Creative Economy Potentials and Fisheries Development in South Korea

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Abstract: A new development paradigm is emerging that links the economy and culture, embracing economic, cultural, technological and social aspects of development at both the macro and micro levels. Central to the new paradigm is the fact that creativity, knowledge and access to information are increasingly recognized as powerful engines driving economic growth and promoting development in a globalizing world. In many definitions as we saw Creative Economy considered as cultural and art products that directly involve in human beings history and culture. On the other hand, in many South Asian countries for example Korea and Japan, fisheries and fishing has long history and it became part of their culture. In this paper we categorize the creative economy in this sector into four parts. Community based fisheries management, Individual Transferable Quota, Fishing Villages and Stock Rebuilding Plans are the four main parts creative economy was used as a tool to develop the fisheries sector. Considering fisheries as part of the Korean culture; we have explained how Korean government used the concept of Creative Economy in order to culture shift this sector towards a more sustainable and efficient sector.

Key words: South Korea • Creative Economics • Culture • Individual Transferable Quota • Fishing Villages • Community based Fisheries Management • Stock Rebuilding

INTRODUCTION

In the contemporary world, a new development paradigm is emerging that links the economy and culture, embracing economic, cultural, technological and social aspects of development at both the macro and micro levels. Central to the new paradigm is the fact that creativity, knowledge and access to information are increasingly recognized as powerful engines driving economic growth and promoting development in a globalizing world. “Creativity” in this context refers to the formulation of new ideas and to the application of these ideas to produce original works of art and cultural products, functional creations, scientific inventions and technological innovations. There is thus an economic aspect to creativity, observable in the way it contributes to entrepreneurship, fosters innovation, enhances productivity and promotes economic growth. For some people, the “creative economy” is a holistic concept dealing with complex interactions between culture, economics and technology in the contemporary globalized world that is dominated by symbols, texts, sounds and images. Others are more skeptical about this fashionable label, voicing concerns about its overstated importance and the way it may exacerbate cultural and technological divisions. Against this background, the creative economy has become a topical issue of the international economic and development agenda, calling for informed policy responses in both developed and developing countries. There is no simple definition of “creativity” that encompasses all the various dimensions of this phenomenon.

After the 1980s, creative industries developed rapidly and are becoming an important part of knowledge-based modern economy. We can often see the “creative industries” in our daily life. They are referring to many kinds of activities of our life, such as fashion, movie, design, art and so on. And they are seen as an indispensable part in our life. It is the product of knowledge economy and is related to the development of knowledge economy. So in many countries, the “creative industries” also are called as the “cultural industries” (especially in Europe) or the creative economy (such as the UNACTAD Model) [1].

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“Creative industries” is a relatively new term in the government policies and academe. It firstly emerged in Australia in 1994 in the report “Creative Nation” [2]. The report is the first cultural policy in the history of Austria and it emphasized the importance of the creative work and its contribution to the economy in Austria and thought the new technologies are very important to develop the knowledge economy and enhance the competitiveness of Austria in the international [3]. Then the concept was adopted and developed further in United Kingdom (UK). The UK is the first country in the world beginning to study the creative industries and it gave a deeper implication of the creative industry. The British government thought the creative industries can boost the economy of UK and increased their National strength. They emphasized the development of creative industries in the UK. After many years of development, now the UK maybe has the largest creative industries in the national economy in the EU and the contribution to the GDP maybe also is the largest in the world [4].

The term “creative economy” appeared in 2001 in John Howkins’ book about the relationship between creativity and economics [5]. For Howkins, “creativity is not new and neither is economics, but what is new is the nature and the extent of the relationship between them and how they combine to create extraordinary value and wealth”.

Howkins’ use of the term “creative economy” is broad, covering fifteen creative industries extending from arts to the wider fields of science and technology. According to his estimates, in the year 2000, the creative economy was worth $2.2 trillion worldwide and it was growing at 5% annually. For Howkins, there are two kinds of creativity: the kind that relates to people’s fulfillment as individuals and the kind that generates a product. The first one is a universal characteristic of humanity and is found in all societies and cultures. The second is stronger in industrial societies, which put a higher value on novelty, on science and technological innovation and on intellectual property rights (IPRs).

