

Engagement of Youth in Agricultural Entrepreneurship in  
Laos

Manithaythip Thephavanh

A thesis submitted in fulfilment of the requirements of the degree of

Doctor of Philosophy

School of Agriculture, Food and Wine

Faculty of Sciences

The University of Adelaide

May 2023



THE UNIVERSITY  
*of* ADELAIDE

## Table of Contents

Table of Contents .....	i
List of Tables .....	vi
List of Figures .....	viii
Publications arising from the thesis .....	x
Abstract .....	xi
Declaration .....	xvii
Acknowledgements .....	xviii
Terms, Acronyms and abbreviations .....	xxii
Chapter One: General Introduction.....	1
1.1 Chapter introduction .....	1
1.2 Problem statement.....	1
1.3 Research aim and questions .....	4
1.4 Research Approach .....	5
1.5 Field study sites.....	5
1.6 Thesis structure .....	7
1.7 References.....	11
Chapter Two: Literature Review .....	16
2.1 Chapter introduction .....	16
2.2 Agripreneurship as a pathway for sustainable agricultural development and improved youth opportunities in Laos .....	17
2.2.1 Definitions.....	17
2.2.2 Laos country context.....	17
2.2.3 Commercialisation of agriculture in Laos.....	18
2.3 Understanding agripreneurial career selection.....	19
2.3.1 Behavioural research into career selection .....	20
2.3.2 Entrepreneurship research.....	40
2.4 Conclusion .....	45
2.5 References.....	46
Chapter Three: Exploring demographic influences on perceptions of agricultural entrepreneurship as a potential career choice among Lao youth .....	63
3.1 Statement of Authorship .....	64
3.2 Abstract.....	66
3.3 Introduction.....	67
3.4 Method .....	70
3.4.1 Theoretical Background.....	70

3.4.2 Data collection .....	71
3.4.3 Sample population .....	76
3.4.4 Data analysis .....	78
3.5 Results.....	78
3.5.1 Demographic differences in constructs underlying perception towards agripreneurship .....	78
3.5.2 Demographic determinants of constructs underlying perception towards agripreneurship .....	80
3.6 Discussion.....	84
3.6.1 Influences of family occupational background on perceptions and intention towards agripreneurship.....	84
3.6.2 Influences of gender on perceptions of agripreneurship and intention to select it as a career.....	87
3.6.3 Faculty enrolment influence on perceptions of agripreneurship and intention to select it as a career .....	87
3.7 Limitations .....	88
3.8 Conclusion .....	88
3.9 Implications.....	89
3.10 References.....	90
3.11 Supplementary data.....	99
Chapter Four: Determinants of intention to engage in small and medium scale agricultural entrepreneurship amongst Lao youth: A Structural Equation Modeling Approach .....	104
4.1 Statement of Authorship .....	105
4.2 Abstract.....	107
4.3 Introduction.....	108
4.4 Method .....	109
4.4.1 Conceptual framework for analysis of career intentions .....	109
4.4.2 Consolidated Framework of hypothesised determinants of intention to engage in agripreneurship .....	112
4.4.3 Survey instrument and hypothesised indicators.....	117
4.4.4 Data collection .....	117
4.4.5 Data analysis .....	120
4.5 Results.....	124
4.5.1 Model validity.....	124
4.5.2 Determinants of Intention to enter a career as an agripreneur .....	129
4.6 Discussion.....	131
4.6.1 Determinants of intention amongst Lao Youth.....	131
4.6.2 Theoretical contribution.....	136
4.7 Conclusion .....	139

4.8 References.....	140
4.9 Supplementary .....	150
Chapter Five: Narrative Insights Reveal the Motivations of Young Agricultural Entrepreneurs in Laos.....	161
5.1 Statement of Authorship .....	161
5.2 Abstract.....	164
5.3 Introduction.....	165
5.4 Materials and Methods.....	167
5.4.1 Research Approach .....	167
5.4.2 Case Study Context.....	168
5.4.3 Sampling and Participants.....	169
5.4.4 Data Collection .....	170
5.4.5 Data Analysis .....	170
5.5 Results.....	171
5.5.1 Participants.....	171
5.5.2 Narrative Paradigms.....	173
5.5.3 Income Paradigm .....	175
5.5.4 Extrinsic Benefit Paradigms .....	176
5.5.5 Attainability Paradigms .....	179
5.5.6 Emotional Paradigms .....	181
5.5.7 Societal-Communal Paradigms.....	182
5.6 Discussion.....	185
5.6.1 Influence of Narrative Paradigms on Agripreneurial Motivation.....	185
5.6.2 Limitations .....	190
5.7 Conclusions.....	191
5.8 References.....	192
Chapter Six: Perceptions of the institutional and support environment amongst young agricultural entrepreneurs in Laos .....	202
6.1 Statement of Authorship .....	203
6.2 Abstract.....	205
6.3 Introduction.....	206
6.4 Materials and Methods.....	208
6.4.1 Conceptual approach.....	208
6.4.2 Study participants.....	212
6.4.3 Data collection and analysis.....	214
6.5 Results.....	215
6.5.1 Agricultural information and extension services .....	218

6.5.2 Financial support.....	220
6.5.3 Infrastructure.....	221
6.5.4 Informal rules and attitudes .....	222
6.5.5 Taxation and registration .....	224
6.5.6 Agricultural policy .....	225
6.5.7 Research and development .....	226
6.6 Discussion.....	227
6.6.1 Perceived enablers of agripreneurship .....	229
6.6.2 Perceived limitations to agripreneurship .....	231
6.6.3 How can agri-system environment be made more supportive for young agripreneurs?.....	234
6.7 Conclusions.....	235
6.8 References.....	237
Chapter Seven: General Discussion, Conclusion and Recommendations.....	250
7.1 Chapter introduction .....	250
7.2 Mapping the research results to the research questions .....	250
RQ1. Which demographic factors influence motivational antecedents of intention regarding agripreneurship amongst Lao youth? .....	250
RQ2. To what extent are perceptions about agripreneurship and the enabling environment motivational antecedents that influence intentions to be an agripreneur? .....	253
RQ3. What factors previously motivated currently-practicing young agripreneurs in Laos to enter a career as an agripreneur?.....	254
RQ4. Is there an enabling institutional and support environment for young agripreneurs in Laos?.....	257
RQ5. Do motivational antecedents that influence intention to become an agripreneur amongst Lao youth who have yet to embark on a career reflect the motivations of practicing youth agripreneurs?.....	260
RQ6. Do the experiences with the enabling environment of practicing youth agripreneurs reflect the perceptions of the enabling environment amongst Lao youth who have yet to embark on a career?.....	265
7.3 Future directions .....	267
7.3.1 Expanding perspectives .....	267
7.3.2 Conceptual framework.....	269
7.3.3 Area and Scope of study .....	272
7.4 Conclusion and summary of recommendations.....	274
7.5 References.....	282
APPENDICES .....	288
Appendix I: Poster presented at the 2022 TropAg INTERNATIONAL AGRICULTURE CONFERENCE, Brisbane Convention and Exhibition Centre in Australia 31 October to 02 November, 2022.....	288

Appendix II: Human Research Ethics Committee Approval.....289

## List of Tables

Table 2.1 Common and unique factors from three theoretical frameworks for investigating career motivational antecedences and intentions in agripreneurship.....	34
Table 2.2 List of courses taught for the Bachelor degree of Agricultural economics and Food technology, Faculty of Agriculture, National University of Laos, Laos.....	36
Table 2.3 List of courses taught for the Bachelor degree of Food technology, Faculty of Agriculture, Champasak University, Laos.....	37
Table 3.1 Questions and methods for measuring perception variables.....	74
Table 3.2 Overview of demographic characteristics of study participants.....	77
Table 3.3 The influence of different demographic characteristics on Lao youth ATT, SN, PBC and INT to engage in agripreneurial career, on a Likert-scale from 1 to 7. ....	81
Table 3.4 Summary of 3 regression models of the influence of demographic factors on TPB' constructs: ATT, SN, PBC towards agripreneurship, and of demographic factors and TPB' constructs on the INT strength of Lao students to engage in agripreneurship.....	83
Table 4.1 Common and unique factors from three theoretical frameworks for investigation career intention in agripreneurship. ....	114
Table 4.2 Overview of demographic characteristics of study participants. ....	119
Table 4.3 Hypothesised latent variables. ....	121
Table 4.4 Indicators for measuring latent variables in the final model of determinants of intention to choose an agripreneurial career, the average variance extracted (AVE) and construct reliability (CR) for each latent variable, and standardized factor loadings for each indicator. ....	125
Table 4.5 The final structural model goodness of fit. ....	128

Table 4.6 Structural relations of FESkn, FESr, ATT, PCP, POL, and EDUi on Lao youth intention (INT) to engage in agripreneurship. ....	130
Supplementary Table 4.1 Observed indicators and scales used for measuring each factor in the final measurement mode. ....	150
Table 5.1 Key characteristics of participating young agripreneurs ( $n = 74$ ). ....	172
Table 5.2 Frequency of identified paradigms and select specific motivations. ....	174
Table 6.1 Key characteristics of participating young agripreneurs ( $n=74$ ). ....	213
Table 6.2 Enabling and hindering factors for each domain explored, as reported by young agripreneurs: percentage of respondents (%) and number of respondents mentioning ( $n$ ), and as percentage of all female respondents (%F, $n=50$ ) and all male respondents (%M, $n=24$ ). Total respondents: 74.....	216



## List of Figures

Figure 1.1 Field study sites in Laos indicating Vientiane Capital, and Vientiane, Champasak and Salavan provinces. ....	6
Figure 1.2 Thesis structure showing the sequence of chapters. ....	10
Figure 2.1 The Theory of Planned Behaviour (Ajzen, 1991). ....	21
Figure 2.2 The Entrepreneurial Event Model (Shapero & Shokol, 1982). ....	23
Figure 2.3 AgriPreneurial Career Framework (APCF) ( <i>Adapted from the Theory of Planned Behaviour (Ajzen, 1991), the Entrepreneurial Event Model (Shapero &amp; Shokol, 1982), and the Careership Theory (Hodkinson &amp; Sparkes, 1997), with author modifications</i> ). ....	39
Supplementary Figure 3.1 Frequency distribution of participants' Attitude scores as indicated by the extent to which students like the idea of agriprenurship as a career on a 7-point Likert scale. ....	99
Supplementary Figure 3.2 Frequency distribution of Subjective Norms (SN) scores as indicated by the perceived extent to which normative referents approve of agriprenurship as a career, weighted by motivation to comply, on a 7-point Likert scale. ....	100
Supplementary Figure 3.3 Frequency distribution of participants' Perceived Behavioural Control (PBC) scores as indicated by the perceived likelihood of achieving their career goals with this career, on a 7-point Likert scale. ....	101
Supplementary Figure 3.4 Frequency distribution of participants' self-reported intention strength to be an agripreneur on a 7-point Likert scale. ....	102
Supplementary Figure 3.5 Path diagram showing standardized coefficients of determination ( $\beta$ ) from multiple linear regressions. ....	103
Figure 4.1 AgriPreneurial Career Framework (APCF). <i>Adapted from the Theory of Planned Behaviour (Ajzen, 1991), the Entrepreneurial Event Model (Shapero &amp; Shokol, 1982), and the Careership Theory (Hodkinson &amp; Sparkes, 1997), with author modifications</i> . ....	116

Figure 6.1 Conceptualisation of the agripreneurial market system embedded in institutions and supporting functions that together form an enabling (or otherwise) environment. ....211

Figure 7.1 AgriPreneurial Career Framework (APCF) with coloured information corresponding to research activities in this thesis (Green = Chapter 3, Black = Chapter 4, White = Chapter 5).....276

## **Publications arising from the thesis**

Thephavanh, M., Philp, J.N.M., Nuberg, I., Denton, M., & Alexander, K. (2022). Narrative Insights Reveal the Motivations of Young Agricultural Entrepreneurs in Laos. *Sustainability*, 14(20), 13113. <https://doi.org/10.3390/su142013113>

Thephavanh, M., Philp, J.N.M., Nuberg, I., & Denton, M. (2023). Exploring demographic influences on perceptions of agricultural entrepreneurship as a career choice among Lao youth. *Development in Practice*. <https://doi.org/10.1080/09614524.2023.2183831>

Thephavanh, M., Philp, J.N.M., Nuberg, I., Denton, M., & Larson, S. (2023). Perceptions of the Institutional and Support Environment amongst Young Agricultural Entrepreneurs in Laos. *Sustainability*, 15(15), 4219. <https://doi.org/10.3390/su15054219>

Determinants of intention to engage in small and medium scale agricultural entrepreneurship amongst Lao youth: A Structural Equation Modeling Approach. Manuscript submitted.

## **Abstract**

Despite the potential for the agricultural sector to serve as a source of livelihood opportunities, employment and entrepreneurial opportunities for rural youth in developing countries remain limited. The lack of appealing livelihood opportunities is a contributing factor to a reduction of youth involvement in agriculture that poses a major concern for the sustainability of production systems worldwide. The integration of entrepreneurship in agricultural sectors (agripreneurship) in the developing world has been advocated as a powerful tool for promoting the socioeconomic integration of young people and is a key to avoiding rural depopulation.

Obtaining the benefits of youth agripreneurship requires a comprehensive understanding of the circumstances that cause youth to choose this career pathway, the environments that facilitate or hinder this development, and extent of youth agripreneurial career engagement. However, there are insufficient data available to assess these requirements. Although there is increasing interest in the agricultural sector's potential to provide income generating opportunities for rural youth in developing countries, scientific literature on agripreneurship in developing countries has largely been neglected by the mainstream research on entrepreneurship, with the majority of agripreneurial research focussed on developed countries. Research into characteristics and circumstances that drive young people to engage in agripreneurship in developing economies, and the constraints and opportunities that young farmers face remains scarce, and there is a specific need for research that sheds light on the perspective of the young farmers themselves. This thesis therefore aims to identify demographic, personal and enabling environment factors that encourage or discourage youth engagement in agripreneurship, using Laos as a case study, as it is a developing country in Asia with a highly rural and young population that is transitioning to commercial agriculture, agribusiness and agripreneurship.

A review of the literature identified that behavioural sciences has been applied to understand entrepreneurial career decisions, and the motivational antecedents of the intention to choose entrepreneurial careers. By consolidating the dominant frameworks for career decision making in the literature, a novel framework, the AgriPreneurial Career Framework (APCF) was developed to guide this research. Meanwhile, the scientific study of entrepreneurship has emerged as a distinct field that is characterised by research into the establishment and performance of entrepreneurial ventures, including studies that have sought to identify the reasons and goals that motivate individuals to create businesses. Entrepreneurship research may be used to provide meaning from the lived experiences of practicing youth agripreneurs in Laos. In particular, research can identify the phenomena that motivate youth to become agripreneurs. This thesis therefore applies quantitative and qualitative research methods from both approaches to address the following research questions:

RQ1. Which demographic factors influence motivational antecedents of intention regarding agripreneurship amongst Lao youth?

RQ2. To what extent are perceptions about agripreneurship and the enabling environment motivational antecedents that influence intentions to be an agripreneur?

RQ3. What factors previously motivated currently-practicing young agripreneurs in Laos to enter a career as an agripreneur?

RQ4. Is there an enabling institutional and support environment for young agripreneurs in Laos?

RQ5. Do motivational antecedents that influence intention to become an agripreneur amongst Lao youth who have yet to embark on a career reflect the motivations of practicing youth agripreneurs?

RQ6. Do the experiences with the enabling environment of practicing youth agripreneurs reflect the perceptions of the enabling environment amongst Lao youth who have yet to embark on a career?

Demographic factors that influence motivational antecedents of intention towards agripreneurship amongst Lao youth (RQ1) were explored by statistical comparison in 298 undergraduate students in Laos. University students are a group of young Laotians who have not yet embarked upon a career, however they have certain characteristics that may differ from youth generally. The demographic factors found to influence intention towards agripreneurship amongst Lao youth were family backgrounds, area of studies and university of enrolment, whilst motivational antecedents of intention, namely Attitudes, Subjective Norms and Perceived Behavioural Control, were also variously influenced by demographic variables. Although commercial agriculture/agribusiness family occupational backgrounds contributed to greater intention to practice agripreneurship, subsistence farming backgrounds did not. Commercialisation of agriculture in Laos therefore requires better engagement of youth from subsistence farming households, as this group predominates in Laos, and is at the greatest risk of missing the benefits of modernisation. This result also provides new insight into demographic origins of perceptions and intentions according to the Theory of Planned Behaviour.

The extent that perceptions about agripreneurship and the enabling environment are motivational antecedents that influence intentions to be an agripreneur (RQ2) was examined by applying a structured equation model, developed according to the APCF, to data obtained from a survey 298 undergraduate students in Laos. Factors that significantly influenced students' intention strength included perceived feasibility arising from agriculture and business knowledge, access to resources, attitudes towards the outcomes of having a career as an

agripreneur, perceived capability in performing a career as an agripreneur, perception of support from government policy, and the importance placed on educational support. The consolidated framework contributes new insights into the determinants of intention towards agripreneurship. These insights can enable decision makers in Laos to target certain beliefs and enabling environment factors for intervention and may provide a point of reference for other emerging economies faced with the need for transitioning to entrepreneurial modes of agriculture. As a theoretical contribution, these results demonstrated that the Theory of Planned Behaviour, the Entrepreneurial Event Model and the “Careership” theoretical frameworks all include factors that significantly influence intention towards agripreneurship amongst Lao youth, but also omit some significant determinants and include non-significant indicators.

A qualitative approach combining content analysis with narrative inquiry techniques was applied to factors that previously motivated currently practicing young agripreneurs in Laos to enter a career as an agripreneur (RQ3). The accounts of 74 young Laotian agripreneurs regarding their entry into agripreneurship showed that despite the characteristics that set agripreneurship in Laos apart from entrepreneurship in general, commonly identified typologies of entrepreneurial motivation, particularly income, extrinsic benefits, and emotional paradigms also motivate Lao youth to become agripreneurs. The application of narrative inquiry has revealed the emphasis that some practicing agripreneurs in Laos place on the attainability of their career that resulted in its practice by both opportunity-driven and necessity-driven entrepreneurs, with implications for the sustainable development in other countries that are in transition to commercial agriculture. Furthermore, conducting this investigation with practicing agripreneurs enabled the research to build on the survey work by investigating if the motivational antecedents that influence intention to become an agripreneur amongst the students reflects the motivational antecedents of practicing young agripreneurs. The motivational antecedents that influence intention to become an agripreneur amongst the

students have significant overlap with the motivational antecedents of practicing youth agripreneurs (RQ5); notably, the most influential consideration of students was perceived feasibility, which was frequently reflected by currently practicing entrepreneurs.

