

**Democratization and the Commons:  
Politicalization and Institutional adaption of Irrigation Governance in Taiwan**

Chien-Hsun Huang,\* Ching-Ping Tang,† Chung-Yuan Chiu‡

Abstract

Meaningful user participation is widely believed to be essential for successful governance of common pool resources. Very limited discussion, however, has ever covered how empowerment and greater stakeholder engagement might actually destabilize a well-functioning governance system. Since the indigenous governing systems have played a critical role in managing natural resources and many of them are encountering democratization that substantiates participation and power-sharing, how they might evolve to survive deserves more attention.

The irrigation system in Taiwan is a perfect case to demonstrate the challenges of enhancing participation, the strategic responses of actors, and consequences of democratization on a self-governing system. Inheriting from Japanese colonial rule, the irrigation system has carried prominent features of public-private partnership. On the one hand the public authority assumed the duty of supplying hardware that requires much bigger economy of scale. On the other hand, local self-governing associations were organized to coordinate the demand side sophisticatedly through network governance. While this well-cited legendary system demonstrates the possibility of public-private synergy, it has been troubled by such snags as rampant rent-seeking activities, patron-client networking, and populism that most third-wave democratization countries have experienced.

By in-depth field study in rural Taiwan, this research reveals negative impacts of unleashed participation on the indigenous resources governing system in the course of democratization. In addition to challenging the conventional wisdom of participatory governance, this study also examines the factors that have contributed to successful institutional adaptation that can help improving the survival of many indigenous institutions that are suffering dramatic political transition.

**Keywords:** Taiwan, Democratization, Irrigation Systems, Self-governance, Institutional Adaptation

\* Doctoral Student, National Chengchi University, Taiwan, E-mail: 101256501@nccu.edu.tw

† Distinguished Professor, National Chengchi University, Taiwan, E-mail: cptang@nccu.edu.tw

‡ Doctoral Student, Indiana University, US, E-mail: chiuch@indiana.edu

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### **Introduction**

Although participation of self-organizing users has been widely considered as an alternative approach to effectively manage common-pool resource (CPR, Ostrom 1990; Ostrom, Garder, and Walker 1994), limited discussion has challenged the contribution of participation to governing CPR in democratizing contexts. According to conventional wisdom, enhancing participation can facilitate efficiency and responsiveness of a governance system through building trusts, reciprocal cooperation, and social networks in a vibrant civil society setting. However, because lacking the traditions of civil norms like the West, participation, based on personal ties and relationships, tends to shape informal exchanges of vertical interactions and particularism in most the third-wave democratization countries. The other side of participation then turned into notorious clientele structures and downplayed the needs of horizontal reciprocation and cooperation among participants on which successful self-governing systems rely. By politicizing public policy process, the clientele structures may give rise to the potentials of rent seeking activities to cause institutional inefficiency and impair the growth of civil society in the process of democratic transition and consolidation. Limited attention has been paid to the challenges of participation resulting from politicalization in an indigenous CPR governing system

This article cites a case of participation irrigation system in Taiwan, a successful paradigm on irrigation management, to illustrate how participatory governance of CPR suffer from the challenges of politicalization problems and can evolve into countervailing effects against the negative impacts. Taiwan's participatory irrigation system demonstrates the efficiency of physical infrastructure has been well known around East Asia (Bray 1986). The efficient system is governed by a networking relation of "synergy" between public authority and local self-governing associations. The public authority provides physical investments in infrastructure to secure stable water delivery based on scale and technology; local self-governing associations are organized to coordinate the individual needs of irrigating water and collective maintenance to the system in the field. Such network facilitates governmental actions on societal collective actions through vertical and horizontal interactions in a complementary way (Lam 1996). However, the networking relation may induce both positive and negative influence of participation in the operation of irrigation systems. The self-governing association (called Irrigation Association) in Taiwan has carried mixed features both of associational life in civil society and clientele traditions in authoritarian rules. The "politicized" association served as an electoral mobilizing machine to distribute particular benefits in exchange of political supports from the bottom. After democratization, the government by dominant coalition more relied on the vote-mobilizing supports in localities and tended to allocate more public resources for the particular needs.

Then, like other irrigation systems in the Third world,<sup>1</sup> Taiwan's participatory irrigation system has suffered from negative politicalization problems related to electoral and clientele politics. In the process of democratization, the network of Taiwan's governing model has been troubled by such snags as rampant rent-seeking activities, patron-client networks, and populism that most third-wave democratization countries have experienced. Scholars worried about the participation based on clientele exchanges may destabilize and even decay the swell-functioning governing system (Lam 2001; 2005; 2006).

In this article, we explore the evolution of the self-governing system in the course of democratic consolidation. Although the irrigation system has suffered from the negative impact of clientelism, the experience of ruling party turnover and sequent reforms after 2000 seemed to correspond with diminishment of the politicalization problems deriving from clientele exchanges in recent decade. Political competition derived from the turnover of ruling party implied that opposition parties are able to threaten and even replaced with the dominance coalition to constrain and even cut the existing clientele connections. It may be hopeful, by the chances of reform window, to rebuild rule of law, robust associational life, and civil engagement in the state-society relations. While inefficiency of governing institutions mainly derive from vertical clientele connections over civil association life based on Putnam's argument (1993), the case of Taiwan's participatory irrigation system presents a governing structure that combines civil associational life and clientele traditions and may develop countervailing strategies against negative impact on irrigation governance. It is critical to pay attention, for our purpose of the article, to explain how the participatory irrigation system in Taiwan can be eventually transformed to be less clientelistic, and then survive and adapt into democratization.

