

## ENTREPRENEURSHIP AND INNOVATION IN SOUTH KOREA

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**Abstract:** *Innovation and entrepreneurship are considered a necessity in any state's development. In South Korea's case, chaebols<sup>1</sup> are the resistance structure of the economy and one of the most important forces in the state. However, their existence, together with the traditional culture such as Confucianism, has a great impact on the entrepreneurship development and innovation in the country. The article also aims to create an analysis of the Korean entrepreneurship environment and highlight the factors that lead to the development of research and development sector, facilitating entrepreneurs to open new businesses. The research is based on data provided by The World Bank, Dealogic, IMF, World Economic Forum and Entrepreneurship Barometer and the literature related to the Korean culture and social environment. The findings indicate that the Korean traditional culture together with the chaebols have a slowing impact on the South Korean entrepreneurship, although the country is considered one of the most innovative in the world.*

**Keywords:** *entrepreneurship; innovation; South Korea; chaebols; Confucianism*

### 1. INTRODUCTION

Innovation and entrepreneurship is an essential element in any state's growth. In South Korea, *chaebol* is one important element to take into consideration. Taking the form of family businesses, like clans, *chaebol* appeared in 1920, during Japanese occupation in Korea, having its echivalent in the japanese *keiretsu*<sup>2</sup>.

The differences between those is that Chaebols are generally controlled by their founding families, while *keiretsu* are run by professional managers. Chaebol was created as a conglomerate of companies ran by different families, subordinated to the government. It became so powerful in time that it has the power now to conduct the government's actions. A charge against the chaebols is that they have impeded the development of small and medium business in South Korea, creating massive imbalances in the economy. The pseudoliberalization of the economic market has generated many conflicts and differences within South Korea from small producers and market's giants. While the South

Korean government has made occasional attempts to curb the power and influence of chaebols over the years, these efforts have met with mixed success.

So far, South Korea's intense efforts to be noticed worldwide and bring welfare to the country led to satisfactory results, although there is still more work to do. Between 2004 and 2008, as most countries in the world, South Korea had an anual economic growth between 4% and 5%, based on powerful exports and internal consumption. But, with the advent of the economic crisis, also South Korea suffered after 2009, the main problems being unemployment, large foreign debt and fall in exports.

That is why the South Korean government was forced to adopt a series of measures aimed at returning the economy to a higher level. Thus, more emphasis was put on the openness towards foreign investments and imports. At the same time, the exports also started to rise, the interest rates lowered and the fiscal policy was an expansionary one. Currently, South Korea is one of the strongest economies in the world (ranked 15th), registering a GDP of 1360 billion USD in 2014 (GDP per capita being of 28.180 USD). These values, particularly impressive considering the global economic downturn, were achieved largely due to progress in restructuring the economy and strong foreign demand, particularly from China and ASEAN countries.

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<sup>1</sup>A South Korean form of business conglomerate: numerous national and international enterprises controlled by a chairman with power over all the operations.

<sup>2</sup> It is a Japanese term referring to business conglomerates in Japan.

Moreover, South Korea has a rapid market development rhythm, for which it is part of the 20 major economies (G20), being also a member of OECD. South Korean leadership understood that this country has still unexploited tourism and cultural potential and large sums of money have been invested in these areas.

They also adopted important laws to protect the environment, such as reducing pollutant emissions (sulfur oxides) or investment in improving the water quality and recycling. South Korea had the highest scores in the world to value added in industrial production, as in tertiary efficiency – an indicator that includes the number of students and the percentage of graduates from the faculties of science and engineering. If the country occupies a modest 39 place for productivity, it is second in research-development expenses, in high-tech companies' density and sixth after the researchers' percent in the total of employees (Bloomerang Innovation Index, 2015).

The article analyses the Korean entrepreneurship environment and highlights the factors that lead to the development of research and development sector, facilitating entrepreneurs to open new businesses. The research is based on data provided by The World Bank, Dealogic, IMF, World Economic Forum and Entrepreneurship Barometer and the literature related to the Korean culture and social environment.

