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DEVELOPING COMPANIONSHIP WITH THE LEFT-BEHINDS

UNIVERSITY SOCIAL RESPONSIBILITY AND A COLLABORATIVE APPROACH TO RURAL REGENERATION IN THE BADLANDS REGION OF TAIWAN

Hsiutzu Betty Chang[a]

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Abstract

The subject of regional inequality has garnered scholars' attention over the past decade and has generated debates on those territories forgotten by mainstream economic activities. Though left-behind places are a global phenomenon, they are sited in different development contexts that require customized, place-based solutions. This paper discusses a possible approach to working with the left-behinds: leveraging the university as an institutional resource to engage people and places in regional regeneration. Using the Collaborative Badlands project as an example, we describe the learning journey of developing ground solutions and companionship between a research university and the left-behind communities in a rural badlands region. Adopting a hybrid approach of an asset-based approach to community development and collaborative planning for regional development, this case demonstrates a potential levelling-up strategy for sustainable development for the lagging region.

Keywords

Left-behind, university social responsibility, place-based, asset-based, collaborative planning

a (Corresponding author) Associate Professor, Department of Urban Planning National Chen Kung University, Tainan, Taiwan No.1, University Road., East Dist., Tainan City 701, Taiwan (R.O.C.) E-Mail: hsiutzuchang@mail.ncku.edu.tw

1. Introduction

1.1. Left-Behind as a Global Phenomenon

The term 'left-behind' has often been brought up in the policy arena over the past few years. It refers to those places that are forgotten by mainstream economic activities. National economic policies often emphasise agglomeration and investments in large cities or targeted geographic areas to make such places competitive globally. The rationale behind such concentration of investment is based on a strong belief that the economic benefits will trickle down to other areas, including those that are less prosperous (Bolton *et al.*, 2019). These areas, including former industrial regions, second-order cities, towns, and rural areas, do not experience the benefits from premier cities or regions; rather, they often suffer through supporting such growth without reaping its benefits. This approach to economic growth often neglects middle- and low-paid workers in non-targeted sectors as well as the infrastructure that supports the upgrades and innovations that benefit the whole economy (Reeves, 2018). If being left behind describes the consequence, then being held back is the cause; the policy neglect of such areas is quite evident (Bolton *et al.*, 2019).

Disconnected from development opportunities, such places continue to experience increases in geographical inequalities, resulting in social, economic, and even political costs. At the individual level, fewer job opportunities, lower levels of educational attainment and mobility, and poor health are common attributes among residents in left-behind places. A lack of social or civic infrastructure and low levels of community activity that promote connectedness and participation are seen at the community level. This lack of connectedness includes both physical and digital connectivity (Bolton *et al.*, 2019). At a national level, these inequalities contribute to the slow growth of the overall economy (Cigano, 2014; IMF, 2017; Ostry *et al.*, 2016; Stiglitz, 2015; as cited in Tomaney *et al.*, 2021), and generate a greater wealth gap between those who have benefited and the rest of the population (McKay, 2019). Politically, places that lag behind 'may hold back collective growth and threaten the social fabric on which a healthy democracy depends' (Berube and Murray, 2018, p. 2). As a result, the increasing gap between the 'growth spurt' and the 'left behind' (Jennings, Stoker and Twyman, 2016) causes greater intra-regional inequalities and may prompt political backlash in a nation.

Particularly within developed countries in the northern hemisphere, the election results of 2016-2017 demonstrated a sentiment of exclusion. For example, England and Wales voted to leave the European Union in the Brexit referendum (Tomaney and Pike, 2018; Townsend and Champion, 2020); rural populations voted for Donald Trump to restore working-class America (Ulrich-Schad and Duncan, 2018); and Marine Le Pen ran a divisive campaign for the French presidential election (Tomaney, Pike and Natarajan, 2021). These political incidents all demonstrate that there is a growing gap between those who have benefited and those who are left behind. The political backlash from areas (whether rural or urban) missing out on the economic prosperity of a nation has made the notion of the 'left-behind' region emerge as a critical subject and placed a new emphasis on taking into account regional geography in public policy.

1.2. Place-Based Approaches to Level Up Left-Behinds

How to 'level up' the left-behinds has become an important national policy arena beyond economic considerations. As traditional top-down policy frameworks have largely failed left-behind regions, fresh thinking on future development strategies and a new politics of redistribution are required to make a difference (Tomaney *et al.*, 2021). Academics have called for a 'less centred' spatial policy structure and have looked for place-based approaches to be remedies by which to level up left-behind places (Martin *et al.*, 2019; Pike, 2018; as cited in Townsend and Champion, 2020). There are some common features among current proposals that work with left-behind areas, including addressing the fundamental issues and taking a customised and targeted approach which is often place-based and asset-based to make institutional and capability improvements (Iammarino, Rodriguez-Pose and Storper, 2019; Bolton *et al.*, 2019; Tomaney *et al.*, 2021).

The World Bank has called for individual regions to act as the architects and implementers of programmes to address their locally unique capabilities and challenges. In turn, this will provide customised, on-the-ground support, both at regional and local levels (Farole, Goga and Ionescu-Heriou, 2017). At the same time, by working

on the ground and connecting to local issues, it is possible to call for institutional and regulatory reforms that will improve policies at a national level (Tomaney *et al.*, 2021). Rather than waiting and competing for top-down national policies, 'left-behind' regions would be better served by policies that seek to secure their foundational economies and which invest in high-quality infrastructure to improve their underlying social problems.

To address the multidimensional nature of the problems faced in these left-behind places, Bolton *et al.* (2019) emphasise the value and importance of civic infrastructure, connectivity, and community engagement as important in seeking to protect them from a downward spiral. They address the importance of creating strategies that are flexible and community-led, as well as the importance of making connections to opportunities that lie beyond the given community. To initiate sustainable, positive changes, they argue that any funding initiative that seeks to level up left-behind neighbourhoods should be invested at the neighbourhood level, long-term, and be led by resident decision-making. Rebuilding community confidence and capacity, and improving the quality of life are as important as improving economic conditions.

