

ALUMNI IMPACT BAROMETER

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By W. Casten, M. Gamboa, N. Mugabi, R. Villar, N. Holvoet, and S. Dewachter

Table of Contents

Executive Summary	5
I. Introduction	7
II. The Process	8
A. Research question	8
B. Research design.....	9
1. Overall design.....	9
2. Designing instruments.....	11
C. Timeline	14
D. The Research Team	15
1. Introducing the team	15
2. Added value and challenges of an intercultural team of alumni.....	16
III. Theory of Change	17
A. Process Theory	20
B. Impact Theory	20
C. Pathways	21
D. Assumptions	21
References.....	24
Annex 1. Overview and Planning of the Alumni Impact Barometer Research	25
Annex 2. Data Collection – IOB Alumni Events	26
Annex 3: Complete List of Alumni Co-researchers.....	28
Annex 4: Programme Process Theory	29
Annex 5: Programme Impact Theory	30

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The study is made possible through the contributions of IOB alumni, current students and alumni employers as well as IOB faculty and staff members who have wholly supported this undertaking.

The alumni research team is composed of 19 alumni researchers: Wanda Casten, Marian Gamboa, Tewelde Gebremariam Adhanom, Abdurahman Ibrahim, Grachel Manguni, Hezron Makundi, Georgina Manyuru, Nicholas Mugabi, Yahaya Nawanda, Chau Nguyen Hoai, William Pallangyo, Luz Saavedra, Mariluz Salgado, Nash Tysmans, Rose Villar, Thi Ngoc Anh Vu, Zerihun Weldegebriel, Eshetu Woldeyohannes and Eva Wuyts and two IOB staff: Sara Dewachter and Nathalie Holvoet.

This report has been written by Wanda Casten (lead author), Marian Gamboa, Nicholas Mugabi, Rose Villar, Nathalie Holvoet and Sara Dewachter.

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Abbreviations

DAC	Development Assistance Committee
DEM	Advanced Master of Development Evaluation and Management
GG	Going Global
GLOB	Advanced Master of Globalisation and Development
GM	Global Minds
GOV	Advanced Master of Governance and Development
ICP	International Master's Programmes
IOB	Institute of Development Policy
ITPs	International Training Programmes
M&E	Monitoring & Evaluation
MSC	Most Significant Change
NGO	Non-Governmental Organisation
OECD	Organisation of Economic Corporation and Development
SNA	Social Network Analysis
TOC	Theory of Change
UA	University of Antwerp
UOS	Universitaire Ontwikkelingssamenwerking (University Development Cooperation)
VLIR	Vlaamse Interuniversitaire Raad (Flemish Interuniversity Council)

Executive Summary

The VLIR-UOS International Master's Programmes (ICPs) funded by the Flemish government and Belgian development cooperation provides scholarships to individuals from 31 eligible countries in Africa, Asia and Latin America. It represents an important element in Belgium's support to development. A key partner, the Institute of Development Policy (IOB) of the University of Antwerp has received about 650 scholarship students through VLIR-UOS support.

The IOB **Alumni Impact Barometer** study aims to develop tools to monitor and evaluate the impact of ICPs; assess the impact of VLIR-UOS university development cooperation; improve the quality, relevance and impact of the ICPs; build capacity of IOB alumni in policy and in Monitoring & Evaluation (M&E) of scholarship programmes; and share the research instruments, results, toolbox, lessons learned and best practices beyond the University of Antwerp and feed into policy discussions. The study was conducted in four phases (i.e., research design, data collection, data analysis, and dissemination of results) for a period of four years, from 2018 to 2021.

The study employed a mixed method approach, both qualitative and quantitative, through multiple lenses and perspectives to determine the impact of studying at IOB on the level of the individual graduate, the organisations they work for, and the overall society. Data collection instruments included **alumni impact story interviews** which provided a more detailed and holistic perspective of what graduates learn during their study experience and how this contributes to development impact through their individual or collective action; **alumni online surveys** that collected information from cohorts 2000 to 2018 on their current profile, their learnings during the study experience, how they have been able to apply them in the organisations where they worked, and whether they had been contributing to development; **social network data surveys** which were designed to study the effect of studying an ICP programme on the graduates' social networks; **pre and post surveys with students and control batch** which focused on the direct benefits of an ICP programme on the graduates at the individual level, particularly skills, knowledge, attitudes, and networks; and **employer surveys** that captured the perspective of the organizations where the graduates are employed and triangulate the graduates' responses in the online alumni survey.

The **data analysis** employed three methods to **process alumni impact stories** which are the **categorisation of stories, selection of most significant change stories, and NVivo analysis**. The **Social Network Analysis** showcased different types of social ties (social interaction, information sharing, collaboration) between graduates per country before and after the IOB experience. The **Matched Difference in Difference Design** established a treatment group, or those who were accepted in the ICP Programmes for academic year 2018-2019, in comparison with a control group. Pre and post surveys were administered both for the treatment and control group before the start of the academic year (2018) and after graduation (2020). Descriptive statistics were used to describe the basic features of data through analytical and logical reasoning to determine relationships, patterns and trends. Apart from the alumni surveys, **employer surveys** were also administered for this study which were tested during a pilot phase in the Philippines and Tanzania.

A diverse, gender-balanced group composed of 17 individuals from 6 countries, working in government agencies, academia, NGO, and donor agency were engaged as co-researchers to work with two IOB faculty members to conduct the study, which facilitated the deeper appreciation and richer assessment of the study as it unfolds cultural and gender perspectives on development impact (see Annex 2 for details).

A dynamic, two-part (process and impact), multilevel model with inter-connected components **Theory of Change (TOC)** served as the basis of the evaluation. The TOC shows that by supporting international scholarship programmes such as the IOB master programmes, the scholars could trigger a transformative process in which *individual* educational benefits could translate into changes at the *organisational* level which may in turn bring about positive changes at the *societal* level. It is expected that they learn new *knowledge* and *skills*, get new insights and *ideas* and broaden their personal and professional *networks* while studying abroad. As a result, they are expected to contribute to sustainable development individually or collectively through several *pathways* either in their local communities or in the national or international domains. A set of assumptions linked to the TOC elements were carefully laid out to ensure that evidence collected throughout the study mainly reflect the graduates' efforts and that results presented were obtained through their participation in IOB master programmes.

I. Introduction

Education and research are top priorities for Flemish universities. VLIR-UOS, a consortium of Flemish universities, offers scholarships to individuals from 31 eligible countries in Africa, Asia and Latin America. The scholarships provide opportunities to access advanced education through the International Master's Programmes (ICPs) and International Training Programmes (ITPs). A key partner, the Institute of Development Policy (IOB) of the University of Antwerp has received about 650 scholarship students (over the period 2000-2018) through VLIR-UOS support.