### **Irrigation Governance in Taiwan: Civil Associations, Synergy, and Clientele Traditions**

Irrigation system in Taiwan is dominated by decentralized and self-governing association, called "Irrigation Association (IA)."<sup>2</sup> From a perspective of state-society, the local farmer-based organization seems to demonstrate an associational institution with strong civic participation and organized social life in autonomous civil society. The institution empowers local farmers to fully participate into managing the irrigation system through voluntary activities and social cooperation against the excesses of state intervention. The participatory irrigation system in Taiwan support the prominent argument that some irrigation systems managed by participatory farmers have better performances than others directly maintained by the government (Ostrom 1990; 1992; Tang 1992; Lam 1998). Since

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<sup>1</sup> Recent decade, the issue about politicalization of irrigation management has been common phenomena in many developing democracies due to agriculture interests and election campaigns (cf. Mollinga and Bolding 2004). The water user associations (WUA) were suffered from the impact of patronage and rent-seeking in Philippine (Oorthuizen 2004), and former president Estrada had proposed to reduce rates of membership fee for farmers. Similarly, Mexico's WUAs serve as springboard to other political positions and their funds have the purpose of political campaigns. The similar scenarios also have occurred on irrigation infrastructure related to patronage and corruption in Southern Asia (Araral 2005; Wade 1982).

<sup>2</sup> There are 17 IAs scattered in Taiwan. According to irrigation areas, IAs with 50 thousands hectare above include Chianan, Yunlin, Changhua; IAs with from 20 to 50 thousands hectare include Pingtung, Kaohsiung, Taichung, Taoyuan, Hsinchu, Miaoli, Yilan; IAs with 20 thousands hectare below include Peikee, Liugong, Chihsin, Shihmen, Nantou, Hualien, Taitung.

long ago the system has been considered as a classical model of “Participatory Irrigation Management (PIM)” worldwide by academics and practitioners.<sup>3</sup>

The IA is a professional and civic organization of farmer membership. On the top, the IA is mainly operated by executive headquarters composed of professional officials and mechanics in charge of maintenance & operation (O&M) of irrigation systems in scheme level. The executive sector, led by a president, must be accountable to IA councilors and member farmers for stable water supply services. Additionally, to closely connect to farmers, the IA has many extending branches, called as “work stations” in different localities. The work stations, serving frontline units of IA, have to implement rotating plans of water supply and convey feedback from farmers to IA headquarters. Besides IA, there are various farmers self-organizing communities, called “Irrigation Group (IG),” in charge of sub-lateral levels system. Every IG has a leader elected by farmers and take full responsibility and authority on delivery of water, daily O&M of sub-lateral infrastructure. Through direct face-to-face communication in IG, farmers mobilize themselves in the bases of neighborhood trust and reciprocation to manage the system in the field. They have autonomy respected by the IA to determine who can access to water, how to distribute and monitor water-use against free-rider behaviors, or other managerial rules depend on various local ecological and social contexts. Under IG leader’s coordination, they find resolutions to conflicts about distributions of water among farmers. Then the IGs are embedded into directions and coordination of IA in a networking form of governing system.

In addition to autonomous feature of IA, governmental actions can demonstrate alternative relationship of state-society synergy for participatory irrigation system in a complementary and mutual facilitating manner (Evens 1996; Ostrom 1996). The successful synergy of irrigation governance derives from building public-private-partnership and “co-production” between the government’s physical capital-oriented assistance and farmers’ social cooperation (Lam 1996; 2001). Instead of intervention, the government plays a facilitating role to provide technologic, financial, and policies supports on legal and physical infrastructures of irrigation systems.<sup>4</sup> Particularly, the government would annually arrange large amount of subsidies about new construction or renovation of modernizing infrastructure in the systems to secure efficient delivery of water. Under the promise of stable delivery, the IAs, based on professional and social knowledge over the system, have to operate and maintain the infrastructure and coordinate diverse demands of water among farmers. Then, farmers in the fields mobilize themselves to regularly clean the canals and distribute the predictable water from the IA system. The government, IA, and grass-rooted

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<sup>3</sup> In the past, the Taiwan’s successful experience had attracted attention of International Irrigation Management Institute, IIMI (now reorganized as International Water Management Institute, IWMI). The institute’s officials had visit Taiwan for the operation of Irrigation Associations, and actively introduced similar institutional design, called water user association (WUA) to other developing countries. The primary cases include Mexico (Enrique Palacios 1999), Turkey (Svendsen and Nott 1998), and Philippine (Raby 1998). There are research papers about general discussions of PIM (cf. Merrey 1996; Salman 1997; Easter 2000).