Given the geographical differentiation of socio-economic conditions in left-behind regions, Tomaney *et al.* (2021) call for a place-based approach to local and regional economic development. On the demand side, place-based approaches can aim to (re)build and enhance the everyday and foundational economy of the place (Reeves, 2018), improve basic infrastructures, and stimulate demand-side policies that respond to the immediacy of the place. On the supply side, such approaches take an appreciative, positive view of the place by maximising local assets and empowering local stakeholders to maximise their skills, talent, and capabilities (Barca, McCann and Rodríguez-Pose, 2012) to release untapped local potential. Such policies aim to increase and broaden capital ownership to anchor jobs locally and to place local infrastructure back under local control (Cumbers, 2016; Centre for Local Economic Strategies, 2017). As a result, place-based approaches require more participatory, multistakeholder, and deliberative models of decision-making to bring in customised resources and enhance untapped local potentials at the same time.

The suggested place-based approach for left-behind areas is similar to asset-based community development (abbreviated as ABCD), an alternative community development approach initiated in North America as an innovative strategy for community-driven development (Mathie and Cunningham, 2003). Initiated by Kretzmann and McKnight (1993), this approach recognises the capacities of local people and their associations to build powerful communities, particularly in disadvantaged neighbourhoods and rural communities. The process of recognising these capacities begins with constructing a new lens through which communities can 'begin to assemble their strengths into new combinations, new structures of opportunity, new sources of income and control, and new possibilities for production' (Kretzmann and McKnight, 1993, p. 6). Contrary to a needs-based approach, the appeal of ABCD lies in its emphasis on local assets and seeing people in communities as capable of organising the development process themselves by identifying and mobilising unrecognised assets to create local economic opportunities. By mobilising these hidden assets, including informal social networks, formal institutional resources can be activated to leverage additional support and entitlement, especially through local associations. ABCD can be understood as a set of methods for community mobilisation, and as a strategy for sustainable community-driven development (Mathie and Cunningham, 2003). In the next section, we discuss universities as local institutions and potential assets for left-behind places under the concept of university social responsibility.

2. University Social Responsibility as a Place-Based Approach

The call for increased community engagement in the higher education sector is not new but has received more attention under the term university social responsibility (USR). USR stemmed from the spirit of corporate social responsibility (CRS). In the European Union and globally, the concept of social responsibility has become increasingly important and popular with regard to sustainable development as the ideas of competitiveness and sustainability have gradually become more closely related. Integrating social and environmental concerns into business strategies and operations has become an indicator of competitiveness in the context of globalisation (Vasilescu, Barna, Epure and Baicu, 2010). The environment of corporatisation is ever-changing, and higher education has gone through a process of privatisation. The narrow perspective on knowledge (e.g., technical rationality) in academic ivory towers has made universities further distanced from solving real-world

problems (Shek and Hollister, 2017). It is in such a context that USR emerged to form a partnership with local stakeholders to allocate the resources to help address issues in the community and help their businesses and institutions achieve a balance of social, environmental, and economic dimensions.

Since the beginning of the 21st century, USR has received much global attention. It has become a global movement of institutional transformation in higher education. Gomez's (2014) analysis of the concept of USR began in 2001 when Chile extended the concept of social responsibility to domestic universities. The Romanian government has also stressed the importance of developing USR as a public policy to guide university engagement in solving domestic social problems and has emphasised the need for coexistence between universities and their environment (Vasilescua *et al.*, 2010; Yang, 2019). Developed countries such as the United States and Canada, and the European Union began to promote measures related to the social responsibility of universities (especially for environmental issues and sustainable development) as early as the 2010s. The European Framework for University Social Responsibility (EU-USR) calls for transparency of governance, active responses to societal demands, effective information to be accessible, and strategies to exert universities' social influence (EU-USR, 2018; as cited in Lin and Chen, 2020). The Organisation for Economic Co-operation and Development (OECD) urges the participation of universities in local economies in the era of globalisation and highlights the role that regional universities have in promoting regional development and economic linkages (Yang, 2019; Lin and Chen, 2020). The concept of 'regional learning economy', combined with 'learning regions' and 'learning cities', was put forward by the OECD to highlight the significance of regional universities in driving the learning economy (Yang, 2019). Universities worldwide have begun to embrace a new paradigm of learning and contribution by engaging their staff and students in their local communities to engage in different learning opportunities and by providing proactive solutions to societal and environmental changes.

In addition to their economic functions in the global economy, universities have always held a special place and a public role in society. They provide services related to the transfer of knowledge to their customers, ranging from individuals to public and private organisations, as well as to society as a whole (Gourova, Todorova and Gourov, 2009). Universities preserve and extend their knowledge through education and research via intellectual, scientific, creative, and artistic activities. More importantly, they play an important role in public discussions on social problems and facilitate mutual understanding of civil society and cultural diversity (Tetřevová and Sabolova, 2010). Their roles are multi-dimensional and are integrated into the scientific, cultural, social, and economic development of society. Through different programmes, whether acting individually by faculty interests or collectively through university policies, universities have become active stakeholders in problem-solving, social innovation, and economic development.

3. University Social Responsibility in Taiwan

Following this new paradigm, the Ministry of Education in Taiwan launched the University Social Responsibility Programme in 2017 as one of its high-profile national education policies. Based on individual universities' strengths and expertise, 220 projects were funded in 116 universities across the country to promote innovative education and research activities between campuses and their local communities. The policy aims to encourage higher education institutions in Taiwan to 'invest their intellectual assets and human resources in solving local social and economic problems, as well as to construct a think tank and proactive ecosystem for regional innovation and development' (Centre for University Social Responsibility, 2022). With over 75 percent of the universities in the country engaging in these educational experiments, it is evident that the nation is attempting to make higher education knowledge and human resources essential components of local affairs.

