• U.S.-Korea auto agreements - Cut in car tax (from Jan. 1996)				
	11	• Daewoo took over FSO of Daewoo (70%)				
1996	1	• Cut in car tax				
1997	7	• Bankruptcy of Kia Motors	12	• Asian financial crisis in Korea	7	• Toyota begins selling hybrid electric car, the Prius • Asian financial crisis
1998	1	• Daewoo group took over SsangYong Motors	2	• Kim Dae-jung elected as President		
	10	• U.S.-Korea auto agreements • Discussion on big deal between Samsung Motors and Daewoo Electronics co.				
1999	3	• Hyundai Motors took over Kia Motors.				
	6	• Kia Motors took over Asia Motors • Hyundai Motors took over automobile part of Hyundai Precision & Industries Co.				
2000	4	• Renault took over Samsung Motors • Separation of SsangYong Motors from Daewoo Motors				
	9	• Establishment of Renault Samsung Motors • Hyundai Precision & Industries Co. renamed as Hyundai Mobis • Bankruptcy of Daewoo Group				
	11	• End of Samsung Commercial Vehicle Co.				
2002	10	• Establishment of GM Daewoo • Separation of Daewoo Incheon Motors (대우인천자동차), Daewoo Bus Co. (대우버스), Daewoo Commercial Vehicle Co. (대우상용차) from Daewoo Motors	5	• 2002 FIFA World Cup Korea-Japan		
2003			2	• Roh Moo-hyun elected as President		
2004	2	• Tata Group took over Daewoo Commercial Vehicles Co.		• (Domestic) Real market difficulties		

2005	10	• SAIC took over SsangYong				
2007			4	• Free Trade Agreement (FTA) between Korea and the U.S.		• Toyota becomes the world's largest car manufacturer over GM
2008			2	• Lee Myung-bak elected as President		• Global Financial Crisis
2009	1	• Receivership of SsangYong			6	• Bankruptcy of GM • China's car market becomes the world's largest
2010	8	• Mahindra & Mahindra Ltd. took over SsangYong			4	• End of the Toyota-GM joint-venture over the NUMMI plant
2011					3	• The 2011 Tohoku earthquake and tsunami
2012					10	• Toyota Recall Crisis • Toyota becomes the world largest automobile manufacturer
2013			2	• Park Geun-Hye elected as President		

2. Korea’s film industry

Yr.	Mo.	Korea’s film industry	Mo.	Korea	Mo.	World
1919	10	• Korea’s first film, *The righteous revenge* (의리적 구투)				
1923		• Success of *Chunhyangjon* (춘향전)				
1940	1	• Enactment of Chosun Motion Picture Law (조선영화령) by the occupation government • Establishment of Chosun Film Production Co. Ltd. (CFPC, 조선영화주식회사) by Japanese Occupation Government				
1942	9	• Enforced integration of Korean film productions by the occupation government				
1944						• Italian neorealism begins (until 1952)
1945			8 9	• Liberation from Japan • The U.S. Army Military Government		
1948			8	• Establishment of the Republic of Korea with Syngman Rhee as President.		
1949	4	• Korea's first color film, *The Women's Diary* (여성일기)				
1950			6	• Outbreak of the Korean War		
1951					6	• First color TV program broadcasted
1953			7	• Armistice agreement		
1954	3	• Taxation exemption for film industry				
1955					11	• Outbreak of Vietnam War
1958	4	• Set-up of foreign film import quota (IQ) system and “IQ reward system” • First submission to Berlin International Film Festival, *the Wedding Day* (시집가는 날) • First submission to Venice Film Festival, *the Seong Chun-hyang* (성춘향)				• Nouvelle Vague (the French New Wave) begins (until 1960s)
1960			4	• Resignation of Rhee Syngman		
1961		• The first Berlin International Film Festival laureate, *the Coachman* (마부), the Silver Bear Extraordinary Jury Prize at the 11th Festival	5	• Military coup d’état by Park Chung-hee		