<sup>4</sup> In Taiwan, legal foundations of irrigation governance mainly rely on “Water Act” and “The Act of Irrigation Association Organization.”

farmers engage in a collaborative network of hierarchic and horizontal interactions through connecting state power and societal participation.<sup>5</sup>

While the close connection of cross-sectors enjoys positive benefits from synergy, it may also tend to blur the boundary between public and private spaces and arouse doubts on the possibility of negative influences from clientelistic capture (Evens 1996, 1129). Besides the aforementioned associational life of IA and horizontal interactions among farmers in the field, in fact the mobilizing participation in irrigation system also derives from a vertical interaction of clientele structure. It is common that the vertical structure of participation tend to shape an informal exchange of “particularism” between citizens and political elites over the operation of formal institutions in the third-wave democratized countries (O’Donnell 1994; 1996; Roniger 1994). On the vertical interactive settings, political elites build up their own personal networks through serving as patrons’ proffering of material goods, or security in return for political supports from clients (Scott 1972; Stokes 2007). Although clientele structures are assumed to be close kinships or friendships (Scott 1972; Mainwaring 1999), clients may directly or indirectly connect with their patron through a personal networking linkage among them (Kitschelt 2000; Kitschelt and Wilkinson 2007). In Taiwan, more than five decades the vertical linkage has exercised a substantial influence on the public policy process in national-wide and local politics. Political elites tend to distribute targeted benefits to fortify the loyalty of clients and to co-opt some potential followers by effectively controlling some formal apparatuses to manage economic activities. Particularly, IA has been considered as the apparatuses to mobilize more political supports through provision of irrigating water highly associated with agricultural productivity.<sup>6</sup>

The vertical mobilizing structure to shape participation in Taiwan’s irrigation system has a historical background. When originating in Japanese colonial rule to manage modernized irrigation systems since around 1900, the self-governing associations fulfilled an important mission set up by the colonial government to maintain political stability and societal control on local population.<sup>7</sup> By utilizing co-opting strategy, some of Taiwanese local notables and elites were allowed to join in management of the associations. Sequentially,

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<sup>5</sup> The collaborative network could be considered as social webs or network compose of horizontal bond (friends, neighbors, or peers) and vertical dimension (government, IA, and IG) in a interdependent manner, and it is similar to social structure of Mexico, see Lomnitz 1982.

<sup>6</sup> According to official statistics, the area of farming fields grew from 876,100 ha. in 1951 to 918,143 ha. in 1978, and paddy productivity also boosted to 3,096,041 metric ton in 1978 which grew 20% more than 1951. See statistic information on official website: <http://agrstat.coa.gov.tw/sdweb/public/inquiry/InquireAdvance.aspx>.

<sup>7</sup> Around the year of 1900, Japan’s colonial authority actively involved in managing and improving irrigation so that boosting Taiwan’s agricultural economy can generate more resources for the needs of Japan’s homeland. For this purpose, firstly the colonial government gradually renovated or new constructed infrastructures in scheme level to pursue stable water supply for agricultural development. Besides updating the scheme level systems, the colonial government also enforced local people contribute to reconstruct many sub-lateral level systems to build up the whole networks of water delivery. At the end of the colonial era, there were 38 modern irrigation systems completed by the Japan government (Chen 2001). To manage the completed and large scale modern irrigation systems, the colonial government set up some corporate bodies called Irrigation Groupings (the predecessors of the Irrigation Associations) which were responsible for operations and maintenance of scheme systems and subject to close official supervision.

when Taiwan turned into jurisdiction of KMT authoritarian role after 1945, under the acquiescence of the KMT, more local political elites gained access to IA positions to build their personal networks, to fortify their political influence in localities, and to compete further political careers when local elections in township and county levels were launched around 1950. According to scholar's observations (cf. Wu 1987; Chu 1992; Chen 1995), over the past few decades Taiwan's IA had become a political mobilizing machine during elections and involved in national and local clientele structures. To earn more farmers (clients) supports, the local political elites (patron) always keep good relationships with them by providing better IA's services. The IA, particularly work stations, daily communicate with farmers for ameliorating water delivery services, or resolving conflicts about water distribution, or for just closing informal relationships (such as attending weddings or funerals). The IA officials are quite familiar with the local needs. Then, the IA possessed professional and social knowledge to decide how to distribute benefits of their services and easily earn farmers trusts and supports. The IA's services (particularly, improving physical infrastructure in sub-lateral levels) are very attractive for local political elites to cater to targeted farmers who could promise voting loyalty in return. The IA play a critical role in these vertical linkages, and local political elites use the IA to mobilize votes for their candidates by conveying promises of favors to local communities. Therefore, the irrigation sectors under politicalization could influence farmer attitudes on voting during elections campaigns.

Besides growing in local politics, the vertical exchanges relationships extend into national level through government material distributions during the period from authoritarian rules to democratization. Since around 1950, the ruling KMT had tried to build up a political partnership with local alliances through distributing economic privileges and protection.<sup>8</sup> When rising competing elections after democratization, the ruling KMT became more concerned with farmers interests and relied on the vertical exchanges of material rewards and voting supports in face of the opposition challenges. The subsidy to irrigation sectors is one of important approaches for the KMT to distribute rewards for his local supporters, particularly in rural places. Sometimes, local political elites tended to request more subsidies, mainly on physical improvement of infrastructure, and claimed credits to certain targets by cultivating their "personal votes" (Carey and Shugart 1995) in intraparty competitions of local elections. Eventually, the politicizing actions in the vertical exchanges drove the governmental assistance to irrigation sectors to become inefficient clientele rewards. From the perspective of policy analysis, overspending on improving infrastructure by clientele capture may lead to a situation of "social deadweight loss" that overprovision by governmental intervention cause social waste (Weimer and Vining 1989).