According to Wu's (2018) definition of USR, 'In addition to fulfilling its teaching and research responsibilities, universities should do their best to shoulder the responsibility of serving the society and educating students with a social mind, with a sense of mission to drive the progress and development of society, to fulfil the function of the university in promoting sustainable development.' (p.1) Following this argument, the Centre for University Social Responsibility in Taiwan pointed out that the core mission of the University Social Responsibility Practice Plan is to take local connections and talent cultivation seriously. To make higher education facilities people-oriented and locally responsive institutions, the goal of USR is to solve regional problems, fulfil social responsibilities with a humanistic approach, and promote the application and diffusion

of innovative knowledge to drive local success (Yang, 2019; Centre for University Social Responsibility, 2022). As important local, regional, and national institutions, universities are expected to serve as active and responsible contributors to society and local communities. The concept of USR thus throws the door of these ivory towers wide open and creates opportunities for connections between higher education and communities (i.e., left-behind places) and for the development of the regions in which the individual universities are sited.

Taiwan's efforts in cultivating students with social responsivity and connecting universities with communities did not start with the launch of the USR programme. The Ministry of Education promulgated the University and College Service-Learning Project to promote service-learning as an integral part of citizen education in higher education in 2007 (Hu, 2015; Fang, 2016). Service learning, as a type of experiential learning, merges community service and classroom learning and involves teachers and students in meeting societal needs through formal curricula. For many universities, service learning plays an important role in establishing university-community engagement (Fang, 2016). However, its impact on university culture is limited to individual faculty members due to its course-based nature (Chen, 2021). There have been other Ministry of Education programmes that have also emphasised the importance of citizenship and social responsibility of the students, such as the Mid-term Framework Plan for General Education (2007-2010) and the Competence Development for Modern Citizen (2011-2014). Additionally, programmes such as the Trans-disciplinary Education on Society-Humanity-Science (the SHS Programme, 2012-2015) and the University Learning Ecosystem for Taiwan (2015-2017) focused on the development of innovations or trans-disciplinary curriculum activities in higher education to step outside the university to make connections with society for problem-solving and create a network of co-creation (Wu, 2016). The Humanity Innovation and Social Practice (HISP) Project (2013-current), funded by the Ministry of Science and Technology takes a step further. It integrates academic research and innovation with social practices and encourages the formation of partnerships with local communities to address local demands and problems (Dai and Wu, 2013). Compared with the scale of USR funding, the grants from these education and research programmes are often implemented by a smaller pool of experimental universities. Nevertheless, these endeavours have initiated a place-based, incremental, and learning-by-doing approach for university-wide transformations and created co-learning platforms for trans-disciplinary instructors, students, and local stakeholders. Thus, these endeavours have laid a foundation for USR to take place in Taiwan as a national policy.

On the community side, policy and historical contexts have also reduced the learning curve of university-community partnerships in Taiwan. The Ministry of Culture initiated the Community Empowerment Program (shequ zongti yíngzao) in 1994 to promote citizen participation to rebuild local culture and nurture senses of belonging. This policy made community participation a trend in Taiwan, activated social energy in civil society, and promoted community-building (a common term by which the government promotes grassroots participation in different public spheres) (Liao, 2008; Wang, 2008). The catastrophic event of the "921 Earthquake" in 1999 made the government fully recognize the importance of community participation in disaster reconstruction. The bottom-up approach of the Community Empowerment Program has been incorporated into national disaster planning and policies ever since (Huang, 2016). Another rural policy, Rural Regeneration (nongcun zaisheng), which was launched by the Council of Agriculture of the Executive Yuan in 2012, puts a stronger emphasis on community economic development by integrating physical, cultural, and ecological assets and engaging different professional disciplines in rural communities. These policies were originally designed to address different issues in the community development history of Taiwan, but they have also been essential levelling-up strategies which have promoted decision-making and empowerment at a community level. By building capacities at a local level, these policies paved a solid foundation for university-community engagements in different parts of Taiwan.

The following sections present a case study called 'Collaborative Badlands'. It is a project that the author directed and participated in while at the National Cheng Kung University (NCKU) in Taiwan between 2016 and 2022. The case illustrates how two programmes, HISP and USR, combined the concepts of social practice, social innovation, social enterprise (Pratono and Wong, 2019), entrepreneurship education (Fang, 2018), and social responsibility to address the left-behind conditions of a rural region in southwestern Taiwan nick-named the 'Badlands' and proposed levelling-up solutions for this territory.

4. Badlands: Zuojhen and the Left-Behind Rural Region

4.1. Zuojhen as a Site for Social Innovations

The Collaborative Badlands project was first called The Taskforce of Gongguan Community. It was part of the HISP programme launched by the Ministry of Science and Technology, the largest research funding institution in Taiwan. The Research Centre for Humanities and Social Sciences in NCKU implemented the HISP programme in 2014 in Tainan City under the core concept of 'Together with a Good Society'. As the city annexed its nearby country areas to form a metropolitan region in 2010, the overall goals of the HISP project were sustainability and to respond to the various injustices and development dilemmas that then existed in the political, social, and economic development of the region (Dai and Wu, 2013; Dai, 2015). Three types of 'communities for action' were selected in the HISP to address aging conditions in the central city, practice sustainable farming in the rural communities, and assist the disadvantaged regional area through social innovations. The Gongguan community in Zoujhen was selected to represent the third category in hopes of revealing the needs of the area and initiating NCKU's systematic participation in communities via an innovative service journey (the Taskforce of Gongguan Community, 2016; Pratono and Wong, 2019).

