Enhancing University-Enterprise Collaboration Models Towards Synergizing Sectoral Efforts for Disaster Resilience in the Philippines

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Target Readers:

Higher Education Institutions, particularly administrators and offices involved in:

- Student Internships
- Faculty Development Programs, and Faculty Performance Evaluations
- Research and Development
- Extension Activities

Enterprise Partners of HEIs, specifically:

- Local Government Units
- National Government Units
- Private Sector

Summary of Recommendations:

University-enterprise collaborations (UECs) for disaster resilience should be tailored to fit the region in which the university is located to target initiatives specific to the social, physical, and economic vulnerabilities of the region. Existing models of UECs (e.g. student internships, faculty immersions, research and development, and extension) can be enhanced to strengthen the Triple Helix of academe-government-industry/private sector through the following initiatives:

- Data on DRRM and allied fields gathered by local government units (LGUs) and national government agencies (NGAs) should be made accessible to universities for research and assistance in policy crafting.
- Projects and research contributing to resilience and creating robust and sustainable systems should be incentivized by the relevant government agencies.
- UEC Partnerships should be leveraged to innovate corporate social responsibility (CSR) programs of the private sector to create shared value in the communities they operate in or with.
- The private sector should engage with university placement offices to craft internship opportunities that focus on business continuity (in the face of hazards) in all aspects of the organization.
- Performance and reward systems of universities should be reviewed to encourage and support long-term networking and relationship-building with enterprises.

Furthermore, this policy brief proposes the creation of an enabling policy event, in the context of disaster risk reduction and management (DRRM), that would enhance UEC partnerships and inter-agency collaboration at the local/regional level with the corporate social responsibility (CSR) programs of the private sector as one of its pillars.

Objective:

This policy brief examines the different approaches by which the HEI's trifocal functions (instruction, research, and extension) can be possible entry points for collaboration with the private sector/business sector and local and national government. Specifically, this paper reviews existing models of university-enterprise collaborations (UECs) and recommends guidelines and interventions by which these models can be enhanced towards building disaster resilience. UECs refer to partnerships undertaken between universities and other organizations - the private sector, government offices, non-government organizations, civil society organizations, etc. towards a common goal. The proposed action points to forge strong UECs hopes to fill the implementation gaps in the existing DRRM laws in promoting effective partnerships among the government (LGUs and NGAs), the private sector, and the academe (universities).

Models of UEC:

UECs are currently facilitated in the country via four models:

1. The Student Internship Model allows students to gain practical competencies relevant for employment and learn about industry operations (Navarro, 2018; Sevilleja, 2014). It benefits companies by augmenting their workforce and providing access to potential employees. It benefits universities, too, through equipment and resources support and the opportunity to develop more responsive curricular programs.

2. The Faculty Immersion Model involves professional practitioners in HEIs engaging in programs and projects to improve their skills and knowledge in their field, modeled after the Commission on Higher Education (CHED) Sectoral Engagement Program (SEP) in 2014. SEP offers various activities for faculty to participate in while adjusting to the K to 12 program, including research, industry participation, and extension program development, spanning industry, government, and civil society sectors.

3. The Research and Development Model leverages the strength of professionals in HEIs in the conduct of research (CMO 52, 2016). It is embodied in the approach of the Department of Science and Technology's Collaborative Research and Development to Leverage Philippine Economy (DOST CRADLE) program, which promotes academe-industry collaborative research. It benefits both the academe and industry by providing research and development capabilities to the academe, and innovation that improves the industry partners' products, services, and processes to become more competitive in their respective industries.

4. The Research and Extension Model involves HEIs transferring knowledge, skills, and technology to communities through various activities. CHED incentivizes partnerships with industries and provides grants for successful proposals. Extension programs can include training, technical assistance, advisory services, community outreach, and technology transfer (Medina, 2019).

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Gaps in UEC Models:

Gaps have previously been identified with the aforementioned models such as the mismatch on the industry-related skills of students and their academic training (Navarro, 2018). But more importantly, little is known about the efforts of the industry and academe partnership on DRRM. Hence, internships must bridge collaboration between HEIS and industry, and not just provide a manpower pool. (Bernante, 2014). Accessing and networking with practitioners and professionals outside of the academe is a specific need that is cited by Gotangco et al. (2020) in their study on disaster risk and resilience education in Asia, and this can be met by developing both the student and faculty immersion models.

The gaps in the research and development model are characterized by insecurity. HEIs see a risk of "losing their independence" in determining their research agenda; while industries risk facing a long return on investment which may limit the scope of collaborations (Vea, 2014) given the time and resources needed to monitor the long-term impacts of HEI research and extension programs. However, the challenge remains for the private sector to develop DRRM-informed business models, with a focus on business continuity (Lorenzana and Sario, 2016).