Considering all above definitions and concepts the important question that we can ask is how much we can generalize the word Creative economy? In many definitions as we saw Creative Economy considered as cultural and art products that directly involve in human beings history and culture. On the other hand, in many South Asian countries for example Korea and Japan, fisheries and fishing have long history and it became part of their culture.

Based on the licensing system of fishing vessels and fisheries, the Korean government has traditionally used technical measures such as closed time, closed area, mesh size regulation and etc., as well as input control to manage fish stock and the fishing industry for the last century [5]. Although each species’ situation is different, the stock assessment conducted in coastal and offshore areas in Korea has shown that the total fish stock constantly decreased and it’s likely that total fish stock would be even further reduced to 3.9 million tons (M/T) in ten years [5]. Fishing as part of the culture draw enormous attentions toward creative economy in fisheries sector especially in South Korea.

In this paper we will explain some of the steps that South Korean government took towards creative economic in fisheries sector of this country.

Potentials of Creative Economy in South Korean Fisheries: The fisheries sector is rarely a strategic sector for national economic development. It plays a prominent role in Korea and other countries which are rich in fishery resources relative to their populations. It is an important economic activity in many coastal regions. Indeed, in many countries, fish export is a major contributor to foreign exchange earnings, often ranking far higher than other agricultural commodities. The major trade flow underlines the significance of this sector for the trade balance in many countries.

The more considerable and substantial contribution of fisheries is the supply of highly nutritious animal protein for human consumption and the employment and income generation in often remote coastal areas in South Korea.

The growing importance of recreational fishing is also notable, especially as its contribution to economic benefits is often difficult to assess and still insufficiently recognized. Below we explain the positive impacts of creative economics in South Korea.

The Fisheries Act of Korea (1953), which is the basic legal framework for Korea’s fisheries, contains the provisions on the management, control, restrictions, regulation and limitations of fisheries, including licenses, authorization, notifications, enforcement and penalties. Some of the major legal instruments for fisheries include the “Fishery Resources Management Act”, which governs the management (conservation, utilization and development) of fisheries resources; the “Inland Water Fisheries Act” for the management of fisheries and aquaculture in inland waters; the “Distant Water Fisheries
Development Act” for the management of high seas fisheries and the promotion of international fisheries cooperation and the distant water fishing industry; the “Aqua Farm Management Act” for the effective and efficient operation of aquaculture and pollution mitigation. Other laws and regulations include the “Aquatic Animal and Plant Disease Control Act”; and the “Agricultural and Fishery Products Quality Management Act”.

Korean coastal-offshore fisheries may utilize offshore waters of the East Sea, the West Sea, the East-China Sea and sea waters above 25 degrees northern latitude and to the 140 degrees east longitude of the Pacific Ocean. Waters outside the designated area are considered as international fisheries where overseas fishing is carried out.

Total Allowable Catch (TAC) system was first introduced in 1999 to manage and control the harvest from the EEZ of Korea, to be consistent with the UN Convention on the Law of the Sea, which took effect in 1994. As of 2011, Korea’s TAC system covers 11 species, such as the Mackerels, Jack Mackerel, Squid, Red Snow Crab and Blue Crab, with a total TAC of 425,000 tones (Fig. 1). Under the system, individual vessel quotas are allocated by respective Fishers Cooperatives. We can see in Figure 1 that Squid and Mackerel got the most TAC shares in South Korean Fisheries.

In 2001, community based fisheries management (CBFM) was introduced, whereby fishers are the partners and initiators of management actions for their fisheries in addition to the already-established rules and regulations for the sustainability of their local fisheries.

Under the CBFM, fishers’ groups are taking voluntary management measures on their own fisheries and actively participating in decision-making processes for dispute settlement; income generation; fishing ground and resource management; and stock enhancement in the framework of relevant fisheries laws and regulations. An increasing number of fishers’ groups are joining the CBFM.