In 2018, VLIR and IOB through the Global Minds initiative, sought to further integrate a development dimension into the University of Antwerp's education, research and to raise awareness among students, staff and other stakeholders about the benefits derived from international perspectives.

The **Alumni Impact Barometer** study was conceptualised to determine the impact of IOB's three advanced master programmes (i.e., Advanced Master of Globalisation and Development, Advanced Master of Development Evaluation and Management and Advanced Master of Governance and Development). The programmes have received funding support from the Flemish government and Belgian development cooperation and represents a key element in Belgium's support to development.

The objectives of the study are as follows:

1. Develop tools to monitor and evaluate the impact of ICPs;
2. Assess the impact of VLIR-UOS university development cooperation;
3. Improve the quality, relevance and impact of the ICPs;
4. Build capacity of IOB alumni in policy and in Monitoring & Evaluation (M&E) of scholarship programmes; and
5. Share the research instruments, results, toolbox, lessons learned and best practices beyond the University of Antwerp and feed into policy discussions.

A participatory action research was organised engaging 17 alumni researchers from Ethiopia, Nicaragua, Philippines, Tanzania, Uganda, and Vietnam and two IOB staff members to conduct the study.

The preliminary outline of the study is discussed in the following sections. The first section introduces the study. Section II elaborates the process and discusses the overall research design along with the designing instruments, timeline, team composition and the added value and challenges of having an intercultural team. Section III explains the Theory of Change which served as the basis for analysing and evaluating the ICPs. The results of the study will be presented in a separate report.

II. The Process

A. Research question

The VLIR-UOS, a scholarship funding institution in Flanders, is giving more attention to research that aims to assess if the scholarship schemes they are funding are generating impact in the area of development. There is also a continuing concern of identifying means to increase the impact of their scholarship interventions in the South. Similarly, the University of Antwerp as a host institution of the ICP scholars is eager to study if it has achieved its learning objectives and fulfilled its mission of imparting developmentally relevant knowledge and competencies to its graduates, while keeping its programmes relevant to the needs of the development sector. Also considering the fact that evaluations in this sector of development cooperation are limited¹ because of low evaluability related to the lack of theories of change, indicators, availability of (baseline) data, etc. (see Special Evaluation Office of the Belgian Development Cooperation, 2016; Holvoet et al., 2018), the use of a robust theory-based evaluation design using a mixture of quantitative and qualitative methods that allows to capture the long-term impacts of scholarship schemes is deemed essential.

The IOB Alumni Impact Barometer combines all these research interests in one study by employing rigorous design and methodologies to investigate the short, medium, and long-term impact of ICP programmes on three levels of development—individual, organizational, and societal. Specifically, the study aims to answer the research question,

“What is the **impact** of studying an ICP master programme on the **graduate**, the **organization** and on societal ‘**development**’?”

At the individual level, the study seeks to determine the direct effects of the ICP master programmes on the graduates’ knowledge, skills, attitudes and networks, which will enable them to become change agents in their places of work and ultimately the broader society. The study investigates if the graduates’ application of newly gained educational benefits lead to improved employability and competency, better organizational performance, inspire their organizations’ increased orientation towards development, or lead to creation of new organizations in relevant sectors. It also examines if graduates possibly even in their non-professional life become change agents and contribute to solve development challenges, individually or collectively, in their local communities or in the national or international domains. Ultimately, it studies how all these intended positive changes may lead to improving the living conditions of the graduates and their home countries.

¹ A noteworthy exception is Special Evaluation Office of the Belgian Development Cooperation. (2018). *Impact Evaluation of the Belgian University Development Cooperation. Lessons on the Evaluability of Institutional Partnerships and Scholarships*. Brussel: Federal Public Service Foreign Affairs, Foreign Trade and Development Cooperation.

B. Research design

To assess the impact of an international study, specifically the IOB programmes, several research instruments were jointly designed by the team, which is composed of two IOB faculty members and international alumni. The involvement of diverse international alumni has helped capture vital inputs necessary to develop research instruments that would best fit for the study. The assessment looked at three levels of development: individual, organisational and societal.

1. Overall design

a) Mixed methods approach. The mixed methods approach is the overall research design employed in the IOB Alumni Impact Barometer study given its “unique feature in integrating social science discipline with predominantly quantitative and qualitative approaches to theory, data collection, and data analysis” (Bamberger, 2012, p.3).

A number of benefits have been identified in utilizing the mixed methods approach. The advantage of triangulation, which strengthens the reliability of evaluation findings, is one of the primary reasons for adopting this particular design (Greene, 2015). The other reasons in using the mixed methods approach include the following: (i) “complementarity, this allows for a deeper understanding by extending the comprehensiveness of evaluation findings through the results from different methods used; (ii) *development*, this emerges as it adopts the results of one method to develop the instrumentation for another; (iii) *initiation*, this pertains to the generation of new insights into evaluation findings through the results of other methods that differ, hence the need for reconciliation which can be performed through further analysis or shift in perspective; and (iv) *value diversity*, it incorporates the diversity of values with greater consciousness about the value dimensions of evaluation through the use of different methods” (Greene, 2005 as cited in Bamberger, 2012, p.4-6).

The sheer objective of this approach is to use different research methods, both qualitative and quantitative, so as to investigate through multiple lenses and perspectives the impact of studying at IOB on the level of the individual/graduate, the organisations they work, and the overall society.

b) Co-research. The study involved a gender-balanced group of 17 international alumni from 6 countries around the globe with different professional backgrounds (government, academia, NGO, donor agency) as co-researchers to two IOB faculty members in all stages of the research process. Further information about the research team is added in Section II.D. The diverse background of the team paved the way for a deeper and richer assessment and inclusiveness of the different appreciation of the impact as it unfolds cultural and gender perspectives on development.

c) Theory-Based Evaluation. The theory-based evaluation was introduced to the team during the training programme, starting off with the understanding of programme theory. Working on the definition of Rossi et al. (2004, p.64), “programme theory refers to the set of assumptions in which a programme relates to the social benefits it is expected to produce, and the strategies the programme has adopted to achieve its goals and objectives”. From this operational definition emanates the *programme impact theory* (output-outcomes) and *programme process theory* (input-activities). The two concepts were differentiated with the former pertaining to causal theory in which “programme activities are the instigating causes and certain social benefits are the effects they eventually produce,” while the latter assumes the “overall description of assumptions and expectations on how the programme is expected to operate” (Rossi et al., 2004, p.168). Section III elaborates the process of initially crafting a Theory of Change (TOC) through in-depth discussion among the lead- and co-researchers to achieve a common understanding of the intended impact and processes involved. The agreed and finalized TOC aided the group in evaluating further the IOB Alumni Impact.