The same practicing agripreneurs provided insight into the enabling environment, consisting of institutions, and supporting functions, through a semi-structured interview process (RQ4). Agripreneur perspectives indicated improvements to the enabling environment in Laos that increase their capacity for agripreneurship compared with earlier in their careers. Factors such as infrastructure, and new, digitalised, online-offline platforms for information sharing, banking, marketing, delivery, and logistics were identified as specific areas of improvement. Commercial agricultural policy has resulted in increased food production, income generation and opportunities for technical advice, financial access, market linkages, product development, and farmers' group/organisation establishment from public, private and (I)NGOs. However, young agripreneurs identified areas in which institutions and supporting functions limited the growth and sustainability of agripreneurship. Limitations included service obstacles, quality of extension staff, coordination, effectiveness of policies for implementation and monitoring, unclear administrative/tax fees, poorly defined research, school values, curriculum design and learning-teaching methods. The investigation demonstrates that institutions and supporting functions have a vital function in enabling agripreneurship by young agripreneurs. However, administrative obstacles and poor implementation of policies carry the risk of having the opposite effect. By comparing the experiences of practicing agripreneurs to the perceptions of Lao youth who have yet to choose their career, it was possible to identify key areas of the enabling environment that are underperforming and subsequently discouraging future agripreneurs from embarking on these careers (RQ6).



This thesis applied both quantitative and qualitative social research methodologies to identify factors that influence youth to be agripreneurs. The various analyses presented in this thesis, guided by the APCF, have identified factors regarding individuals, their beliefs and the enabling environments that significantly determine motivational antecedents/factors influencing undergraduate students and young agripreneur engagement in agripreneurial careers in Laos. The commonality of these results across analysis methods and participants, combined with support from the available literature, demonstrates the applicability of the APCF framework for investigating youth perception and intention to engage in small and medium scale agripreneurship in Laos, and potentially other countries in agrarian transition. This research contributes knowledge regarding youth and agripreneurship that is relevant to Laos and other developing countries. This improved understanding of the constraints and opportunities that young farmers face can facilitate the development of an enabling environment for transition from subsistence to commercial agriculture. The findings from this research also assist the promotion of agripreneurship in Laos through these following recommendations (1) Adopt a people-centred approach that recognises the varying influence of demographic characteristics on agripreneurial intention and motivational antecedents, (2) Reduce barriers to finance for subsistence farmers to enable commercialisation, (3) Raise awareness of the benefits and values of agripreneurship, integrate agripreneurship knowledge and address institutional biases in the educational sector, (4) Emphasise the role of motivations and personal capacities rather than resource endowments when promoting agripreneurship, (5) Increase the certainty of interactions with formal institutions by increasing transparency and accessibility of information relating to registration and fees, and (6) Improve the effectiveness of policy support for youth agripreneurship.

## **Declaration**

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

I acknowledge that copyright of published works contained within the thesis resides with the copyright holder(s) of those works.

I give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library Search and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

Manithaythip Thephavanh

05<sup>th</sup> May, 2023

## **Acknowledgements**

This research was undertaken with support from the Australia Awards John Allwright Fellowship (JAF), Australian Centre for International Agricultural Research (ACIAR) projects SMCN/2012/075 and ASEM/2014/052, and the Crawford Fund Student Award. I am deeply grateful to the National University of Laos and Champasak University for accessing to their undergraduate students' enrolment profiles in 2018-2019 academic year, and Lao Farmer Network (LFN) for accessing to its young farmers' profiles and contact details respectively, at our early stage for samples selection, and later for providing approval letters and assigning key contacts facilitating our data collection at their campuses, and farmers groups/organisations/cooperatives' offices or farms.

I extend my heartfelt gratitude to a large number of people participated in this research. They include (1) 298 Lao undergraduate students from all faculties in both universities for volunteering to participate in our Youth career perceptions and intentions surveys and self-reported their perceptions; (2) 74 young agripreneurs from farmers' organisations under and outside LFN, agricultural projects and private farms in all four study sites for facilitating and participating in our semi-structure interviews and focus group discussions; (3) 15 decision-makers, senior researchers, development practitioners, private sectors and (I)NGOs both in Vientiane Capital and Champasak province from these following offices and organisations for sharing information used to identify dominant beliefs about the enabling environment and expected outcomes of agripreneurship: Regional Centre for Community Education Development of Laos, Ministry of Education and Sports, Ministry of Agriculture and Forestry, Department of Technical Extension and Agro-Processing, the National University of Laos, LFN, Lao National Chamber of Commerce and Industry, iJob, Muong Lao Food Supply Co., Ltd, and the Agroecology Learning alliance in South East Asia (ALiSEA) in Laos; and (4) 19

online-survey participants from or living in rural areas of Laos, and included high school and undergraduate students, young agripreneurs, business owners and early and mid-career professionals, employed in private, government and international organisations, that shared their perception and insights used to identify dominant beliefs about agripreneurship.

I acknowledge the support received from the National Agriculture and Forestry Research Institute in Laos (NAFRI) for providing authority to facilitate communication with the universities, and allocating office spaces, facilities and research assistants to facilitate my fieldtrips in Laos for data collection. Special thanks to Manivanh Phimpachanvongsod, Phonealoun Chanthabouasone, Chanphasouk Phialathounheuan, research assistants from NAFRI and Manilitphone Thephavanh, my beloved sister, a freelance research assistant, for their assistance in data collection and entry.

My greatest thanks is reserved for my PhD supervisors at the School of Agriculture, Food and Wine, University of Adelaide: Assoc. Prof Matthew Denton, Joshua Philp and Ian Nuberg. Their enduring patience and their support both professional and personal encouraged me to become a better researcher.

I would also give my appreciation to my collaborators, colleagues, advisors or co-authors Dr Kim Alexander, The University of New England, Dr Silva Larson, University of the Sunshine Coast, Dr Igusti Darmawan, The University of Adelaide, Dr Sean Foley, an environmental scientist, Dr Davina Boyd, Murdoch University, Assoc. Prof Magnus Moglia, Swinburne University, and Prof Pascal Perez, The University of Wollongong for their guidance in developing my research proposal, data analysis and proofreading support in some versions of my publications and thesis' chapters.

Special thanks goes to Dr. Thavone Inthavong, NAFRI, my former boss in NAFRI and Dr Garry Greenhalgh, James Cook University, my ACIAR former colleague. It was their insightful advice and their belief in my potential that led me to pursue my PhD in Australia. I promise I will pay these kindnesses and encouragement forward to other junior researchers and younger generations those I will come across domestically and internationally in my personal and professional life.

I also owe thanks to my lovely lab mates, beautiful landlord and her family, housemates, Lao, Australian and international friends studied in Adelaide, Lao community in Adelaide, JAF fellows studied in Australia, and Lao embassy in Canberra, for their generosity, friendship and supportive words and actions during my times as in Australia, especially during Covid-19 era. I would like to make a specific mention of my best friend and lab mate Alyce Dowling who regularly checked up on my well-being and research progress, introduced challenges that encouraged both of us to work productively and have fun on our PhD projects, and invited me and other friends to do relaxing activities at home and the beaches. Alyce is a highlight of my PhD journey, our lab, other people, animals and our planet. Another best friend is my co-supervisor, Joshua Philp who is allocated so much time and energy to make sure I will have a progress for my research, I will not give up on my PhD and I will be called Dr Manithaythip soon. I am so fortunate to have a co-supervisor and best friend in the same person.

Finally, I would like to thank my family, my cousins, relatives, friends and my girlfriend in Laos. Thanks to my parents Manivong Thephavanh and Bounsong Thephavanh for always cheer me up, encourage me to being optimistic and have faith in me that helped me through the difficult times. Thanks to my brother and my sister that always keep in touch with me and try to be supportive in whatever I come up to. Thanks to my cousins, relatives and friends, especially my two little nephews: Yoyo and Jojo for checking up on me (or chocolates haha)

from time to time. It was so meaningful for a person who live alone far from home. Thanks to my girlfriend for her effort, patience, understanding, love and care. Thanks for always go beyond extra miles just to make me happy and smiles. You are the best, I love you. I know it is challenging for us both to maintain our long-distance relationship. Thanks to your wonderful mom and dad too for being so supportive, compassionate and encouraging. Without all of you I would not come this far. Thank you so much for being my family, my comfort and my home. You all are in every stage of my life chapter, no matter how busy you are, you always make times for me, even to listen to my sometimes nonsense talks. I cannot wait to go back home and spend time with you all. It has been three years we have not met due to travels restrictions during Covid-19 in the last two years and my last year of candidature in this year.

## **Terms, Acronyms and abbreviations**

Agripreneurship	Agricultural Entrepreneurship
ACIAR	Australian Centre for International Agricultural Research
APCF	AgriPreneurial Career Framework
ATT	Attitude
AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CR	Construct Reliability
DTEAP	Department of Technical Extension and Agro-Processing
EEM	Entrepreneurial Event Model
GDP	Gross Domestic Product
GOF	Goodness of Fit
IFI	Incremental Fit Index
ILO	International Labour Organisation
(I)NGOs	(International) Non-Governmental Organisations
INT	Intention
JAF	John Alwright Fellowship
LFN	Lao Farmer Network
NAFRI	National Agriculture and Forestry Research Institute
NGOs	Non-Governmental Organisations
NUoL	National University of Laos
PBC	Perceived Behavioural Control
RMSEA	Root Mean Square Error of Approximation

SEM	Structural Equation Model
SMEs	Small and medium-sized enterprises
SN	Subjective Norms
TLI	Tucker-Lewis Index
TPB	Theory of Planned Behaviour
$\chi^2/df$	Relative Chi-Square



# **Chapter One: General Introduction**

## **1.1 Chapter introduction**

The modernisation of the agricultural sector is a foundational component of economic development. However, the forces of modernisation provide many livelihood opportunities for youth to consider beyond agriculture. This tension between the need for the next generation of farmers and the opportunities from other livelihood activities is common across developing economies, and the Lao Peoples Democratic Republic (Laos), a country characterised by a high proportion of rural youth, is no exception to this phenomenon. This chapter introduces the essential nature of youth involvement in agriculture, the importance of agricultural entrepreneurship (agripreneurship) as a mode of youth engagement in agriculture, and the issues of youth involvement in agriculture as agripreneurs, and its characteristics in Laos. It then presents the aim of this thesis. A set of research questions are posed and a brief explanation of the methodology is provided. It then presents an outline of the structure of the thesis on a chapter-by-chapter basis.

## **1.2 Problem statement**

Approximately 87% of the world's youth population live in developing countries, with the majority living in rural areas in sub-Saharan Africa, South Central and South East Asia (UN, 2013). The agricultural sector's potential to serve as a source of livelihood opportunities for rural youth is internationally acknowledged in both literature and practice (Bouichou et al., 2021; Mmbengwa et al., 2021; Refiswal et al., 2021; World Bank, 2012; Yamaguchi et al., 2020). However, employment and entrepreneurial opportunities for youth living in developing countries' economically stagnant rural areas remain limited, poorly remunerated and of poor

quality regarding vulnerable employment and working poverty (OECD, 2017) and rural youth continue to face challenges related to unemployment, underemployment and poverty (UN, 2018).

The integration of entrepreneurship in agricultural sectors is crucial for highly agrarian developing countries (da Silva et al., 2009) as it promotes the interconnections and developing of economic structures (Solesvik et al., 2012). In the developing world, agripreneurship has been advocated as a powerful tool for promoting the socioeconomic integration of young people and a key to avoiding rural depopulation (Bouichou et al., 2021). The adoption of more entrepreneurial modes of agriculture by rural youth can lead to greater developmental outcomes because youth as agripreneurs are more enterprising, innovative, risk-tolerant and accepting of new technologies (Arindam et al., 2018; Petit et al., 2018; Valle, 2012; White, 2012). Thus, agripreneurship has become well-established as a development strategy to facilitate youth empowerment, particularly in Africa (Williams & Hovorka, 2013) and South America (Yamaguchi et al., 2020). Furthermore, given that the reduction of youth involvement in agriculture poses a major concern worldwide for the sustainability of agriculture, the continued involvement of youth in agriculture can ensure the success of agricultural systems in the future (Giuliani et al., 2017).

Despite the potential for agripreneurship to provide meaningful opportunities for rural youth, there is a perception among rural youth that there are too few opportunities in agriculture (Bennell, 2007). Oftentimes, agriculture, especially smallholder farming, is viewed unfavourably in comparison to other livelihoods, for example, as “dirty work” (Bennell, 2007), and youth are considered as having a low interest in engaging in entrepreneurial activities (Bennell, 2007; White, 2012). Some have argued that rather than having unfavourable perceptions about practicing agriculture, youth are discouraged by their perceptions of the

constraints, outcomes and the risks involved (Peters, 2011; Richards et al., 2010). Across the developing world, these include a reduced focus on farming skills in educational systems, an absence of basic rural infrastructure, a mismatch between demand and supply of labour markets, a lack of policy support, promotion of large-scale investments and the neglect of small-scale agriculture and resource constraints i.e., available farmland (Arindam et al., 2018; Giuliani et al., 2017; Murray Li, 2009; Valle, 2012; Vijayabaskar et al., 2018; White, 2012). From this literature, it is evident that youth decisions to engage in agriculture depends on both personal and environmental factors.

Scientific literature on agripreneurship has largely been neglected by the mainstream research on entrepreneurship (Fitz-Koch et al., 2018), especially in developing countries (Dias et al., 2019). Accordingly, research that describes characteristics and circumstances that drive young people to engage in agripreneurship in developing economies, and the constraints and opportunities that young farmers face, remains scarce (Buyinza et al., 2020; Freire-Gibb & Nielsen, 2014). Furthermore, there is a specific need for research that sheds light on the perspective of the young farmers themselves (Fitz-Koch et al., 2018). This PhD project aims to provide comprehensive research to understand factors that encourage or discourage youth engagement in agripreneurship, using Laos, a country with a high proportion of rural youth that is in the process of transition to commercial agriculture, agribusiness and agripreneurship (MAF, 2015), as a case study. This thesis will contribute to the body of literature pertaining to youth and agripreneurship in other developing countries. Furthermore, a better understanding of constraints and opportunities that young farmers face will facilitate the development of an enabling environment for transitioning from subsistence into commercial agriculture (Shattuck et al., 2019). This research could be applied towards the Laos Government's policy on promoting commodity agriculture for small and medium scale farmers, and youth unemployment, ensuring national food security and reducing reliance on food importation. In

particular, the study is relevant to the new targets of the Laos Ministry of Agriculture and Forestry that focus on job creation and income growth, in addition to increasing production for agricultural development strategies (Shattuck et al., 2019).

### **1.3 Research aim and questions**

The aim of this thesis is to identify and describe the motivational antecedents that influence youth intention and engagement in agripreneurship, and investigate the enabling environment, using Laos as a case study.

The specific research questions are:

RQ1. Which demographic factors influence motivational antecedents of intention regarding agripreneurship amongst Lao youth?

RQ2. To what extent are perceptions about agripreneurship and the enabling environment motivational antecedents that influence intentions to be an agripreneur?

RQ3. What factors previously motivated currently-practicing young agripreneurs in Laos to enter a career as an agripreneur?

RQ4. Is there an enabling institutional and support environment for young agripreneurs in Laos?

RQ5. Do motivational antecedents that influence intention to become an agripreneur amongst Lao youth who have yet to embark on a career reflect the motivations of practicing youth agripreneurs?

RQ6. Do the experiences with the enabling environment of practicing youth agripreneurs reflect the perceptions of the enabling environment amongst Lao youth who have yet to embark on a career?

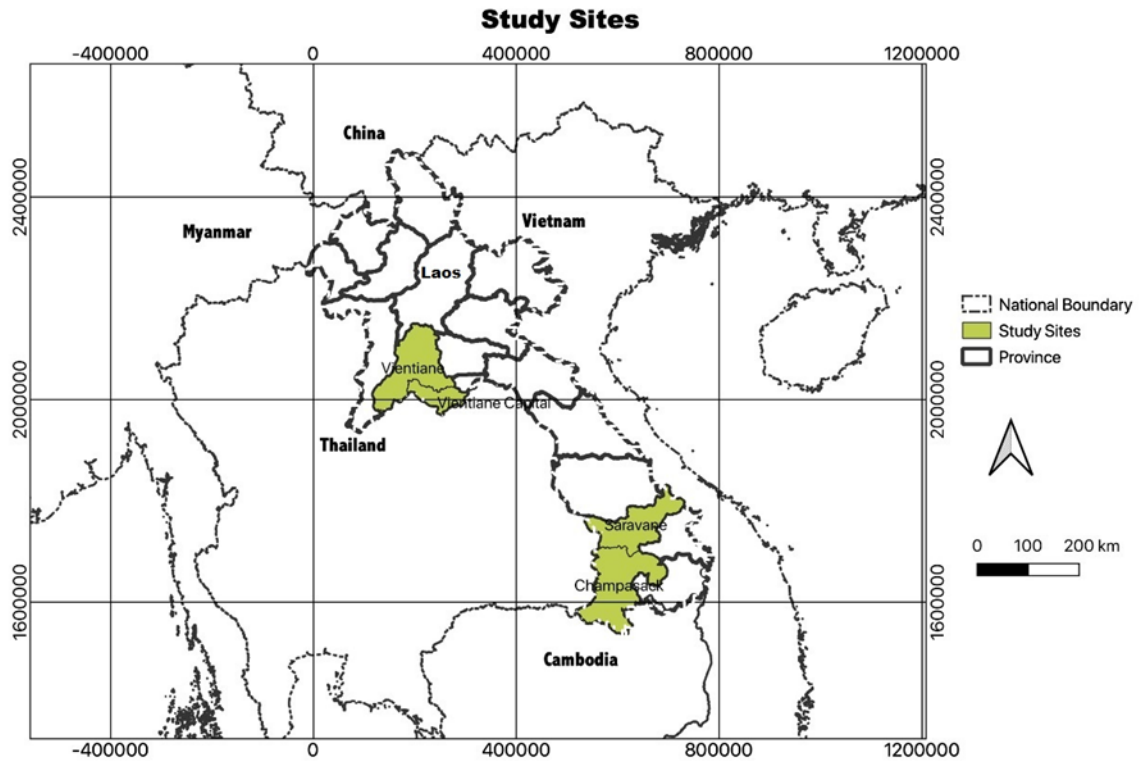
## **1.4 Research Approach**

A systematic literature review of research on entrepreneurship in the agricultural sector and bibliometric technique identified that most of the 162 sampled articles were quantitative, with only 53 empirical articles applying qualitative methods (Dias et al., 2019). Similarly, a systematic review on research into entrepreneurial intentions found that most empirical papers applied quantitative research methods, and only a few studies used qualitative approaches (Liñán & Fayolle, 2015). Hence, there is scope for future entrepreneurship related research to use applied qualitative approaches and/or a mixture of methods (Liñán & Fayolle, 2015). Accordingly, this thesis applies both quantitative and qualitative social research methodologies to identify factors that influence youth to be agripreneurs, and to determine the relative strength of these factors, from the perspective of key institutions, including young agripreneurs and young people who have not yet begun their careers. The process of identifying appropriate techniques is described in Chapter 2.

## **1.5 Field study sites**

Vientiane Capital and Champasak province are two of the largest plains regions in Laos that have a high potential for food production. However, they have been reported as the top non-farming household sites in Laos (Steering Committee for Lao Census of Agriculture, 2021). They are also the locations of the two out of the total five of public universities in Laos (MoES, 2016). Accordingly, they were used as case study areas. Therefore, Vientiane Capital, in central Laos, the more urban representative, and Champasak province, approximately 600 km south

of Vientiane Capital, the more rural representative, and the farms nearby that bordered with them, namely farms in Vientiane and Salavan provinces, were selected as field study sites (Figure 1.1).