4.2. The Left-Behind Conditions of Zuojhen

Zuojhen, about 75 square kilometres in size, is an administrative district located in the southeastern part of the Tainan metropolitan region. Whilst it is only 20 minutes (by car) from the Tainan Science Park (the southern Silicon Valley of Taiwan), Zuojhen is perceived to be one of the most depopulated rural communities in Taiwan. The population decreased by more than 17 percent between 2010 and 2020, and the current total population is comprised of fewer than 4,500 people (Tainan City Government, 2022). With a birth rate of 0 percent and the second-highest mortality rate in the metropolitan, Zuojhen has been labelled as an 'extreme village' and was selected as the pilot area for the Regional Regeneration Policy (difang chuang sheng) in 2020. Yet historically, the town was the gateway from the city to the mountain area and was also a significant transportation and commercial hub for agricultural goods. With the construction of Route 20, the traffic bypasses the town centre to the north; this has accelerated the deterioration of the high street. The town centre has now become one of the few commercial areas in Taiwan where no convenience stores or home delivery services are available.

Gongguan, located in the southern hilly part of Zuojhen, fits the description of a left-behind place in many regards. It is economically disadvantaged due to its natural environment and land regulations. This is an area with a unique geological condition, 'Badlands'. The main features of the badlands are its hilly terrain, lime mudstone, and highly alkaline soil. The topology and soil conditions make large-scale machine farming impossible and less competitive than conventional market practices. Institutionally, the establishment of water quality protection zones has limited the industrial development of the area. Restrictions on large-scale ranching activities have further reduced employment opportunities in the region. In addition, the lack of public services has made the left-behind situation worse. With continued out-migration, public services such as public transportation, schools, clinics, and police stations have gradually closed or been downsized. Socially, Zuojhen has the highest percentage of Siraya, one of the Taiwanese Plains Tribes, whose indigenous status has not been recognised by the state. As an indigenous tribe that has historically lived alongside the Han (Chinese) population, their ethnic identity as aboriginals has historically been hidden and shied away from. Social identity and local confidence have further deteriorated due to outmigration and the lack of employment opportunities. As a result, the community faces complex social-economic problems including unemployment, lack of commercial service delivery, inconvenient medical treatments, lack of social interactions, intergenerational parenting, and so on (Dai, 2015; Lin, 2017; Pratono and Wong, 2019).

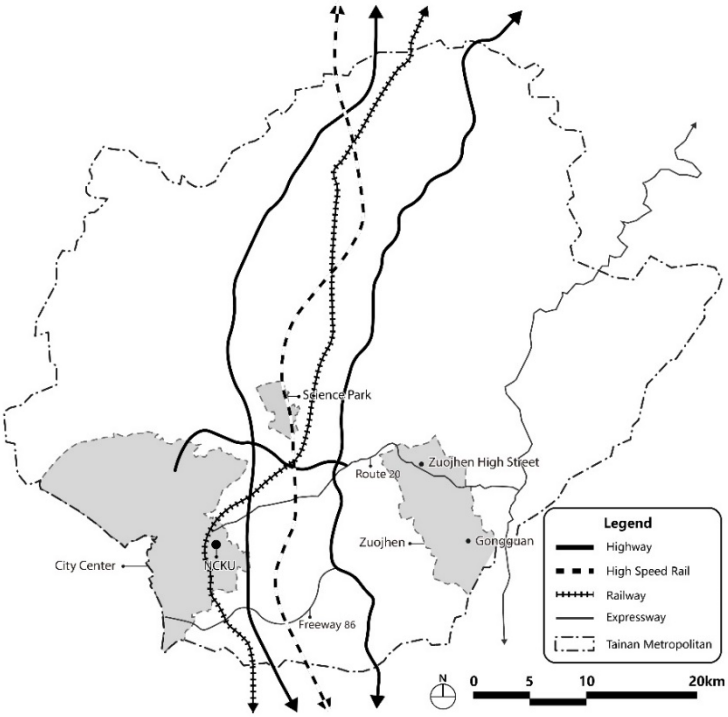

Figure 1 - Location of Zoujhen in relation to the city centre and science park

4.3. The Rich Assets of Zuojhen

Despite the complex conditions which contribute to the left-behind nature of Zuojhen, the town is a rural area rich in historical, cultural, and natural assets. The archaeological finding of the Zuojhen people confirmed the existence of one of the earliest prehistoric humans in Taiwan. The fossil and archaeological sites near the Cailiao River were once popular destinations for fossil diggers. Zuojhen was also one of the settlements that accepted the western missionary James Laidlaw Maxwell and thereby Christianity to spread quickly in southern Taiwan during the 19th century. Culturally, Zuojhen was one of the early settlement areas for the Siraya people before the Han people arrived; it still has the highest percentage of Siraya persons in Tainan. Siraya cultural activities such as hunting, music, and religion can still be found in the area. Environmentally, the unique topography and geology of the badlands have also contributed to the development of unique agriculture and animal husbandry. The lack of large-scale arable land and the sodium compounds in the badlands soil have made agricultural production small in quantity but diverse and unique in both texture and flavour. The unique topography also makes Zuojhen a famous destination; it is known for its beautiful sunrises and the low-altitude 'sea of clouds' effect under certain meteorological conditions. These assets have attracted the government's attention with regard to tourist infrastructure development over the past decade, which included the Fossil Park in the north of the area and the Erliao Sunrise Pavilion in the south (Figure 2). The Fossil Park attracted over one million tourists in the two years after its reopening in 2019. The Sunrise Pavilion has been the official New Year's event destination for Tainan City since 2013. However, the economic benefits of these tourism sites have not yet trickled down in such a way as to improve the basic service provisions and retail development of the high street or nearby communities (Figures 3 and 4).