d) Data collection instruments. Complementing the assessment of the programme theory is the designing of various data collection instruments to capture the different perspectives of evaluation which include the *alumni impact story interviews*, *alumni online survey*, *social network data survey*, *pre and post-tests with students and control batch*, and *employer survey* (refer to B.2 for the detailed description of each data collection instrument).

e) Data analysis. This is the most crucial part of the research as this is the process of cleaning, transforming and modelling data to extract useful information through the use of various analytical methods:

Analysis of Alumni Impact Stories. There are three methods used for the processing of alumni impact stories: (i) *categorisation of stories* – this basically identified the importance of the different level of change (individual, organizational, societal), the four learning dimensions (knowledge, skills, networks or attitudes), and the five pathways prominent in the stories (change agent, social network, widening access, academic diversity, and international understanding), which validated the TOC in a more structured manner; (ii) *selection of most significant change (MSC)*, this nominated the top 3 impact stories per member, per country team and for IOB team, without any predefined selection criteria so as to allow other elements to come out beyond what is identified in the TOC; and (iii) *NVivo analysis*, this was structured on the basis of a coding scheme similar to the structure of categorisation of stories which has 3 levels of impact, 4 learning dimensions, and 5 implicit pathways, however in addition to the original structure, subcategories of different levels and dimensions appeared in validation of the TOC, totalling to 88 sub nodes.

Social Network Analysis (SNA). The SNA showcased different types of social ties (social interaction, information sharing, collaboration) between graduates per country before and after the IOB experience. Further analyses were made to assess the role of social networks

mainly on how it contributed to graduate impact, on the country alumni network, how it could strengthen the alumni network typology, and contribute to societal impact.

Matched Difference in Difference Design. This quasi-experimental design combined with a longitudinal approach was utilized to establish a treatment group, or those who were accepted in the ICP Programmes for academic year 2018-2019, in comparison with a control group. The control group were those who shared the same characteristics with the treatment group, in terms of selection score, gender and region but were not accepted in the programme. Pre- and post-tests were administered both for the treatment and control group before the start of the academic year (2018) and after graduation (2020). The very purpose of this is to establish changes over time (before and after the programme) and assess its benefits at the individual level particularly on the 4 learning dimensions (skills, knowledge, attitudes and network) along with the control group.

Descriptive Statistics. This is used to describe the basic features of data through analytical and logical reasoning to determine relationships, patterns and trends. Apart from the alumni survey, employer survey was also administered for this study which was tested during a pilot phase in the Philippines and Tanzania in order to capture the perspective of the organizations and triangulate it to the graduates' responses in the alumni survey.

2. Designing instruments

After finalizing the Theory of Change, the research team developed the research design and the appropriate instruments through a series of brainstorming sessions and joint discussions with key experts in evaluation. The research team was subdivided into several breakout groups to brainstorm on each of the instruments, with the goal of validating their appropriateness, and improving their content to respond to the case countries' contexts. The



IOB Alumni co-researchers working together on the research design in Antwerp, Belgium

team then discussed the results of these brainstorming sessions jointly, to come up with the final design instruments.

The team designed the following data collection instruments, each intended to capture a different perspective of the evaluation:

a) Alumni online survey. The research team administered the alumni online survey to all alumni (cohorts 2000 to 2018) to collect information on their

current profile, their learnings during the study experience, how they have been able to apply them in the organization/s where they worked, and whether they had been contributing to development. The survey provides critical information to help IOB improve its programmes,

report to its funding institutions, construct an online searchable database for IOB alumni expertise, and map IOB’s development footprint. The survey also served as a starting point for the research team to construct and refine the *IOB impact story* interview and social network survey.

b) Alumni impact story interviews. Alumni impact stories are the more detailed and more holistic perspective of what graduates learn during their study experience and how this contributes to development impact through their individual or collective action. Relating to the study’s theory of change, the collection of *alumni impact stories* is an effective instrument



Interviews conducted in Manila, Philippines

to capture all the intended results (initial, intermediate, and final outcomes) at the individual, organizational, and societal levels. Through the interviews, each of the graduates were asked what they think they gained from studying at IOB (in terms of skills, knowledge, networks, and attitude), if they feel they were able to strengthen the organizations where they work, and if they feel they were able to contribute to development. In addition, the graduates were asked to identify a particular project or accomplishment they are proud of as a contribution to society. Lastly, they were asked to identify ways that IOB can improve its programmes to increase the impact alumni can have after they graduate.

Through these personal stories, the research team was able to identify the levels and loci of impact, and pathways of change through which the graduates are able to affect positive sustainable development. The team was also able to gather information on how the IOB programmes can stay relevant to the development sector, which is of interest to both the university and the funding institutions. Each of the country teams implemented the *alumni impact story* interviews in their respective countries of Ethiopia, Tanzania, Uganda, Vietnam, Philippines, and Nicaragua, producing 106 unique impact stories.



Ethiopian team discussing the categorisation of the impact stories in Addis Ababa, Ethiopia

c) Social network data survey. The social network data survey was designed to study the effect of studying an ICP programme on the graduates’ social networks. Based on the study’s theory of change, it is expected that scholars will broaden their personal and professional

networks through their exposure to various development actors during the programme. The graduates' new networks or intensified networks brought about by their study experiences are expected to create a pathway for them to contribute to the development in their local/national/international communities and tackle developmental challenges at the societal level.

The survey asks the graduates to identify their networks (a) among their friends, family, and colleague who have studied in Europe/Belgium/Antwerp, (b) with IOB staff, (c) among the IOB alumni of their respective countries, and (d) Belgian development actors, before being accepted to study in Antwerp. They were then asked to identify their networks within the same criteria after graduating from IOB, to establish the effect of their experiences on their social networks. From the results of the survey, the research team was able to map the social ego networks of the respondents to measure its size, and heterogeneity. The researchers were also able to map the (partial) alumni networks for these six countries and assessing the density of the different types of graduate's networks (social, information sharing, or collaboration), and with whom and where the networks were tied (development actors in own country, with other international alumni, Belgian development actor, or within IOB as a host institution).

d) Pre and post surveys for IOB students and control group. The study's impact evaluation design is a longitudinal matched difference-in-difference, which establishes a treatment and control group. The IOB students of academic year 2018 – 2019 represent the treatment group, while candidates who share similar characteristics (selection score, gender, and region) but were not selected to study in IOB represent the control group. To study the differential effect of studying an international master's programme, the study team developed and administered pre- and post-surveys to both treatment and control groups before the official start of the academic calendar (2018) and after graduation (2020). The pre- and post-survey focuses on the direct benefits of an ICP programme on the graduates at the individual level, particularly skills, knowledge, attitudes, and networks.

e) Employer survey. Based on the study's theory of change, it is expected that the graduates' application and sharing of new knowledge, skills, attitudes and networks inspire their organizations' increased orientation towards development, lead to better organizational performance, or lead to creation of new organizations in relevant sectors. These outcomes will in turn contribute to positive social development, ultimately improving living conditions. The team designed the employer survey to capture the perspective of the organizations where the graduates are employed and triangulate the graduates' responses in the online alumni survey, particularly responses on individual and organizational levels. The survey was administered to organizations where scholarship graduates of the academic year 2019 – 2020 with previous work experience had been working.

