



**Long-term Assistance and Services for Research -
Partners for University-Led Solutions Engine (LASER PULSE)**

**Understanding Vietnam's Higher Education Institution
Research Infrastructure, Research Translation, and
Sustainability Mechanisms**

Research Assessment Report

August 2020

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List of Abbreviations

HCMC	Ho Chi Minh City
HEIs	Higher Education Institutions
LASER	Long-Term Assistance and Services for Research
NGOs	Non-Governmental Organizations
PULSE	Partner University-Led Solutions Engine
RFAs	Requests for Applications
SMEs	Small and Medium Enterprises
UNDP	United Nations Development Program
USAID	United States Agency for International Development
VAAS	Vietnam Academy of Agricultural Sciences
VASS	Vietnam Academy of Science Science



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Executive Summary

Background

This report contributes to the broader Long-Term Assistance and Services for Research (LASER)'s mission of increasing universities' participation in research that contributes to the improvement of development outcomes. This short report seeks to provide LASER PULSE network with an analysis of high education in Vietnam in relation to the system to support research and research translation set up by universities.

Methods

Between December 6-12, 2019 Makerere University's ResilientAfrica Network (RAN) joined Purdue University, Indiana University, and Catholic Relief Services on a field visit to Vietnam to conduct an analysis of high education in Vietnam in relation to the system to support research and research translation set up by universities. The team explored the existing systems and infrastructure at eight universities in two of the main cities, Hanoi and Ho Chi Minh City (HCMC) (details of the universities visited are in appendix 1). Through qualitative research methods (focus group discussions and in-depth interviews), the team engaged researchers and administrators at the eight universities. We focused on the universities' research translation capacities and infrastructures to address development challenges related to business competitiveness especially small and medium enterprises (SMEs), as well as air and water pollution.

The research questions for the study were framed around the following dimensions/research focus areas: 1) Vietnam's university system; 2) research infrastructure; 3) linkages, partnerships, and collaboration; 4) continuity and sustainability; 5) research applicability; 6) dissemination and knowledge translation; and 7) research management and support systems.

Highlights of the Major Findings

- **Research:** There are strong research centers and research consultancy firms particularly in Hanoi that focus on applied research including air pollution, climate change, innovation, and water resources conservation. These centers include the Air Pollution and Climate Change Research Center, the Green Innovation and Development Centre, and the Center for Water Resources Conservation and Development and Centre for Sustainable Development of Water Resources and Climate Change Adaptation. Some Non-Government Organizations (NGOs) and other practitioners have in-house research teams and receive competitive external funding. Examples of such organizations include Winrock International, implementing Vietnam Forests and Deltas Program, and the Vietnam Association for Conservation of Nature and Environment. There was a reported need to further strengthen the quality of research done by Higher Education Institutions (HEIs). Regarding gender considerations in higher education, the Vietnamese government encourages female participation in public/technical service in general. There is a high level of female faculty participation in research: female academic staffing levels range between 40% and 70%.
- **Research translation:** Both central and local governments are involved in the identification of research issues, the dissemination of research findings, and the implementation of the recommendations from the research findings. HEI and other



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researchers submit reports with recommendations to the government, but they leave it up to the government to implement the recommendations. There is no follow-up mechanism to ascertain if recommendations were implemented. There is minimal involvement from NGOs, development partners, and the private sector in the translation (application or uptake) of research. Donor-supported research partnerships are chiefly funded through Asian development agencies, with Japan serving as the main funding agency for research/translation in Vietnam. Other agencies that support research translation include USAID, and some European Union donors. There are more incentives to publish, compared with applying research findings to recommendations for policy or practice. Some peer reviewed publications attract up to \$1,000 USD per paper paid as a bonus that faculty receive for publishing.

Researchers are hesitant to interact with media out of concern that their findings will be misrepresented or unwelcomed by the government. Some researchers mentioned that they have a hard time summarizing their findings into concise pieces that are accessible to the general population. Practitioners have tried, with varying degrees of success, to organize dissemination events between researchers and policy makers.