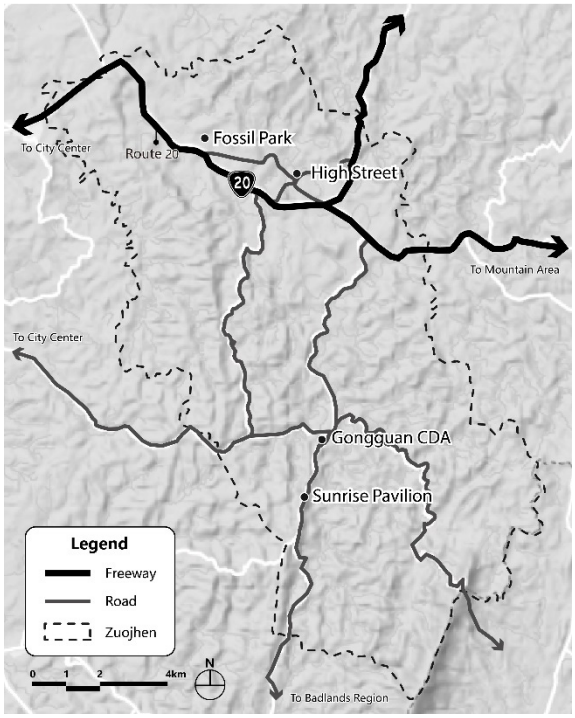

Figure 2 - Map of Zoujhen showing the topography, major routes, local sites, and tourist facilities

Figure 3 - The badlands landscape in Zuojhen

Figure 4 - The high street of Zuojhen

5. HISP: Levelling-Up through Equality and Empowerment

5.1. The Challenging Beginning of University-Community Partnership

The causes of Zoujhen being left-behind are mixed and include institutional constraints and cultural biases. The overall national economic policy is pro-urban and pro-industrial; structurally, this leaves rural areas behind. In addition, continued out-migration has caused a sense of hopelessness in the place, which is intertwined with the historical taboos that exist with regard to plain-aboriginal identity. With its main focus of 'health equality and community empowerment', the HISP programme tried, in 2014, to bring faculty and students into the town through service-learning to meet the needs of the community. However, the limited number of local organisations and staff created fundamental challenges for the university. In the beginning, it did not know where to start, and at the end of the first year, HISP even considered removing Gongguan from its list of social experiment sites.

5.2. The Critical Step: The After-School Program

Through the continuous efforts of the post-doctoral researchers in the team and with the help of the Gougguan Community Development Association (hereafter, GCDA), an after-school programme was implemented in 2015; it became a possible site for social intervention and partnership. In the beginning, the demand mainly came from the lack of tutors for after-school tutoring at a local church. HISP's assistance started with the concept of distance tutoring and developed a digital buddy programme to connect local children with university students. In terms of providing necessary equipment and facilities, HISP procured second-hand computers from the local elementary school and the university, asked a non-profit team to take care of technical aspects, and found a room in which to run the buddy programme. The volunteers were recruited from the university's general education and service-learning courses, as well as external organisations. In addition, English distance learning, an English camp, and technology courses and camps were also gradually added to serve the local junior high school. Service-learning from the international students at NCKU and Hong Kong Polytechnic University opened the eyes of local students and raised community education to a higher level than that which had hitherto existed. The distance learning partnership first started in the local church building in 2015, expanded to the junior high school in 2016, and then progressed to other disadvantaged areas two years later. This innovative after-school programme brought several critical benefits. It utilised the assets of local institutions and leveraged services outside the community to solve an immediate need. It also promoted the participation of community members in public affairs, such as education. Most importantly, it gradually developed trust between the university and community organisations, including schools, churches, and the GCDA.

5.3. Developing Partnership: The Elderly Care Service

Aside from supporting education in the community, HISP also worked on issues pertaining to the care of the elderly. The elderly population size in Zuojhen is amongst the top three in the country. Due to limited medical resources and the inconvenient nature of transport in this remote village, the GCDA had gradually become a local centre for elderly care. To address the needs of the community, HISP teamed up with professors at the Department of Geriatrics at the university, cooperated with the Taiwan Elderly Care and Education Association, and combined the medical services of nearby hospitals to form a health care service model for the elderly population in the village. In addition to medical services, HISP invited faculty and students to provide services in preventive medicine, including health promotion activities and home improvements. Student-elderly interactions (e.g. the collection of life stories) and the elderly's participation in student course activities (e.g. guiding local tours, presentations, and workshops) enhanced their social interactions. By linking medical services and promoting health care activities for the elderly, HISP gradually established an integrated long-term care model and support system for the elderly in remote villages. This method of enhancing community welfare through elderly care was also important in developing the partnership between the university and the GCDA.

5.4. Place Making: Students' Hands-on Projects

In addition to service provision, HISP began to focus on community assets, including local historical, agricultural, and ecological features. To align with faculty's and students' interests, field trips with guided tours were developed to provide basic information about the place. With the assistance of GCDA, local leaders, farmers, and elderlies were invited to guide the tours and share their local knowledge. In addition, camps were organised by HISP for several cross-disciplinary courses. Usually held in the middle of the semester, they enabled the collection of first-hand data through interviews, field visits, and surveys for course projects. Through these course activities, documents were made about the place. Student projects, including documenting farming practices, local maps, videos, and models of historical buildings, became a medium by which to create a dialogue among residents and make local assets more tangible. Externally, the touring routes, documents, and exhibitions developed through the university activities helped to make this left-behind place more accessible to faculty and students, as well as outsiders. These social practices are critical to enhancing local capacity in community-based tourism development. Internally, these community projects also helped the students develop their social design and problem-solving skills. At the same time, the university's relationship with locals grew beyond the GCDA and to a much deeper level. As a result, an incrementally developed action-oriented culture between the university and the GCDA was established.