## 2. LITERATURE REVIEW

Nowadays innovation is considered the main motor of the economic development and the main weapon in competition. Innovation is also seen as the conversion of new knowledge in economic and social benefits as a result of interactions among multiple factors in a system consisting of an environment that includes companies, research institutes, donors or networks through which they come into contact.

Schumpeter argued a century ago that the main characteristic of the market is innovation. He thought, contrary to the ideas of those times, that the competition for market and not the one in the market stands at the base of innovation. Also, a succession of monopolies leads to better living standards in the long term, said Schumpeter. His theory has been refuted by many. Monopolistic and dominant companies can eliminate the innovation, and unattended by the authorities may resort to anti-competitive practices to maintain their position. In addition, markets may not direct or manage efficient investments in research and learning. Private interests are not aligned with

those of the society. Firms can gain from innovations that increase their strength on the market, which helps them to bypass laws (Schumpeter, 1942:83-84).

One of Schumpeter's ideas remained valid: conventional policies that focus on short term efficiency are not desirable if there are taken into consideration the innovation and long-term study, especially in the case of emerging markets.

Innovation processes do not have the same characteristics in terms of human capital employed and achieved results, but show differences in enterprises according to the type of innovation, the firm's size, strategy and its experience in the field of innovation. There are several common characteristics of innovation processes: exploring opportunities for the realization of new/improved goods (products or services) based on technical knowledge that depends on market's demand; Investment efforts in technological innovation which correspond, in particular with

Development and production engineering framework in which knowledge is, also gained through experience in production, learning practice (learning by doing) and use (learning by using) (Pavitt, 1987:9);

in the innovational process, focused mostly on research and development, is impossible to accurately forecast the cost and performance of new artifacts and the user's response to those.

However, not all companies adopt an innovation based on research and development within their structures as required in the Frascati Manual "systematic and creative activities initiated to increase the volume of knowledge" (OECD, 2002:30). Research and development are the only types of technological advances and innovation processes; Moreover it involves skills acquisition, integration of technology and practical use of higher levels of complexity, productivity and quality. As well as design, engineering and capabilities purchasing management technology ensure a continuous flow generating improvements and innovations. Technological competitiveness and innovation result from oriented activity on research and development inside organizations, being a driving force in the economic development. A company with innovative ideas will market a higher rate of profit, and others will immediately imitate - for example the Chinese companies that imitate products from Apple or Samsung. The imitation process will lead them all to profit, but the first to reach the market with an innovative idea will make the most money out of all.

This “invaded” industrial or sectoral level imitators drive technological development over a period of time, after which the effects of the new technologies on growth will be slowed. Taking on this idea, Schumpeter noted the importance of the diffusion of innovations, arguing that if improvements can be successful done by imitators from original innovation, they become innovators. In this context, it is clear that technology acquisition can not be equated with a simple purchase from suppliers. The company must have the ability to identify technologies necessary for technological options assessment to be used or changed and also the integration of new technologies production processes. In other words, companies practicing the method of innovation must have acquisition skills and use new technologies or those substantially improved. In fact, innovations tend to facilitate the achievement of other innovations. In this respect, innovation in broadcasting a creative process in which innovation becomes input in innovation activities, through not a passive process, but an adaptive one. It implies also that innovations tend to concentrate in certain sectors, resulting in those sectors’ development (Schumpeter, 1942:200-201). Schumpeter looked to this dynamic, thus explaining the length “business cycles” and “long waves” in the economy.

Entrepreneurship is a source of innovation and changing that stimulates the productivity’s growth and the economic competition. Robert Solow cautions that increasingly large revenues should not be made by the accumulation of capital but instead use on the technological progress, which means learning how to make things better. While some of the increases in productivity are based on the impact of crucial discoveries, the others are due to minor changes. In these conditions it is normal to pay attention to how companies learn how this progress can be promoted or how it can be learned (Solow, 1956:65-94). Innovation and entrepreneurship are the principals pillars of competitiveness. They are a necessary in economy and society. Innovation and entrepreneurship are two processes that are made step by step and they appear from opportunity and need.