**Figure 1.1** Field study sites in Laos indicating Vientiane Capital, and Vientiane, Champasak and Salavan provinces.

## 1.6 Thesis structure

The structure of this thesis presented in Figure 1.2. In Chapter 2, a conceptual framework is developed from which the research questions can be examined. It begins by presenting the case study context, identifying the benefits of inclusive youth in agripreneurship and the knowledge gaps that limit or prevent youth in agripreneurship in Laos. The research methodologies employed in this literature are examined, namely behavioural research into agripreneurial career selection and entrepreneurship research. From these, a conceptual framework appropriate to the context of Laos is created, the AgriPreneurial Career Framework (APCF), consolidated from existing frameworks for studying career decisions. A narrative approach is then used to validate the framework and/or complement the understanding of circumstances of young agripreneurs in Laos, including relevant enabling environment that may facilitate or hinder their engagement in agripreneurial careers. The conceptual frameworks are developed through reviewing the literature and are built on existing theories and research approaches. These are namely the Theory of Planned Behaviour (Ajzen, 1991), the Entrepreneurial Event Model (Shapiro & Shokol, 1982), and the Careership Theory (Hodkinson & Sparkes, 1997) for research questions 1 and 2. A narrative approach (Polkinghorne, 1995; Smith, 2000) is used for research question 3 and the conceptualisation of the agripreneurial market system (ILO, 2021) is used for research question 4.

Chapter 3 addresses Research Question 1 by statistically analysing relationships between demographic factors and motivational antecedents of intention to practice small and medium scale agripreneurship using survey data collected from 298 Lao undergraduate students. It hypothesised that significant relationships exist between self-assessments of motivational antecedents of intention, as defined in the Theory of Planned Behaviour, towards becoming an

agripreneur, and demographic factors. The results identify factors that significantly influence intention and motivational antecedents of intention.

Chapter 4 applies a Structural Equation Model developed according to a consolidated framework developed in Chapter 2 to investigate the complex determinants influencing the intention of Lao youth to engage in small and medium scale agripreneurial careers, in accordance with Research Question 2. The investigated determinants included perceptions of the enabling environment for conducting agripreneurship, and their perceptions of their ability and willingness to capitalise on them.

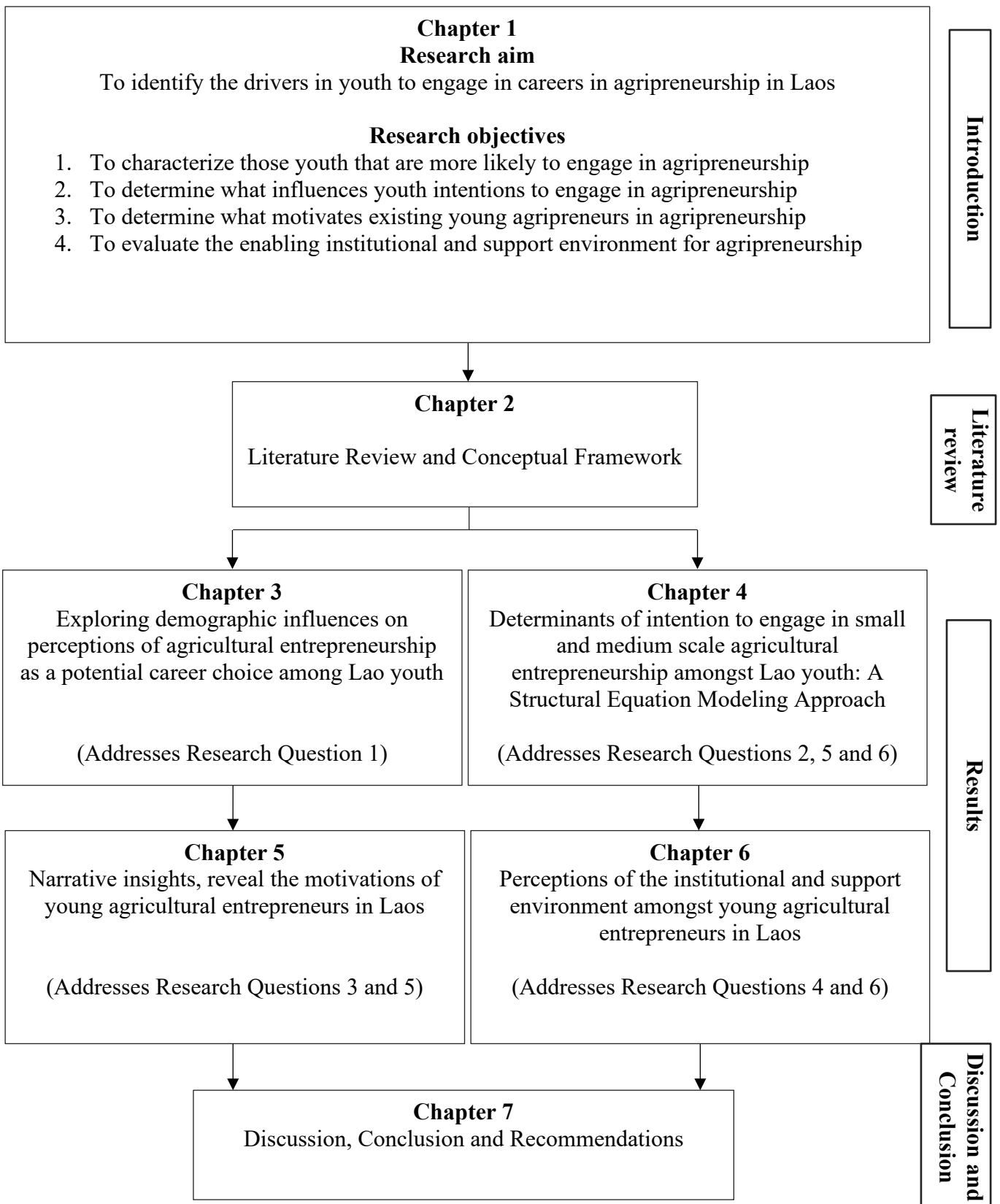
In Chapter 5, Research Question 3 is addressed by applying qualitative methods called qualitative content analysis (Weber, 1990) in a supplementary with narrative inquiry techniques namely paradigmatic analysis of narratives and diachronic narrative analysis approach (Polkinghorne, 1995; Smith, 2000) with practicing 74 young agripreneurs in Laos. The aims are to obtain new understanding of the factors that motivate youth to enter a career as agripreneurs, and compare the results with the prior quantitative approach in Chapter 4 (Research Question 2) to validate the framework (APCF) developed.

In Chapter 6, the International Labour Organisation (ILO)'s market systems framework (ILO, 2021), developed for organising the analysis of production systems, was adopted to embed our conceptual approach (Figure 6.1, Chapter 6) to understand the key characteristics of the enabling environment that facilitate or hinder young agripreneurs in Laos (Research Question 4). The role of both formal institutions, such as political and legislative system, and informal institutions, such as norms, values, and attitudes were explored through the lens of 74 practicing young agripreneurs. A role played by a range of support services reported in the literature, such as access to infrastructure, finance, and information also were explored. Content analysis (Weber, 1990) was applied to identify positive and negative influences and processes,



obstacles perceived (Tables 6.2, Chapter 6) as well as suggestions and recommendations for improvements from the 74 young agripreneurs. By relating these perceptions to the literature on the institutions and supporting functions that make up the enabling environment, we propose recommendations which may foster and support agripreneurship in Laos and other developing countries.

Chapter 7 synthesises the main conclusions from each of the preceding results chapters to address Research Questions 1, 2, 3 and 4 and to demonstrate the extent to which these questions have been answered. The results are discussed in context with those four research questions to answer Research Questions 5 and 6. Then, opportunities for future research identified throughout the thesis are summarised to set the agenda for future research that would continue to identify scientific and managerial implications on the topic of youth agripreneurship. Recommendations for the government and decision-makers in Laos to foster vital and productive small and medium scale agripreneurship, specified as 0.5 to 3 hectares, among Lao youth are presented.



**Figure 1.2** Thesis structure showing the sequence of chapters.

## 1.7 References

- Arindam, N., Sujeet, K. J., Asif, M., Sanjit, M., Jancy, G., D.K, G., K.K, D., & T.K, M. (2018). Predictive Factors Affecting Indian Rural Farm Youths' Decisions to Stay in or Leave Agriculture Sector. *Agricultural Science and Technology*, 20(2), 221–234
- Bennell, P. (2007). Promoting Livelihood Opportunities for Rural Youth. Knowledge and Skills for Development. <https://pdfs.semanticscholar.org/2842/3e9e1ef81c9f3cc3076b8ab2f6c6f3454061.pdf>
- Bond, J., & Graff, G. (2012). G.A. Alsos, S. Carter, E. Ljunggren, and F. Welter (eds.), *The Handbook of Research on Entrepreneurship in Agriculture and Rural Development*. Edward Elgar Publishing, Inc. 320 pp., ISBN: 978 1 84844 635 0. *Agribusiness*, 28(1), 118–120. <https://doi.org/10.1002/agr.20294>
- Bouichou, E., Abdoulaye, T., Allali, K., Bouayad, A., & Fadlaoui, A. (2021). Entrepreneurial intention among rural youth in moroccan agricultural cooperatives: The future of rural entrepreneurship. *Sustainability (Basel, Switzerland)*, 13(16), 9247–. <https://doi.org/10.3390/su13169247>
- Buyinza, J., Nuberg, I. K., Muthuri, C. W., & Denton, M. D. (2020). Psychological Factors Influencing Farmers' Intention to Adopt Agroforestry: A Structural Equation Modeling Approach. *Journal of Sustainable Forestry*, 39(8), 854–865. <https://doi.org/10.1080/10549811.2020.1738948>
- da Silva, C.A., Baker, D., Shepherd, A. W., Jenane, C., & Miranda-da-Cruz, S. (2009). Agro-industries for development. In *Agro-industries for Development*. CABI. <https://doi.org/10.1079/9781845935764.0000>

- Dias, C.S., Rodrigues, R. G., & Ferreira, J. J. (2019). What's new in the research on agricultural entrepreneurship? *Journal of Rural Studies*, 65, 99–115.  
<https://doi.org/10.1016/j.jrurstud.2018.11.003>
- Fitz-Koch, S., Nordqvist, M., Carter, S., & Hunter, E. (2018). Entrepreneurship in the Agricultural Sector: A Literature Review and Future Research Opportunities. *Entrepreneurship Theory and Practice*, 42(1), 129–166.  
<https://doi.org/10.1177/1042258717732958>
- Freire-Gibb, L.C., & Nielsen, K. (2014). Entrepreneurship within Urban and Rural Areas: Creative People and Social Networks. *Regional Studies*, 48(1), 139–153.  
<https://doi.org/10.1080/00343404.2013.808322>
- Giuliani, A., Mengel, S., Paisley, C., Perkins, N., Flink, I., Oliveros, O., & Wongtschowski, M. (2017). Realities, Perceptions, Challenges and Aspirations of Rural Youth in Dryland Agriculture in the Midelt Province, Morocco. *Sustainability (Basel, Switzerland)*, 9(6), 871–. <https://doi.org/10.3390/su9060871>
- Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: Citation, thematic analyses, and research agenda. *IDEAS Working Paper Series from RePEc*, 11(4), 907–933. <https://doi.org/10.1007/s11365-015-0356-5>
- MAF. (2015). *Agriculture Development Strategy to 2025 and Vision to the year 2030*. Ministry of Agriculture and Forestry. <https://www.maf.gov.la/wp-content/uploads/2016/01/MDS-2025-and-Vision-to-2030-Eng.pdf>

- Mmbengwa, V.M., Qin, X., & Nkobi, V. (2021). Determinants of youth entrepreneurial success in agribusiness sector: the case of Vhembe district municipality of South Africa. *Cogent Social Sciences*, 7(1). <https://doi.org/10.1080/23311886.2021.1982235>
- MoES. (2016). *Department of Higher Education Annual Report*. Ministry of Education and Sports, Laos.
- Murray, L.T. (2009). Exit from agriculture: a step forward or a step backward for the rural poor? *The Journal of Peasant Studies*, 36(3), 629–636. <https://doi.org/10.1080/03066150903142998>
- OECD. (2017). *Unlocking the Potential of Youth Entrepreneurship in Developing Countries from Subsistence to Performance*. OECD Publishing. <https://doi.org/10.1787/9789264277830-en>
- Peters, K. (2011). *War and the crisis of youth in Sierra Leone*. Cambridge University Press.
- Petit, O., Kuper, M., & Ameer, F. (2018). From worker to peasant and then to entrepreneur? Land reform and agrarian change in the Saïss (Morocco). *World Development*, 105, 119–131. <https://doi.org/10.1016/j.worlddev.2017.12.031>
- Refiswal, E., Julianti, T., Supriana, & Iskandarini. (2021). Development strategy of young agricultural entrepreneurs. *IOP Conference Series: Earth and Environmental Science*, 782(2), 22059–. <https://doi.org/10.1088/1755-1315/782/2/022059>
- Richards, P., Rizzo, M., Weiss, M. L., Steiner, C., & England, S. (2010). Do Peasants Need GM Crops? *The Journal of Peasant Studies*, 37(3), 559–574. <https://doi.org/10.1080/03066150.2010.494378>

- Shattuck, A., Manivong, V., & Vongthilard, S. (2019). *Towards 'People Centred Agriculture: Rethinking rural labour, youth employment and the agrarian transition in Laos*. Department of Policy and legal Affairs, Ministry of Agriculture and Forestry, Laos. <https://www.laofab.org/document/view/4069>
- Solesvik, M.Z., Westhead, P., Kolvereid, L., & Matlay, H. (2012). Student intentions to become self-employed: The Ukrainian context. *Journal of Small Business and Enterprise Development*, 19(3), 441–460.  
<https://doi.org/10.1108/14626001211250153>
- Steering Committee for Lao Census of Agriculture (2021). *3rd Lao census of agriculture 2019/2020*. Lao Statistics Bureau.
- UN. (2013). *Ten things to know about rural youth*. United Nations Department of Economic and Social Affairs. <https://www.ifad.org/fr/web/latest/-/photo/ten-things-to-know-about-rural-youth>
- UN. (2018). *WORLD YOUTH REPORT: Youth and the 2030 Agenda for Sustainable Development*. United Nations Department of Economic and Social Affairs <https://www.un.org/development/desa/youth/wpcontent/uploads/sites/21/2018/12/WorldYouthReport-2030Agenda.pdf>
- Valle, F.D. (2012). *Exploring Opportunities and Constraints for Young Agro-Entrepreneurs in Africa*. Food and Agriculture Organization (FAO).
- Vijayabaskar, M., Narayanan, S., & Srinivasan, S. (2018). Agricultural revival and reaping the youth dividend. *Economic and Political Weekly*, 53(26-27), 8–16.

- White, B. (2012). Agriculture and the Generation Problem: Rural Youth, Employment and the Future of Farming. *IDS Bulletin (Brighton, 1984)*, 43(6), 9–19. <https://doi.org/10.1111/j.1759-5436.2012.00375.x>
- Williams, M., & Hovorka, A. J. (2013). CONTEXTUALIZING YOUTH ENTREPRENEURSHIP: THE CASE OF BOTSWANA'S YOUNG FARMERS FUND. *Journal of Developmental Entrepreneurship*, 18(4), 1350022–. <https://doi.org/10.1142/S1084946713500222>
- World Bank. (2012). Agricultural Innovation Systems: An Investment Sourcebook. In *Agricultural Innovation Systems*. World Bank Publications. <https://doi.org/10.1596/978-0-8213-8684-2>
- Yamaguchi, K., Stefenon, S. F., Ramos, N. K., dos Santos, V. S., Forbici, F., Klaar, A. C. R., Ferreira, F. C. S., Cassol, A., Marietto, M. L., Yamaguchi, S. K. F., & de Borba, M. L. (2020). Young people's perceptions about the difficulties of entrepreneurship and developing rural properties in family agriculture. *Sustainability (Basel, Switzerland)*, 12(21), 1–12. <https://doi.org/10.3390/su12218783>

## **Chapter Two: Literature Review**

### **2.1 Chapter introduction**

In the introduction to this thesis, it was established that scientific literature on agripreneurship in developing countries has largely been neglected by the mainstream research on entrepreneurship, with the majority of agripreneurial research focussed in developed countries. This is despite the increasing research interest in the agricultural sector's potential to provide income generating opportunities for rural youth in developing countries, the challenges related to youth participation in this sector, and the options for overcoming them. This chapter introduces the Lao People's Democratic Republic (Laos) as a developing country undergoing agrarian transition, in which the commercialisation of agriculture would benefit from greater youth participation by small and medium scale agripreneurs, and identifies the knowledge gaps that limit interventions that could obtain the benefits of youth agripreneurship in Laos. It then reviews research on agripreneurial career selection, in the fields of behavioural research and entrepreneurship research, including dominant conceptualisations of the influences on career selection. The review concludes that in Laos, behavioural research frameworks may be applied to focus on career decision makers to identify motivational antecedents that may influence behavioural intentions towards agripreneurial careers. Entrepreneurial research may also be used to make meaning from the lived experiences of practicing young agripreneurs, particularly the phenomena that motivated them to become agripreneurs and their perceptions of the enabling environment.



## **2.2 Agripreneurship as a pathway for sustainable agricultural development and improved youth opportunities in Laos**

### **2.2.1 Definitions**

In this thesis, agripreneurs are defined as “owner-managers of agricultural businesses” as identified by Pindado & Sánchez (2017), and agripreneurship being “the ability and willingness of a person to recognize viable agricultural business opportunity, gather resources, establish and manage the resulting agribusiness successfully” (Otache, 2017). The focus of this study are small and medium scale agripreneurs with landholdings ranging from 0.5 to 3 hectares according to Lao Census of Agriculture (Steering Committee for Lao Census of Agriculture, 2014), and aged between 15 and 35, which are defined as “youth” by the Lao People’s Revolutionary Youth Union (LYU & UNFPA, 2014).

### **2.2.2 Laos country context**

Laos, as one of the least developed countries (UN, 2021) is a nation whose population is both highly rural (Ducourtieux et al., 2005; Goto & Douangneune, 2017; Manivong et al., 2014; Senties Portilla, 2017; Southavilay et al., 2013) and the youngest in Asia, with a median age of 23 (Vongpraseuth & Phengsavatdy, 2021). Laos is sparsely populated, with 7.2 million inhabitants at a density of approximately 32 people per km<sup>2</sup> (CIA, 2019). Although it is a rapidly urbanising country, 64% of the population still live in rural areas (World Bank, 2022) with more than three quarters of its residential households engaged in agriculture (WFP, 2017). Even amongst urban residents, nearly half of households engage in some form of agriculture (Steering Committee for Lao Census of Agriculture, 2014). Despite the significance of the agriculture sector, its contribution to the growth of Laos national GDP has decreased from 55.5% in 1991-1998 into 31.4% in 2008-2012.