When facing the politicizing influence of clientele structures on irrigation governance, one essential question is how the self-governing association can survive and adapt toward

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<sup>8</sup> For more nation-wide clientelism in Taiwan, see Wu 1987; Chu 1992; Chen 1995. At past, the ruling KMT government permitted formally and informally local political elites to enjoy several local economic privileges, such as bus companies, banks, financial services of farmers and fishers associations, contractors of public work, urban planning and so on (Chu 1992).

de-clientelism in the course of democratization. If democracy refers to that citizens are able to participate in the selection of rulers and formation of public policies,<sup>9</sup> then democratization implies more participation. On the perspective of institutional arrangements, democratization aims at setting up a predictable and accountable connection between citizens and governments to drive governmental actions more representative than before through liberal constitutions and fair elections committing to broad civil participation. Although the formalized institutions have been launched in the third-wave democratization countries for decades, real scenarios of pluralistic representation like Western democracies rarely happened. Comparing with the West, the key is the backward development in democratization: free elections precede institutions of a modern state (Rose and Shin 2001). The suffering problem refers to, as argued by O'Donnell (1993; 1996), the informalized practices and rules of clientelism may pervade between state and society in these new democracies and disturb the goals and efficiency of formal institutions. According to suggestions by scholars of democratization, improving the quality of governing capacity against clientelism in new democracies leans on invigorating civil engagements and institutions of civil society, accountability, and the rule of law (cf. Putnam 1993; Diamond 1999; Rose and Shin 2001) for positive participation in democratic governance.

Taiwan's participatory irrigation system governed by synergic connections between public authority and local self-governing associations demonstrates a collaborative network of vertical and horizontal interactions. Such network may facilitate positive governmental actions on societal cooperation. However, the self-governing IA has carried mixed features of associational life in civil society and clientele traditions in authoritarian rules. Like Putnam's (1993) influential study, he implied that inefficiency of local governance derive from vertical clientele connections over civil association life. Although the irrigation systems has suffered from the negative impact of clientelism, the experience of ruling party turnover and sequent reforms after 2000 seems to diminish the politicalization problems deriving from clientele exchanges.

In the process of democratization, while political competition provides a chance for citizens to participation in politics and to make electoral officials more responsive and accountable, not all of competition mechanisms can promise enhancing civic engagement and reflect broader policy interests. Under authoritarian rules or one-party dominated democracy, limited political competition in elections could maintain or enhance vertical exchanges by clientele capture to uphold political offices and vested interests in incumbent coalitions. When political competition became "robust,"<sup>10</sup> imply opposition party was able to threaten and even replace with the dominance coalition, the turnover of ruling party may open the "policy window" to change the vertical clientele structures and rearrange institutions of civil society toward democratic consolidation. The following sections will

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<sup>9</sup> For a discussion about democratic development and political participation, see Huntington and Dominquez 1975.

<sup>10</sup> About how robust competition rebuilds state institutions of providing public good to prevent the state from exploitation by ruling party, see Grzymala-Busse 2007; 2008. Similar argument about competition implying access to alternative options lead to rural collective action in a hierarchical network of clientelism, see Shami 2012.

demonstrate how Taiwan's participatory irrigation system suffers from politicalization and then its responses, adaption, and survival against clientele capture in a democratizing setting.<sup>11</sup>

### **The Consequence of Politicalization in Democratized Settings**

Around the 1970s, the rising challenges from the opposition brought to much competition in local elections and drove the ruling KMT to respond to local needs more than before. These electoral threats had a substantial impact on authority of the ruling KMT in localities and led to the KMT much rely on voting mobilizations by local organizing networks. In rural counties, the voting mobilization of IA had remarkable influence on the outcomes of competitive elections,<sup>12</sup> and made local elites who controlling the IA enjoy a greater bargaining power to request more government's financial aid on irrigation systems. For reelections on counties and townships, the ruling KMT government gradually cannot but accept the bargains with the local elites to raise the amount of governmental subsidies to IA in return for local political loyalty.

Waiving membership fee is highly associated with the governmental subsidies for political reasons and has eroded participatory motivations of farmers in irrigation systems. Membership fee is a payment that farmers make for their rights to access to irrigation systems and request better water delivery services. However, in reality, after Taiwan's economic transition around the 1970s, farmers did not afford to pay the fee by themselves because of rising farming costs and low revenue from agricultural products. Farmers support the IAs and local political elites to persuade the ruling KMT government for more subsidies on irrigation systems. The IAs also welcome this supports from farmers to reduce the burdens of fee collection and they grabbed this chance to request more governmental aid to improve their bottom line. Gradually, the voices of waiving membership fee had kept growing and became an inevitable political pressure for both local politicians and the ruling KMT around the late 1980s. Consequently, in May 1988, farmers' protest movement led to the Executive Yuan hold the second national agriculture conference and made a decision by consensus about waiving membership fee. In 1992, the first general election in the Legislative Yuan proposed the policy of waiving membership fee. This election opened a door for local elites to compete the political positions in central-level legislature to influence national policies. The ruling KMT government felt increasing threats from the opposition (Democratic Progress Party, DPP) that claimed waiving total amount of the fee to earn more farmers' supports during election campaign. Finally, in 1993, the Legislative Yuan, which was composed of broad local elites elected in 1992, passed an amendment to "The Act of Irrigation Association Organization" that the central government had to arrange public budget to pay the full amount of membership fee in behalf of farmers.<sup>13</sup>

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<sup>11</sup> Besides some documentary sources from government and IA, the study conducted in-depth field research and observations from 2006 to 2009, and interviewed with two officials in Council of Agriculture (C.O.A) and three IA officials.

<sup>12</sup> For example, in 1989 election of county magistrates on Changhua, two competing local factions' elites would like to pursue the positions, but KMT nominated one candidate rather than the other without making proper mediation. Finally, KMT lose the election because of lacking supports from the non-nominated candidates and their cadres who control voting mobilization of IA (Lian 1995).