- **Collaborations between practitioners and academics:** There are no guidelines on collaboration between practitioners and HEIs. Nonetheless, some practitioner organizations collaborate regularly with Vietnamese researchers. Practitioner organizations tend to contract individual academics as consultants, instead of through contracts with universities because of perceived bureaucracy, and issues of government control over public HEIs.
- **Continuity and sustainability of research:** The Vietnamese government is the biggest funder of research for public universities. Within some universities, like the Hanoi University of Science and Technology, for-profit companies are registered to facilitate the generation of resources for the universities. These companies manage the intellectual property, estates including housing and property management, students, and university services provided to external clients, including consultancies. Most universities visited are members of Asian Universities Network where universities share opportunities including capacity building, financial support, and student exchange programs.

1.0 Background

1.1 Overview of LASER PULSE

USAID's Center for Development Research, through the Higher Education Solutions Network awarded the Long-Term Assistance and Services for Research (LASER) – Partner University-Led Solutions Engine (PULSE) initiative to Purdue University. The mission of LASER is to increase the participation of universities in research that contributes to the improvement of development outcomes. LASER PULSE's core partners are Purdue University, Catholic Relief Services, Indiana University, the University of Notre Dame, and Makerere University. The anticipated outcome of LASER is enhanced discovery and application of evidence-based solutions to development challenges. This is to be achieved under four key intermediate results: (I) Increased HEI delivery of collaborative and effective development-focused research; (II) Increased HEI synthesis, exchange, and translation of research results into useable development products and practices; (III) Increased dissemination and use of translated research solutions and policy; and (IV) Enhanced systems and structures for gender considerations in the HEI network that enable women and minorities to lead and benefit from research.

LASER aims to mobilize a network of researchers from HEIs to conduct research that responds to development priorities, generating knowledge products that impact development by increasing the effectiveness of development interventions. HEI researchers in the LASER PULSE network respond to a research agenda, identified in collaboration with development practitioners, by submitting research proposals in response to specifically targeted requests for applications (RFAs). LASER PULSE aims to catalyze evidence-based research that can be readily translated into useful products, policies, and practices that better address development goals. This goal is accomplished through participatory research question identification (i.e. bringing researchers and development practitioners together), improved researcher capacity to conduct development research, and by ensuring that research is accessible to decision makers.

1.2 About the University Assessment in Vietnam

Through interactions with USAID and other partners in Vietnam, LASER PULSE identified two priority areas for research: 1) business competitiveness, focusing on SMEs, and 2) air and water pollution. A greater understanding of the Vietnamese university research systems was needed in order to identify evidence to make recommendations for strengthening the system's ability to support faculty engaged in development research. University research ecosystems have a profound effect on the readiness of universities to undertake high quality research that meets the needs of development practitioners.

LASER PULSE consortium partner Makerere University conducts gap analysis assessments to understand university research environments. The findings of these assessments are used to identify, prioritize, and describe key focus areas that drive development research outputs and impacts from HEIs. Researchers from Makerere University conducted an assessment of Vietnam's HEIs to explore and understand the existing systems and infrastructure for Vietnamese universities to engage in research in collaboration with practitioners. The assessment was framed around the following dimensions/research focus areas: 1) understanding the context of the university system in Vietnam, 2) research infrastructure, 3) linkages,

partnerships, and collaboration, 4) continuity and sustainability, 5) research applicability, 6) dissemination and knowledge translation, and 7) research management and support systems.

2.0 Scope and Objectives of the Assessment

A team from LASER PULSE network undertook a visit to eight universities in Vietnam and carried out focus group discussions and in-depth interviews with researchers and university administrators in the selected universities. The team was guided by a local consultant identified by Purdue University. The consultant made initial appointments with all the universities that were visited for this assessment. The LASER PULSE team conducted interviews in Hanoi and Ho Chi Minh City (HCMC) in order to prepare for LASER's Research for Development (R4D) conference. This assessment was aimed at:

- a. Identifying research gaps in air and water pollution and SME competitiveness,
- b. Exploring barriers to, and opportunities for, collaboration with researchers in the two aforementioned sectors, and
- c. Building awareness of and interest in attending the proposed LASER R4D conference.

For each of the universities visited (refer to Appendix I for the universities visited), a brief about LASER PULSE was verbally presented to HEI researchers and administrators. This brief was followed by a detailed explanation of the university assessment as well as the planned R4D conference in Vietnam. Interviews were conducted by a LASER PULSE principal investigator and a RAN representative who is also the Director for Eastern Africa Resilience Innovation Lab. Data synthesis and report writing was conducted by a team of RAN research assistants.