Over a quarter of the Lao population live below national poverty line, with poverty particularly prevalent in rural and remote regions (Messerli et al., 2008; WFP, 2017) where two-thirds of Laos' rural population are considered to be operating with subsistence incomes (Banks et al., 2022; Goto & Douangneune, 2017; Manivong et al., 2014; Moglia et al., 2018). Similar to other developing countries, Lao youth, especially rural youth, are facing limited employment opportunities, limited education, lack of a voice in decision-making, and a mismatch between young workforces skills and the workforce market demand (LYU & UNFPA, 2014; Vongpraseuth & Phengsavatdy, 2021). This lack of choices traps youth in a poverty cycle, as they remain in unremunerated or subsistence level work (LYU & UNFPA, 2014). Evidence for this can be seen in the fact that although approximately 75% of young people in Laos work in the agricultural sector, only half do so with market interactions (Manikham, 2018), as smallholder and subsistence farming predominates (Samm, 2020). With fewer off-farm opportunities compared with urban youth and youth of regional neighbours (Shattuck et al., 2019), there is a danger of rural youth being left behind as Laos modernises, unless they are capable of transitioning to more entrepreneurial livelihood models (White, 2012). Accordingly, inclusion of youth in the commercialisation of the agricultural sector, especially those engaged in smallholder and subsistence farming, could significantly assist Laos in its national poverty reduction scheme (Gaiha et al., 2012).

### **2.2.3 Commercialisation of agriculture in Laos**

The Government of Laos has identified the agricultural sector as the “major battlefield” for economic development, prioritising the shifting from subsistence farming into commercial scales and development of agricultural market systems (MAF, 2015). Three commercial farming modalities have emerged, characterised as concessions, contract farming and small-investor farming (Samm, 2020). However, development policies have prioritised large-scale

investment over small-scale agriculture, with the smallholder scheme receiving the least support from the government compared with the other schemes (Samm, 2020), despite the potential contribution to livelihood development that commercialisation of smallholder agriculture may bring. The emphasis on large-scale investment in commercialisation strategies has resulted in the consolidation of smallholdings, often exceeding tens of thousands of hectares, for foreign concessionary land acquisition, which occupy an estimated 10 to 14% of the total area of agricultural land in Laos (Campbell et al., 2012). It is suggested that large scale land conversion is competing with smallholder farmers by dominating local markets with untaxed or reduced taxed products (Gaiha & Annim, 2010). Smallholder farmers have responded by: (a) changing production from subsistence into commercial production operations, (b) seeking international employment opportunities (e.g., Thailand), and, (c) gaining employment as wage labourers on plantations or engaging in illegal land clearing to increase production (Fraser, 2009). Youth may be better positioned to changing to commercial production because youth tend to be more enterprising, innovative, risk-tolerant and accepting of new technologies (Arindam et al., 2018; Petit et al., 2018; Valle, 2012; White, 2012), which may have beneficial developmental outcomes for Laos. Obtaining the benefits of youth agripreneurship requires a comprehensive understanding of the circumstances that cause youth to choose this career pathway, and the contextual factors that facilitate or hinder their practice. However, insufficient research is available to assess these requirements.

### **2.3 Understanding agripreneurial career selection**

Behavioural sciences has been applied to understand entrepreneurial career decisions, and the motivational antecedents that contribute to the behavioural intentions of people who choose entrepreneurial and other careers. Separately, the scientific study of entrepreneurship has emerged as a distinct field that is characterised by research into the establishment and

performance of entrepreneurial ventures, including studies that have sought to identify the reasons and goals that motivate individuals to create businesses. In this section, the application of behaviour sciences and entrepreneurship research to study the motivational antecedents contributing to behavioural intentions is reviewed, along with the characteristics and circumstances that cause the selection of entrepreneurial careers, as they applied to understanding youth engagement in agripreneurship in Laos.

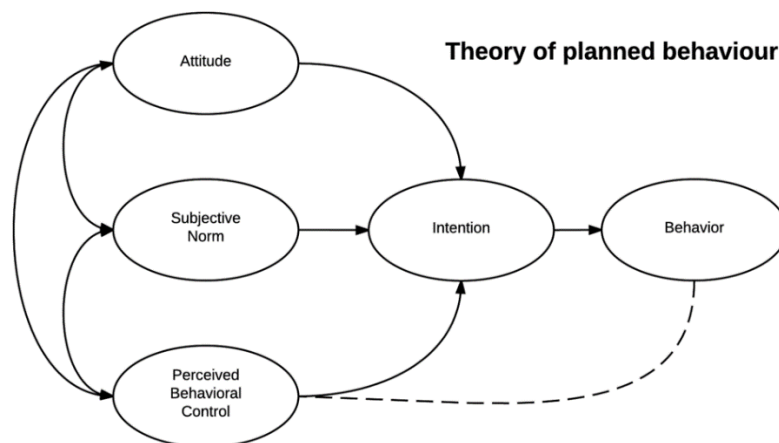
### **2.3.1 Behavioural research into career selection**

Behavioural sciences are applied to problems related to career selection by providing a theoretical basis for predicting career selection from quantifiable phenomena, or conversely, quantifying the impact of phenomena on career selection. A range of frameworks have been applied for these purposes. Most notable amongst these are the Theory of Planned Behaviour (TPB) (Ajzen, 1991), the Entrepreneurial Event Model (EEM) (Shapero & Shokol, 1982), and “Careership”, a sociological theory of career decision making (Hodkinson & Sparkes, 1997).

#### *Theory of Planned Behaviour*

The TPB is a well-established model applied to understand and predict individual behaviours (Gorgievski et al., 2018). The TPB developed from the theory of reasoned action, with the assumptions that an individuals’ behaviour is determined by their intention to perform the behaviour, that an individuals’ behaviour is usually rational, and their actions are the result of their direct and indirect consideration of the information available to them (Ajzen, 1991). According to TPB, there are three independent determinants underlining an individuals’ intention to perform a behaviour that are the result of the individuals’ beliefs: attitudes towards the behaviour, subjective norms with respect to the behaviour, and perceived control over the behaviour. Beliefs about the normative expectations of others are known as normative beliefs,

and belief about the presence of factors facilitating and preventing the behaviour performance are known as control beliefs, respectively. The function of these three determinants forms a highly accurate prediction of individuals' intention to perform behaviours (Figure 2.1). Despite the uncertainty of the exact nature of the relationships between these three main factors, the accuracy in prediction of human behavioural intentions from these three factors is well-founded and broadly accepted (Ajzen, 2012; Murphy et al., 2017); a combination between these intentions and perceived behavioural control accounts for a substantial fraction of variance in human actual behaviour (Ajzen, 1991).



**Figure 2.1** The Theory of Planned Behaviour (Ajzen, 1991).

The TPB has been successfully applied as a framework for studies in developing countries that measure youth career intentions (dos Santos & Brito de Almeida, 2018; Solikhah, 2014), farming practice intentions (Lalani et al., 2016; Senger et al., 2017), youth intentions about participating in urban agriculture (Tiraieyari & Krauss, 2018), and school leavers' entrepreneurial intentions (Ambad & Damit, 2016; Astuti & Martdianty, 2012; Dias, et al., 2019; Kibuka, 2010; Yang, 2013). Its validity as a theoretical framework for entrepreneurial career intentions and behaviour prediction has been repeatedly demonstrated (Kautonen et al., 2015; Schlaegel & Koenig, 2014). When conceptualised according to the TPB, agripreneurship

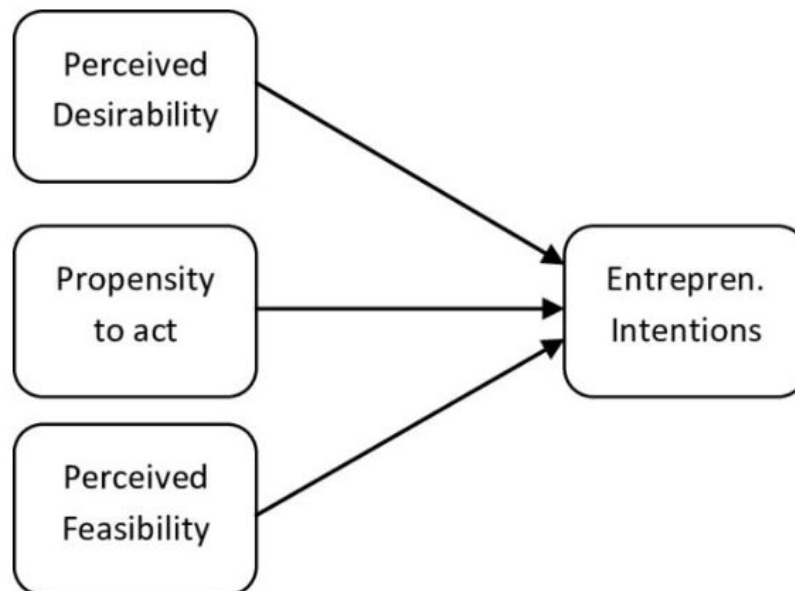
is a behaviour performed by an individual according to the individual's intention to engage in it, which itself is influenced by the value the individual places on the behaviour (attitudes), the views of significant others (normative beliefs), and the ease with which it can be performed (control beliefs).

### *Entrepreneurial event model*

Despite the high accuracy of the TPB in the prediction of individuals' intention or behaviour, there is still space for other factors that could contribute to individuals' intention towards behaviour within the theoretical framework (Ajzen, 1991; Karimi, 2020). Shapero & Shokol (1982) presented the EEM as a better fit for predicting specific intentions related to entrepreneurship or business engagement (Kibuka, 2010). The EEM is an intention model specific to the domain of entrepreneurship, which accounts for certain entrepreneurial factors.

According to the EEM, intentions to start a business derive from perceptions of desirability and feasibility and from a propensity to act upon opportunities (Figure 2.2). Perceived Desirability refers to individuals' evaluation on whether a particular business or career would match their desires (Shapero & Sokol, 1982). Propensity to Act is defined as a stable personality characteristic (Krueger & Brazeal, 1994) facilitating individuals in acting on their desires and a willingness to overcome any risks, adversity and uncertainty they face while starting or running a business of their choice (Krueger et al., 2000). Perceived Feasibility refers to individual self-evaluation of many aspects that together could determine whether they feel capable of performing a particular entrepreneurial career or not (Shapero & Sokol, 1982). This evaluation may include the perception of their own ability to access particular resources for a purpose of starting or running their entrepreneurial career, and the assessment of their related knowledge or education (Ozaralli & Rivenburgh, 2016). Previous research has considered the constructs of perceived desirability and perceived feasibility in the EEM as being

interchangeable with attitude perceived behaviour control in the TPB, respectively (Liñán & Fayolle, 2015). Schlaegel & Koenig (2014) suggested the EEM should be integrated with the TPB for a more complete understanding of entrepreneurial intentions.



**Figure 2.2** The Entrepreneurial Event Model (Shapero & Shokol, 1982).

*“Careership”, a sociological theory of career decision making*

There are three competing dominant career decision-making theories that are known as: (1) Trait theory – which is matching individuals to career based on personality traits, required skills and interest, (2) the Developmental Model of Ginzberg et al. (1951) and Super (1953, 1957, 1980) which is that career decision-making involves developmental stages, in which the young need to develop their ability and maturity to make a “good” decision, and (3) the Social Learning Theory of Krumboltz (1979) which is “based on a largely discredited view of learning, based on a sophisticated version of behaviourism”. Some of these theories have been criticized as being oversimplified due to ignorance relating to the social and contextual factors that can be considered useful in decision making. In addition, viewing social experiences as external rather an integral factors in a process of individual career decision-making has also

been identified as a limitation in these models (Hodkinson & Sparkes, 1997). Hodkinson & Sparkes (1997) developed a contrasting career decision-making model in which “Careership” is claimed to be a blend of factors relating to social and culture with personal choices, building a more complex learning model, and merging between personal preferences and opportunity structures. The Careership theory includes three interrelated dimensions: pragmatically rational decision-making, power relations in the training credits field, and transformations, turning points and routines. These are developed under Pierre Bourdieu’s practice theory concepts: habitus, field and capital (Maggio, 2017).

The role of environmental and personal factors in decision making are respectively captured in the concepts of the Field and the Habitus, as conceptualised in Social Theory of Practice (Bourdieu, 1977). Field comprises enabling environments such as institutional support and governmental policies. There is a trend of youth career decision-making studies applying Social Theory of Practice, with “Careership”: a sociological theory of career decision making (Hodkinson & Sparkes, 1997) providing the fundamental framework that is used or modified to suit a variety of contexts. This theory posits that young people are rational and pragmatic when it comes to selecting a career and that most make career decisions based on personal preferences, personal identity/characteristics, social structure (i.e., culture), values, norms of action, perceived information, opportunities and risks, and family background (Hodkinson & Sparkes, 1997). These are categorised under the Habitus concept.

Career choice is a part of on-going interactions of the individual within the field (Hodkinson & Sparkes, 1997). Each field contains different stakeholders and regulations. The reality for young people is complex, and is governed by the extent that the environment enables them to be enterprising in agriculture, to perceive of their rural opportunities and to use their ability and be willing to capitalise on them. This requires a supportive enabling environment namely



public policies, governance structure, regulatory frameworks, social norms, rules and systems function (OECD, 2018).

According to the Careership theory, individuals' power and negotiating relations, perceptions and reactions to stakeholders, and regulations in the Field depend on their Habitus, capital owned and perceived opportunities. The forms of capital include economic, social, cultural, symbolic and bodily aspects (Hodkinson & Sparkes, 1997). However, the Careership theory argues that an individual's habitus could change along what it is called turning points and routines. This includes an absorbing of new information, changes in social-economic status, geographical location, level of academic achievement, educational and training provision and labour markets (Hodkinson & Sparkes 1997). Sometimes new experiences and insights of individuals could not only change their habitus but even lead to the development of a new secondary habitus, and may lead to a contrasting deposition of individuals.

#### *Consolidation of frameworks into the AgriPreneurial Career Framework*

The Theory of Planned Behaviour, the Entrepreneurial Event Model, and the Careership theory share many common factors (Krueger et al., 2000; Liñán & Fayolle, 2015) whilst others are unique to each framework (Table 2.1). Despite the high accuracy of the TPB in the prediction of individuals' intentions or behaviours, there is still space for other factors that could contribute to individuals' intentions towards behaviour within the theoretical framework (Ajzen, 1991; Karimi, 2020). Studies urged future research applying TPB to integrate the theory with other factors such as institutional support and/or the enabling environment (Agu et al., 2021; Buyinza et al., 2020). This suggestion was also from the study that had already integrated TPB and EEM as a conceptual framework in their study (Agu et al., 2021). Furthermore, it has been argued that career choice is a part of on-going interactions of individuals within different elements of the enabling environment, such as institutional support

and governmental policies (Hodkinson & Sparkes, 1997). Numerous studies have identified circumstances in the enabling environment that discourage youth from voluntarily engaging in an agricultural career (Arindam et al., 2018; Giuliani et al., 2017; Murray Li, 2009; Valle, 2012; Vijayabaskar et al., 2018; White, 2012). The role of the environment in decision making are captured in the concepts of the Field in the Social Theory of Practice (Bourdieu, 1977) and the derivative Careership theory (Hodkinson & Sparkes, 1997). Accordingly, we developed a consolidated framework, APCF to assess the direct and indirect effects of hypothesized factors that influence the behavioural intention of youth to be small and medium scale agripreneurs in Laos (Figure 2.3).

The hypothesised factors used in the APCF were selected according to the behavioural frameworks that are reviewed above (Table 2.1). To characterise the Field, elements of the enabling environment were identified that were proposed to influence the extent that the environment enables youth to be enterprising in agriculture, to perceive rural opportunities, to use their ability and be willing to capitalise on them. Both primary information and literature review of environmental factors that encourage or discourage youth in agriculture globally. For the primary information, key informant interviews were conducted with senior academics and researchers in Laos and online surveys with Lao youth, students and early and mid-career professionals. Interviews with key informants were used to identify dominant beliefs about the enabling environment and expected outcomes of agripreneurship. The online surveys were used to identify dominant beliefs about agripreneurship. These beliefs were incorporated as hypothetical indicators of the field in the APCF. As a result of these investigations, nine domains are included as indicators of the enabling environment or institutional support on agripreneurship. They are agricultural extension services, agricultural policy, financial/credit access, information sharing and distribution, infrastructure and transportation, taxation and

registration, research development and technology, market support, and educational support (Table 2.1). Their significance the enabling environment is outlined below.

#### Agricultural extension services, and information sharing and distribution

Agricultural extension programmes in developing economies nominally increase agricultural productivity and income by disseminating information on farm technologies and supporting farmers in developing their farm technical and managerial skills (Danso-Abbeam et al., 2018), thereby raising their capacity. In Laos, extension services has been provided by the Department of Technical Extension and Agro-Processing (DTEAP) and its line organisations in provincial and district levels (Alexander et al., 2017). Despite the inclusion of other areas and scopes in agricultural extension services provided in most countries such as transferring technology, education, changing attitudes, developing human resources; agricultural information and extension services in Laos were significantly focused on production issues aspects such as improving crops and livestock production, integrated pest management, etc. (Alexander et al., 2017).

Agricultural knowledge and skills are mandated to be transferred by the National Agriculture and Forestry Research Institute (NAFRI), five agricultural colleges (which are the main providers of qualified government staff), and Provincial and district agriculture and forestry offices that provide Extension services (ADB, 2018, p.14). Both DTEAP, NAFRI and their line organisation offices are under Laos Ministry of Agriculture and Forestry. These organisations suffer from a lack of capacity, and operational costs of the services are also highly dependent on external financing from foreign aid, international development agencies, non-governmental organisations and private sectors (ADB, 2018, p.14; Alexander et al., 2017). Key informants indicated formal and informal knowledge networks between farmers also result in the spread of agricultural information, technology and skills through altruism and observation.

Recently, social media and other internet communications have enabled agricultural knowledge sharing through new pathways. It is likely that the challenges faced by formal agricultural information and extension systems in Laos prevent them from having a strong motivating effect on youth to become agripreneurs, although the rise of new forms of information sharing may offset this to an extent that is currently unknown.

### Agricultural policy

According to OECD (2018), small and medium-sized enterprises (SMEs) policy plays a significant impact on the growth of economic, employment and inclusivity of the society. SMEs targeted institutions, laws, regulations and policies influence the actions and behaviour amongst economic actors and policy makers. The effectiveness and efficiency of the SMEs policy implementation or the level of benefit that the enterprises could have from the SMEs policy depend on both the policy elaboration, implementation, monitoring and evaluation at all levels, and structures and allocation of human and financial resources of the SMEs policy to (OECD, 2018). In the developing world, many international and regional development policies prioritise large-scale investments and neglect small-scale agriculture (Murray Li, 2009; White, 2012), which may discourage young people from small-scale agricultural enterprises (Arindam et al., 2018; Giuliani et al., 2017; Murray Li, 2009; Valle, 2012; Vijayabaskar et al., 2018; White, 2012). Section 2.2.3 of this chapter details the relationship between the Agricultural Policy of Laos and smallholder commercialisation and its expected effect on agripreneurship. Furthermore, in terms of inclusive entrepreneurship policy for youth in 10 ASEAN countries, Laos ranks below the median for inclusion in planning and design, implementation, and monitoring and evaluation (OECD, 2018, p.193).