<sup>13</sup> According to the amendment, the government had to subsidy 2.026 billion NTD for membership fee. In the



However, membership fee implied farmers' ownership and participation in the IAs. When the membership fees were waived from farmers under the political considerations, the changing relationships between the IAs and farmers led to irrigation management without farmers' involvement. Firstly, waiving fee broke the rule of "boundary" for member and non-member among farmers. In the past, farmers of the IA membership were greatly willing to patrol the canals and monitored water allocation against nonmembers use. Once membership fees were paid by the public budget, more farmers tend to consider that irrigating water no longer was an exclusive service provided by the IAs, but "public good" supply by the government. Non-member farmers argued to have equal right to share water. Secondly, waiving membership fee also violated conventional rules of water allocation among memberships. No matter the amount of water which farmers need in the field based on different rotation systems, some farmers tend to satisfy their needs to appropriate water in priority at expense of others quota allocated properly in the past. If farmers encountered conflict of water allocation, they became to rely on the IAs for solutions more than the farmer themselves and IGs coordination.<sup>14</sup>

Besides waiving membership fee, the physical improvements mainly come from governmental subsidies and are much popular for local communities. Because of rising burden of labor and renovation costs on irrigation systems recent decades, more farmers would be more likely to request IA to provide better services to improve physical settings, particularly on concreting canal lining, building new canals or water gates, or widening paths in field. Originally, irrigation systems in sub-lateral levels should be managed and renovated by IG. Farmers in the IGs used to mobilize themselves to perform the routine of operation and maintenance (O&M). However, the physical improvement provided by the IA had changed farmers' incentives to participate in daily O&M. Farmers turned to more rely on better efficiency of water delivery through the physical improvement. They could spare labors and expenses away from regular collective contributions and focus more time on taking care about fields and products, even other businesses. Eventually, they tend to request the IA or even lobby local elites to continue to provide the services.<sup>15</sup> The local political elites utilize the services by IA to satisfy the needs in localities as possible if elections were coming; at the meantime, they have strong motivations to request more financial aid from the government to resolve serious deficit problems on the operation of irrigation systems in return of continually mobilizing votes from the bottom. In the long run the exchanges between local elites and farmers bring to rise in spending of infrastructure even if they faced reduction of farming population and agriculture

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past decades, IA member farmers afforded to pay the membership fee by themselves as well as 40%~60% of new construction fee. Around the 1980s, the government had provided subsidies for all construction fees. In 1994, official statistics showed total spending of all IAs were 7.757 billion NTD and the government provided 4.158 billion NTD (51% of total spending), source from Taiwan Statistical Data Book 1994.

<sup>14</sup> If encountering water shortage, instead of checking whether someone violates rule of distribution, farmers tended to directly request help from work stations. They consider IA and government have a duty to satisfy their needs on water. Interview with a director of work station of an IA in southern Taiwan.

<sup>15</sup> When competition on local elections rose, farmers tended to request more physical innovation by visiting IA representatives and staffs. The IA usually satisfied their needs in terms of available budget. Interview with a superintendent and a senior manager of an IA in southern Taiwan.

productivities.<sup>16</sup> Also, the physical improvement had made a negative impact on farmers' participation in irrigation systems. Farmers had no strong motivations to participate in daily O&M like before.

The professional functions of the IAs were further threatened by rampant rent seeking followed by corruption and mafia. Local political elites who control the IAs enjoy privileges to decide how to distribute services of improving physical infrastructure for local communities. They could easily allocate the contracting of physical improvement in sub-lateral levels, including concreting canal lining or rebuilding new concrete canals in replace of traditional ones made by gravel and soils, to their followers of certain local businesses or individuals without public scrutiny.<sup>17</sup> These followers also pursue those narrow benefits by returning their political loyalty during election campaigns. Sometimes, some of them services as brokers to mobilize votes from neighborhoods or local businesses for their political "supervisors" or even "boss." Thus, physical improvement was no longer considered as a "service" for irrigation in the base of professional evaluation but as a "reward" for satisfying local communities' needs under political considerations. The powers of vote-mobilizing and "reward" distributing are very attractive for various local political elites to compete to domain the operation of IA by competing the positions of the IA presidents and councilors. In the past, the IA president was elected indirectly by IA members based on electoral rule: the members elected 15 to 33 councilors according to the size of IA and irrigation areas and then the councilors elected the president. Therefore, it was easy for competing local political elites to aggressively involve into the elections of IA councilors and president. Firstly, they competed to be elected as councilors through vote-mobilizing from their personal networks and even vote-buying. Secondly, they attempted to influence election outcomes of the IA president voted by councilors by fortifying their supportive councilors on the one side and co-opting others in the form of bribery or even threatening violence on the other side. Around the 1980s to 1990s, there had been serious scandals of vote-buying and gang involvements in the elections of IA presidents and has been an open secret in local political ecology.

### **Institutionalization and Reforms against Politicalization**

To fight against negative impacts of clientelism and corruption, the ruling KMT government further intervene decision-making of the IAs by preparing "nationalizing" policy in 1994. According to the amendment to "The Act of Irrigation Association Organization" in 1993, the central government should nationalize the IAs within three years. For preparation of the nationalizing policy, the KMT government actively put a bridle on IAs' decision-making mainly through appointing the IA presidents and councilors. The strategy which the KMT adopted was aimed at splitting the clientele connections between the IAs and local politics and rebuilding professionalism of irrigation management of IAs.