2.1 Assessment Questions

This assessment was designed with an interview guide built around three broad areas: university set up and infrastructure, research leadership, and sustainability mechanisms.

1. Research supporting HEI/university systems and infrastructure in Vietnam
 - a. How is the university system set up?
 - b. How do public university systems differ from private university systems?
 - c. What is the management structure for universities? What is the relationship between government and HEIs?
 - d. How do faculty participate in development research?
 - e. Are there provisions to incentivize female researchers to participate in research? Are there any conditions that discourage female faculty from the research enterprise?
2. Research leadership within the universities
 - a. How is research managed at the university level and within the academic units/departments?

- b. What are the incentives for research and research translation within HEIs?
 - c. How is research generated and utilized by the university, policy makers, program implementers, and other stakeholders?
 - d. How does research align to the national/government development strategies?
 - e. How is research funded?
 - f. Describe the existing systems for knowledge translation to disseminate research findings for impact.
 - g. What are the gaps/barriers for knowledge and research applicability (dissemination, translation, and/or commercialization)?
3. Describe the sustainability mechanisms for research
 - a. What are the systems that are available for the continuity and sustainability of research?
 - b. What mechanisms are available to support research collaborations including funding and networks with other universities?

3.0 Key Findings

3.1 University System

In 1986, the government of Vietnam introduced an open-door system entitled *Đổi Mới policy* that saw the governance shift from a centrally-planned economy to a market-oriented one. The *Đổi Mới* system brought a significant change in managing basic social services, including education, and this had a direct impact on setting up the university system.

The Vietnamese university system is set up into three general systems. One popular system is a highly specialized system where a university focuses on a single area of study, such as engineering, law, economics, arts, environmental sciences, among other specialized disciplines. The second system is multidisciplinary and includes the national and regional universities in some of Vietnam's largest cities. The third system is an open system mainly operating in two cities, Hanoi and HCMC. Public universities dominate the system, with the majority of them falling under the specialized and multi-disciplinary system. Besides the public institutions of higher education, semi-public and entirely private universities also operate in Vietnam and are allowed to charge tuition fees. The private sector is estimated to contribute about 20% of the total enrollment in higher education. Throughout the country, private higher education is perceived to be of a lower quality compared to that of the public institutions.

Most universities and colleges were established with support from line ministries and are under the supervision of those ministries. The Vietnamese university system is heavily influenced by the former Soviet academic system, in which universities were primarily teaching institutions, while research was carried out separately by research institutes. In public universities, it was reported that all academic staff must contribute a combined teaching and research load of at least 600 hours with some universities requiring up to 850 hours a year.

“Each researcher is expected to commit 600 hours in research and 280 hours in teaching, for a total of at least 800 hours of work per year,” - researcher at a public university

Similarly, other countries have a relatively higher workload for faculty. In Kenya, due to an increase in university student-to-lecturer ratio from 25:1 in 1986 to 52:1 in 2013, Lecturers often teach year-round without a break, and in some cases evenings and weekends with some teaching for about 40 hours a week (Wangenge-Ouma, 2008). The National Tertiary Education Union (NTEU) in Australia has argued that the increase in academic workloads is attributable to rising student-to-staff ratios. The number of students to academic staff at Australian universities nearly doubled from 12.9 in 1990 to 23 in 2012 (ILO, 2018). An employee survey in 2012 found that 90% of full-time academics worked over 40 hours per week, with 51% of them working more than 50 hours per week (Strachan et al., 2012).

In Europe, a union study among academic staff in nine European countries found that half of those surveyed reported that their working conditions had deteriorated, and that they were under pressure to teach more students and work longer hours (Clarke and Winch, 2015). In the United States, as a consequence of decreasing tenure-track positions, those in tenure-track posts have been required to take on increasing responsibility for managing curriculum development, departmental and other duties, in addition to conducting research (Kezar et al., 2015).