5.5. Envisioning the Future: Community Planning Proposals

Through the aforementioned efforts, community planning with the locals was undertaken which systematically assessed their needs and assets. From this, envisioning a future for them became possible. HISP invited the Institute of Cultural Affairs, Taiwan (an expert organisation specialised in community development in developing countries), to collaborate with faculty in the planning department. The planning themes included the development of elementary education, community agriculture, and various types of community-based tourism. The university conducted workshops to explore local assets in the planning process, to promote communication among the teachers, students, and residents, and to induce actions by developing a vision for the place. For example, in one strategic visioning workshop, the group came up with the analogy of 'gluing people together' as the vision for community development and the short-term action plan of fundraising for a local van to expand the area's elderly care network. Through various participatory workshops, community planning initiated public discussions on community affairs. It was important that both the university and community stakeholders had a systematic way of thinking about the social, economic, and environmental capacities and issues of the place. This was also a critical step in bringing the next phase of the university-community partnership - Collaborative Badlands - to the forefront of USR and enabled the application of Zuojhen's experience to the entire badlands region.

6. Collaborative Badlands: Levelling- Up Through Regional Collaboration

6.1. From HISP to USR

By 2020, six years of work had built trust, social networks, and social capital in the community, and enabled an opportunity to integrate the resources from the USR policy in Taiwan. Facing the ending of HISP funding, the Taskforce of Gongguan Community was restructured and applied for USR funding under the project name 'Collaborative Badlands'. The goal of this USR project is to expand the learning experience of HISP from Zoujhen to three nearby municipalities which possess the same badland geological features and similar left-behind conditions (Figure 5). The project seeks to overcome the challenges of the badlands communities while generating synergy with local assets through enhancing multiple stakeholders' involvement, synergistic partnerships, and co-creation in the changing economy (Brand and Gaffikin, 2007).

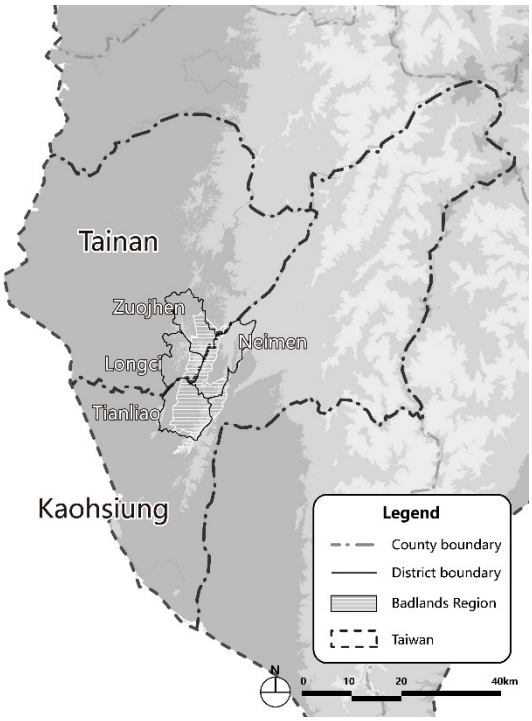

Figure 5 - The badlands region in relation to nearby Tainan and Kaohsiung metropolitan areas

6.2. Collaborative Planning and Network Power

The design of Collaborative Badlands is based on the ideology of collaborative governance and sees the community as a stakeholder and an equal participant in regional sustainable development. The new project is led by a group of NCKU faculty members who participated in HISP from 2015 onwards and continue to be interested in collaborative theories and methods. They see USR as an opportunity to practice collaborative planning (Healey, 1997; Innes and Booher, 1999) in combination with the asset-based approach to community development. More importantly, they are interested in the institutional design of developing place-based professional education beyond local service provision.

The Network Power Model, developed by collaborative planning scholars Booher and Innes (2002), has been adopted by the team as a means by which to systematically structure teaching, research, and service activities. The model possesses a unique flow of power; it is shared by all participants in the networked society, and the sharing of power in this manner is an indicator of successful collaboration. The critical conditions that enable network power among the agents are diversity, interdependence, and authentic dialogue. The collaborative planning process would become a complex adaptive learning system in the badlands, in which diverse and independent stakeholders from the university and regional communities could generate dialogue, form collaborations, find shared meanings, and develop shared heuristics and norms to enable cooperative actions to be undertaken. The ultimate goal of the Collaborative Badlands project is to engender a self-organizing process that brings together agents, enables information to flow, builds trust and reciprocity, represents interests, connects networks, and mobilizes actions' (Booher and Innes, 2002, p. 232).

6.3. Network Power and Project Design

The Collaborative Badlands project uses the network power model to guide the design and evaluation of the actions implemented in the university and the badlands. In Figure 6, one of the network loops represents the university's activities at different stages and levels. By visiting the community, the faculty and students began to create dialogues between stakeholders through local tour guiding. Participation and collaboration were gradually formed through student projects. Shared meanings were, in turn, developed through course presentations, workshops, and public meetings with the stakeholders. Shared heuristics and norms were formed through evaluation interviews and focus groups between faculty, student, and community stakeholders. The network loop on the right represents the USR-initiated activities for the badlands stakeholders, such as lectures, workshops, and field trips on particular topics. From there, the team helped stimulate project-based collaborations between the different stakeholders through small actions. Through reflective activities and discussions, shared meanings, heuristics, and norms were developed among the stakeholders which prompted future cooperative actions. Together, the two loops constituted the network power of collaboration in place-based education and illustrated the new relationship that emerged between the university and regional stakeholders at different stages of practicing collaborative governance.