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<sup>16</sup> According to statistic yearbooks of an IA in southern Taiwan, spending on infrastructure in 1994 is around 5 hundred millions NTD and the spending is increasing up to 10 hundred millions NTD in 2001.

<sup>17</sup> The contracting physical improvement on sub-lateral levels systems didn't follow regulations of government procurement until 2002.

However, the nationalizing policy sequentially suffered strong resistance from the opposition party and local political elites. At national level, if the IAs organizations were transferred into government agencies, the opposition party, DPP, argued that there were huge financial burdens for central government to cover serious deficits of IAs. More importantly, the DPP criticized that the ruling KMT seemed to directly control IAs for electoral mobilization against local elites' domain. At local level, local elites criticized the nationalizing policy trespassed farmers' ownerships of the IAs and irrigation infrastructure in tradition. They also had doubt about whether the government found solutions to a legal problem about transferring the ownerships. Furthermore, what the local elites were mostly worried about was losing their patronage resources after the IAs were nationalized. Without controlling the IAs, many local political elites would lose the access to one of important vote-mobilizing machines and also failed to distribute material goods about personnel or constructing infrastructure through IAs for their political supporters. In the end, the Legislative Yuan, in 1995, passed second amendment to "The Act of Irrigation Association Organization" to resume IAs' original status of farmers' ownership and autonomy.<sup>18</sup>

In 2000, the opposition, DPP, won the president election and brought about the first turnover of ruling party in central government. When the DPP had prepared to appoint his favorite candidates of IA presidents as part of political attempt to co-opt the important local mobilizing machines, the KMT feared to lose the important political alliances for voting mobilization in localities during elections. Although losing executive power at that time, the KMT still controlled majority in Legislative Yuan. In order to prevent the "new" ruling DPP from penetrating into IAs, the KMT, in 2001, proposed and revised again "The Act of Irrigation Association Organization" to maintain the original status of IA autonomy and farmers' ownerships and also change the electoral codes of IA presidents. Both IA presidents and councilors were directly elected by their member farmers. As a result, in 2002, except one IA president turned to the DPP, the rest were mostly incumbent presidents nominated by the KMT. Because of the difficulty in access to controlling IAs, after 2002, the new ruling party gradually constrained the amount of financial aid to the IAs.<sup>19</sup> The ruling DPP was not generous to satisfy the financial needs of IA like before. Although shrinking subsidies from the government, the ruling DPP wouldn't like to irritate farmers and still kept certain amount of financial aid for irrigation sectors. In an expectable manner, local elites in the IA had to continually endeavor to maintain a reasonable operation of irrigation systems in face of limited resources cut by breaking links with the past "patron." Particularly, when arranging physical improvement of canal lining or rebuilding new

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<sup>18</sup> According to interviews with two officials in Council of Agriculture (C.O.A), there were two voices about how to improve the operation of IA in central government in early 1990s. One voice supported nationalizing policy against bribery and corruption; the other voice suggested to maintain the status quo and sought more consensuses among different opinions.

<sup>19</sup> According to official budget information, a program of improving irrigation infrastructure was launched in 2001 and arranged subsidy of near 4.2 billion NTD for renovation and farmland readjustment. In 2007, the program reduced amount of subsidy to close 3.2 billion NTD and provided additional subsidy of 0.5 billion NTD for special financial aid to IA deficit this year, source from Directorate General of Budget, Accounting and Statistics (DGBAS) of Executive Yuan.

concrete canals, the IA turned to be pragmatic to balance poor conditions in systems and farmers' needs.

Besides, after 2000, several new national policies were initiated to facilitate the IAs' financial self-supports and to rebuild professional management. Firstly, the KMT government officially launched the policy of "diversification" on operation of the IAs before the DPP entered into presidential palace.<sup>20</sup> Sequentially, all of IAs had to draw upon their unique advantages of irrigation systems and water resources to develop their "sideline" for more revenues. More significantly, for example, they transferred redundant amount of water to industrial sectors, engaged in hydraulic power generation, or developed ecological tourism.

Secondly, due to a lack of strong legal settings on irrigation management before, the KMT government grabbed this chance of revising "The Act of Irrigation Association Organization" in 2001 to set up several conditions for presidents and councilors candidates against gang involvements as well as some anti-bribery regulations during elections. Then, the following DPP government also enacted some administrative regulations mainly focusing on personnel and finance management of IA as well as supervision rules to strengthen the IA capacity of irrigation management. To illustrate, all IA officials, following the recruitment of public servants, must pass open and competing exams and have to be evaluated by merit systems. Further, all IA financial management, accounting, and public procurement must follow national regulations on public agencies under directions of governmental supervisor: Council of Agriculture (C.O.A). Also, to ensure the quality of renovating infrastructure, some requirements and procedures must be followed under public security and be checked regularly by C.O.A.

At bottom level, grass-rooted collective action networks under leaderships still play a substantial role in managing irrigation systems. When available resources for physical improvement had diminished, farmer engagements and IGs return to become more important for efficiency of irrigation systems. Although farmers had less participated in management work of irrigation systems than before due to updated infrastructure or convenient piping groundwater, they still relied on services of daily O&M on the systems and conflict resolution by IGs. An IG leader plays a critical role in the operation of IG in recent decade. The IG leaders regularly patrolled canals for monitoring water distribution in person or by mobilizing their neighbors or other IG farmers.<sup>21</sup> Also, the IG leaders are most familiar with situations of the systems and actively renovate breakdown on the systems caused by heavy rain and flood before IA's direct improvement. Even if IG leaders no longer have to chase improvement in infrastructure and cater to farmers, they still enjoy high social reputations and respects by local communities for their local knowledge and

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<sup>20</sup> The diversification includes selling redundant water, natural conservation and tourism, rental realty, or electricity generation.