Table 1 provides a summary of the data collection instruments, respondents, timing of implementation, and link to the theory of change.

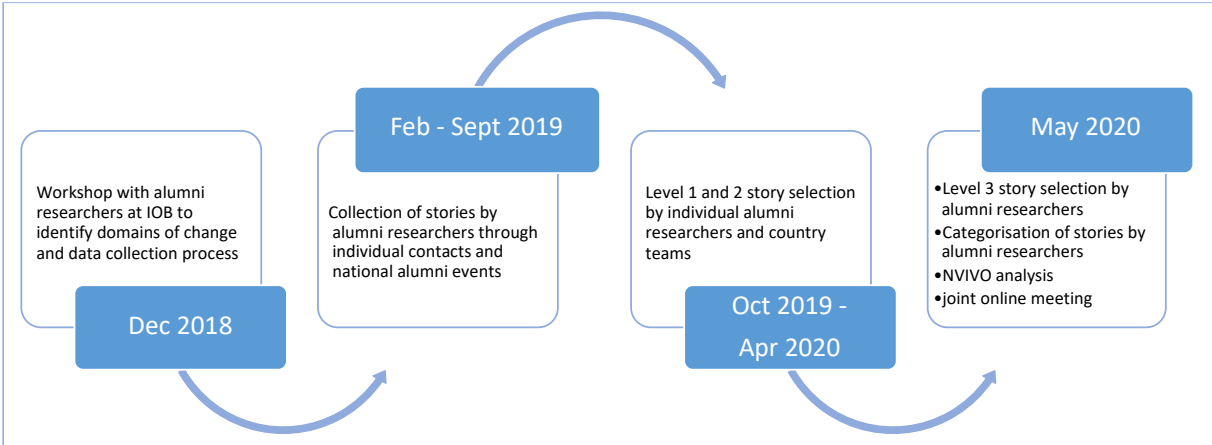
Data collection instrument	Respondents	Timing	Focus/ Link to Theory of Change
Alumni survey	All alumni cohorts 2000 to 2018	2019	Individual, organisational, and societal level outcomes
Alumni impact story interviews	All alumni in the six case-study countries	2019	Individual, organisational, and societal level outcomes
Social network survey	All alumni in the six case-study countries	2019	Individual, organisational, and societal level outcomes related to social networks of graduates
Pre- and post-survey for IOB students and control group	Cohort 2018-2019 and control group	2018 & 2020	Individual outcomes (skills, knowledge, networks, attitude)
Employer survey	Employers of student cohort 2019-2020	2020	Individual and societal level outcomes, to triangulate graduates' responses.

C. Timeline

The study was conducted in four phases for a period of four years. The first phase **Research Design** was conducted from December 2018 to March 2019, focusing on orientation of the study team, developing the research design and study instruments. The second phase **Data collection** was implemented from March 2019 to October 2019. It involved data collection using the following survey instruments: pre-study survey students, pre-study survey control and alumni survey. The alumni survey targeted IOB graduates (2000 – 2018). In this phase, the alumni database was updated by all country teams for their respective country alumni. In addition, alumni interviews were conducted in spring and summer 2019 through alumni workshop events or through individual contact to gather data. Online surveys and interviews for selected employers of IOB graduates (batch 2018) were also administered as a pilot study. Moreover, the **Data analysis** or the third phase was conducted in the spring of 2020 with several online sessions for all country research teams to jointly review and analyse data.² The final phase **Dissemination of Results** is set in the fall or winter of 2021 (or beginning 2022 if it is not possible to organise sooner due to the COVID19 pandemic) where study results will be shared with stakeholders through a joint team seminar. This will be followed by in-country seminars in the fall or winter of 2021 or in 2022 to share study results to participating countries. Below is Figure 1 showing the summary of the research timeline, excluding the research dissemination phase. The detailed study work plan is presented in Annex 1 while photos of the alumni events are in Annex 2.

² Due to the COVID19 pandemic and subsequent restriction on international travels, the physical workshop was cancelled. It was replaced by online workshops, meetings and teamwork.

Figure 1. Snapshot of study timelines



D. The Research Team

1. Introducing the team

The principal investigator of this research is Prof. Dr. Nathalie Holvoet with Dr. Sara Dewachter (IOB alumni coordinator) as a co-investigator, both are faculty members of the IOB. There are also two additional alumni co-researchers based at IOB namely Eva Wuyts and Nash Tysmans. Apart from the researchers based at IOB, the study involved a team of 17 alumni with evaluation skills and experience from Africa, Asia, Latin America contributing to participatory research as co-researchers. In Africa, the alumni co-researchers were from Ethiopia (4), Tanzania (3), Uganda (2). In Asia, the co-researchers were from Philippines (4) and Vietnam (2) while in Latin America, two researchers were from Nicaragua. In terms of gender, 53% of alumni co-researchers were female and 47% were male. Each country team was composed of one team leader and additional team members (Annex 2: Complete List of Alumni Co-researchers).