The public university system in Vietnam is highly controlled by the government. Decisions related to university operations and processes, such as the promotion of faculty, are made by a national committee. This system limits the incentives for universities and other higher education institutions to compete and innovate. Vietnam follows a two-step process of promotions to professorship, a model that is relatively similar to the French system. The National Committee on Professorship Titles, hosted under the Ministry of Education and Training, develops the requirements and criteria, and reviews the final round of professorship promotion applications. This follows a process of approval by the Institutional Review and the Specialty Review Committees, that can approve or reject applications. Universities then appoint a professor after the National Committee has given its approval. This system has been criticized by some scholars who argue it is not aligned with international standards. In 2015, Ton Duc Thang University, a self-financed public institution in Vietnam, announced that it would create its own requirements and procedures for promoting professors, arguing that universities should have autonomy to grant professorship based on certain conditions. However, the current system follows Education Law Article 71, which stipulates that the Prime Minister regulates professorship requirements and the process of appointment to, or ending of, these titles (Vietnam Education Law, 2015).

Among the eight universities that we contacted for this assessment, we found that four of them do not have full professors. However, each of the eight universities reported having at least two associate professors. Among the universities contacted, Hanoi University of Science and Technology has the highest number of professors: 25 full professors and 350 associate professors, out of about 1,096 academic staff.

3.2 Research Funding for Universities

Since the mid-1980s, the funding for scientific research in Vietnam is progressively becoming more diversified. Whereas during the 1980s, almost all funding was channeled directly from the state, the later years saw a significant shift in research funding with an opening of possibilities for private funding, self-funding, and direct foreign funding (Zink, 2009).

Research within Vietnam is initiated within the government framework and research funds are directed from different ministries, development partners, and universities with well-established research funds. The government framework provides funding to support different ministries that in turn support research and development, especially for universities. At the provincial level there are research facilities that pilot work, and within the local government there are organizations that specialize in research. There are new efforts to encourage practitioners to partner with HEI researchers.

Unlike other Southeast Asian countries like Cambodia and Myanmar, where donors have some influence on agenda setting for research and policy priorities, much of the funding for public universities in Vietnam, including research, comes from government entities at various levels. Universities apply for grants from the government depending on their budget allocations. There is also some external funding, mainly from Japan and Asian regional university networks. There is also funding from Europe and the United States, especially for healthcare-related research. Overall, much of the research in Vietnam is done on behalf of the government through line ministries, central government, and local governments.

Government funding for public universities follows two models: 1) support for infrastructural development (in form of lecture rooms, laboratories etc.) with universities meeting other costs through university-led services like teaching/tuition, consultancies, intellectual property, and estate management, and 2) infrastructural development and support to salaries for university staff. There are many government-funded research institutes in Vietnam, which are unable to make independent decisions about adherence to what they perceive as quality standards. For example, some mentioned having limited engagement with their statistics offices during research. In most countries, statistics offices provide advisory services on sampling, data collection, analysis and dissemination of economic and social statistics. Such a disconnect between research and data functions could likely result in compromised research quality.

“Some government institutes in Vietnam have limited capacity or motivation to do good work; a lot of output you cannot use; statistics office is not reliable. The government wants to increase GDP because they want a percentage of debt. Not many provinces have their own research institutes. Most of the research institutes are in Hanoi/HCMC. Sometimes provinces will ask for help but it’s not very frequent.” - researcher based at a research institute

“We have funding from both government and international donors including European Committee and Horizon 2020 projects funded by European Union.” - university administrator

3.3 Research Translation

Government policy makers looking to obtain information to inform policy issues usually rely on their personal networks to identify researchers and to conduct research. Senior government officials have the authority to handpick people to undertake research on behalf of the

government and then provide advice. However, some ministries have established loose collaborations with senior researchers at government research institutes to provide information for policy. This might lead to biased findings being incorporated into policy; for example, research is controlled by the government and the production of research is in the hands of the government (Datta and Pham, 2013).

According to Datta and Pham, ministers and general directors may also commission research from one of the three large research academies: the Vietnam Academy of Science and Technology, Vietnam Academy of Social Sciences (VASS), and/or the Vietnam Academy of Agricultural Sciences (VAAS). VASS and VAAS operate under the Prime Minister's direct control. Additionally, there are other academic units, established under a line ministry, that provide scientific evidence to government. Some universities were formed by specific ministries to undertake research assignments for those ministries. University practices require teaching staff to commit 30% of their time to research, despite the focus on teaching. However, due to limited incentives and funding gaps, many lecturers are less involved in research and policy discussions.

This situation is similar to other countries in Southeast Asia, where most policymakers prefer to work with academics who share similar beliefs on a topic (Akareem and Hossain, 2016). Decision-making in most of these countries is centralized, and such systems may hinder the influence of academics' technical knowledge on decision-making.