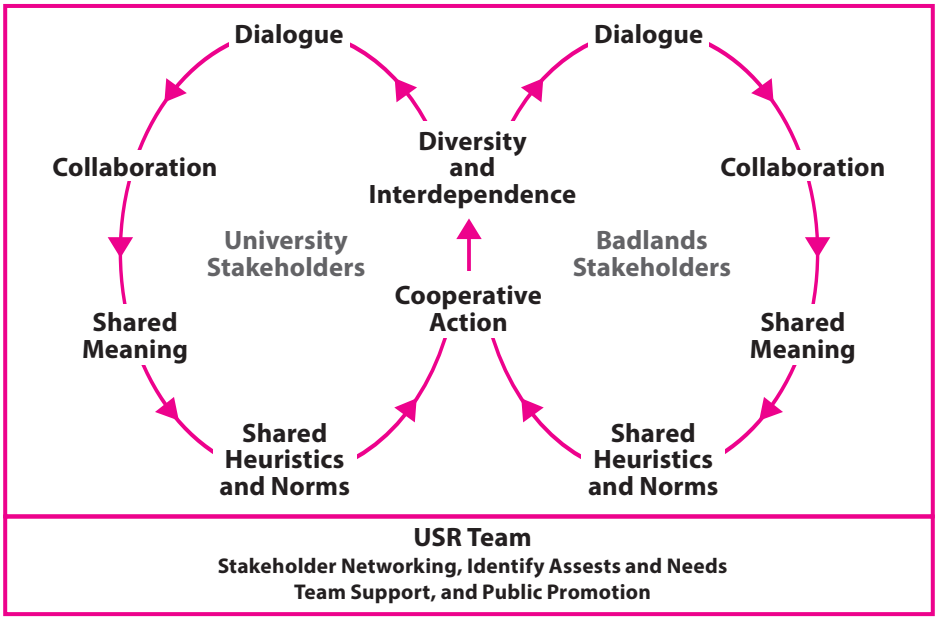

Figure 6 - The Network Power Model for the badlands modified from Booher and Innes (2002), p. 232

6.4 Three Action Areas: New Experience, New Industries, and New Information

In addition to adopting the network power model to design activities for engagement and collaboration, three core action areas for collaboration were designed based on reflections on current regional development issues to maximise the synergy of the university's actions: new experiences, new industries, and new information. 'New experience' refers to strengthening the meaning of existing tourism activities to the local economy. By emphasising local natural and cultural heritage, the university proposed different ways to extend the length of tourists' stays and maximise their spending through itinerary and activity design. After a series of university-community cooperative actions, a regional heritage tourism route was recognised by Taiwan's Ministry of Culture as one of the national designated cultural routes in 2021. The 'new industries' strategy focuses on existing local agricultural resources (e.g. bamboo forests and agricultural products) and seeks to create added value through a circular economy. By acting as a platform for information sharing and a space for dialogue, the Collaborative Badlands team has gradually become an intermediary that has helped to establish a regional coalition of the bamboo industry which has become an active participant in policy change. Finally, the third action area, 'new information', was motivated by the lack of secondary information available in Taiwan's rural areas. The challenge was to systematically accumulate the outcomes of university participation, make the information accessible for new faculty and students, and attract a diversity of agents for collaboration. A database incorporating the concept of digital humanities is under construction, which will serve as a reservoir of USR activities and a gateway of knowledge to reduce the learning barriers faced by those who reside in the left-behind region.

Echoing the policy directions of USR in connecting higher education institutions, communities, and the development of the region, Collaborative Badlands places a strong focus on linking academic and local knowledge, bridging the gap between theory and practice, and leveraging local assets for regional sustainable development by systematically engaging university teaching, research, and service actions. Using 'Collaborative Badlands' as a new regional identity and brand name, the team has gradually expanded the social networks and social capital of a single community to an entire region, turning the negative perception of the badlands into a positive image of resilience. By engaging the students and faculty in working closely with the region through different types of activities, a sense of belonging was formed between the university and the badlands communities. Thirteen faculty members from nine departments have continued to adopt the badlands as their sites of teaching and research and delivered 52 courses engaging 540 students in the past three years (Chang *et al.*, 2021). Five out of thirteen faculties have participated in the badlands since HISP. In addition to these devoted faculty members, a self-organised student group named BEST (Badlands Empowerment Sustainability Taskforce) has initiated several cooperative projects with different stakeholders in the region since 2020. Projects such as the Maxwell-Thompson Grand Tour and the Moon World Feast reflect the practice of 'the economics of belonging' (Sandbu, 2018), which values the students' (customers') relationships with the badlands and creates new forms of economic activities for tourists based on local assets (Tomaney *et al.*, 2021). It should also be noted that, through the USR project, regional collaboration has also expanded, overall, to 34 different institutions and organizations in the Badlands.

7. Discussion: Bottom-Up vs. Top-Down Approach for Levelling Up

NCKU's experience in the Badlands has, to date, consisted of two stages of levelling up. With HISP, the focus was to level up through service provision and community empowerment. The primary strategy was to bring human resources from the community, university, and beyond together to meet/address the needs of the community. The site for action took place at a community level and took a comprehensive approach to addressing different social and economic needs. In contrast, the primary focus of Collaborative Badlands is to utilise the assets of the badlands for sustainable regional development and to scale up its problems so as to draw the attention of the university and policies to the area, whilst also encouraging stakeholder participation. An approach that targets the topics that interest both community leaders and university faculty is required to sustain the commitment from both sides. Although Collaborative Badlands is the effective extension of HISP and a number of the participants involved in both schemes have overlapped, their approaches are different. HISP was more bottom-up and placed grounded efforts on local needs and university-community relationships. Collaborative Badlands, on the other hand, addresses regional issues and needs more systematically while working on the institutional design of place-based education at the university level. USR policy has become a

publicity platform that seeks to engage people's attention at a regional and national level and to advocate for the needs and assets of the badlands (and the hilly areas of Taiwan in general). Both approaches are deemed necessary if communities at different stages of being 'left behind' are to be levelled up.