Lastly, the roles and extent of engagement of HEIs and the private sector within larger governance structures is unclear. While there are policies on DRRM at the national and local levels on developing and implementing DRRM plans and councils and prescribing the collaboration among the government, civil service organizations (CSOs) and the private sector (e.g., Republic Act No. 10121, also known as the Philippine Disaster Risk Reduction and Management Act of 2010), there is still limited opportunity for a meaningful participation and engagement of more HEIs in the official meetings of the multi-sectoral national DRRM council (NDRRMC) and its working groups. The CHED sits at the NDRRMC as one of its members, while HEIs may only be part of the council by representing one of the four slots allotted for CSOs. The National DRRM Plan (2011-2028) Plan also does not mention the possible contributions of HEIs despite the integration of DRRM into educational systems which has been recognized as a priority. At the local level, multi-sectoral engagement with the local DRRM office is also mandated but again there is no specific mention of the role of HEIs.

The participation and contribution of the private sector as stipulated in national and local DRRM plans and policies, however, seem less ambiguous compared to HEIs. The private sector is considered a category on its own, distinct from CSO, in the NDRRMC. All business (private) organizations are also encouraged to provide disaster relief assistance as part of their corporate social responsibility (CSR) based on the CSR Act of 2011. According to Mandanguit (2021), CSR may also be referred to as corporate community engagement, which entails businesses to partner with relevant stakeholders toward sustainable development. Despite the explicit policies on their role in DRRM, the private sector was previously studied to have limited DRRM programs (Lorenzana & Sario, 2016) and insufficient collaboration with HEIs as regards DRRM, but more recent literature is lacking to assess their progress. In general, there is scant literature on UECs particularly on DRRM. Adding to this is the lack of a platform consolidating and evaluating any existing or past UECs on DRRM.

It is therefore the absence of a coherent university/academe–private sector-government collaboration that this policy brief seeks to address and hopes to create an enabling policy environment on UEC collaboration on DRRM. While pockets of initiatives have already been

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undertaken at the national level along this line (UPRI 2022), there is still a need to reinforce these separate initiatives into a coherent system

Proposed Interventions:

UEC Collaborations should be tailored to fit the region in which the university is located to address local vulnerabilities. What this table table presents are proposed interventions that can be considered by HEIs, government, and the private sector - the "Triple Helix" of innovation - for each of the UEC models. These proposals may improve the coordination and implementation of resilience-related interventions.

UEC Model	HEI	Government	Private Sector
Student Internship Model	Design and process the internship experience in terms of building resilience (e.g. developing toolkits for internship coordinators to orient students on risk and resilience prior to internship and conduct reflection sessions after)	Open government offices to student internship; or develop program for students in HEIs to be exposed more to government operations	Engage with university placement offices and academic departments to craft internship opportunities that focus on business resilience in all aspects of the organization
Faculty Immersion Model	Develop and incentivize faculty immersion programs specifically to bridge HEI and enterprise needs and capabilities; Build capacities of faculty members / researchers / students to understand contexts of and work with enterprises (i.e., policy-making timeline or business R&D process usually different from academic research timelines)	Open local and national government DRRM offices to faculty immersion and secondment, building on existing programs (such as the ASEAN Science Diplomats) for training researchers to bridge the academe and government.	Engage with HEI faculty and researchers to craft immersion / secondment programs that will contribute both to innovating business resilience solutions and capacitating faculty to work with the private sector.

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Research and Development Model	Review incentive and performance evaluation systems in HEIs to encourage and support long-term networking and relationship-building with enterprises (i.e. beyond focusing on publications) Create platforms to facilitate partnerships and dialogues with public and private sectors for building community resilience and shared value.	Develop mechanisms (e.g. funding opportunities) to incentivize research contributing to resilience and creating robust and sustainable systems, with metrics developed according to the UNDRR definition of resilience. Facilitate access to government data, facilities, and other resources relating to DRRM and related fields (e.g. environment, sustainability, hazards); Develop co-creation models with HEIs for sharing and use of DRRM-related data and facilities for R&D.	Support nascent UEC networks through funding, participation, and increased opportunities. Develop business models that integrate DRRM via disaster risk-informed investment.
Research and Extension Model	Include as extension work long-term impact monitoring in organizations or communities where the HEI has partnerships (e.g. for research, immersion etc.)	Bridge / mediate the academe-enterprise collaboration to ensure the safety and resiliency of communities to face the challenges of disasters. Include local HEIs in the development of local DRRM plans and partner with HEIs in the implementation of these plans.	Reframe CSR programs to specifically create shared value for partner communities by leveraging UEC partnerships.

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Concluding Remarks

Clarifying and strengthening institutional arrangements under the scope of the disaster risk reduction and management framework is one of the challenges in implementing DRRM in the Philippines, to which HEIs can contribute. Successful DRRM requires both "vertical" and "horizontal" coordination between the national, and local authorities and stakeholders. There are several modes by which UEC can contribute to resilience. Therefore, HEIs, the private sector, government, and other stakeholders alike (representing the various enterprises) could benefit from a more systematic framing of UECs in the context of DRRM and resilience and long-term documentation of the outcomes and impacts of these UECs, contributing to an in-depth analysis of the different models and mechanisms.

This policy brief seeks accountability from the HEIs in terms of developing and deploying impactful learning, research and innovation towards disaster resilience; the private sector to deepen community engagement towards disaster resilience as part of their CSR; from the major government bodies to truly implement the salient provisions of the DRRM Law and the National DRRM Plan in relation to the meaningful participation and engagement of the academe and private sector. Now is the time to swiftly act on enriching UEC partnerships to continue building more resilient and disaster-prepared communities.

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