In 2011, the “Korea Fisheries Resources Agency (FIRA),” a government-funded body dedicated to fisheries stock enhancement, was established. Main task areas of FIRA include artificial reefs, fry release, marine ranches and marine forests. The Agency also deals with research and development programs and projects related to stock enhancement, relevant technologies, feasibility studies and ecology surveys.

The fisheries sector usually makes a valuable contribution to economic development of coastal areas. The relative dispersion of coastal small-scale fisheries adds to maintaining economically viable rural communities and balancing the trend towards growing coastal urbanization.

In history, fisheries have often been the basis for human settlements and coastal development in both the rural and urban environments. Artisanal fisheries often generate the capital needed by fisher-farmers to invest in agriculture.

In well-managed fisheries, high resource rents can be generated and used to finance investments within or outside the sector. The sight of fishing activities (e.g. ports, fishing boats and landing sites and fish markets) is attractive to many people and often has considerable aesthetic value to both those living permanently in the area and tourists.

In addition to its direct contribution, the fisheries sector is often responsible for significant indirect multiplier effects on economic development. First, through intra-sectorial interactions, e.g. between capture fisheries and ancillary activities such as net-making, or between capture fisheries and aquaculture through the supply of fishmeal. Second, fishing or fish farming is often undertaken next to other economic household activities including farming and small trade.
These multiple economic occupations not only bridge the often-great seasonality in the abundance of fishery resources, but also insure against risks of failing production in any one of these activities.

Moreover, these complementary pursuits may in some cases determine part of the fisheries sector dynamics; for example, the supply of capital and labor of the fishing activity may evolve in close relation to agricultural activities undertaken by the household.

The infrastructure developed for fisheries (feeder roads, landing sites and coastal havens, water-retaining ponds) tend to trigger further economic developments in other sectors such as tourism or agriculture.

An important contribution of the sector is the employment opportunities it generates, especially in remote and marginal areas. And not only in fishing but also in boat-building and maintenance, mechanical workshops for engines and gear, net-making and repair, handling, processing, packing and transport. In many countries, it is estimated that some million fishers (including those engaged in production, harvesting and landing site-based activities) are dependent for all or part of their livelihoods on fisheries. Together with their dependents, as many as million people may rely on fisheries for their livelihood. The rapid development of aquaculture, for the local and export markets and its rapid transformation in many areas into a commercial or semi-industrial activity is also contributing substantially to the development of rural areas.

The fisheries sector can also be an inexpensive 'observer' and, potentially, 'guardian' of the aquatic resources and environment of a country or a region, capable of alerting the relevant authorities in case of some major hazard such as pollution. Fishers and fish farmers often first witness major changes in ecosystems. Under this angle and provided fisheries adopt a responsible attitude across the board, as provided in the FAO Code of Conduct for Responsible Fisheries, fisheries could significantly increase their future contribution to sustainable development.

Some positive impacts result from the fact that fishing and aquaculture activities may affect the development of other economic activities. The presence of set fishing gear or aquaculture installations can be an impediment to navigation and tourism and the development of these activities cooperating for space need to be carefully integrated.

**South Korea Development of Creative Economy in Fisheries:** Like most of the fisheries around the world fishermen traditionally think that stocks are unlimited and depletion will not happen since the ocean is unknown. This got long cultural history in South Korea and facing this issue need special creative economy strategies that Korean government already started.

We can consider these creative economy strategies in four parts:

- Fisherman Communities and Fisheries Management
- ITQ system
- Fishing Villages
- Stock Rebuilding Plans

Each of these four parts made important steps towards fisheries culture change in Korean fisheries sector. Next part we will explain more about each of the above fisheries strategies and the way Korean government used as creative economy strategies in fisheries sectors.

**Fisherman Communities and Fisheries Management:** According, the Korea government introduced a new self-management system in which fishermen voluntarily make decisions on the management and use of resources in order to receive support from government on fishery resource management and to administer a sustainable fishing through ownership awareness and independence of fishermen. A fishermen-oriented and community-based fisheries management (CBFM) has been implemented in 63 self-fishing communities since February 2001 and then number of participating communities has expanded to 579 as of 2007 [6].