### Financial/credit access

Access to formal external finance, informal finance or other alternative sources of finance and financial products has been widely acknowledged by an extensive body of literature as a vital enabler supporting enterprises, especially small and medium-sized enterprises, to reach their optimal size and increase competitiveness (OECD, 2018). Facilitating access to finance thus has been identified as a priority for reforming the enabling environment for agribusiness sector (Konig et al., 2013), and the negative impact of financial exclusion and inequality on small agricultural enterprises is well-documented in a wide range of contexts (Kiros & Meshesha 2022, Peprah et al., 2021). In Laos, financial systems are reported in the literature as underdeveloped in comparison to other ASEAN and East Asian countries (Ling & Chanthavong, 2022; OECD, 2018; World Bank, 2019). Specific challenges in Laos that are reported to limit smallholder agricultural value chains include high interest, short pay-back times, and difficulty in getting loans (Bannalath et al., 2021; Manivong et al., 2016). It is likely that these challenges dampen motivation to invest in new agripreneurial firms in Laos.

### Infrastructure and transportation

Infrastructure is an essential input into the production of all kinds of goods and services (OECD, 2018). Almost all agricultural inputs and products require transportation by road, rail or water. Irrigation requires its own specialised infrastructure. Value addition, especially processing, often requires electricity whilst marketing and sales may be dependent on telecommunications. An absence of basic rural infrastructure has been implicated in limiting fundamental agricultural activities in other developing contexts (Giuliani et al., 2017; White, 2012). Inadequate infrastructure is often referred to as a major constraint on the socio-economic development of Laos despite rapid and increasing development, and therefore may be expected to constrain agripreneurship (OpenDevelopment, 2018).

### Taxation and registration

Stable legal frameworks can reducing uncertainties regarding investments in commercial agriculture (Konig et al., 2013). Developing good regulatory practices, tax policies and procedures for registration and compliance can help create a more conducive environment for SMEs (OECD, 2018). Commercial agriculture in Laos reported to be hampered by an uncertain regulatory and legal environment, difficulties with contract enforcement; expensive transaction costs for business registrations, export licenses and other administrative processes, and market-restraining practices (Bestari et al., 2006, p.6).

### Research, development and technology

The role of research, development and new technologies has been acknowledged in the literature as a crucial factor enabling enterprises in emerging economies to attain higher competitiveness in the global value chains and moving to a more knowledge-based economies and innovative enterprises (OECD, 2018). According to key informants in Laos, the government oversees research aimed at providing improved inputs for farmers, particularly seeds. New technologies are not developed in any meaningful way domestically, however new and improved agricultural products become available with time and agricultural producers have the chance to invest in them as inputs into their farming systems. The promotion, availability and quality of research and development outputs and new technology in Laos is likely to affect the innovation and motivation of youth to start new agricultural enterprises.

### Market support

A supportive market environment for agripreneurship can be facilitated through measures such as export promotion, trade facilitation, e-commerce (e.g. digital transaction platforms and their regulation), and the development and enforcement of quality standards that improve competitiveness and enable entry into new markets (OECD, 2018). In Laos, direct measures to

improve the market access of all enterprises is encouraged through policy aspirations and instituted on multiple levels, by a variety of organisations, including government and NGOs (MAF, 2015). Particular emphasis from higher levels of management has been given to export promotion and integration of Lao products global value chains (OECD, 2018), whilst agricultural trade facilitation at the sub-national level is also a support function of Provincial and district agriculture and forestry offices (MAF, 2015). E-commerce is still in an early development (OECD, 2018).

### Educational support

Entrepreneurial and management skills are required to stimulate entrepreneurship and/or run a business productively, and Laos is still in the early stage of developing and including entrepreneurial learning programmes in the national education system (OECD, 2018). Education systems have been implicated in the movement of young people out of Agriculture. For example, some African educational systems which include limited farming skills in their curriculum have been blamed for discourage youth from voluntarily engaging in an agricultural career (White, 2012). According to MoES (2010a), Lao primary school students are taught cultivation and animal husbandry as subjects in the curriculum. In cultivation, students learn growing plants by seeds, stem cutting, roots. In animal husbandry, students learn about raising aquatic animals (i.e., fish, frog), birds (chicken and ducks). Lao primary schools can have local curriculums that include local knowledge or cultural characteristics. Two of nine subjects touch on general knowledge about agriculture, namely social etiquette, and handicraft. The social etiquette has a section about relation with natural environment and social environment. Students learn about value of natural environment, so they know to protect the nature and society. The handicraft subject provides basic knowledge on handicraft, house management, and agriculture. In early secondary school, of 14 specific-subjects in the curriculum, only basic vocation includes teaching related to agriculture, which is one the three core parts of this

subject. Agriculture covers cultivation and animal husbandry. Cultivation includes vegetables that grow from seeds, producing seedlings, growing vegetables by seeds, harvest and selling vegetables. Animal husbandry includes poultry, building poultry barn, raising poultry techniques, food and feeding poultry, poultry disease prevention.

During secondary schooling, business education is included in conjunction with other 6 branches of vocation subject to create awareness about enterprise and private entrepreneurship which can be an option for them in the future and have positive attitude on this vocation (MoES, 2010b). According to MoES (2010b), agriculture is also taught to foster students to gain understanding on techniques of this vocation. Grade five of upper secondary school are taught rice farming, growing vegetable, growing, and propagating mango. Grade six learn growing lemon and propagation, raising and breeding frogs, raising pigs, growing, and propagating longan and lychee, growing mushroom, raising chickens and ducks, raising and breeding fish. The secondary school enrolment rate in Laos was recently calculated as 62.76% in 2020 (UNESCO, 2020). The effect of the education system on the willingness and capacity of students to become agripreneurs in Laos is unstudied.

Gross enrolment tertiary ratio in Laos was approximately 13% in 2021 (UNESCO Institute Statistics, 2022). There are presently five public universities in Laos, of which four have a faculty of agriculture and faculty of business (the remaining Public University is dedicated to health science. However, there is no faculty or school focussed on entrepreneurship or agripreneurship specifically. Under the faculties of agriculture within the public universities, there is a bachelor degree in agricultural economics and food technology. There are courses taught in this degree that go beyond agricultural production into the topics closer to agripreneurship. For example, agribusiness, rural economics, agricultural products processing, credits for rural and micro finance, value chains research, supply chain control and quality



management, and marketing and international trade on agricultural products are included in the list of the courses taught for the bachelor program in Agricultural economics and Food technology, Faculty of Agriculture, National University of Laos (NUoL) (Table 2.2). At Champasak University, bachelor degree students in Food technology at the Faculty of Agriculture also undertake courses that go beyond agricultural production techniques into entrepreneurship. They include agricultural economics and agro industry, entrepreneurship in food industry, food products marketing and management, packaging technology in logistics and supply chain management, principles of food processing, and food packaging technology (Table 2.3). Nevertheless, the level of students practice in agripreneurship, their exposure to agribusiness and/or agripreneurship vary depending on their internship placements and the focus of their thesis projects. There is no scientific study determining the extent of exposure to agribusiness/agripreneurship amongst undergraduate students in Laos.

**Table 2.1** Common and unique factors from three theoretical frameworks for investigating career motivational antecedences and intentions in agripreneurship.

<b>AgriPreneurial Career Framework Hypothesised Factors</b>	<b>Theoretical Basis</b>		
	<b>Theory of Planned Behaviour</b>	<b>Entrepreneurial Event Model</b>	<b>Careership Theory</b>
Attitude towards the outcomes of having a career as an agripreneur	Attitude	Perceived Desirability	Habitus (values)
Perceived approval from close normative referents			Habitus and Capital (social, culture, norm of action)
Weight of normative referent's influence on motivation to select a career as agripreneurs	Subjective norms		
Perceived Capability in performing a career as agripreneur	Perceived Behaviour Control	Perceived Feasibility	Habitus (perceived information, opportunities and risks, family background)
Perceived Desirability	Attitude	Perceived Desirability	Habitus (personal preferences)
Perceived effect of resources on feasibility	Perceived Behaviour Control	Perceived Feasibility	Capital (resources)
Perceived effect of knowledge about agriculture and business on feasibility	Perceived Behaviour Control	Perceived Feasibility	Capital
Propensity to Act	Perceived Behaviour Control	Propensity to Act	Habitus (personal identity/characteristic s)
Perceived Extension services support Perceived Policy support Perceived Financial support, credit access Perceived Information sharing and distributing Perceived Infrastructure and transportation Perceived Taxation and registration support Perceived Research, development and technology Perceived Market support Perceived Educational support			Field: perception of these enabling environments

---

Importance of Extension services

Importance of Policy support

Importance of Financial support, credit  
access

Importance of Information sharing and  
distributing

Importance of Infrastructure and  
transportation

Importance of Taxation and registration  
support

Importance of Research, development and  
technology

Importance of Market support

Importance of Educational support

---

Field: importance of  
these enabling  
environment on  
decision-making to  
engage in  
agripreneurship

**Table 2.2** List of courses taught for the Bachelor degree of Agricultural economics and Food technology, Faculty of Agriculture, National University of Laos, Laos.

No	List of courses taught for the Bachelor degree of Agricultural Economics and Food Technology
1	Principle of Agriculture
2	Agricultural Policy
3	Agricultural Development and promotion
4	Agro-forestry
5	Statistics, Research and Experiment
6	Seminar and report writing
7	Livestock production system
8	Crop production system
9	Agricultural production system
10	Rural Economics
11	Agribusiness 1
12	Food Chemistry
13	Food Microorganism
14	Economics Mathematics
15	Agricultural products processing
16	Food Nutrition
17	Agribusiness 2
18	Macro-economics
19	Marketing and International Trade on Agricultural products
20	Credits for Rural and Micro Finance
21	Value Chains research
22	Food Preservation
23	Post-Harvest Management
24	Basic Food Quality and Safety Research
25	Supply Chain Control and Quality Management
26	Food Technology: Risk and Hazardous
27	Food Risk Prevention
28	Farmer Group Establishment and Management
29	Food Safety and Risky: GMS and international regulations
30	Internship on Production Techniques 1
31	Internship on Production Techniques 2
32	Internship on Production Techniques 3
33	Internship on Production Techniques 4
34	Thesis Writing and Defence

**Table 2.3** List of courses taught for the Bachelor degree of Food technology, Faculty of Agriculture, Champasak University, Laos.

---

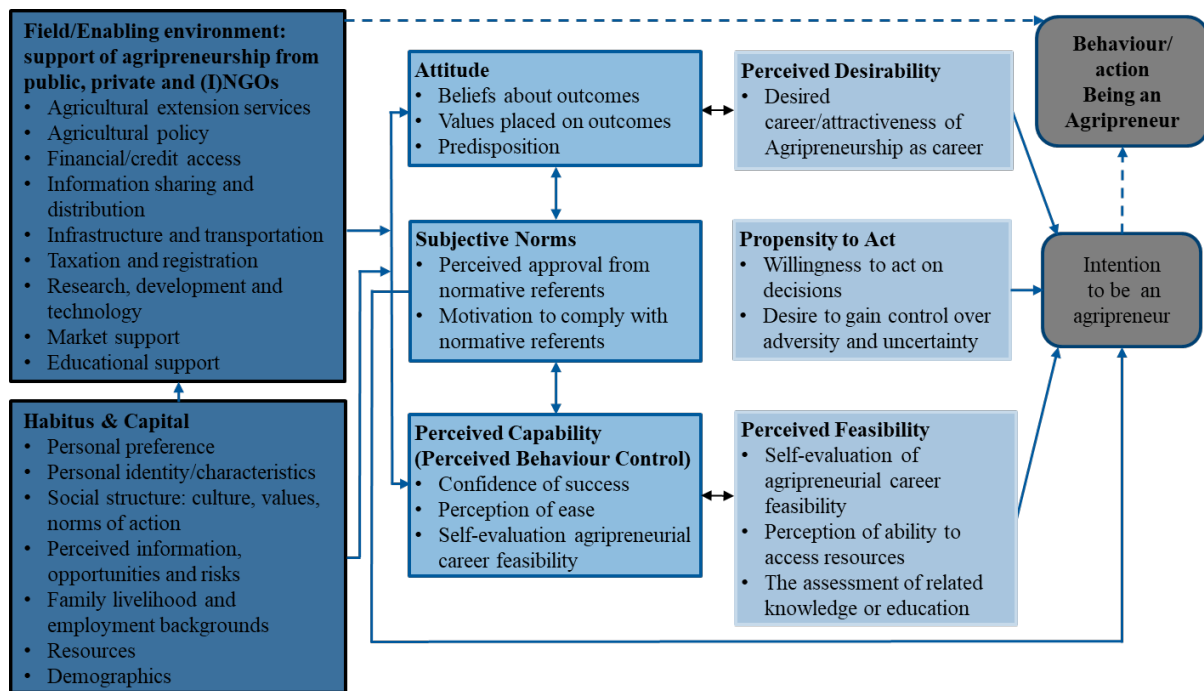
No	List of courses taught for the Bachelor degree of Food technology
1	English Language
2	Computer
3	Philosophy
4	Sports and defense
5	Bioscience
6	Life and Microorganisms
7	Biochemistry
8	Biochemistry Laboratory
9	Microbiology
10	Microbiology Laboratory
11	Physics
12	Physics Laboratory
13	Inorganic Chemistry
14	Inorganic Chemistry Laboratory
15	Organic Chemistry
16	Organic Chemistry Laboratory
17	Physical Chemistry
18	Analysis Chemistry
19	Mathematics
20	Physical Science in Daily Life
21	Statistical Methods for Research
22	Seminar
23	Production and Introductory Agro Industry
24	Practicum in Food Processing Machinery
25	Nutrition and Health
26	Food Engineering
27	Principles of Food Processing
28	Food Chemistry
29	Food Analysis
30	Food Industrial Microbiology
31	Food Industrial Microbiology Laboratory
32	Agro-Industrial Plant Environment and Sanitation
33	Entrepreneurship in Food Industry

---

---

<b>34</b>	<b>Food Quality Control</b>
<b>35</b>	<b>Food Safety and Quality Assurance System</b>
<b>36</b>	<b>Principles of Agro-Industrial Product Development</b>
<b>37</b>	<b>Agro-Industrial Plant Management</b>
<b>38</b>	<b>Packaging Technology in Logistics and Supply Chain Management</b>
<b>39</b>	<b>Food Packaging Technology</b>
<b>40</b>	<b>Meat, Poultry and Egg Product Technology</b>
<b>41</b>	<b>Presentation of Agricultural Information with Computer</b>
<b>42</b>	<b>Food Products Marketing and Management</b>
<b>43</b>	<b>Finance Management and Accounting in Agro-Industrial Plant</b>
<b>44</b>	<b>Agricultural Policies</b>
<b>45</b>	<b>Agricultural Economics and Agro Industry</b>
<b>46</b>	<b>Thesis Writing Project</b>

---



Dashed arrows indicate a possible influence of one construct to another, blue arrows indicate direct influence of one construct to another, blue two-headed arrows indicate mutual influence between constructs, black two-headed arrows indicate constructs that are considered interchangeable from previous research.

**Figure 2.3** AgriPreneurial Career Framework (APCF) (*Adapted from the Theory of Planned Behaviour (Ajzen, 1991), the Entrepreneurial Event Model (Shapero & Shokol, 1982), and the Careership Theory (Hodkinson & Sparkes, 1997), with author modifications*).

### **2.3.2 Entrepreneurship research**

There is a trend in entrepreneurship research to conceptualise motivating factors for the formation of an enterprise, based on a differentiation between opportunity and necessity (Stephan et al., 2015). Similar conceptualisations differentiate pull and push factors. The purpose of these classifications is generally to differentiate and compare the enterprises based on factors that motivate their formation, particularly in terms of performance. Less common, although still present in the literature (e.g., Nguyen et al., 2021; Sali et al., 2018) is the study of motivating factors from the perspective of fostering new ventures, including in specific sectors, such as agriculture.

It is becoming increasingly accepted that the opportunity-necessity differentiation oversimplifies the complex motivations underlying entrepreneurship (Arindam et al., 2018). Furthermore, it does not provide sufficient insight into motivations that would enable interventions to act upon factors that might encourage entrepreneurship. Therefore, studies often differentiate motivations into a range of typologies, which commonly include variations of achievement, challenge, learning, independence, autonomy, income security, financial success, recognition and status, whilst less commonly include family, roles, dissatisfaction, and community and social motivations, that do not necessarily reflect the opportunity-necessity paradigm (Stephan et al., 2015). Qualitative studies on entrepreneurs have identified aspects specific to relatively unique populations of entrepreneurs (Petit et al., 2018), indicating that motivations may differ between contexts and business sectors. However, entrepreneurship research has historically been focused on sectors with high rates of new firm formation and employment growth potential, such as in manufacturing, technology and services, rather than agriculture which is characterised by declining employment and establishment (Bond & Graff, 2012). The agripreneurship research that is available tends to focus on developed nations,



highlighting the increased prominence of identity, family, and institutions as contextual dimensions of the agricultural sector that may influence agripreneurship, including entrepreneurial motivations (Fitz-koch et al., 2018). The extent to which youth in Laos are motivated by established motivational factors from entrepreneurship literature factors to choose their careers, and to which they perceive agripreneurship as being able to cater to these motivations is unknown.

#### *Influence of Identity and Family on career selection in agriculture and entrepreneurship*

Identity manifests as the personal agency and individual decision-making behaviours. A study of 250 agripreneurs in Malaysia reported that attitudes, acceptance, knowledge, family support and government support are the main factors that influence youth to become agripreneurs (Abdullah & Sulaiman, 2013). Additionally, perseverance, personal motivation, creativity and positive attitude were factors that reduced youth agribusiness entrepreneurial failures for 235 youth entrepreneurs in agriculture in South Africa (Mmbengwa et al., 2021). However, Ripoll et al. (2017) argue that not all income generating activities should be seen as reflecting entrepreneurial identity (Langevang et al., 2015; Schøtt et al., 2015); nor should all young people be conceptualised as being “innovative” or having a particularly entrepreneurial identity (AGRA, 2015; SNV, 2016). Although identity is diagnosed and studied as a major factor in the performance of firms, entrepreneurial identity is usually studied as the result of entrepreneurial activity during working life rather the result of developmental processes that predate the entrepreneurial activity. Identity formation itself is the subject of multiple psychosocial theories (Erikson, 1963; Erikson, 1980; Erikson, 1994). It is a common characteristic that the process is influenced by individual experiences in early life, which themselves are influenced by demographics and socioeconomic circumstances.

Previous research from various fields found that perceptions of the same stimuli vary across demographics dimensions (Kim, 2018), including individual/family livelihood activities (Chaudhary, 2017), gender (Pindado & Sánchez, 2017), age, race/ethnicity, education (Yang, 2013), marital status and geographical locations (Kusakabe & Chanthoumphone, 2021). However, the effects of these dimensions vary across studies undertaken in different developing and emerging economies.