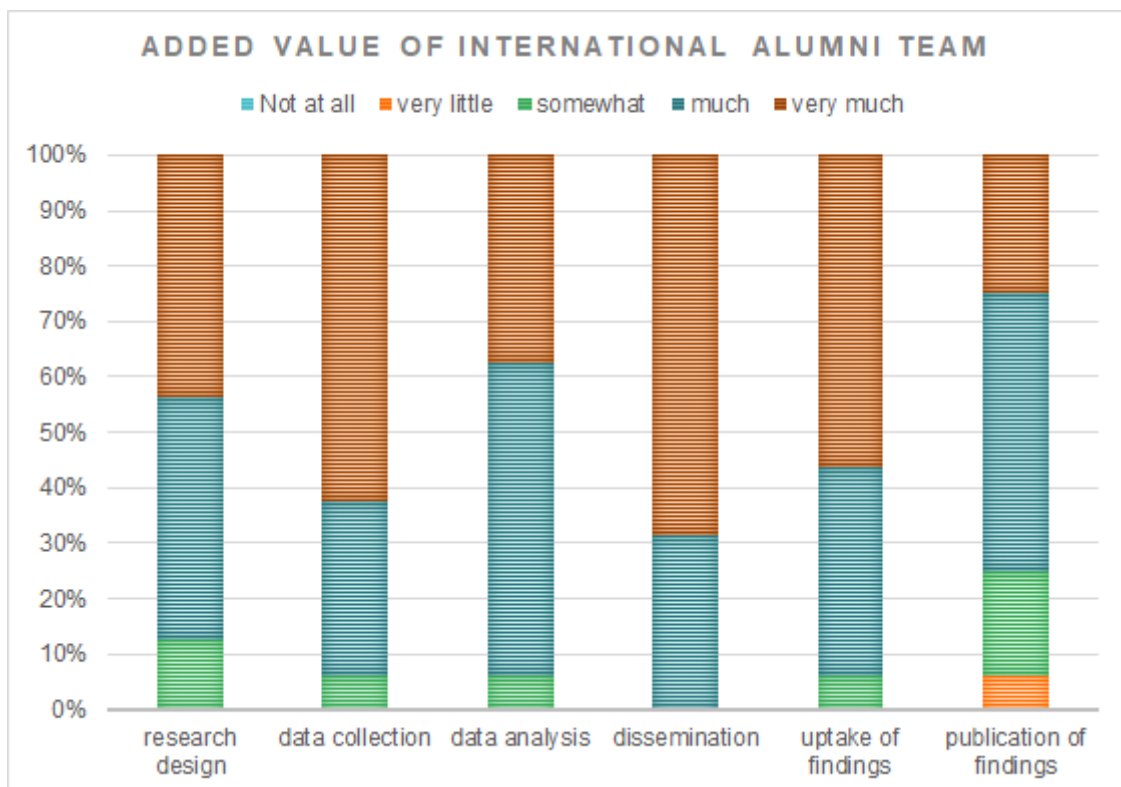


The Research Team (L-R): Georgina Manyuru, Zerihun Weldegebriel, Wanda Casten, Thi Ngoc Anh Vu, Sara Dewachter, Luz Saavedra, William Pallangyo, Rose Villar, Hezron Makundi, Nathalie Holvoet, Abdurahman Ibrahim, Chau Nguyen Hoai, Yahaya Nawanda, Nicholas Mugabi, Grachel Manguni, Marian Gamboa, Tewelde Gebremariam Adhanom, and Eshetu Woldeyohannes. Not on the photo: Mariluz Salgado, Nash Tysmans, and Eva Wuyts.

2. Added value and challenges of an intercultural team of alumni

The study adopted an inclusive approach, involving senior researchers and IOB alumni. This approach helped to ensure a 360-degree perspective and minimize biases. It engaged an international gender-balanced team composed from six countries from four continents with alumni researchers working in various sectors.

The global, multi-cultural composition and gender balance of the research team unpacked gender and cultural biases on development impact that was observed throughout the research process. The team of alumni researchers highly valued the inclusive approach. Survey findings confirmed that most alumni researchers think that working with an international team of alumni co-researchers has very strong or strong positive influence on the different aspects of the research process. Most alumni researchers underscored the value of the international team to influence the quality of research design (88%), data collection and analysis (94%), dissemination (100%), publication (75%) and uptake of findings (94%) (Graph 1).



The international research team believed that their contribution improved the quality of research (81%) through their knowledge of the **research topic**, shared training and passion for research, shared understanding of IOB culture and “language”, easier access to respondents through alumni networks, openness and trust when interviewing alumni respondents, and easier validation of stories based on own experience. The global and multi-cultural composition of the study did not only help to enrich the study but also strengthened the evaluation and research capacities of alumni, professional connections and built a diverse global research team. Thus, many alumni researchers expressed a strong desire to stay

connected and involved in international research with much emphasis placed on IOB organizing this.

In addition, all alumni researchers totally agree that working with an international team improved the quality of research through their **knowledge of the cultural and national context**. The local knowledge of country alumni helped the respondents to feel more at ease with an interviewer from a similar background and language. However, one alumna researcher asserted that *there is a risk of having a bias to a certain culture or local context when there is not enough diversity and you are comparing outside of that space [IOB team document, 26 May 2020]*. This risk is however, resolved through triangulation of both methods and mix of the research team by gender, profession training and cultural orientation even within the same country.

III. Theory of Change

As part of the participatory action research, key aspects of the initial Theory of Change were socialized through in-depth discussions among the lead researchers and co-researchers to achieve a common understanding of the intended impact of the programme including the causal mechanisms as well as the processes involved and generate examples of contexts or situations on which such mechanisms or processes could work. Leveraging on their knowledge of the programme through personal experience, the foundations of the initial TOC which drew heavily from higher international evaluation models (Kirkpatrick, 1975) and from literature that explored the relationship between international scholarship programmes and social change (Dassin et al., 2018), among others, was put to test. The resulting TOC, a dynamic, two-part, multilevel model with inter-connected components served as the basis of this evaluation.

The TOC is composed of two parts, a process and impact theory which are defined as follows:

- 1) Process: This part describes the inputs provided, activities implemented, and outputs generated by the intervention or the IOB international scholarship programme.
- 2) Impact: This part links outputs to outcomes (i.e., initial, intermediate and final) and impact of the intervention.