1962	1	• Enactment of Motion Picture Law (MPL, 영화법) - Registration system of film producer, importer, and exporter - Set-up of minimum requirement for producer registration - IQ reward system • Launch of *the Grand Bell Award* (대종상)	1	• 1st Five-year plans	10	• Cuban missile crisis
1963	3	• 1st amendment of MPL -Import license granted to productions (Integration: producer-exporter-importer) - Reinforcement of registration requirement and registration cancellation - IQ reward system	12	• Park Chung-hee as President	11	• Assassination of John F. Kennedy
1964			5	• Devaluation of Korean won: from ₩130 to ₩255 to US$1 (96%)		
1965			6	• Treaty on Basic Relations between Japan and Korea		
1966	8	• 2nd amendment of MPL - Relaxation of the registration requirement - Prohibition of foreigners and foreign companies' film importation - IQ system: maximum 1/3 of Korean films screened - Introduction of SQ: more than 90 days of mandatory screening and 6 domestic films/year				
1967	1			• 2nd Five-year plans		
1969			11	• Devaluation of Korean won: from ₩291.4 to ₩304.4 to US$1 (4.4%)		
1970	8	• 3rd amendment of MPL - Separation: producer-exporter - IQ system: maximum 1/3 of Korean films screened - SQ: more than 30 days of mandatory screening (with condition: minimum 3 films per year, 1 film every 4 months) - Registration allowed to independent film productions - Establishment of Union of Korean Film Promotion (UKFP, 영화진흥조합)	4	• Beginning of Saemaeul Movement		
1971			6	• Devaluation of Korean won: from ₩328.2 to ₩370.8 to US$1 (13%)		
1972			10	• 3rd Five-year plans • Yushin Constitution		

1973	2	• 4th amendment of MPL - Integration: producer-exporter-importer - IQ system: 1/3 of Korean films screened (if needed, 1/10 of foreign films in addition to the original 1/3 can be added) - SQ: more than 121 days of mandatory screening - Approval system of film production - Film Policy Measure (영화시책) introduced - Establishment of Korean Motion Picture Promotion Corporation (KMPPC, 영화진흥공사), replacing UKFP	1	• Heavy-Chemical Industry Drive	10	• 1st oil shock
1974		• Establishment of Korean Film Archive (한국영상자료원) • SQ: sequential screening-ratio of foreign to Korean films should be 1 to 2	12	• Devaluation of Korean won: from ₩399 to ₩484 to US$1 (21%)		
1975					4	• Cessation of Vietnam War
1977				• 4th Five-year plans		
1979		• Film Policy Measure repealed	10	• Assassination of Park Chung-hee	2	• 2nd oil shock
			12	• Coup d'état by Chun Doo-hwan		
1980			1	• Devaluation of Korean won: ₩580 to US$1		
			9	• Chun Doo-hwan as President		
1981		• SQ: more than 165 days of mandatory screening			7	• Economic downturn in the U.S. begins
1984	12	• 5th amendment of MPL - Separation of production and import companies - Liberalization on foreign films imports - Abolishment of authorization of film producing (registration)				
1985	10	• 1st Korea-US Film Agreement - SQ: more than 146 days of mandatory screening with 20 days of cut, if needed				
1986	12	• 6th amendment of MPL - Abolishment of IQ system passed - Direct distribution of Hollywood companies allowed				

1987		• Kang Soo-yeon, played in *the Surrogate Woman* (씨받이), honored the *Volpi Cup Best Actress award* at Venice International Film Festival	6	• June Democracy Movement		
	11	• 7th amendment of MPL				
1988	3	• First Hollywood studio branch offices in Korea, led by UIP	2	• Roh Tae-woo elected as President		
	9	• First direct distribution film by a Hollywood company, Fatal Attraction	9	• 24th Olympic Games in Seoul		
	12	• 2nd Korea-US Film Agreement				
1989	12	• 8th amendment of MPL	1	• Elimination of all overseas travel restrictions		
1991			9	• Join the United Nations with North Korea		
1992	7	• First *chaebol* (Samsung) financing film, *Marriage Story* (결혼이야기)				
1993	3	• 9th amendment of MPL • Launch of cable television channels • The lowest market share record of Korean films, 15.9% • First over-million-viewer hit film, *Seopyeonje* (서편제)	2	• Kim Young-sam elected as President		
1995	12	• Repeal of MPL				
1996	6	• Enactment of Film Promotion Law (FPL, 영화진흥법) - SQ: more than 146 days of mandatory screening with 40 days of cut, if needed (sequential screening)				
	9	• The 1st Busan International Film Festival, the very first Korea's international film festival				
1997	11	• Opening of Namyangju Cinema Complex outside of Seoul	12	• Asian financial crisis in Korea	7	• Asian financial crisis
1998	10	• 1st opening to Japanese culture	2	• Kim Dae-jung elected as President		
1999	2	• Enactment of Basic Law for the Promotion of Cultural (문화산업진흥기본법)				
	5	• Establishment of Korea Film Commission (영화진흥위원회), replacing KMPPC				
	9	• *Shiri* (쉬리) kicked off commercial boom • 2nd opening to Japanese culture				
2000	6	• 3rd opening to Japanese culture				