**3. METHODOLOGY**

The methodology used to achieve the goal is based on a qualitative analysis. Using our statistics we try to emphasize the factors that provide growth to entrepreneurship. The methodology includes desk research from primary sources and secondary sources and statistical data provided by world organizations. The main aim of the article is

to find out the way in which these factors help to the development of a healthy environment for the development of entrepreneurship.

**4. EAST ASIA**

Regarding development, East Asia recorded a legendary success at least until the financial crisis of 1960, when Japanese citizens had an income equal with the eighth part of an American citizen’s income. No other group of developing countries in the world has achieved such high performance in terms of stimulating growth, poverty reduction, integration in the world market and improvement of living standards (Rohwer; Blossfeld,1987). The income per capita in the region increased by almost four times in the last 25 years, poverty level fell with almost two-thirds, population growth rates fell and the education and the health systems have been upgraded. The „Asian Tigers” story led to a second wave of industrialized economies, growing rapidly.

The civilization’s modernisation experienced three stages of development: the Industrial Revolution (late eighteenth – early nineteenth century) to the outbreak in Western Europe, the second phase which includes the end of nineteenth century and beginning of twentieth century and the wave after the second World War. The third one includes the influence that Confucianism had. East Asia is not homogeneous culturally, and the influence of Confucianism was often discussed in light of the fact that it leads to promoting or hindering modernization.

The table below highlights two characteristics:

Table 1 Modernization versus Confucianism. Source: Wong, Autio (2005:335-350)

<b>Modernization</b>	<b>Confucianism</b>
Market economy	Traditional agrarian economy
Rule of law	Human supremacy
The principle of equality	Hierarchical institution
Democracy	Patriarchal ideas
Creativity	Conservatism
Material interests	Principals of ethics
Trend towards consumption / pleasure	Sense of thrift and self-control

Confucianism had a profound impact on East Asian cultures. Zhang (2000) lists some of the principles of Confucian thought, as we could also observe above. Economy has to be based on harmony and compatibility with natural laws on human supremacy and avoid extremes; economic relations must reduce inequity and reduce individual selfishness; the use of peaceful means to

make fortune, disciplined life, keeping promises in business and serious work; creating a tax system gentle on the development of agriculture and poverty reduction; centralized administrative power and efficient management; economic life to be integrated into economic morality.

**5. SOUTH KOREA MODEL**

South Korea provides a good environment for entrepreneurs even if the economy is still dominated by the *chaebols* (Samsung, Hyundai, Pohang Iron and Steel Company, and LG electronics). Public opinion of the chaebols has swayed in the past, depending heavily on the changes in the political, social and economic atmosphere -- but it's impossible to deny that these conglomerates have played a key role in the development of today's South Korea. Chaebols are quite numerous, but the largest -- dubbed the "Big Four" by the South Korean press -- are Hyundai Motor Company, SK Group and perennial rivals, Samsung and LG. Samsung is ranked by Global Innovation in 2014 the fourth world most innovative company, behind Apple, Google and 3M.

In South Korea taxes are low, regulatory system is business friendly and the government offers financial support for the companies that invest in research and development. The high level of education and investment in innovation are born in the high number of patents granted locally each year. Given that it is one of the most developed countries in terms of innovation, it is clear that South Korea supports its entrepreneurs more than other countries, even by its culture. Data shows that in South Korea the rate at which new companies are incorporated is much lower than in the most mature economies.

One of the obstacles to entrepreneurship is the education system. Most young people achieve higher education in internationally rated institutions, in a system that emphasizes rote learning. Moreover, the South Korean education is dominated by Tiger Moms<sup>3</sup>, cram schools and extremely authorian teachers (that push students to obey and memorise), that induces a great stress on the students and creates many health problems and even suicide. All these may be leaving the country short on people who are eager and able to strike out on their own path.