In CBFM, the fishing community is responsible for its own fishing management and adjustment for fishing activities. If disputes occur between communities, industries or regions in promotion of CBFM, a self-control conference could be operated by the private to resolve the problems voluntarily through consultations and discussions. A public fishing village guidance serviceman was appointed for each participating community from fisheries office to provide technical guidance and advices to self-management communities. Also, private consultants with diverse experiences in fishing provide customized education to communities that either show poor progress or newly participate in community-based fisheries management, inducing substantiality by suggesting problems and alternatives of communities. In order to achieve balanced development between rural and urban communities, the government divided fishing communities into 160 areas and gave supports to their production facilities, income building and welfare facilities [6].
The Korea government also started fishermen, oriented co-management system for more effective implementation of responsible fisheries. Under this system, organization of fishermen such as a fishery corporation or group of fishermen in fishing villages set up self-regulation according to relevant fishery-related laws and regulations with the endorsement of the local government so that fishery could be controlled. The fishermen-oriented co-management system is designed to enhance a sense of responsibility of the fishermen and prevent illegal fishing. Another characteristic of Korea ecosystem based is that it is premised fisherman’s voluntary participation by connecting with community-based management fisheries. Self-management fisheries of Korea newly systemized the traditional management of fishing community focusing on fishing village communities. In this system, fishermen communities make voluntary decisions for them to manage and use available resources.

**Individual Transferable Quota (ITQ) System:** Individual quotas attempt to solve the common property problem not by defining property in the fish stocks themselves but by allocating individual harvesting rights in these stocks. Thus, individual catch quotas constitute at best an indirect property right in what really counts, the fish stocks and their natural environment. However, it can be shown [7] that this indirect property right, provided it is transferable goes a long way toward resolving the common property problem. TAC system is having put under the system for 2011 in 11 species and continuous having extended to the inshore fisheries under the complete settlement of EEZ system agreement among three countries, Korea, China and Japan. South Korea is starting ITQ after a successful experience on TAC system. The Korean Fisheries sector is now ready to take a new step for making the fisheries sector more sustainable and try to save stocks from depletion.

When fishermen move into the TAC plan, for sure there will be some fishermen that cannot fill their quota. These fishermen will face higher Marginal costs than other ones who fulfill their TAC quota. To show this phenomenon and move towards ITQ model we try to analyze it with below model. A Korean fishery is unique and the ITQ system is considered to be as fisherman to fisherman and fisherman to government interaction. Hence the Korean Government considered this as a creative economy in order to shift the solo ownership of the stocks to the most efficient fisherman right to harvest. This system automatically remove not efficient fisherman from the cycle. As part of “Fisheries Resource and Management plan” in 2011 ITQ (Individual Transferable Quota) system has been established South Korea. ITQ system allows individuals to trade fisheries catch quotas among themselves. The effects of the implementation of the ITQ system in general can be categorized as below:

- Increased fishing efficiency,
- Decrease level of uncertainty
- Profit maximization,
- Deduction of administrative costs

Creating a Resource Zone and sustainability of fishery resources will prevent overfishing and controlling fishing efforts as much as possible. Fisheries management and cost savings guaranteeing fisherman’s fishing right in order to prevent from illegal fishing is another reason why ITQ system was implemented in Korean Fisheries. In 1999, the Total Allowable Catch (TAC) system was first applied to Korean fisheries, where traditional fishery management has consisted mainly of technical measures and input controls. The TAC system has been implemented in the form of cooperative-based co-management framework. This management framework was chosen to overcome many difficulties and limits that a competitive TAC system would impose on Korean traditional fisheries management. It first started with 4 species and then reached to 11. After 11 years South Korea is making another step to make more environment friendly fisheries sector.