<sup>21</sup> According to field observation during interviews with farmers of a certain IA in southern Taiwan, many IG leaders actively involved in O&M of the system in sub-lateral level by mobilizing their family, neighbors, and several trust IG members or friends. They participated in clearing or paroling canals when irrigating water passed through the fields.

personal networks. Sometimes, farmers tend to depend on IG leader's mediation for conflict resolution about water distributions in the field.

In recent decade, the contribution of IG leaders has been expected by farmers and then appreciated by the IAs. When irrigating water passed through the sublateral canals according to irrigation plans by the IAs, the IAs relied on the IGs leaders to coordinate when and how farmers divert water into their fields as well as the amount of water. It would be more efficient way to fit various needs from different farmers, to maintain orders of water distribution, and to reduce conflicts under the IG leaders' directions. Therefore, the IAs have to deeply connect with IG leaders to enhanced efficiency of the system in sublateral levels around localities. Because an IG leader is an honor position without formal pay, the IAs provided few extra benefits for their hard work to fortify their connections. For example, the IAs would arrange two or more tours per year for them in name of training or business trips. For moral encouragement, the IAs will give awards of excellent IG leaders in a ceremony every year. Beyond the formality, the IG leaders are invited to engage in some social activities and gatherings held by the IAs for closing their informal relationships. For example, frontline staffs of IAs usually stop by IGs leaders' home for public or private reasons. In offices of work stations, the IA staff also present great respects by preparing tea and cigarettes for IG leaders when they come for business or private. Briefly, earning IG leaders' cooperation and closing their connections become one of primary missions for IAs officials.

Eventually, against the hypothesis about decay of the indigenous self-governing associations, in recent decade Taiwan's irrigation systems still have been sustained by professional management by the IAs and the certain extent of self-organization by the IGs, even if they haven't performed very well like before. The IGs are still responsible for the certain extent of O&M on sublateral systems based on leaders' high involvement with social networks and leaderships. The IAs must maintain the operation of whole modern irrigation systems on the base of reasonable financial arrangements when the government tightly controlled the amount of financial aid. A brief illustration concerning political regimes, policies, and irrigation sectors management is presented as Table 1 below.

Table1: Development of Macro Politics, Policies, and Irrigation Sectors

Time	1950~1987	1987~1994	1994~2001	2001~2008
Political system	Authoritarian rule	Democratization		
Ruling party	KMT			DPP
Member fee	Paid by members		Paid by the government	
Managing agency: Irrigation Association	IA president was elected by representatives, representatives were elected by members		IA president and representatives were appointed by the government	IA president and representatives were elected by members directly
Farmer organization: Irrigation Group	IG chief was elected by IG members			

### **Discussion: Competition, De-clientelism, and Robust Associational Life**

Crossing ten decades from Japanese colonial rules, authoritarian system, to democratized pluralistic regime, it is impressive for academics and practitioners to look at that Taiwan's participatory irrigation system, closely linking state power and society cooperation, survives and keeps robust in response to diverse changes of the macro political economy. While participation by farmers is widely believed to enhance efficiency of self-governing irrigation systems, it is possible that the negative influence of politicalization and clientele capture may impair the efficiency of the system and destabilize its functions. Beginning in 1910, the irrigation system was established in a manner of combining bureaucratic mode and grass roots participation. The system has carried prominent features of public-private partnership between governmental actions on hardware modernization and IA's coordination on bottom-up participation. While the systems demonstrate an amazing performance of coproduction, decline of agriculture has weakened incentives of grass-roots participation in the fields around the 1970s. After democratization, the vertical linkage between government, IA, and farmers in clientele traditions turns to be more important towards electoral democracy. The farmers become particular interests in issues of agricultural policies and usually catch electoral authorities' attention. For winning in elections, both central and local political elites try to compete for farmers' supports in response to their needs. Enhancing clientele exchange from governmental resources would be a useful way for political elites' purposes, and then change the cognition and motivation of farmers to participate in irrigation management. In the 1980s and the 1990s, rising corruption and scandals had seriously eroded operation of the self-governing associations and led to the government planned to adapt nationalizing strategy to resolve the politicalization problems.

Although the negative consequences of politicalization had destabilized participatory irrigation system, democratization may not inevitably lead to destruction of the local self-governing association. According to Taiwan's experiences after 2000, the turnover of ruling party and sequent institutional reforms seemed to correspond with diminishment of the politicalization problems in recent decade. In 2000, it was surprising that the opposition party, DPP, won the presidential election and peacefully took over executive branch of central government. The party turnover implied that it is difficult for any ruling party to domain state power and public resources in a long run. When losing their "patron" who can arrange public resources for local private needs, local political elites tended to become more conservative and punctilious toward the unfamiliar new ruling party in central government. At that time, national political elites, including the KMT and DPP, attempted to prevent each other to control the IA. The KMT, controlling majority of Legislative Yuan, amended "The Act of Irrigation Association Organization" to maintain original status of farmer ownerships and change the electoral rules of IA president. The amendment enhanced the autonomy of IA through member farmers directly vote to their president and prevent the elections from involving into bribery and corruption. The president will be more accountable to their member farmers than before. Because of losing access to control IA by appointing IA presidents, the DPP government wouldn't like to arrange more financial aid for the local politic alliances with the KMT. It gradually constrained the amount of governmental subsidies on improving hardware except paying memberships in behalf of farmers.