Researchers reported that the Government of Vietnam is the biggest consumer of research products, and therefore there are exciting national-level engagements with the government despite the aforementioned challenges. Researchers clearly stated that local governments are much more involved and active in discussions on research question identification ensuring that the research questions are aligned to government priority focus, the dissemination of results, and the incorporation of the findings. Local governments sometimes commission research to inform program design or implementation. On the aspect of disseminating research products (including findings), researchers we interviewed reported that some academics are hesitant to interact with the media out of concern that their findings will be misrepresented or unwelcomed by the government. Researchers further reported challenges related to engaging policy makers during dissemination of research findings since policy makers are not involved in the entire research cycle.

The involvement of NGOs, development partners, and the private sector in the translation of research is minimal as the system is highly controlled by the government. This could be due to the fact that much of the research is funded by government and therefore researchers find it more easy to work with government rather than other development practitioners, especially in translating research findings. Researchers' partnerships are mainly limited to Asia; only a few respondents said they engaged in research collaboration outside Asia. Japan was frequently mentioned by researchers as the main funding agency for research/translation in Vietnam. Researchers from the private university we visited indicated that much of the focus was on student enrollment, as well as provisions for publication incentives, with little focus on research and on research translation. They mentioned that limited funding was hindering their focus on research.

3.4 Collaborations between Practitioners and Academics

Our interactions with HEI researchers showed that there are no clear regulations or rules on research collaborations with practitioners. Local NGOs are heavily controlled by the government. Researchers reported that some NGOs have well established in-house research teams and compete with HEIs for external funding to undertake research. However, some universities are collaboratively working with NGO practitioners on a number of research projects, for instance Green ID, Change, East Meets West, and Live & Learn focusing on air and water pollution research and research translation. Others, like Vietnam Association for Women Entrepreneurs, have interacted with HEI researchers mainly as workshop trainers, locations for practicums, or as study respondents during research. Researchers mentioned that practitioner organizations prefer to contract individual academics instead of a university due to the highly bureaucratic processes involved in working with the government.

It was noted that when the government plays a leading role in research, the process is more formalized and the results are submitted for use to high levels within the federal government. This becomes a best practice for embedded research translation as governmental policymakers are involved in the research design and implementation, as well as the application of the resulting recommendations.

3.5 Incentives for Research Translation

Researchers are more inclined to focus efforts toward peer-reviewed publications, instead of on the translation of research into policy, program, or products. For example, it was reported that each publication in an international journal has a direct financial benefit on the researcher ranging from \$100 to \$1,000 USD per publication. This is paid as a bonus on each of the peer reviewed journal published by researchers. Relatedly, there are gaps in monitoring uptake of research recommendations to government. Most Researchers submit reports to government and leave translation to government to implement the recommendations instead of jointly working on the implementation plan of the recommendations. This leads to gaps in the incorporation of research recommendations at the government level, as most researchers submit reports to the government instead of jointly working on an implementation plan.

*“Research is incentivized through financial award for publications, approximately USD \$200-300 for international publications, with some getting up to USD \$1,000 for a single publication.”
- researcher at a public university*

All public universities included in this study rely on the government to fund research and translation. Because of this, there is an incentive among policymakers and researchers to ensure that their research is aligned. Researchers primarily access funds from the government in two ways: 1) by invitation, where a governmental department directly contacts researchers to ask them to provide evidence-generating services, or 2) through direct application, when government research funds are streamlined and researchers can compete for funds.

3.6 Women Involvement in Research

Following the Đổi Mới system, Vietnam has made significant progress in improving the well-being of women and reducing gender disparities with an impressive advance in narrowing the

gender gaps in terms of improved income and access to productive resources, education, and health care (Kabeer, 2011). Generally, the Vietnamese system encourages female participation in public/technical service. Among the universities that were surveyed, there is quite a high level of participation by female researchers: the academic staffing level for female researchers ranges between 40% and 70%.