TAC system is helpful to improve the effectiveness of traditional fisheries management, in which the conservation based fisheries management and the supplementary approaches can be achieved. Because of mentioned reasons and benefits that South Korea could gain from applying TAC system, Korea government decided to use TAC for the first time in 1999. To achieve TAC management objectives, the implementation of TAC system should be cooperative-based co-management system. The basic plan of TAC system implementation should divide into two different approaches in offshore fisheries, inshore fisheries and fisheries in coastal area as shown Figure 2.

As shown in Figure 2, the basic principle of TAC system plan in offshore fisheries focuses on the national level co-management, offshore licensed fisheries, business-type fisheries based Co-management, allowable biological catch (ABC) based on scientific TAC, regional0 management framework and ecosystem based management. The basic principle of TAC system
plan in inshore fisheries focuses on the local level co-management, fishing village association based co-management; market based precautionary TAC, local and community management frameworks and socio-economic driven management. Under this principle of TAC plan, the Total Allowable Catch (TAC) system was first applied to four species of offshore fisheries in 1999. TAC system is currently extended to 11 species. South Korea is planning to use ITQ system for some of these species but the fundamental question that the fisherman and processor ask is why they need to accept ITQ.

**Fishing Villages:** Worldwide growth in tourism continues, fueling the growth of industries selling creative goods and cultural services in the tourist market. Globally, tourism is a $3-billion-a-day business from which countries at all levels of development can potentially benefit. It is the main source of foreign exchange for one-third of developing countries and one-half of least developed countries, where it accounts for up to 40% of GDP [8].

Tourism development pattern in Korean fishing communities, so far, is similar to other kinds of rural tourism. Typically, it is small scale, traditionally operated and relatively geographically isolated [9, 10]. Fishing communities tend to be located in front of the rice field or mountain or next to the rocky coastline. Because land space is scarce for most fishing communities, houses lineup along the main road or are concentrated in one area usually behind the road or the coastline. Tourist development also tends to occur alongside the main road for easy access by the tourist and the local resident. Restaurants, fishing gear shops and gift shops favor locations close to the major roadways; accommodation facilities are situated behind them in the residential areas. Parking lots oftentimes take up the space between the road and the residential area. In the center of the village is the docking area. Since tourism in fishing communities is small-scale and relatively isolated, the ability of the villages to attract tourists depends on their proximity to other tourist destinations, to the major transportation point, like a ferry terminal or to major cities [11, 12]. Fishing communities that have multiple draws such as fishing port, beach and recreational fishing spot have a better chance of successful tour operation. The better locational advantages they have in terms of the nearness to major points of tourist draws, the higher income fishing communities can obtain from tourist activities.

Exogenous changes such as declining fish stock and fishermen have heightened institutional involvement in tourism, for example, in the form of external capital and labor from the state and the fishing village cooperative. The type of tourism sought by the fishing communities is largely divided into three types depending on the availability and source of capital: state-led, cooperative-led, or individual-led. The most stable and largest source
of capital is from the government and government-administered projects. Alternatively, some cooperatives develop self-generated tourism projects using the cooperative fund, locally collected participation fund and the flexible use of the fishing ground to conduct tourism business. The third type is individual run tourism businesses such as accommodations and restaurants. Locals using local resources run many home stays and small restaurants. Fishing communities usually demonstrate a combination of individual-run businesses and state or cooperative initiated tourism projects.

Private operation of tourist activities under the supervision or ownership of the cooperative is the current trend in fishing communities pursuing tourism. The flexible operation of fishing grounds leading to some private operation of commonly held fishing grounds enabled the tourist entry into fishing grounds for diving and fishing purposes. The fishing village cooperative oftentimes sets up business partnership with a tourist company and operates tourism business. By doing that, fishing cooperatives opened up to tourist operation by private interests such as water-borne tourist operators and managers to access the exclusive common fishing grounds. The same goes for state-led tourism investment in fishing village cooperatives. The government investment was originally designed to enrich local economies through the collective operation of funded tourism business such as inns, home stays and small restaurants [13].