Following the 2002 DAC key evaluation terms (pp 15, 24, 25, 28), they are defined as follows:

- a) *Inputs*: the financial, human, and material resources used for the development intervention
- b) *Activities*: actions taken or work performed and other types of resources mobilized to produce specific outputs
- c) *Outputs*: the products, capital goods and services which result from a development intervention
- d) *Outcomes*: the short-term and medium-term effect of the intervention to indirect or direct beneficiaries on the individual, organisational and societal levels
- e) *Impacts*: the positive and negative, primary and secondary long-term effects produced by the intervention, directly or indirectly, intended or unintended on the individual, organisational and societal levels

The levels of changes can be observed at the following levels (Holvoet et al, forthcoming):

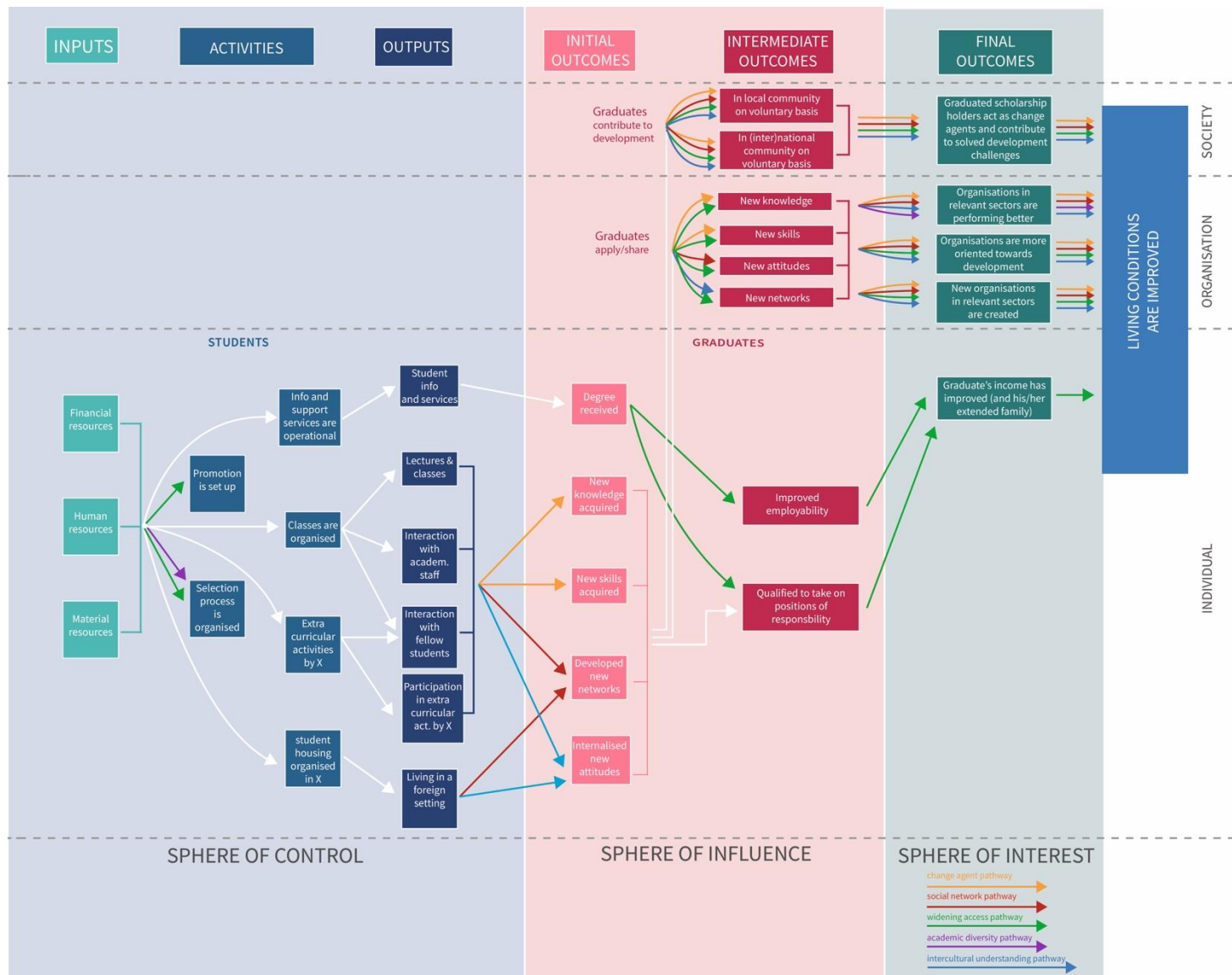
- a) Individual: changes at individual level that improves quality of life or purchasing power (micro)
- b) Organisational: changes in organisations and institutions (meso)
- c) Societal: changes in society that supports the Sustainable Development Goals (macro)

The limits of the influence of the programme are described through Spheres of Influence (Hearn, 2009):

- a) Sphere of control: refers to the operational environment where IOB has direct control as part of the intervention and the time period where the scholar is considered a 'student' at the IOB
- b) Sphere of influence: refers to the time period where the scholars become 'graduates' and the immediate changes in their behaviour, relationships, activities, or actions which are logically linked to the intervention but may or may not be entirely caused by it
- c) Sphere of interest: refers to a longer time period where the graduated scholars' behaviour, relationships, activities, or actions influence their broader environment socially or economically which can be related but may or not be fully attributable to the intervention

The summarized TOC depicted in Figure 2 shows the transition from the **process theory** to the **impact theory**. The right-most portion presents the different levels of changes beginning from the **individual** to the **organizational** and **societal** levels which are demarcated by horizontal broken lines. The lower section indicates the different levels of influence which are the **sphere of control** in blue shade, **sphere of influence** in pink, and **sphere of interest** in green. Causal linkages on how changes could be achieved through different **pathways** are represented by color-coded unidirectional arrows.

Figure 2. Theory of Change [designed by Joëlle Dhondt]



The TOC shows that by supporting international scholarship programmes such as the IOB master programmes, the scholars could trigger a transformative process in which *individual* educational benefits could translate into changes at the *organisational* level which may in turn bring about positive changes at the *societal* level. While studying abroad, it is expected that they learn new *knowledge* and *skills*, get new insights and *ideas* and broaden their personal and professional *networks*. As a result, they are expected to contribute to sustainable development individually or collectively through several *pathways* either in their local communities or in the national or international domains. As mentioned in the foregoing, we distinguish between the process and impact theory to understand the TOC outlined below.

A. Process Theory

To provide access to Belgian education, VLIR scholarship grants which are composed of financial, human and material resources or **inputs** are arranged to target qualified individuals from developing countries. **Activities** are then organised by IOB such as the promotion of VLIR scholarship and the corresponding scholarship selection process to identify and accept scholars. Classes, extracurricular activities, info and support services as well as their housing arrangements in Antwerp are also organized to support their studies at the IOB. Once accepted to the masters' programme, the scholars are able to take advantage of the lectures and classes, interactions with the academic staff and fellow students from different countries, participation in the extracurricular activities, access to student info and services and from the experience of living in a foreign setting in Antwerp (**outputs**). Please see Annex 3: Programme Process Theory.

B. Impact Theory

The intended **initial outcomes** are for scholars from developing countries to acquire new knowledge, skills, attitudes and networks (IN2-5) and obtain a postgraduate degree (IN1) from IOB.

The above could lead to the achievement of **intermediate outcomes** where graduates' render voluntary work in the local, national or international community (IO1 & IO2), apply and share their new knowledge, skills, attitudes and networks (IO3, IO4, IO5 & IO6) at their respective organisations, which could improve their employability (IO7) or allow them to take on positions of higher responsibility with their better academic qualifications (IO8).