The dominance of chaebols makes it difficult for new entrepreneurs to find support, the

companies that are successful being taken by the conglomerates. Although the access to finance is highly developed, there are not enough funds available to young entrepreneurs with innovative ideas. The analysis emphasizes that even if the system meets few gaps, it supports the next generations of entrepreneurs much more than other states.

South Korea's entrepreneurs are perfectly positioned to make the most of Asia's rising middle class and the rebalancing of the global economy toward the East. The good business, environment, large pool of skilled labor and world-class infrastructure also provide the country's growing businesses with strong assets to build on.

Table 2. SWOT analysis – entrepreneurship and innovation. Source: own processing

<b>Strengths</b>	<b>Weaknesses</b>
Low tax burden on the corporate sector; Generous subsidies for innovation; Abundance of skilled labour; Strong manufacturing base; control over vertically integrated supply-chain allows for rapid incremental innovation;	Dominance of large conglomerates; Education system is based on rote learning not on understanding and creativity; Difficult to raise funds for innovative but risky ventures; Lack of natural resources; Significant gender gap in the workforce;
<b>Opportunities</b>	<b>Threats</b>
The Government has pledged to improve the business environment for small businesses by restricting unfair practices by conglomerates; Korean entrepreneurs are well placed to take advantage of rapid growth in emerging Asia; Culture of consolidation driven by need for stability and security, but high tolerance for risk in business, even in large companies (which distinguishes South Korea from Japan); Strategic use of patenting and increasing involvement in global standards setting;	The political influence and economic importance of South Korea's conglomerates; Economy concentrated in few sectors; Underdeveloped defense technology; Lack of knowledge transfer between universities; Research and industry.

Moreover, as it can be seen in the figure no. 1 the number of new companies is much lower compared to EU, France and UK. Yet they still try to restore the balance by preventing big conglomerates to abuse their power. But the *chaebols* vehemently oppose

<sup>3</sup> Is a term which refers to extremely strict mothers (from East Asia especially) who push their children to be successful academically to the detriment of the children's well being.

government's attempts to create competition. Increased competition and fear of undermining the economy bring a question marks but the government and the small entrepreneurs remain in the shadow of large conglomerates.

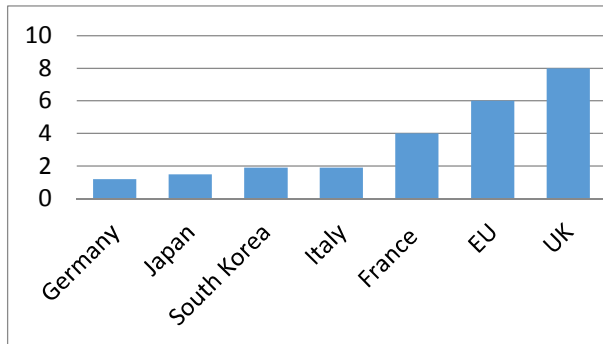


Fig.1 New business density (new registration per 1000 people aged 15-64) – 2013. Source: World Bank

The Korea Fund of Funds (KfoF)<sup>4</sup> is a government fund that provides a stable source of finance to private funds that invest in entrepreneurial businesses. In the five years to 2014, KfoF committed US\$1.2b into 160 venture capital and private equity funds, which in turn invested in more than 1,000 small businesses. Firms that received funding have grown at an average annual rate of 57.5%, compared with 14.9% growth for firms that did not receive any funding.

Table 3 Access to funding. Source: The World Bank, Dealogic, IMF, World Economic Forum

Access to funding	South Korea
IPO market activity	
IPO amount invested (% of GDP)	0.53
Access to credit	
Domestic credit to private sector (% of GDP)	105.6
Venture capital availability (Scale of 1=impossible to 7=very easy)	2.2
M&A deal value* (% of GDP)	3.8
* Mergers and Acquisitions	

At face value, South Korea has a financial system that caters well to business. It has a well-developed financial system, with a credit-to-GDP ratio that is over 100%, while the amount raised through initial public offerings (IPOs).