*“At this university, 40% of the academic staff are women and most of them are in social sciences”
– Director of Research at a public university.*

However, a 2011 World Bank study indicated that in tertiary institutions in Vietnam, men are more likely to specialize in engineering, manufacturing, construction and services while women specialize in social sciences, education, humanities and the arts (Kabeer, 2011). A study on Vietnam employment trends conducted by the International Labor Organization reported that 29% of men (compared to 11% of women) enrolled in tertiary degrees focused on engineering, manufacturing and construction, while 41% of women (compared to 26% of men) specialized in social sciences, business and law (MOLISA-ILO, 2010).

In 2010, the Vietnamese Government launched the National Strategy on Gender Equality 2011-2020. This initiative outlines strategies and activities to promote women’s employment and economic status, such as education and training, health, leadership and decision-making, women’s rights, and strengthening the national systems for supporting women. It is also incorporated into the Social Economic Development Strategy 2011-2020. Strategy objective two focuses on narrowing the gender gap, and outlines four norms to address gender disparity in labor related work (Vietnam Ministry of Justice, 2011):

- Norm 1: Annually, at least 40% of the total number of people given new jobs will be assured for each sex (male and female);
- Norm 2: The rate of female entrepreneurs will reach 30% by 2015, and 35% or higher by 2020.
- Norm 3: The rate of female rural laborers who are aged under 45 and vocationally trained will reach 25% by 2015, and 50% by 2020.
- Norm 4: The rate of poor female laborers in rural areas or ethnic minority regions who wish to borrow preferential capital from employment or poverty reduction programs and official credit sources will reach 80% by 2015, and 100% by 2020.

A study conducted by Oxford University Clinical Research Unit in Ho Chi Minh City aimed at exploring and addressing gender issues within the research institute reported that majority of scientists 65% (79/121) were women. Of the scientists at senior level, only 14% (1/7) female were full or associate professors, 45% (5/11) were female research group heads, and 45% (9/20) were female postdoctoral scientists. There were more female occupying junior posts with 78% (53/68) being research assistants and 50% (11/22) enrolled as PhD students. Furthermore, examination of grant applications from years 2011 to 2017, revealed that female researchers had slightly lower success rates than males: 54% (58/108) versus 65% (116/179) with only 37% (117/318) applications having female principal investigators (Hoa et al., 2019).

To address these gender issues within research, several interventions have been implemented, including; grant writing and leadership training, active identification and support of female

scientists eligible for promotions, enhanced mentorship through career-guidance programmes where prominent female scientists are invited to run workshops, thus creating a platform for potential role models (Hoa et al., 2019).

However, female researchers in Vietnam still face some challenges that range from cultural norms and stereotypes, to balancing the demand of domestic roles. In addition to their professional roles, women have to perform other domestic duties related to the social expectations of putting marriage and family first. An exploratory study done among female researchers on the barriers to, and facilitators of, female Deans' career advancement in higher education in Vietnam found that the main barriers were strong family obligations, negative gender stereotypes regarding women as leaders, and female academics' unwillingness to take management positions (Nguyen, 2013). On the other hand, the major facilitators of women's career advancement were self-effort, strong family support and, what was perceived to be, a favourable or 'lucky' selection context. As such, there is growing evidence that supports the view that family support is a crucial factor for women's academic career advancement in Vietnam.

The negative impact of societal roles of female researchers on their research career progression was also reported by Hoa Ngo Thi and other researchers. In many areas of Vietnam, most female researchers live within the context of extended families with additional responsibilities of caring for elderly relatives. Hoa et al reported that 57% (24/42) female respondents cared after dependent relatives and spent a median 10–20 hours per week on caring duties and a further 10–20 hours per week on other domestic duties (Hoa et al., 2019). These societal duties have an effect on networking possibilities and travel for female researchers.

Another study documented challenges faced by female scientists in a traditional Asian society, citing issues of the traditional role of women defined in many cultures as being wives and mothers. "Historically in Vietnam, sons have been favored over daughters in most families with parents tending to invest more in sons for better education and social status. Parents often instruct daughters to avoid careers that require extensive training and long working hours. Furthermore, many parents do not encourage their daughters to take Ph.D. training because it is around the time when many young ladies get married. The average age for first marriage in Vietnam is 22.8 for women and 26.2 for men. That means women are likely to get married right after college while men usually take more time to study or develop their careers" (Minh TN Le, 2019).