As a result, precursor benefits are derived from the **final outcomes** wherein the graduates play a fundamental role to generate positive changes as follows:

FO1: Graduated scholarship holders act as change agents and contribute to solve development challenges

FO2: Organisations in relevant sectors are performing better

FO3: Organisations are more oriented towards development

FO4: New organisations in relevant sectors are created

FO5: Graduate's income has improved (and his/her extended family)

Through the graduates combined efforts, the intervention's intended **impact** of improving living conditions will be realised. Please see Annex 4: Programme Impact Theory.

C. Pathways

Recognising the complex nature of individuals from diverse backgrounds, broad range of age and experience, and the different context or environment that they are in before and after the scholarship, tracing the impact that the intervention generates from the individual to the organizational and institutional up to the societal levels followed a multiple 'pathways' concept (Dassin et al, 2018) described below and displayed in Figure 2 using different colours:

- 1) Change agent: a pathway that highlights the leadership abilities of the scholars in generating positive social change through personal action such as obtaining positions of higher responsibility or autonomy in their working environments to promote and support development objectives.
- 2) Social network: a pathway that generates social change through collective action or through collaboration of several or a group of scholars through the (inter)national alumni networks.
- 3) Widening access: a pathway where women and men from disadvantaged backgrounds get access to postgraduate education increasing their chances to succeed in life and contribute to reducing inequality.
- 4) Academic diversity: a pathway where academic institutions such as the IOB become more inclusive in terms of recruitment to cater to students with different academic credentials and challenges.
- 5) International understanding: a pathway where intercultural communication, tolerance and international cooperation between cultures and countries are enabled through studying abroad or interacting with other international scholars

D. Assumptions

Considering the broad scope of the study, many factors could affect individual or overall results, including some which are well beyond the scope of the study. A set of **assumptions** linked to the TOC elements were carefully laid out to ensure that evidence collected throughout the study mainly reflect the graduates' efforts and that results presented were obtained through their participation in IOB master programmes. They are grouped based on the different **stages of the scholarship** (i.e., pre-scholarship, during the programme, post-scholarship) and are described below:

1) Pre-scholarship

Scholarship information

Scholarship information is disseminated through various platforms and channels. It is assumed that information materials reach eligible candidates including those who are from disadvantaged backgrounds and that sufficient eligible candidates apply (A1.1 – A2.2).

2) During the programme

Student life

IOB takes both the scholar's learning and wellbeing into account so that they are able to access support services and are not hindered by cultural, social, psychological or other barriers (A3). The selection criteria for VLIR scholarship considers the candidate's motivation and professional goals, it is presumed that scholarship students are able and are motivated to

attend classes (A4.1, A4.2) and at the same time, class activities are carefully designed so that they stimulate interaction among students and with academic staff (A4.3, A4.4). The scholars are also expected to be able to attend extracurricular activities and are motivated to do so (A5.1 and A5.2). In addition, arrangements are made to make affordable accommodation near IOB available to all students (A6).

Course content and support services

The acquisition of new knowledge, skills, attitudes and networks is fundamental to IOB's role. Class participation, therefore, aids in completing the programme (A8.1). Thus, a significant effort is given to ensure that IOB teaching methods are fit (A8.2), and that interaction with other students and academic staff, participation in extra-curricular social activities organised by IOB and interaction with local people in Antwerp all stimulates learning (A9 – A12). Moreover, IOB provides support services that are effective and help students to learn and complete the program (A7).

3) Post-scholarship

Individual level: Employment

Often, higher education translates to increased employability and higher income. It is then assumed that the international advanced master's degree in development studies improves the scholars' employability (A14) and that it enables moving up to positions of higher responsibilities increasing the scholars' income (A19.1). The improved employability status provides the scholars a stable and/or sufficient income (A19.2) and the increase in income or stability of employment leads to an improvement of livelihood in the scholar and his/her extended family (A25).

Organisational level: Workplace

Upon graduation, it is assumed that the new knowledge, skills, attitudes and networks gained by the scholars are relevant in the work setting and that the organisations where they work is conducive for using and sharing such (A15, A16). Therefore, equipped with their formation and achievements in IOB, the graduates contribute to the overall performance of their respective organisations, increase the development orientation of the organisation and/or are able to start up new organisations (A20 – A22).

In the longer term, through the collective efforts of the scholars, it is assumed that livelihoods of citizens are improved through the contributions of better performing development organisations (A26), more pronounced development orientation of non-development focused organisations (A27), and creation of new organisations in the development sector (A28) given that the political and economic context in their respective countries are conducive for organisations to make a contribution to development (A29).

Societal level: Agent of Change, Role Model and Volunteerism

Graduates can contribute to development even outside their professional arenas. Development-orientation inspires civic engagement and encourages scholars to promote positive change in communities on their own. Scholars can take part in volunteerism where the knowledge, skills, attitudes, networks developed by the scholars are valuable and such voluntary actions are effective in making a development contribution (A17, A23). Alternatively, they can stimulate change and societal development as a role model, through

civic action, support for local, national or even international development initiatives. The social, political and economic context in the respective countries in which graduates act as change agent is conducive to contribute to development (A30).

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Annex 1. Overview and Planning of the Alumni Impact Barometer Research

Phase	Main Activity	Year	Dates	Sub-activities	Time	
PHASE 1	Research design	2018	Dec 3-15	2 weeks workshop on research methodologies and fine-tuning the design	11 days	
PHASE 2	Data collection	2018	Sep	Pre-study survey IOB students and control group, pre-study survey control group	1 day	
		2019	Jan - Feb	Alumni survey		
			Mar	Country teams receive updated alumni list and complement data send back updated alumni list		
			Mar - Oct	Organise alumni event (survey and impact stories)		20 days
			Mid-Apr	IOB proposes list of employers to be interviewed		
		End of Apr	Online employer survey	10 days		
		May - Oct	Face to face Employers interview			
		End of Oct	Deadline for handing in all data			
PHASE 3	Data analysis	2020	Jan - Mar	Data cleaning, processing and preliminary analysis	3 days	
			Mar - Apr	Interpretation of results plus additional online workshop to fine-tune analysis		
			Apr - Aug	Additional data collection or fact finding, if needed		
PHASE 4	Dissemination of results	2021/ 2022	End 2021/ Early 2022	Joint seminar presenting the 'first results' and tools used (Philippines or Tanzania)	2 days	
			Throughout 2022	Single seminar Uganda, Ethiopia, Vietnam, (Nicaragua)	8 days	
			End 2021	Seminar in Brussels and Antwerp	1 day	