### *Gender*

Although the effect of gender on intention towards agripreneurship has not been studied in Laos, rural females had a more favourable attitude towards off-farm activities and modern, non-traditional economies than males (Moglia et al., 2020). In other contexts, gender influenced intentions and/or preferences towards a particular career, including agripreneurship, however the effect varied between studies. The entrepreneurial drive of female household heads was higher amongst 242 smallholder farmers in South Africa in areas where there was equal access to resources for both men and women, and women were encouraged to engage in agribusiness (Cele & Wale, 2020). Furthermore, the likelihood of land-rich females being self-employed in both agricultural and non-agricultural sectors was higher than for males in Bhutan (Rahut et al., 2017). However, the presence of disadvantages may discourage agripreneurship amongst females in some settings, with the probability of becoming an agripreneur being reportedly lower amongst females than males in European countries, because of disadvantages (Pindado & Sánchez, 2017). Gender roles and relations are shaped by strong social norms and gender stereotyping in Laos, with women usually placed in serving, cleaning, cooking, and care giving roles (Nguyen et al., 2020; Sriprasert & Nguyen, 2020). It is therefore possible that gender role expectations for women cause their intentions for career selection to differ from those of men.

### *Household Livelihood orientation and family employment background*

It is understood that these household livelihood orientations, specifically the occupational activities of immediate and extended family members, can influence livelihood choices related to agriculture and entrepreneurship, with university students from family business backgrounds having a higher entrepreneurial intent in India (Chaudhary, 2017), and students whose parents were self-employed having a greater inclination to entrepreneurship in Iran (Pouratashi, 2015) and in Vietnam (Nguyen, 2018). In Laos, a variety of household orientations have emerged as subsistence-oriented farming households, gradually shifting towards semi-commercial farming, market-oriented farming and non-farming households, and households with diversified livelihoods (Cramb & Newby, 2016; Manivong et al., 2014; Moglia et al., 2020). However, subsistence farming systems with poor productivity still predominate in Laos and are faced with many institutional, policy, and social challenges when transitioning to commercial agricultural production (Alexander et al., 2017). As reported in other agrarian transitions, these challenges could variously motivate youth to enter farming or agribusiness to improve the situation (Webster & Ganpat, 2014), or may discourage them from participating in agricultural careers altogether (Humphrey, 2006).

### *Urbanisation and place of origin*

In Laos, the role of entrepreneurship in local livelihood strategies differs between rural and urban regions, with residents in southern Laos, a rural region, tending to be self-employed more than residents in Vientiane Capital, the country's predominant urban region (Xayavongsa & Pholphirul, 2019). Although the effect of originating from a rural or urban household has not been investigated specifically with regards to perceptions about agriprenurship in Laos, in Ghana the likelihood of becoming an agriprenur was rated as higher by undergraduate students from urban areas than from rural areas (Zakaria et al., 2014). The cause for this

difference was not explored, however entrepreneurial activities are more likely in urban areas of Denmark than in rural areas because the environment is more supportive and competitive (Freire-Gibb & Nielsen, 2014). Compared with Denmark, Laos has greater income inequality, and the rural-urban divide accounts for the majority of income inequality, as indicated by generalised entropy index (Warr et al., 2015) and accordingly, urban residence may be more conducive to all forms of entrepreneurship, including agripreneurship. Although it could be expected that youth from rural areas may have a greater affinity for agriculture, and therefore agripreneurship, it is important to note that even in urban areas of Laos, 47% of the households have members involved with agriculture (Shattuck et al., 2019).

#### *Influence of Institutions on career selection in agriculture and entrepreneurship*

In the context of entrepreneurship, institutions are the rules and norms that individuals follow in their daily lives, the formal and informal constraints and their enforcement characteristics (North, 1990). Formal institutions including political and legislative institutions, and informal institutions including attitudes, subjective norms and values, can enable or hinder agripreneurship (de Wolf et al., 2007; Stenholm & Hytti, 2014). An enabling environment for agripreneurship requires that formal rules that are aligned with the informal norms that individuals follow, favour entrepreneurial activity, and are effectively enforced in an environment that operates under a rule of law (Sautet, 2005).

Although the agricultural sector is characterised in entrepreneurship literature as being both highly regulated and receiving a high level of public support (Bond & Graff, 2012; Fitz-koch et al., 2018), this is due to the focus on American and European markets and is not representative of the sector context in Laos or many other developing countries. Within the APCF presented in Section 2.3.1, Taxation and Registration, Agricultural Policy and Education can be considered as institutions. The extent to which the institutional arrangements, including

regulations, standards, taxation system and laws, and informal governance systems and rules, social and cultural norms and value systems in Laos create an enabling environment for agripreneurship, or conversely constrain it, is yet to be determined.

## **2.4 Conclusion**

Our proposed APCF developed from the review of behavioural research frameworks may be applied to agripreneurial career decision-making in Laos to identify motivational antecedents of agripreneurship and whether these influence intentions towards this career pathway. Entrepreneurship research may be used to provide meaning from the lived experiences of practicing youth agripreneurs in Laos. In particular, it can identify the phenomena that enabled youth to become agripreneurs, and their perceptions of the environment that facilitate or hinder youth engagement in agripreneurial careers in Laos.

## 2.5 References

- Abdullah, A. A., & Sulaiman, N. N. (2013). Factors that influence the interest of youths in agricultural entrepreneurship. *International Journal of business and Social science*, 4(3), 288–302. <https://eprints.unisza.edu.my/2818/1/FH02-FESP-16-06630.pdf>
- ADB. (2018). *AGRICULTURE, NATURAL RESOURCES, AND RURAL DEVELOPMENT SECTOR ASSESSMENT, STRATEGY, AND ROAD MAP. LAO PEOPLE'S DEMOCRATIC REPUBLIC*. Asian Development Bank. <https://www.adb.org/sites/default/files/institutional-document/480141/lao-pdr-agriculture-assessment-strategy-road-map.pdf>
- AGRA. (2015). *Africa Agriculture Status Report: Youth in Agriculture in Sub-Saharan Africa*. Nairobi: Alliance for a Green Revolution in Africa.
- Agu, A.G., Kalu, O. O., Esi-Ubani, C. O., & Agu, P. C. (2021). Drivers of sustainable entrepreneurial intentions among university students: an integrated model from a developing world context. *International Journal of Sustainability in Higher Education*, 22(3), 659–680. <https://doi.org/10.1108/IJSHE-07-2020-0277>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I. (2012). The theory of planned behavior. In P. A. M. Van Lange, A. W. Kruglanski, E. T. Higgins (Eds.), *Handbook of theories of social psychology* (pp. 438–459). SAGE Publications Inc.

- Alexander, K., Case, P., Jones, M., & Connell, J. (2017). Commercialising smallholder agricultural production in Lao People's Democratic Republic. *Development in Practice*, 27(7), 965–980. <https://doi.org/10.1080/09614524.2017.1353064>
- Ambad, S.N.A., & Damit, D. H. D. A. (2016). Determinants of Entrepreneurial Intention among Undergraduate Students in Malaysia. *Procedia Economics and Finance*, 37, 108–114. [https://doi.org/10.1016/S2212-5671\(16\)30100-9](https://doi.org/10.1016/S2212-5671(16)30100-9)
- Arindam, N., Sujeet, K. J., Asif, M., Sanjit, M., Jancy, G., D.K, G., K.K, D., & T.K, M. (2018). Predictive Factors Affecting Indian Rural Farm Youths' Decisions to Stay in or Leave Agriculture Sector. *Agricultural Science and Technology*, 20(2), 221–234
- Astuti, R.D., & Martdianty, F. (2012). Students' Entrepreneurial Intentions by Using Theory of Planned Behavior: The Case in Indonesia. *The South East Asian Journal of Management*, 6(2). <https://doi.org/10.21002/seam.v6i2.1317>
- Bannalath, K., Insisienmay, S., & Songvilay, L. (2021). A study on strategies to improve productivity in agriculture sector. Case study: agribusiness sector. *In NIER Research Summarise 2021*, Laos National Institute for Economic Research (NIER).
- Banks, E.W., Hatch, M., Douangsavanh, S., Pavelic, P., Singsoupho, S., Xayavong, V., Xayviliya, O., Vongphachanh, S., Viossanges, M., & Batelaan, O. (2022). Cooperation in hydrogeophysics; enhancing practitioners and institutions' groundwater assessment capacity, Vientiane Plain, Lao PDR. *Geophysics*, 87(1), WA49–WA63. <https://doi.org/10.1190/geo2021-0100.1>

- Bestari, N.G., Mongcopa, C.J., Samson, J., & Keith, W. (2006). *LAO PDR: GOVERNANCE ISSUES IN AGRICULTURE AND NATURAL RESOURCES. A Case Study from the 2005 Sector Assistance Program Evaluation for the Agriculture and Natural Resources Sector in the Lao People's Democratic Republic*. Asian Development Bank. <https://www.adb.org/sites/default/files/evaluation-document/35925/files/governance-issues-lao.pdf>
- Bond, J., & Graff, G. (2012). G.A. Alsos, S. Carter, E. Ljunggren, and F. Welter (Eds.), *Handbook of Research on Entrepreneurship in Agriculture and Rural Development*. Edward Elgar Publishing. <https://doi.org/10.1002/agr.20294>
- Bourdieu, U.P. (1977). *Outline of a Theory of Practice*. Cambridge University Press.
- Buyinza, J., Nuberg, I. K., Muthuri, C. W., & Denton, M. D. (2020). Psychological Factors Influencing Farmers' Intention to Adopt Agroforestry: A Structural Equation Modeling Approach. *Journal of Sustainable Forestry*, 39(8), 854–865. <https://doi.org/10.1080/10549811.2020.1738948>
- Campbell, R., Knowles, T., & Sayasenh, A. (2012). Business Models for Foreign Investment in Agriculture in Laos. International Institute for Sustainable Development. [https://www.iisd.org/system/files/publications/business\\_models\\_ag\\_investment\\_laos.pdf](https://www.iisd.org/system/files/publications/business_models_ag_investment_laos.pdf)
- Cele, L., & Wale, E. (2020). Determinants of smallholders' entrepreneurial drive, willingness and ability to expand farming operations in KwaZulu-Natal. *Development in Practice*, 30(8), 1028–1042. <https://doi.org/10.1080/09614524.2020.1764501>



- Chaudhary, R. (2017). Demographic factors, personality and entrepreneurial inclination: A study among Indian university students. *Education & Training (London)*, 59(2), 171–187. <https://doi.org/10.1108/ET-02-2016-0024>
- CIA. (2019). *The World Factbook East & SouthEast Asia: Laos FAOStats*. Central Intelligence Agency.
- Cramb, R. & Newby J. (2016). *Trajectories of rice-based farming systems in mainland Southeast Asia*. Australian Centre for International Agricultural Research (ACIAR).
- Danso-Abbeam, G., Ehiakpor, D. S., & Aidoo, R. (2018). Agricultural extension and its effects on farm productivity and income: insight from Northern Ghana. *Agriculture & Food Security*, 7(1), 1–10. <https://doi.org/10.1186/s40066-018-0225-x>
- de Wolf, P., McElwee, G., & Schoorlemmer, H. (2007). The European farm entrepreneur: a comparative perspective. *International Journal of Entrepreneurship and Small Business*, 4(6), 679–692.
- Dias, C.S., Rodrigues, R. G., & Ferreira, J. J. (2019). What’s new in the research on agricultural entrepreneurship? *Journal of Rural Studies*, 65, 99–115. <https://doi.org/10.1016/j.jrurstud.2018.11.003>
- dos Santos, E.A., & Brito de Almeida, L. (2018). To pursue a career in accounting or not: a study based on the Theory of Planned Behavior. *Revista Contabilidade & Finanças*, 29(76), 114–128. <https://doi.org/10.1590/1808-057x201804890>
- Ducourtieux, O., Laffort, J.-R., & Sacklokhom, S. (2005). Land Policy and Farming Practices in Laos. *Development and Change*, 36(3), 499–526. <https://doi.org/10.1111/j.0012-155X.2005.00421.x>

Erikson, E.H. (1963). *Childhood and society* (2nd ed., rev. and enl). Norton.

Erikson, E.H. (1980). *Identity and the Life Cycle*. Norton.

Erikson, E.H. (1994). *Identity: Youth and Crisis*. Norton.

Fitz-Koch, S., Nordqvist, M., Carter, S., & Hunter, E. (2018). Entrepreneurship in the Agricultural Sector: A Literature Review and Future Research Opportunities. *Entrepreneurship Theory and Practice*, 42(1), 129–166.  
<https://doi.org/10.1177/1042258717732958>

Fraser, A. (2009). *Lao People's Democratic Republic: Agriculture and Natural Resources Sector Need Assessment*. Technical Assistance Consultant's Report for the Ministry of Agriculture and Forestry. Asian Development Bank.  
<https://www.adb.org/sites/default/files/project-document/64626/40105-lao-tacr.pdf>

Freire-Gibb, L.C., & Nielsen, K. (2014). Entrepreneurship within Urban and Rural Areas: Creative People and Social Networks. *Regional Studies*, 48(1), 139–153.  
<https://doi.org/10.1080/00343404.2013.808322>

Gaiha, R., & Annim, S. (2010). Agriculture, GDP and Prospects of MDG 1 in Lao PDR. *IDEAS Working Paper Series from RePEc*.

Gaiha, R., Md Shafiul Azam, Annim, S., & Imai, K. S. (2012). Agriculture, Markets and Poverty - A Comparative Analysis of Laos and Cambodia. *IDEAS Working Paper Series from RePEc*.

Ginzberg. (1951). *Occupational choice: an approach to a general theory*. Columbia University Press.

- Giuliani, A., Mengel, S., Paisley, C., Perkins, N., Flink, I., Oliveros, O., & Wongtschowski, M. (2017). Realities, Perceptions, Challenges and Aspirations of Rural Youth in Dryland Agriculture in the Midelt Province, Morocco. *Sustainability (Basel, Switzerland)*, 9(6), 871–. <https://doi.org/10.3390/su9060871>
- Gorgievski, M., Stephan, U., Laguna, M., & Moriano, J. (2018). Predicting entrepreneurial career intentions: Values and the theory of planned behavior. *Journal of Career Assessment*, 26(3), 457–475. <https://doi.org/10.1177/1069072717714541>
- Goto, K., & Douangneune, B. (2017). Agricultural modernisation and rural livelihood strategies: the case of rice farming in Laos. *Revue Canadienne D'études Du Développement*, 38(4), 467–486. <https://doi.org/10.1080/02255189.2017.1263553>
- Hodkinson, P., & Sparkes, A. C. (1997). Careership: a sociological theory of career decision making. *British Journal of Sociology of Education*, 18(1), 29–44. <https://doi.org/10.1080/0142569970180102>
- Humphrey, J. (2006). Prospects and Challenges for Growth and Poverty Reduction in Asia. *Development Policy Review*, 24(s1), s29–49. <https://doi.org/10.1111/j.1467-7679.2006.00340.x>
- Karimi, S. (2020). The role of entrepreneurial passion in the formation of students' entrepreneurial intentions. *Applied Economics*, 52(3), 331–344. <https://doi.org/10.1080/00036846.2019.1645287>
- Kautonen, T., van Gelderen, M., & Fink, M. (2015). Robustness of the Theory of Planned Behavior in Predicting Entrepreneurial Intentions and Actions. *Entrepreneurship Theory and Practice*, 39(3), 655–674. <https://doi.org/10.1111/etap.12056>

- Kibuka, G. (2010). *An examination of factors that influence entrepreneurial intention of high school students in Kenya*. ProQuest Dissertations Publishing.
- Kim, D.D.E. (2018). Demographic differences in perceptions of media brand personality: a multilevel analysis. *International Journal on Media Management (Saint Gall, Switzerland)*, 20(2), 81–106. <https://doi.org/10.1080/14241277.2017.1410481>
- Kiros, S., & Meshesha, G. B. (2022). Factors affecting farmers' access to formal financial credit in Basona Worana District, North Showa Zone, Amhara Regional State, Ethiopia. *Cogent Economics & Finance*, 10(1). <https://doi.org/10.1080/23322039.2022.2035043>
- Konig, G., da Silva, C.A. & Mhlanga. N. (2013). *Enabling environments for agribusiness and agro-industries development – Regional and country perspectives*. FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS. <https://www.fao.org/3/i3121e/i3121e00.pdf>
- Krueger, N.F., & Brazeal, D. V. (1994). Entrepreneurial Potential and Potential Entrepreneurs. *Entrepreneurship Theory and Practice*, 18(3), 91–104. <https://doi.org/10.1177/104225879401800307>
- Krueger, N.F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5), 411–432. [https://doi.org/10.1016/S0883-9026\(98\)00033-0](https://doi.org/10.1016/S0883-9026(98)00033-0)
- Krumboltz, J.D. (1979). A Social Learning Theory of Career Selection. In A.M. Mitchell, G.B. Jones & J.D. Krumboltz (Eds.), *Social Learning and Career Decision Making*. Carroll Press.