The customised, grounded approach of both HISP and Collaborative Badlands echoes those of place-based advocators for left-behind communities and meets the principles they addressed, including neighbourhood funding, resident-led decision-making, and long-term commitments (Farole *et al.*, 2017; Iammarino *et al.*, 2018; Bolton *et al.*, 2019; Tomaney *et al.*, 2021). HISP was founded first and leveraged resources at the neighbourhood level. Through the community planning of HISP and collaborative planning of Collaborative Badlands, residents and local-led decision-making have been emphasised and implemented. The long-term commitment of HISP and USR has not only channelled human resources and social capital through faculty and students during the past eight years but has also gradually nurtured a sense of belonging. More importantly, being treated as equal partners and sites for learning has enabled residents to rebuild their community's ' self-confidence.

NCKU, as the local and regional anchoring institution, has gradually acted more like the architect and implementer of USR-related projects to address the locally unique capabilities and challenges of the badlands, whilst also providing customised, on-the-ground, targeted supports for fundamental service provision and development opportunities. HISP sought to improve basic infrastructures and service provision in response to the immediate needs of the place. Collaborative Badlands has continued the community-making and planning aspects of HISP and sees local aboriginal wisdom as a key to sustainable development, whilst also taking an appreciative, positive view of the place by maximising locally-owned assets and empowering regional stakeholders to optimise their skills, talents, and capabilities (Barca *et al.*, 2012). Based on the collaborative planning model, the team takes participatory and deliberative models of the decision-making process seriously, leverages customised resources, and enhances non-revealed local potential. Emphasising community engagement, the university's teaching and research activities have the potential to be flexible enough to create solutions and strategies that are local-led, whilst also enhancing local connectivity to networks and opportunities beyond the left-behind community. The asset-based approach of NCKU's experience has resulted in capability and institutional improvements in the university-community partnership and place-based education in higher education.

Besides providing customised solutions to addressing the left-behind, the soft outcomes of expanding social capital have probably been the most important achievement of the university that has arisen from its working with the left-behind communities in the badlands. Various aspects of social capital, including bridging, linking, and bonding capital (Woolcock,1998; Putnam, 2000; Woolcock and Sweetser, 2002) have all been found in NCKU's experience. Agger and Jensen's (2015) research on area-based initiatives that facilitated networking in deprived neighbourhoods had similar findings. Expanding and bridging capital was first found in HISP's community education work through its leveraging of resources from local schools and organisations for the after-school programme. Linking capital was gradually developed through community education and community welfare under HISP by its securing of external resources from non-government organisations, university faculty, students, and hospitals. Collaborative Badlands has further expanded the linking capital to regional stakeholders by focusing on the three action areas and diversifying the stakeholders involved including local businesses, local universities, and regional and national government agencies. By expanding the scale to the entire region, the communities in the badlands have been able to discover their bonding capital by sharing their ethnic identities and development issues. More importantly, bonding capital has also developed between university faculty, students, and community stakeholders, creating a sense of belonging toward the badlands. The companionship for learning, working, and growing together has become the new rhetoric of Collaborative Badlands and has transformed the badlands' negative image of being a left-behind place.

8. Prospects: the University as a Panacea or Placebo

Despite current successes, several structural and agency issues that are embedded in the university-community partnership approach as a levelling-up strategy have brought to the surface some uncertainties in working with left-behind areas. Just like any policy, the funding sources of the projects and their institutional

designs may alter a project's direction considerably. For HISP, a research grant with a strong emphasis on knowledge production through practices of social innovations, the production of academic publications was a more prominent key performance indicator, especially for the post-doctoral researchers. HISP was designed specifically to engage post-doctoral researchers and focus their grounded experiences in the community. However, their non-tenured positions put the sustainability of the project into question. Collaborative Badlands, funded by the USR policy through the Ministry of Education, brought the university out of its ivory tower and changed its practices with social responsibility becoming a goal. Rather than academic publications, the key dimensions for project evaluation are the extent to which local needs have been integrated into professional courses, the team-making between faculty and students, the institutionalisation of university support, and the overall reputation of the project within the university and beyond. It follows, that the benefits for faculty, students, and the university need to be balanced with the immediate needs of the community. While HISP focused on generating knowledge of social innovation and nurturing social entrepreneurship (Fang 2018; Pratono and Wong, 2019) through actual field operation, Collaborative Badlands has been more focused on changing the university's culture around teaching and research. At the same time, both see the community as a site of learning, and both practice innovation when dealing with the needs of the community. From the community's perspective, potential constraints for both sides are related to the project's goals and the grant's time scale.

Despite the noted structural issues, agency also makes a difference. The ideologies and professional backgrounds that the players bring to the table to fulfil their social responsibilities can change the direction of projects. For HISP, the main actors' backgrounds in sociology and adult education brought social equality and empowerment perspectives to the community. For Collaborative Badlands, the core team consisted of faculty members who shared an interest in collaboration theories and methods, so practicing collaboration was key to their participation. This lens guided their actions and how they viewed the project's achievements. Because the extent to which the academic frameworks of the university actors match the community's current needs may substantially influence the effectiveness of the university's engagement, balancing the needs of the community and the university faculty is a continuous learning journey necessary to make USR an effective policy and sustainable solution in the long run.

Central government cannot escape from its leading role in designing place-based policies and institutional frameworks to address issues of inequality. The on-the-ground knowledge of USR forms a great reservoir of knowledge that could be used to identify and respond to diverse local and regional conditions. The talents from the university have the potential to develop place-based solutions as well as providing a space for trial and error. The university has the potential to serve as a platform between government, businesses, and civil society by leading a multi-stakeholder joint task force. Its public role in society places it in a position that facilitates public discussions on social problems, promotes mutual understanding of civil society, and contributes to the diversity of customized solutions. For the university to become an active agent, partner, and companion to the left-behind communities, it will need to take social responsivity seriously as a new culture in higher education and make it an integral part of its activities and management rather than just being a programme funding alternative.

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