Annex 2. Data Collection – IOB Alumni Events

3 March 2019 – Tanzania



14 March 2019 – Philippines



5 April 2019 – Ethiopia



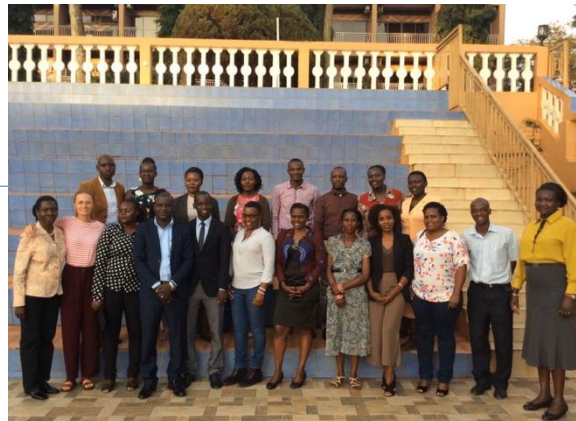
10 May 2019 – Vietnam



16 September 2019 – Nicaragua



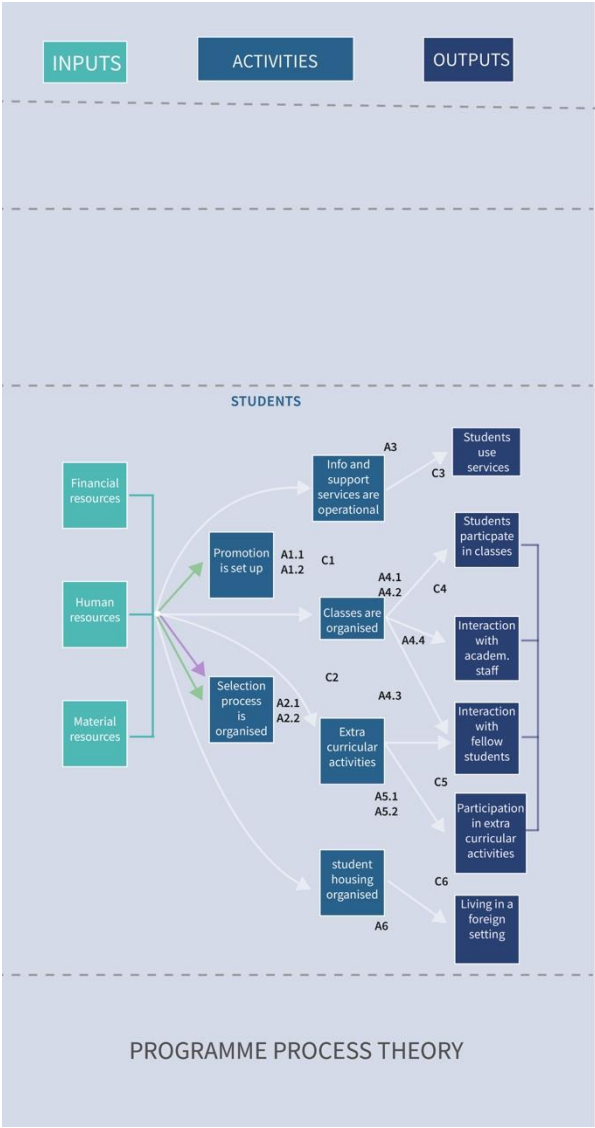
30 September 2019 – Uganda



Annex 3: Complete List of Alumni Co-researchers

No.	Country Team	Family Name	First Name	Master	Academic Year	Professional Position
1	Ethiopia	Adhanom	Tewelde Gebremariam	Governance and development	2015-2016	Lecturer at Gondar University
2	Ethiopia	Ibrahim	Abdurahman Hamza	Governance and development	2013-2014	Lecturer at Hawassa University
3	Ethiopia	Weldegebriel	Zerihun Berhane	Globalisation and development	2009-2010	Assistant Professor at Addis University
4	Ethiopia	Woldeyohannes	Eshetu Demissie	Development evaluation and management	2011-2012	Consultant
5	Philippines	Casten	Wanda Verano	Globalisation and development	2009-2010	M&E Officer at The Asia Foundation
6	Philippines	Gamboa	Marian Kaye	Development evaluation and management	2016-2017	National Economic Development Authority
7	Philippines	Manguni	Grachel Lloren	Development evaluation and management	2012-2013	PhD Student at IOB
8	Philippines	Villar	Rose Pascual	Development evaluation and management	2009-2010	National Economic Development Authority
9	Tanzania	Makundi	Hezron	Training	2014	Lecturer at University Dar Es Salaam
10	Tanzania	Nawanda	Yahaya	Training	2010	Lecturer at Sokoine University
11	Tanzania	Pallangyo	William Amos	Governance and development	2003-2004	Lecturer at Law School of Tanzania
12	Uganda	Manyuru	Georgina	Training	2005	Consultant
13	Uganda	Mugabi	Nicholas	Development evaluation and management	2011-2012	Lecturer at Makerere University
14	Vietnam	Vu	Thi Ngoc Anh	Development evaluation and management	2009-2010	Senior Consultant Transp Int
15	Vietnam	Nguyen Hoai	Chau	Training	2006	Canadian Cooperation in Vietnam
16	Nicaragua	Saavedra Prado	Luz Elizabeth	Development evaluation and management	2017-2018	Centro Humboldt
17	Nicaragua	Salgado	Mariluz	Development evaluation and management	2014-2015	M&E Specialist & Lecturer at Universidad CentroAmericano

Annex 4: Programme Process Theory [designed by Joëlle Dhondt]



ASSUMPTIONS

- A1.1 promotion material reaches eligible candidates
- A1.2 promotion material reaches candidates from disadvantaged backgrounds
- A2.1 sufficient eligible candidates apply
- A2.2 candidates from disadvantaged backgrounds apply
- A3 students (who need support) are not hindered by cultural, social or psychological or other barriers to use the support services
- A4.1 students are able to attend classes (e.g. work students, sickness, ...)
- A4.2 students are motivated to attend classes
- A4.3 activities in class stimulate interaction among students
- A4.4 activities in class stimulate interaction with academic staff
- A5.1 students are able to attend extracurricular activities
- A5.2 students are motivated to attend extra curricular activities
- A6 affordable accommodation is available to all students in the vicinity

MECHANISM

- C1 distribution of info
- C2 selection
- C3 use
- C4 participation
- C5 participation
- C6 integration, interaction

Annex 5: Programme Impact Theory [designed by Joëlle Dhondt]