- Kusakabe, K., & Chanthoumphone, C. (2021). Transition From Subsistence Agriculture to Rubber Plantations in Northern Laos: Analysis of Household Livelihood Strategies by Ethnicity and Gender. *SAGE Open*, 11(2), 215824402110114–. <https://doi.org/10.1177/21582440211011463>
- Lalani, B., Dorward, P., Holloway, G., & Wauters, E. (2016). Smallholder farmers' motivations for using Conservation Agriculture and the roles of yield, labour and soil fertility in decision making. *Agricultural Systems*, 146, 80–90. <https://doi.org/10.1016/j.agsy.2016.04.002>
- Langevang, T., Gough, K. V., Yankson, P. W. K., Owusu, G., & Osei, R. (2015). Bounded Entrepreneurial Vitality: The Mixed Embeddedness of Female Entrepreneurship. *Economic Geography*, 91(4), 449–473. <https://doi.org/10.1111/ecge.12092>
- Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: Citation, thematic analyses, and research agenda. *IDEAS Working Paper Series from RePEc*, 11(4), 907–933. <https://doi.org/10.1007/s11365-015-0356-5>
- Ling, S., & Chanthavong, K. (2022). *Approach to agribusiness development for small farmers*, Presentation to the Sub-sector Working Group on Farmers and Agri-business (SWG-FAB), Vientiane, Laos, 2022.
- LYU., & UNFPA. (2014). *Adolescent and Youth Situation Analysis Lao People's Democratic Republic*. Lao People's Revolutionary Youth Union (LYU), Lao PDR; United Nations Population Fund (UNFPA), Lao PDR. [https://lao.unfpa.org/sites/default/files/pub-pdf/Final\\_Eng\\_AYSA%20Report.pdf](https://lao.unfpa.org/sites/default/files/pub-pdf/Final_Eng_AYSA%20Report.pdf)

- MAF. (2015). *Agriculture Development Strategy to 2025 and Vision to the year 2030*. Ministry of Agriculture and Forestry. <https://www.maf.gov.la/wp-content/uploads/2016/01/MDS-2025-and-Vision-to-2030-Eng.pdf>
- Maggio, R. (2017). *An Analysis of Pierre Bourdieu's Outline of a Theory of Practice* (1st ed.). Macat Library. <https://doi.org/10.4324/9781912284764>
- Manikham, D. (2018). Youth and Agri-Entrepreneurship in Lao PDR. *FFTC Agricultural Policy Platform (FFTC-AP)*. [http://ap.fftc.agnet.org/ap\\_db.php?id=925](http://ap.fftc.agnet.org/ap_db.php?id=925)
- Manivong, V., Cramb, R., & Newby, J. (2014). Rice and Remittances: Crop Intensification Versus Labour Migration in Southern Laos. *Human Ecology: an Interdisciplinary Journal*, 42(3), 367–379. <https://doi.org/10.1007/s10745-014-9656-6>
- Manivong, V., Souvannavong, P., Souliyavongsa, K., Ouansamone, P., Sengphaxaiyalath, K. & Ingxay, P. (2016). *Rice Value Chain Finance in Lao PDR*. National Agriculture and Forestry Research Institute.
- Messerli, P., Heinimann, A., Epprecht, M., Phonesaly, S., Thiraka, C., & Minot, N. (Eds.) (2008). *Socio-Economic Atlas of the Lao PDR: An analysis based on the 2005 Population and Housing Census*. Swiss National Center of Competence in Research (NCCR) North-South, University of Bern, Bern and Vientiane. Geographica Bernensia.
- Mmbengwa, V.M., Qin, X., & Nkobi, V. (2021). Determinants of youth entrepreneurial success in agribusiness sector: the case of Vhembe district municipality of South Africa. *Cogent Social Sciences*, 7(1). <https://doi.org/10.1080/23311886.2021.1982235>

- MoES. (2010a). *Primary Education Curriculum Books*. Research Institute for Educational Sciences, Ministry of Education and Sports, Laos. <http://moes.edu.la/ries/index.php/en/books-en/primary-en/curriculum-primary-en>
- MoES. (2010b). *Secondary Education Curriculum Books*. Research Institute for Educational Sciences, Ministry of Education and Sports, Laos. <http://moes.edu.la/ries/index.php/en/books-en/secondary-en/curriculum-secondary-en>
- Moglia, M., Alexander, K. S., Larson, S., (Giger)-Dray, A., Greenhalgh, G., Thammavong, P., Thephavanh, M., & Case, P. (2020). Gendered Roles in Agrarian Transition: A Study of Lowland Rice Farming in Lao PDR. *Sustainability (Basel, Switzerland)*, 12(13), 5403–. <https://doi.org/10.3390/su12135403>
- Moglia, M., Alexander, K. S., Thephavanh, M., Thammavong, P., Sodahak, V., Khounsy, B., Vorlasan, S., Larson, S., Connell, J., & Case, P. (2018). A Bayesian network model to explore practice change by smallholder rice farmers in Lao PDR. *Agricultural Systems*, 164, 84–94. <https://doi.org/10.1016/j.agsy.2018.04.004>
- Murphy, A.M., Askew, K. L., & Sumner, K. E. (2017). Parents' Intentions to Allow Youth Football Participation: Perceived Concussion Risk and the Theory of Planned Behavior. *Sport, Exercise, and Performance Psychology*, 6(3), 230–242. <https://doi.org/10.1037/spy0000102>
- Murray Li, T. (2009). Exit from agriculture: a step forward or a step backward for the rural poor? *The Journal of Peasant Studies*, 36(3), 629–636. <https://doi.org/10.1080/03066150903142998>

Nguyen, A., Hoffmann, J., Baines, L., Ra, R., Elias, R., & Haneef, C. (2020). *RAPID GENDER ANALYSIS DURING COVID-19 PANDEMIC: Mekong Sub-Regional Report, Cambodia, Lao People's Democratic Republic, Myanmar, Thailand and Viet Nam*. UNICEF, UN WOMEN, CARE.  
<https://www.unicef.org/eap/media/6871/file/Rapid%20Gender%20Analysis%20during%20COVID-19%20Pandemic.pdf>

Nguyen, C. (2018). Demographic factors, family background and prior self-employment on entrepreneurial intention - Vietnamese business students are different: why? *Journal of Global Entrepreneurship Research*, 8(1), 1–17. <https://doi.org/10.1186/s40497-018-0097-3>

Nguyen, G.N.T., Hoang, T. G., Nguyen, T. M., & Ngo, T. T. (2021). Challenges and enablers of women entrepreneurs' career advancement in Vietnam's coffee industry. *Journal of Enterprising Communities.*, 15(1), 76–95. <https://doi.org/10.1108/JEC-04-2020-0075>

North, D.C. (1990). *Institutions, institutional change, and economic performance*. Cambridge University Press.

OECD. (2018). Lao PDR. *In SME Policy Index: ASEAN 2018: Boosting Competitiveness and Inclusive Growth*. OECD Publishing/Economic Research Institute for ASEAN and East Asia. <https://doi.org/10.1787/9789264305328-19-en>

OpenDevelopment. (2018). *Laos. Infrastructure*.  
<https://laos.opendevlopmentmekong.net/topics/infrastructure/>



- Otache, I. (2017). Agripreneurship development: a strategy for revamping Nigeria's economy from recession. *African Journal of Economic and Management Studies*, 8(4), 474–483. <https://doi.org/10.1108/AJEMS-05-2017-0091>
- Ozaralli, N., & Rivenburgh, N. K. (2016). Entrepreneurial intention: antecedents to entrepreneurial behavior in the U.S.A. and Turkey. *Journal of Global Entrepreneurship Research*, 6(1), 1–. <https://doi.org/10.1186/s40497-016-0047-x>
- Peprah, J.A., Koomson, I., Sebu, J., & Bukari, C. (2021). Improving productivity among smallholder farmers in Ghana: does financial inclusion matter? *Agricultural Finance Review*, 81(4), 481–502. <https://doi.org/10.1108/AFR-12-2019-0132>
- Petit, O., Kuper, M., & Ameer, F. (2018). From worker to peasant and then to entrepreneur? Land reform and agrarian change in the Saïss (Morocco). *World Development*, 105, 119–131. <https://doi.org/10.1016/j.worlddev.2017.12.031>
- Pindado, E., & Sánchez, M. (2017). Researching the entrepreneurial behaviour of new and existing ventures in European agriculture. *Small Business Economics*, 49(2), 421–444. <https://doi.org/10.1007/s11187-017-9837-y>
- Pouratashi, M. (2015). Entrepreneurial Intentions of Agricultural Students: Levels and Determinants. *The Journal of Agricultural Education and Extension*, 21(5), 467–477. <https://doi.org/10.1080/1389224X.2014.960528>
- Rahut, D.B., Mottaleb, K. A., & Ali, A. (2017). Occupation choice in the agricultural and non-agricultural sectors by the rural youth and females in bhutan. *Journal of Animal and Plant Sciences*, 27(3), 978–985. <https://www.thejaps.org.pk/docs/v-27-03/35.pdf>

- Ripoll, S., Andersson, J., Badstue, L., Büttner, M., Chamberlin, J., Erenstein, O., & Sumberg, J. (2017). Rural transformation, cereals and youth in Africa: What role for international agricultural research? *Outlook on Agriculture*, 46(3), 168–177. <https://doi.org/10.1177/0030727017724669>
- Saili, A.R., Saili, J., Safai'ee, M. binti M., & Hamzah, N. M. (2018). Dissecting Factors Causing Active Behaviors Associated with Continuity of Youth Participation in Agro-Preneurship: A Qualitative Study on Youth Farmers in Sarawak. *Global Business and Management Research*, 10(2), 253–262.
- Samm, M. (2020). *Increasing Agricultural Commercialisation and Enhancing Food Security and Nutrition in Lao PDR: A Framework for Balanced Policy Analysis, Planning and Programming*. Laos Department of Policy and Legal Affairs, Ministry of Agriculture and Forestry: Vientiane, Lao PDR. <https://www.laofab.org/document/download/4579>
- Sautet, F.E. (2005). The Role of Institutions in Entrepreneurship: Implications for Development Policy. *Mercatus Policy Primer No. 1*. SSRN: <https://ssrn.com/abstract=1264033>
- Schlaegel, C., & Koenig, M. (2014). Determinants of Entrepreneurial Intent: A Meta-Analytic Test and Integration of Competing Models. *Entrepreneurship Theory and Practice*, 38(2), 291–332. <https://doi.org/10.1111/etap.12087>
- Schøtt, T., Kew, P., & Cheraghi, M. (2015). *Future Potential: A GEM Perspective on Youth Entrepreneurship 2015*. Global Entrepreneurship Monitor (GEM).
- Senger, I., Borges, J. A. R., & Machado, J. A. D. (2017). Using the theory of planned behavior to understand the intention of small farmers in diversifying their agricultural

production. *Journal of Rural Studies*, 49, 32–40.  
<https://doi.org/10.1016/j.jrurstud.2016.10.006>

Sentías Portilla, G. (2017). Land concessions and rural youth in Southern Laos. *The Journal of Peasant Studies*, 44(6), 1255–1274. <https://doi.org/10.1080/03066150.2017.1396450>

Shapero, A., & Sokol, L. (1982). Social dimensions of entrepreneurship. In C.A. Kent, D.L. Sexton & K.H. Vesper (Eds). *Encyclopedia of entrepreneurship*. Prentice Hall.

Shattuck, A., Manivong, V., & Vongthilard, S. (2019). *Towards 'People Centred Agriculture: Rethinking rural labour, youth employment and the agrarian transition in Laos*. Department of Policy and legal Affairs, Ministry of Agriculture and Forestry, Laos.  
<https://www.laofab.org/document/view/4069>

SNV. (2016). Opportunities for Youth Employment. The Hague: SNV. te Lintelo, D.J.H. (2012) Young people in African (agricultural) policy processes? What national youth policies can tell us. *IDS Bulletin*, 43(6), 90–103.

Solikhah, B. (2014). An Application of Theory of Planned Behavior towards CPA Career in Indonesia. *Procedia, Social and Behavioral Sciences*, 164, 397–402.  
<https://doi.org/10.1016/j.sbspro.2014.11.094>

Southavilay, B., Nanseki, T., & Takeuchi, S. (2013). Analysis on policies and agricultural transition: Challenges in promoting sustainable agriculture in Northern Laos. *Journal of the Faculty of Agriculture, Kyushu University*, 58(1), 219–223.  
<https://doi.org/10.5109/26183>

Sriprasert, P., & Nguyen, A. (2020). *CARE Rapid Gender Analysis COVID-19 Lao People's Democratic Republic*. CARE International in Lao PDR and CARE Australia.

[https://reliefweb.int/sites/reliefweb.int/files/resources/CARE%20in%20Lao%20PDR\\_RGA%20report\\_Jul%202020.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/CARE%20in%20Lao%20PDR_RGA%20report_Jul%202020.pdf)

Steering Committee for Lao Census of Agriculture (2014). 2nd Lao Census of Agriculture 2010/2011; Lao Statistics Bureau. <https://catalog.ihnsn.org/catalog/4686/download/59188>

Stenholm, P., & Hytti, U. (2014). In search of legitimacy under institutional pressures: A case study of producer and entrepreneur farmer identities. *Journal of Rural Studies*, 35, 133–142. <https://doi.org/10.1016/j.jrurstud.2014.05.001>

Stephan, U., Hart, M., & Drews, C.C. (2015). *Understanding Motivations for Entrepreneurship: A Review of Recent Research Evidence*. Rapid Evidence Assessment paper. Enterprise Research Centre.

Super, D.E. (1953). A theory of vocational development. *The American Psychologist*, 8(5), 185–190. <https://doi.org/10.1037/h0056046>

Super, D.E. (1957). *The psychology of careers: an introduction to vocational development* (1st Ed.). Harper.

Super, D.E. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behavior*, 16(3), 282–298. [https://doi.org/10.1016/0001-8791\(80\)90056-1](https://doi.org/10.1016/0001-8791(80)90056-1)

Tiraieyari, N., & Krauss, S. E. (2018). Predicting youth participation in urban agriculture in Malaysia: insights from the theory of planned behavior and the functional approach to volunteer motivation. *Agriculture and Human Values*, 35(3), 637–650. <https://doi.org/10.1007/s10460-018-9854-8>

- UN. (2021). *LDCs at a Glance*. United Nations.  
<https://www.un.org/development/desa/dpad/least-developed-country-category/ldcs-at-a-glance.html>
- UNESCO. (2020). *Laos: Secondary school enrolment*.  
[https://www.theglobaleconomy.com/Laos/Secondary\\_school\\_enrollment/](https://www.theglobaleconomy.com/Laos/Secondary_school_enrollment/)
- UNESCO Institute for Statistics (UIS). (2022). *UIS.Stat Bulk Data Download Service*.  
<https://data.worldbank.org/indicator/SE.TER.ENRR?locations=LA>
- Valle, F.D. (2012). *Exploring Opportunities and Constraints for Young Agro-Entrepreneurs in Africa*. Food and Agriculture Organization (FAO).
- Vijayabaskar, M., Narayanan, S., & Srinivasan, S. (2018). Agricultural revival and reaping the youth dividend. *Economic and Political Weekly*, 53(26-27), 8–16.
- Vongpraseuth, P., & Phengsavatdy, M. (2021). *Report Youth Unemployment Issues in Lao PDR*. United Nations Development Programme.  
<https://www.la.undp.org/content/laopdr/en/home/library/report--youth-unemployment-issues-in-lao-pdr.html>
- Warr, P., Rasphone, S., & Menon, J. (2015). *Two Decades Two Decades of Rising Inequality and Declining Poverty in the Lao People's Democratic Republic*. ADB Economics Working Paper Series, No. 461.  
[https://www.adb.org/sites/default/files/publication/176031/ewp461.pdf?fbclid=IwAR3XHnROJcT9\\_NngbyKKvAz0xqXGsKiSD7YjTeY2QSVd\\_mftJcV4476rqs](https://www.adb.org/sites/default/files/publication/176031/ewp461.pdf?fbclid=IwAR3XHnROJcT9_NngbyKKvAz0xqXGsKiSD7YjTeY2QSVd_mftJcV4476rqs)

- Webster, N., & Ganpat, W. (2014). St Vincent Youth and Careers in Agriculture. *The Journal of Agricultural Education and Extension*, 20(1), 49–64.  
<https://doi.org/10.1080/1389224X.2013.775952>
- WFP. (2017). *Lao PDR Country Strategy Plan 2017-2021*. World Food Programme, Vientiane, Lao PDR. <https://docs.wfp.org/api/documents/WFP-0000021032/download/>
- White, B. (2012). Agriculture and the Generation Problem: Rural Youth, Employment and the Future of Farming. *IDS Bulletin (Brighton. 1984)*, 43(6), 9–19.  
<https://doi.org/10.1111/j.1759-5436.2012.00375.x>
- World Bank. (2019). *Enabling the Business of Agriculture 2019 Country Profile Lao PDR*.  
<https://eba.worldbank.org/content/dam/documents/eba/LAO.pdf>
- World Bank. (2022). Data set: Lao PDR rural population.  
<https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=LA>
- Xayavongsa, D., & Pholphirul, P. (2019). Delay of gratification and business performance in least developed countries: Evidence from Lao PDR. *Journal of Entrepreneurship in Emerging Economies*, 11(4), 492–514. <https://doi.org/10.1108/JEEE-10-2018-0104>
- Yang, J. (2013). The Theory of Planned Behavior and Prediction of Entrepreneurial Intention among Chinese Undergraduates. *Social Behavior and Personality*, 41(3), 367–376.  
<https://doi.org/10.2224/sbp.2013.41.3.367>
- Zakaria, H., Adam, H., & Abujaja, A. (2014). Assessment of agricultural students of university for development studies intention to take up self-employment in agribusiness. *International Journal of Information Technology and Business Management*, 21(1): 53–67.

# **Chapter Three: Exploring demographic influences on perceptions of agricultural entrepreneurship as a potential career choice among Lao youth**

Manithaythip Thephavanh<sup>ab</sup>, Joshua N.M. Philp<sup>a</sup>, Ian Nuberg<sup>a</sup>, Matthew D. Denton<sup>a</sup>

<sup>a</sup>School of Agriculture, Food and Wine, The University of Adelaide, Urrbrae, SA 5064, Australia

<sup>b</sup>National Agriculture and Forestry Research Institute, P.O Box 7170, Vientiane, Lao PDR

### 3.1 Statement of Authorship

Title of Paper	Exploring demographic influences on perceptions of agricultural entrepreneurship as a potential career choice among Lao youth
Publication Status	<input checked="" type="checkbox"/> Published <input type="checkbox"/> Accepted for Publication <input type="checkbox"/> Submitted for Publication <input type="checkbox"/> Unpublished and Unsubmitted work written in manuscript style
Publication Details	Thephavanh, M., Philp, J.N.M., Nuberg, I., & Denton, M. (2023). Exploring demographic influences on perceptions of agricultural entrepreneurship as a career choice among Lao youth. <i>Development in Practice</i> . <a href="https://doi.org/10.1080/09614524.2023.2183831">https://doi.org/10.1080/09614524.2023.2183831</a>

### Principal Author

Name of Principal Author (Candidate)	Manithaythip Thephavanh		
Contribution to the Paper	Conceptualisation, Data collection, Data curation, Formal analysis, Interpretation of findings, Investigation, Investigation, Methodology, Project administration, Validation, Visualisation, Writing—original draft, Writing—review and editing		
Overall percentage (%)	85%		
Certification:	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature and is not subject to any obligations or contractual agreements with a third party that would constrain its inclusion in this thesis. I am the primary author of this paper		
Signature		Date	06/01/2023

### Co-Author Contributions

By signing the Statement of Authorship, each author certifies that:

- i. the candidate's stated contribution to the publication is accurate (as detailed above);
- ii. permission is granted for the candidate to include the publication in the thesis; and
- iii. the sum of all co-author contributions is equal to 100% less the candidate's stated contribution.



Name of Co-Author	Joshua N.M. Philp		
Contribution to the Paper	Conceptualisation, Formal analysis, Interpretation of findings, Methodology, Supervision, Validation, Visualisation, Writing—original draft, Writing—review and editing		
Signature		Date	06/01/2023

Name of Co-Author	Ian Nuberg		
Contribution to the Paper	Conceptualisation, Supervision, Reviewing of manuscript		
Signature		Date	09/01/2023

Name of Co-Author	Matthew D. Denton		
Contribution to the Paper	Conceptualisation, Funding acquisition, Project administration, Resources, Supervision, Reviewing of manuscript		
Signature		Date	09/01/2023

## 3.2 Abstract



DEVELOPMENT IN PRACTICE  
<https://doi.org/10.1080/09614524.2023.2183831>

 **Routledge**  
Taylor & Francis Group

RESEARCH ARTICLE



### Exploring demographic influences on perceptions of agricultural entrepreneurship as a career choice among Lao youth

Manithaythip Thephavanh , Joshua N.M. Philp , Ian Nuberg and Matthew D. Denton

#### ABSTRACT

Youth participation in agricultural entrepreneurship (agripreneurship) is vital to the sustainable and inclusive modernisation of agrarian societies. We analysed relationships between demographic factors and motivational antecedents of intention to practise small and medium-scale agripreneurship using survey data collected from undergraduate students in the Lao People's Democratic Republic. Gender significantly influenced attitudes, family occupational background influenced subjective norms, and place of origin influenced perceived behavioural control: three constructs hypothesised to drive intention according to the theory of planned behaviour.