2001		• *My sassy girl* (엽기적 그녀), the first mega hit Korean movie in East Asia • Local market share tops 50%, boom in overseas sales				
2002		• The first Canne International Film Festival laureate, *Chwihwaseo* (취화선), the Best Director Prize at the 55th Festival	5	• 2002 FIFA World Cup Korea-Japan		
2003			2	• Roh Moo-hyun elected as President		
2004		• First 10 million tickets sold films, *Silmido* (실미도) and *Tae Guk Gi* (태극기) • *The Oldboy* wins Grand Prix at the Cannes Film Festival		• (Domestic) Real market difficulties		
2006	7	• Enactment of Promotion of the Motion Pictures and Video Products Act (영화 및 비디오물의 진흥에 관한 법률) • SQ: more than 73 days of mandatory screening • The highest market share record of Korean films, 63.6% • The best box office hit of Korean film, The Host (13,019,740 visitors)				
2007			4	• Free Trade Agreement (FTA) between Korea and the U.S.		
2008			2	• Lee Myung-bak elected as President		• Global Financial Crisis
2010		• The best box office hit film in Korea, *the Avatar* (13,624,328 visitors)				
2013			2	• Park Geun-Hye elected as President		

국문초록

국가경쟁우위 향상을 위한 통합적 접근법: 동아시아 경제의 성공 요인에 대한 분석-한국의 발전을 중심으로

기존의 경제 및 경영 이론으로 동아시아국가의 경제성장을 설명하는 데는 한계를 가지고 있다. 이중 국가경쟁력의 결정적 요소에 관해 다루고 있는 마이클 포터의 다이아몬드 이론도 비록 포괄적이며 어느 정도 강력한 설명력을 가지고 있지만, 특별한 경쟁우위가 없었던 한국을 비롯한 동아시아 국가들의 발전초기의 경제발전에 대한 설명력은 부족하다. 이러한 문제를 해결하기 위해서 문휘창 교수는 K-전략의ABCD 분석방법을 제시하였다.

본 논문은 문휘창 교수의 K-전략의 ABCD 체계를 여러 방면으로 더 발전시켰다. 첫째로, ABCD체계에 대한 이론적 배경을 더 강화시켰으며, 둘째로, ABCD체계의 타당성을 통계적으로 증명하였다. 셋째로, 이를 한국의 자동차산업과 영화산업에 적용하였다. K-전략의 ABCD는 속도와 정확성을 기반으로 하는 민첩성(Agility), 모방과 글로벌 스탠더드를 기반으로 하는 벤치마킹(Bench-marking), 혼합과 시너지 창출을 기반으로 하는 융합(Convergence), 그리고 성실과 목적지향성을 기반으로 하는 전념(Dedication)으로 구성되어 있다. 정밀한 이론연구, 통계분석 그리고 사례연구를 통하여 K-전략의 ABCD는 산업이나 기업의 경쟁력 향상에 매우 의미 있음을 증명하였다. 이러한 결과는 다른 국가들의 경제발전계획을 세우는데 있어서 매우 중요한 시사점을 준다.

주요어: ABCD 분석, K-전략, 경제발전, 한국경제, 한국 자동차 산업, 한국 영화 산업, 한국, 경쟁우위
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