**Stock Rebuilding Plans:** In 2005, the Korean government established the basic plan for the FSRP and its fisheries management policies in order to overcome the limitations with the conventional fisheries management policies and to achieve an actual recovery of fishery resources within EEZ since the UN Convention on the Law of the Sea, Korea-Japan/Korea-China Fishing Agreements have come into effect.

FSRP is the comprehensive plan to rebuild fish stock that is excessively caught to a target level within a certain period of time. More specifically, the policy aims to increase the level of fish stock from the current level to a target level within a rebuilding period, so it consists of a series of specific and scientific fish stock management programs including selecting the most effective fisheries management measure as well as complimenting any necessary fishery management supports.

Korea’s FSRP has been established from a holistic approach at the national level and it also has adopted an ecosystem-based approach to fisheries management explicitly as a policy framework.

It was primarily aimed to achieve fish stock recovery by overcoming the limitations of the conventional fisheries management policy, so it is different from the conventional fisheries policy in many ways.

First, because the conventional fisheries management policy does not have a clear goal of stock rebuilding, FSRP specifies are the target fish stocks for recovery in policy.

Second, the conventional fisheries management policy was not implemented based on scientific research and evaluation on fishery resources; for FSRP specifies, type and what content of a fishery management measure will be used after analyzing the condition of fish stock by sea area and by type of fish and establishing a clear stock rebuilding goal and rebuilding period with consideration of the characteristics of target resources.

Third, under the conventional fisheries management system, the policies were established on the initiative of the central government, restricting the participation of fishermen. However, the new FSRP premises the voluntary participation of fishermen, allowing fishermen to voluntarily participate in setting up and executing the plan as well as making them responsible for the outcome.

Fourth, in the application of the conventional fisheries management measures, any analysis before and after the application was absent so it was difficult to operate it with efficiency. But FSRP requires an analysis on a management measures by species, type of fisheries and sea area before and after an operation so that fisheries management measures can be utilized more effectively.

The overall objective of FSRP and its fisheries management policy is to enhance the total fish stock to the level of 10 million tons by 2017 in order to maintain the stable catch limit of 1.3 million tons annually in offshore and coastal fisheries. It is expected that this aims to reach the optimum quantity of fishery resources that the ecosystem in Korea offshore and coastal seas can retain, to break the chains of a vicious cycle of resource exploitation and the aggravation of business conditions of fisheries and to maintain a stable fishery production.

**CONCLUSION**

Through thousands of years fisheries became a major part of Korean Culture and history. This industry plays a major role in Korean economy as well as people’s routine lives. As we mentioned before Korean fisheries sector is unique and cannot be compared with other nations around the world. Consider it as part of the culture we
can see the signs of Creative Economy in this sector. ITQ systems, fishing Villages are only some unique cultural effects that Korean government made in this sector in order to develop fisheries sector in creative economy path.

CBFM introduced in order to bring together the fishermen and culture shifts them towards a better management system. Fisherman sees himself/herself on the front line and directly struggle with the major issues in Korean fisheries.

ITQ model has been recently added in Korean fisheries only for one species and still in the primary level. Here we just explained the system they used to build an ITQ system in Korea and as it is clear we cannot match this with any other country’s ITQ system. This system directly involve fisherman culture shift to be more efficient and more sustainable.

Fishing Villages as a source of attracting tourist were developed through years of experience both in aquaculture field and cultural management in South Korea. This attracts many people every year and involves tourists experiencing unique aquaculture techniques as well as delicious Korean dishes.

In the end, stock rebuilding plans and its fisheries management policy are meaningful for it realizes the limitations of the conventional fisheries management policy and it changes the policy focus by shifting the objective of fisheries management policy from the maintenance of fishery order or the fishery adjustment to fish stock recovery. Also establishment of FSRP that can effectively and quickly recover the fishery resources through controlling of individual resources based on creation of ecological system through traditional stock enhancement programs is also meaningful. Furthermore, preparation of a new management system for ecosystem based recovery of fishery resources and promotion of participation of fishermen by connecting with traditional self-management fisheries can also be considered as important.

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