South Korea's strong R&D performance is reflected in the publication of an above-average

number of scientific and technical journal articles, as well as in the commercial success of large companies, such as Hyundai Motor Company, in sectors where technological innovation is essential. But while the country's large firms are innovative, they might also be stifling the broader entrepreneurship culture, by making life difficult for new entrants — a common local complaint.

Table 4 R&D - South Korea 2014. Source: World Bank

Entrepreneurship	South Korea
R&D spending (% of GDP)	3.4
Scientific and technical journal articles (per 10,000 people)	4.2
Cost of resolving insolvency (% of estate)	4.0

South Korea's regulatory environment is generally supportive for entrepreneurs. The bureaucracy involved in exporting products is very low, as would be expected in a country that has based its development on exports. When it comes to labor market flexibility, the cost of firing a worker is less than in other areas, labor laws are more restrictive. The Government imposes a relatively light tax burden on the corporate sector and offers strong financial backing for R&D.

Table 5. Tax and Regulations – South Korea 2014. Source: World Bank

Tax & Regulations	South Korea
Start-up procedures (number)	6.0
Cost to start a business (% of income per capita)	14.6
Paid-in minimum capital to start a business (% of income per capita)	0.0
Time spent on tax issues (hours)	227
Cost of firing (weeks of wages)	24
Labor and tax contributions (% of financial profits)	13.2
Total tax rate (taxes and mandatory contributions borne by the business expressed as a share of financial profit)	29.8

South Korea has one of the best-educated population in the world. The vast majority of young Koreans now pass high school and most of them go on to university. The country's students do well in international tests of numeracy, literacy and science, which reflect the strong educational system. The glut of graduates means that Korean firms do not lack for well-educated labor. High levels of education should also result in a pool of young entrepreneurs with the skills to create successful businesses.

Finally, South Korea's innovation system shows that: both governance and socio-economic

<sup>4</sup> "Korea Fund of Funds," Korea Venture Investment Corp website, www.k-vic.co.kr, accessed 17 May 2016.

factors play important roles in determining how well a country is able to use its endowments to create a strong national innovation system; a high-quality of education, particularly in the STEM fields, is foundational for developing the human capital needed for an innovation-driven economy; consistent, long-term investments in research and development are instrumental in achieving a leadership position in technology-based fields. The South Korean government supports long-term research in the basic sciences and defense technologies while the private sector is the primary funder of applied research; an underdeveloped and uncompetitive small and medium enterprise sector can reduce the capacity for innovation in the overall economy. In the end, in today's globalized economy, countries and companies are increasingly looking outward to learn about other cultures and increase their ability to be responsive to their global customers in a competitive market.

## 6. CONCLUSIONS

South Korea has many strengths when it comes to providing a good environment for entrepreneurs. The regulatory system is business friendly, taxes are low and the government also offers strong financial support to companies investing in research and development (R&D). Investment in innovation and high levels of education are noticed in the high number of patents granted locally each year. While South Korea has innovative firms operating at the cutting edge of technology, it is less clear that its broader culture is supportive of entrepreneurs. One hindrance to entrepreneurship in South Korea is the nature of its education system. Although the country has an abundance of highly educated young people who score well on international tests, a system that emphasizes rote learning may be leaving the country short on people who are eager and able to strike out on their own path.

A further concern is that the continued dominance of the chaebols makes it difficult for new entrants to gain a foothold. Even companies that do succeed are often acquired in takeovers by these conglomerates. Another area where more attention is needed is access to funding for entrepreneurs. Although Korea has a highly developed financial sector, not enough funding is being made available to entrepreneurs with risky but innovative ideas. As our analysis shows, South Korea performs strongly, even in the innovative pillars, however the country will need to address

some important gaps and shortcomings if it is to fully support the next generation of entrepreneurs.

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