Besides cutting clientele exchanges by new ruling party, several institutional reforms have been launched to rebuild IA's professional management on irrigation system. Regulations on IAs personnel management and evaluation protect legal status of IA officials similar to public servants from spoil systems by local politics. Other regulations like finance and budget management and public procurement of renovating infrastructure can improve transparency of operation in the IA against patronage distribution and corruption. Also, policy of "diversification" further makes the IAs more conscious about a balance between their financial ability and farmers needs. All IAs are required to approach deficit reduction by constraining redundant spending and earning more profits from sideline product. Above institutional reforms aim at making the self-governing association free from politicizing interventions of clientele capture and could be considered to allow IA more "neutralized" from party or clientele politics. Those reforms would fulfill the positive effects of "rules of law" that is required for democratic consolidation to facilitate meaningful participation in irrigation management in a manner of broad interests rather than narrow exchanges.

The endurance of Taiwan's indigenous participatory irrigation system also relies on social viability from local communities. In contrast to active engagement among farmers in the past, nowadays they have lost their interests in engaging in involving in daily O&M of the systems. However, farmers are still concerned with water delivery and distribution in the fields and keep to engage in a certain extent of participation. The key is the active role of IG leaders in irrigation management. The IG leaders are not only renowned social leaders in a network of local communities or villages but also more senior, experienced farmers mostly respected by other farmers in the fields. Farmers tend to rely on the IGs leaders' coordination and directions to monitor water distribution and to resolve conflicts among them. Besides their leaderships, the IGs leaders usually devote themselves to maintenance of the canals in sublateral level by themselves. The IGs leaders, playing a role of social entrepreneur in managing the sublateral systems, have undertaken most coordination costs and successfully diminished collective action problems among farmers. Instead of chasing material rewards, they may be much driven by social or mental incentives, such as recognition by others for their ability of social networking. Their active involvements further facilitate survival of the IGs' organization and the functions of sublateral systems, which the IA quite appreciates. Eventually, the IA strengthened the role of the IGs leaders who farmers depend on more than before in irrigation management. The IAs further close the relationships with the IGs leaders, and rely on their sophisticated social skills and leaderships for local collective action among farmers in the fields.

## **Conclusion**

While most of the literature stimulates an intense theoretic explanations and empirical evidences of self-governance and participation on CPR and irrigation management, much less attention had been paid to discussion on the challenges of participation to indigenous self-governing systems in the course of democratization. As argued by Ostrom, effective self-governing systems require the ability of users engagement that can be enhanced by public authorities (1990, 212), but also might be threatened by several external factors, such as easy access to external funds or rent-seeking (2005, 274-78) that are associated

with politicalization derived from clientele capture in the third-wave democracies. It implies that local self-governing systems are inevitably embedded into macro politics and external institutional arrangements. Under the embedded institutional structures, participation not only can facilitate governance efficiency for resources of sustainable use and horizontal cooperation against collective action problems, but also may destabilize the efficiency by opportunistic behaviors and particularism triggered by vertical exchanges of notorious clientelism. While scholars felt pessimistic about decline and decay of participatory irrigation systems in developing democracies, it is essential to notice whether and how an indigenous self-governing system can take up the challenges and survive in the process of democratic consolidation.

This case study of Taiwan's participatory irrigation system illustrates how an indigenous self-governing institution may evolve in the course of democratization through institutional adaption. Taiwan's story has demonstrated that indigenous self-governing associations have transformed against politicalization in the base of robust political competition toward democratic consolidation. This article has found that the institutional endurance of the IA highly correlates with political competition leading to strategic responses of political elites and institutional reforms. After the first turnover of ruling party, the new ruling DPP government gradually constrained the public subsidies toward irrigation sectors. The local political elites who control IAs are forced to take care more about bottom line and earn revenue through diversification to improve their financial management and sustain the operation of the systems.

Besides, for further countervailing effects on politicalization, facilitating legal regulations imposed by public authority indeed played a critical role to fulfill the rule of law on irrigation management. The central government has tried to rebuild a legal framework to direct managing behavior of IA toward professional competence. The illustrative examples include the change of electoral rules of IA president and the launch of new regulations concerning IA personnel, financial, and procurement against rent-seeking behavior. The institutional factors drove the local political elites and the IAs toward accountability and transparency in irrigation sectors as well as local democracy. Further, when facing the cutting of vertical exchanges and clientele capture from public authority, the IA turned to depend on the inheritances of social cooperation and self-organization from the bottom. Particularly, the IA tended to close collaborative relationships with IG leaders' coordination and leadership for farmers collective actions in the fields. The tight connections between the IAs and grass-rooted IGs shed light on resumable social cooperation of civic networking and associational life after interruption of politicalization.

Although it is limited to generalize the findings of single case to other countries worldwide, Taiwan's scenarios may possibly demonstrate a leading example of reforms on participatory irrigation management in most developing countries going through dramatic political transition. This study also illustrates a theoretical implication concerning interactions between contexts (including physical, societal-cultural, technologic, economic-material, or political) and strategic behavior in the face of external changes. The purpose of the study mainly relies on fulfilling a gap of the literature between CPR governance and



democratization, and in the future further empirical researches could be accumulated and examined on the democratizing influence on the process of institutional adaptation.

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