3.7 Continuity and Sustainability

More than 60% of the research funding for universities in Vietnam comes directly from the government through line ministries and departments. This is due to the fact that most universities were established by government ministries to support evidence generation for those ministries. This means that a number of universities can count on continuous funding from the government. Besides government funding, some universities have established private entities to generate resources for sustained research activities within the university. A case in point is Hanoi University of Science and Technology which established BK Holdings, a profit-making company that manages the university's assets, intellectual property, tuition, and consultancies. Within BK Holdings, seven *limited by guarantee companies* (CLGs) have been

formed. BK Holdings manages four main research groups; 1) data technology and smart systems; 2) sustainable energy and environment; 3) science and technology; and 4) new materials and innovations. These research groups contribute funding to keep the university running.

Some universities have also established long-term partnerships with development agencies supporting research activities. The National University of Vietnam HCMC and the Hanoi University of Science and Technology have long-term partnerships with the Japan International Cooperation Agency, the Korea International Cooperation Agency, and UNDP.

4.0 Programmatic Recommendations

1. For effective implementation of research recommendations, researchers should actively participate and follow up on the recommendations they have developed in the course of their research. Given the researcher's role in generating these recommendations, it is critical they work with the government to ensure proper interpretation and implementation.
2. Networking, especially among women leaders and women faculty, should be implemented by institutions in Vietnam as part of mentorship, role modeling, and capacity-building. Presence of female role models within HEIs and the general community should be used to catalyze the agency of women and girls to pursue an advanced career, including research-oriented positions. These female role models should serve as champions to challenge some of the social and cultural norms that hinder full female participation in research.
3. Incentives to engage in research translation by academic faculty should be expanded to include partnerships, collaboration, program and policy influence.
4. The current research translation is more inclined to working with government, but Vietnamese researchers should widen this scope by working with other practitioners like local and international NGOs, development partners, and the private sector. Researchers need to actively involve themselves in the work of development practitioners by working with them during the development and through the implementation of their strategies.

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Appendices

Appendix I: Brief about the Universities Contacted

- 1. Ho Chi Minh City University of Technology (HCMUT)** is a center of technology, industry, and management training. The university is a member of the Vietnam National University specialized in technology. Prior to the country's re-unification in 1975, the university was the only institution graduating engineers in southern Vietnam. To this day, HCMUT still remains the largest, the most prestigious, and the oldest engineering university in the south of Vietnam.
- 2. Ton Duc Thang University (TDTU)** is a public university operated under the Vietnam General Confederation of Labor. Located in Ho Chi Minh City, TDTU has 17 faculties, with an enrollment of about 23,792 students, over 1,350 faculty and staff, as well as 67 research groups. Global partnerships at the university are structured around three main areas: cooperation in education that involves graduate, undergraduate, and short course exchanges with foreign universities; cooperation in research that focuses on international conferences, research groups and projects; and global networks that extend cooperation with some of the top 500 universities all over the world.
- 3. Foreign Trade University-HCMC** is the constituent branch of Foreign Trade University that was officially put into operation in July 2006. Foreign Trade University, Hanoi was established in 1960 and is among the most well-known universities in Vietnam, covering a wide range of business courses among which are finance, management, and marketing.
- 4. Thuy Loi University** was established in 1959 as the Electricity Water Resources Academy, spun off from the Hanoi University of Technology. Thuy Loi University has three campuses in Hanoi with a large campus in Ho Chi Minh City and one in Phan Rang Tháp Chàm, Ninh Thuận Province.
- 5. Vietnam National University-HCMC** is one of the two largest national universities in Vietnam. It was founded in 1995 to provide undergraduate and graduate programs to about 56,427 students, including 99 undergraduate programs, 105 masters of science and masters of engineering programs, and 79 doctoral programs. The education programs cover technology, natural sciences, basic sciences, social sciences and humanities, literature, foreign languages, and business. Vietnam National University HCMC consists of six member universities, one school, and one institute.
- 6. Hanoi University of Science and Technology** was founded in 1956 and is the first and largest technical university and industrial engineer training center in Vietnam. It is a public university with 32,161 students and 1,240 academic staff. There are about 80 undergraduate majors available at the university.
- 7. University of Economics and Finance** was established in September 2007 and is a private University based in Ho Chi Minh City providing courses in economics, finance, and technology. The university is focused on becoming a modern center for higher education and research in economics and management sciences, providing intellectual products to meet the increasing societal expectations in terms of the trend towards economic globalization.