Although students with commercial agriculture/agribusiness family occupational backgrounds were found to have a greater intention to practise agripreneurship than students without, students with subsistence farming family occupational backgrounds were not. Commercialisation of agriculture in Laos therefore requires better engagement of youth from subsistence farming households, as this group has the most to contribute and is at the greatest risk of missing the benefits of modernisation.

#### ARTICLE HISTORY

Received 23 May 2022  
Accepted 19 February 2023

#### KEYWORDS

Rural livelihoods; youth < gender and diversity; food security < environment (built and natural); region: East Asia

#### Introduction

A transition to more entrepreneurial modes of agriculture by the next generation of young farmers will be essential for the inclusive and sustainable modernisation of agrarian emerging economies (Bouichou et al. 2021; Thephavanh et al. 2022). As a career choice, agricultural entrepreneurship (agripreneurship) represents a departure from the dominant, subsistence-driven forms of small-holder agriculture in these economies, and is instead characterised by engagement with food production and marketing as commercial activities that are linked to value chains. Entrepreneurship in agriculture typically leads to specialisation that creates comparative advantages, potential for large

### 3.3 Introduction

A transition to more entrepreneurial modes of agriculture by the next generation of young farmers will be essential for the inclusive and sustainable modernisation of agrarian emerging economies (Bouichou et al., 2021; Thephavanh et al., 2022). As a career choice, agricultural entrepreneurship (agripreneurship) represents a departure from the dominant, subsistence-driven forms of smallholder agriculture in these economies, and is, instead, characterised by engagement with food production and marketing as commercial activities that are linked to value chains. Entrepreneurship in agriculture typically leads to specialisation that creates comparative advantages, potential for largescale production, and technological, organisational, and institutional changes that arise through the flow of ideas due to exchange-based interactions (Jaleta et al., 2009). Youth may contribute especially to these processes because they are relatively more enterprising, innovative, risk-tolerant and accepting of new technologies (Arindam et al., 2018; Petit et al., 2018; White, 2012). Therefore, agripreneurship has been advocated as a powerful tool for promoting the socioeconomic integration of young people, closing rural-urban gaps, and key to avoiding rural depopulation in the developing world (Bouichou et al., 2021).

Increasing commercialisation of agriculture is promoted as a development strategy by the Government of The Lao People's Democratic Republic (Laos), an emerging and developing nation with a largely rural population (Senties Portilla, 2017), and the youngest in Asia, with a median age of 23 (Vongpraseuth & Phengsavady, 2021). Although approximately 75% of young people in Laos work in the agricultural sector, only half do so with market interactions (Manikham, 2018). Youth in economically stagnant rural areas face limited and poorly remunerated employment opportunities unless they are capable of transitioning to or

participating in more entrepreneurial models of agriculture (OECD, 2017; UN, 2018; White, 2012).

Enabling and encouraging agripreneurship amongst young Laotians and youth in other developing contexts requires an understanding of their perception of agripreneurship as a career choice and demographic factors that influence these perceptions. However, scientific literature on agripreneurship has largely been neglected by the mainstream research on entrepreneurship (Fitz-Koch et al., 2018), especially in developing countries (Dias et al., 2019). Research describing the characteristics and circumstances (antecedents) that drive young people to engage in agripreneurship in developing economies therefore remains scarce (Buyinza et al., 2020; Freire-Gibb & Nielsen, 2014).

A meta-analysis of entrepreneurship research in the agricultural sector identified “the role of identity in entrepreneurial motivation processes that are behind entrepreneurial intentions” as a knowledge gap in studies of antecedents for entrepreneurship at the individual level (Fitz-koch et al., 2018). Previous research from various fields has found that demographic dimensions associated with identity formation result in variation amongst perceptions of the same stimuli (Kim, 2018). Demographic dimensions including individual/family livelihood activities (Chaudhary, 2017; Nguyen, 2018; Pouratashi, 2015), gender (Pindado & Sánchez, 2017), age, race/ethnicity, education (Yang, 2013), marital status, and geographical locations (Kusakabe & Chanthoumphone, 2021) have been reported to influence perceptions and intentions towards agricultural practices, including agripreneurship. However, the effects of these dimensions on perceptions and intentions towards agricultural practices vary across studies undertaken in different developing and emerging economies (Cele & Wale, 2020; Humphrey, 2006; Nguyen et al., 2020; Rahut et al., 2017; Webster & Ganpat., 2014; Zakaria et al., 2014), and no such studies have been undertaken in Laos. For example, it is understood

that agricultural and entrepreneurial occupational activities of immediate and extended family members can influence the livelihood choices of youth towards agriculture and entrepreneurship as indicated by studies from India, Vietnam and Iran (Chaudhary, 2017; Nguyen, 2018; Pouratashi, 2015). Although no such studies have been undertaken in Laos, a variety of household orientations are known to have emerged as subsistence-oriented farming households gradually shift towards semi-commercial farming, market-oriented farming and non-farming households, and households with diversified livelihoods (Cramb & Newby, 2016; Manivong et al., 2014; Moglia et al., 2020). However, subsistence farming systems with poor productivity still predominate in Laos and are faced with many institutional, policy, and social challenges when changing to commercial agricultural production (Alexander et al., 2017). As reported in other agrarian transitions, these challenges could variously motivate youth to enter farming or agribusiness to improve the situation (Webster & Ganpat, 2014), or may discourage them from participating in agricultural careers altogether (Humphrey, 2006). Overall, there is a general lack of information about the effect of demographic factors on the intentions of Lao Youth towards agripreneurship. However, evidence from other developing contexts indicates that particular factors can influence career intentions and behaviours relating to agriculture and entrepreneurship in ways that vary with context.

The Theory of Planned Behaviour (TPB) is a well-established model applied for understanding and predicting behaviours (Ajzen, 1991; Gorgievski et al., 2018) that has been successfully applied as a framework for studies in developing countries which analysed youth intentions towards certain careers (dos Santos & Brito de Almeida, 2018; Solikhah, 2014), farming practices (Lalani et al., 2016; Tiraieyari & Krauss, 2018), and entrepreneurship (Ambad & Damit, 2016; Dias et al., 2019; Kibuka, 2010; Martdianty, 2012; Yang, 2013). The validity of the TPB as a theoretical framework for predicting entrepreneurial career intentions and behaviours according to perceptions and beliefs has been repeatedly demonstrated (Kautonen

et al., 2015; Schlaegel & Koenig, 2014). Accordingly, this study statistically analysed relationships between demographic factors and motivational antecedents of intention to practice small and medium scale agripreneurship using survey data collected from 298 Lao undergraduate students. We hypothesised that significant relationships exist between self-assessments of motivational antecedents of intention, as defined in the TPB, towards becoming an agripreneur, as well as gender, place of origin, family backgrounds, area of study, and university of enrolment. Our results identify factors which significantly influence intention and/or antecedents of intention.

## **3.4 Method**

### **3.4.1 Theoretical Background**

According to the TPB, engaging in agripreneurship is a behaviour performed by an individual according to the individual's intention, which is influenced by three constructs: the value the individual places on the behaviour (Attitude (ATT)), the views of significant others (Subjective Norms (SN)), and the ease with which it can be performed (Perceived Behaviour Control (PBC)).

Attitude is defined as an individual's disposition, favourable or unfavourable, towards the behaviour of interest (Ajzen, 1991). Attitudes towards careers have been explored in previous studies by surveying perceptions of the desirability of the career (Kibuka, 2010), attitude towards income (Astuti & Martdianty, 2012), prestige (Solikhah, 2014), and advantages (Ambad & Damit, 2016).

Subjective Norms are defined as an individual's perceptions of approval from close referents in performing or not performing that behaviour, and their motivation to comply (Ajzen, 1991). Close referents used to assess the SN of individuals commonly include parents, other family

members, friends, teachers, or prominent community members. The influence of SN on a behaviour is typically assessed through two items: the strength of encouragement or discouragement from their close referents (Ambad & Damit, 2016; Astuti & Martdianty, 2012; Kibuka, 2010; Lalani et al., 2016; Tiraieyari & Krauss, 2018; Yang, 2013), and motivation to comply with referents (Lalani et al., 2016; Solikhah, 2014; Tiraieyari & Krauss, 2018; Yang, 2013).

Perceived Behavioural Control refers to an individual's perception on the ease or difficulty of performing the behaviour, based on their perceived past experience and anticipated risk or anticipated obstacles (Ajzen, 1991). For example, PBC can be measured by assessing individuals' perception of their own personal capacities (Astuti & Martdianty, 2012) and their perception of the presence of factors that may facilitate or impede performance of the career (Solikhah, 2014).

### **3.4.2 Data collection**

The use of Likert Scale survey instruments is proposed for collecting TPB data by the original proponent of the theory (Ajzen, 2006), and has been widely applied in other studies (e.g. dos Santos et al., 2018; Gorgievski et al., 2018). Surveys of career perceptions and intentions were undertaken at two state universities in Laos during January and February, 2020: National University of Laos (NUoL) in Vientiane, the capital city of Laos, and Champasak University in southern Laos. Although NUoL alone hosts a large proportion of the total university enrolments in Laos, including students from many different regions in the country, previous studies of youth perceptions involving university students have suggested broader geographical scope may increase the representativeness of the sample (Kalitanyi & Bbenkele, 2019). Accordingly, Champasak University, which is separated from NUoL by approximately 610 km and located in southern Laos, was included. Five temporary survey stations staffed by project

researchers were established at each university campus in public spaces that were subject to frequent pedestrian traffic. Students variously approached the kiosks to participate, or were approached by researchers and invited to participate, after which informed consent was obtained from all participants and they were provided with a paper questionnaire to complete. The questionnaire queried participants regarding five demographic variables that were hypothesised to influence perception on agripreneurship as a career (family backgrounds, place of origin, gender, area of study, and university of enrolment), three constructs hypothesised to drive intention in the TPB (ATT, SN and PBC), and the strength of their intention to engage in a selection of careers including agripreneurship.

Participants were asked to specify their gender identity and place of origin by district and province. Places of origin were categorised as urban, semi-rural and rural, according to Laos' administrative subdivision database, which considers population size, economic growth, facilities and distance from the nearest urban centre. For information on family backgrounds, participants were presented with four relevant livelihood backgrounds- business, subsistence farming, commercial agriculture/agribusiness, and on-farm labourers (Cramb & Newby, 2016; Manivong et al., 2014; Moglia et al., 2020) and asked if they or their family members had participated in these livelihoods. The business background was defined as the participant or their family members owning either one or more businesses. The commercial agriculture background was defined as the participant or their family members owning either one or more commercial farms or agribusinesses. The on-farm labourer background was defined as either the participant or their family members working or having worked on a commercial farm for their livelihood. The universities have 13 faculties, namely Education, Sciences, Letters, Social Sciences, Business, Environment, Architecture, Forestry, Engineering, Agriculture, Law, Water Resources, and Sports, which were categorised into three groups based on their relevance to agripreneurship: agriculture, environment and forestry faculties, the business



faculty and other faculties. Because this study has Lao youth as a target demographic, certain demographic dimensions reported to influence perceptions were largely homogenous, namely age, ethnicity and marital status, therefore these were not analysed for their influence on TPB constructs.

The measurement of TPB variables was adapted from Ajzen (2006), but used single self-reported indicators for ATT and PBC (Table 3.1). For each variable, students were asked to respond to associated statements using a Likert scale from 1 to 7. Attitude, PBC and intention were quantified using the questions presented in Table 3.1. Subjective Norms were quantified by having participants score the level of encouragement to be an agripreneur and career decision-making influence from different categories of referents, then for each category, the product of encouragement and influence score was calculated, and the average across all categories was used. Intention was quantified for a list of 13 possible future careers including agripreneurship (Table 3.1).

**Table 3.1** Questions and methods for measuring perception variables.

<b>Perception variables</b>	<b>Measurement question(s)</b>	<b>Participant response format</b>
<b>Attitude</b>	To what extent do you agree with the statement: Being an agripreneur is a career that [you] like.	Likert scale score: 1 (Strongly disagree); 2 (Disagree); 3 (Slightly disagree); 4 (Neutral); 5 (Slightly agree); 6 (Agree); 7 (Strongly Agree)
<b>Subjective Norms</b>	To what extent do you believe the following people/groups would encourage or discourage of [you] choosing agripreneurship as a career: <ul style="list-style-type: none"> <li>• Guardians;</li> <li>• Siblings;</li> <li>• Cousins/other relatives;</li> <li>• Close friends;</li> <li>• Teachers;</li> <li>• Others</li> </ul>	Likert scale score for each person/group. 1 (Strongly discourage); 2 (Discourage); 3 (Slightly discourage); 4 (Neutral); 5 (Slightly encourage); 6 (Encourage); 7 (Strongly encourage)
<b>Perceived Behavioural Control</b>	When it comes to matters of career, how strong is the influence of the following people/groups on your decisions: <ul style="list-style-type: none"> <li>• Guardians;</li> <li>• Siblings;</li> <li>• Cousins/other relatives;</li> <li>• Close friends;</li> <li>• Teachers;</li> <li>• Others</li> </ul>	Likert scale score for each person/group. 1 (None); 2 (Very Weak); 3 (Weak); 4 (Moderate); 5 (strong); 6 (Very strong); 7 (Maximum)
<b>Intention</b>	To what extent do you agree with the statement: [You] intend to engage in the following career in the future: <ul style="list-style-type: none"> <li>• business/an entrepreneur;</li> <li>• agripreneur;</li> <li>• civil servant;</li> <li>• private company employee;</li> </ul>	Likert scale score: 1 (Strongly disagree); 2 (Disagree); 3 (Slightly disagree); 4 (Neutral); 5 (Slightly agree); 6 (Agree); 7 (Strongly Agree)

- 
- (I)NGOs worker;
  - non-profit organisation worker;
  - family business worker;
  - farmer;
  - on-farm wage labourer;
  - off-farm wage labourer;
  - remittance (on-farm);
  - remittance (off-farm);
  - other
-

### **3.4.3 Sample population**

The survey was administered to 298 Lao undergraduate students (Table 3.2), young people who have not yet begun their careers. In the 2018 to 2019 academic year, there were 21,264 undergraduate domestic students enrolled at NUoL and 5,554 enrolled at Champasak University. From this number, 235 students from NUoL and 68 from Champasak University participated in this study voluntarily (Table 3.2), approximately 1% of all enrolments. The distribution across faculties was proportionate to each faculty's share of total enrolments. All research involving human participants described in this study was approved by the University of Adelaide Human Research Ethics Committee, approval number H-2019-110.

**Table 3.2** Overview of demographic characteristics of study participants.

<b>Variable</b>	<b>Category</b>	<b>Number</b>	<b>Percentage</b>
<b>Total participants</b>	All	298	100.0
	Business	96	32.2
<b>Family occupational backgrounds</b>	Subsistence Farming	187	62.8
	Commercial agriculture/agribusiness	76	25.5
	On-farm work	263	88.3
<b>Place of origin</b>	Urban	96	32.2
	Semi-rural	60	20.1
	Rural	58	19.5
	Not answered	84	28.2
<b>Gender</b>	Female	146	49.0
	Male	152	51.0
<b>Area of studies</b>	Agriculture, environment and forestry	44	14.8
	Business	45	15.1
	Other	209	70.1
<b>University of enrolment</b>	National University of Laos	235	78.9
	Champasak University	63	21.1

### **3.4.4 Data analysis**

The five demographic variables were tested against ATT, SN, PBC and intention (Table 3.1). Survey data were entered into IBM SPSS Statistics 28. Two nonparametric statistical tests: Mann–Whitney U (M–W U) and Kruskal–Wallis (K–W) in SPSS were used to test for significant differences between gender identities, places of origins, family backgrounds, faculties and universities, in the ATT, SN, PBC and strength of intention of participants. Harman’s one-factor test for Common Method Bias was applied to verify that the variance extracted by one factor did not exceed 30%.

Path analysis of the data was undertaken with a series of 4 multiple regression models. The first three tested the hypothesis that gender, place of origin, the four family backgrounds, area of studies and university of enrolment are significant determinants of ATT, SN and PBC. The fourth model represents the second layer of the path analysis, and tested the hypothesis that gender, place of origin, the four family backgrounds, area of studies and university of enrolment, as well as ATT, SN and PBC are significant determinants of intention. Dummy variables were created for family background and area of study. Place of origin was treated as ordinal variable, increasing in distance from the urban areas.

## **3.5 Results**

### **3.5.1 Demographic differences in constructs underlying perception towards agripreneurship**

Overall, Lao undergraduate students had a slightly positive attitude towards agripreneurship (4.97 average score on a scale of from 1 to 7 where 4 is neutral; Supplementary Figure 3.1). Attitude towards agripreneurship differed significantly between reported gender, family backgrounds and areas of studies, but not significantly between place of origin, and university

of enrolment. Male students held significantly more positive attitudes towards agripreneurship than female students ( $p < 0.05$ ). Students from commercial agriculture/agribusiness and on-farm work family backgrounds held significantly more positive attitudes towards agripreneurship than those without ( $p < 0.05$  and  $p < 0.01$  respectively). Students enrolled in Agriculture, Environment and Forestry faculties held a significantly more positive attitude toward agripreneurship than students enrolled in business or other faculties ( $p < 0.01$ ) (Table 3.3). Participants rated the influence of close referent groups as slightly positive on average (4.51 average score on a scale of 1 to 7 where 4 is neutral, Supplementary Figure 3.2). The influences were significantly higher only amongst students with family members who practiced on-farm work ( $p < 0.05$ ) (Table 3.3). Subjective Norms did not vary significantly amongst other demographic variables.

Students perceived their likelihood of successfully meeting their career goals as an agripreneur only slightly favourably on average (4.96 average score on a scale of 1 to 7 where 4 is neutral, Supplementary Figure 3.3). Students from the rural areas believed they would have a higher chance of succeeding if they engaged in agripreneurship compared with students from semi-rural and urban areas ( $p < 0.01$ ). Students from a commercial agricultural/agribusiness and on-farm work family backgrounds also believed they would have a higher chance of succeeding if they engaged in agripreneurship than those without ( $p < 0.01$ ). Students at Champasak University in the south of Laos also felt more capable of succeeding than students at NUoL in Vientiane Capital, the central of Laos ( $p < 0.01$ ). There was no significant difference in PBC amongst other demographic variables (Table 3.3).

Intention strength (Supplementary Figure 3.4) did not vary significantly by gender or place of origin differences, but did for family backgrounds, area of studies and university of enrolment. Students from a commercial agricultural/agribusiness and/or on-farm family background had

higher intention strength than those without ( $p<0.05$ ) and ( $p<0.1$ ) respectively. Students studying in agriculture, environment and forestry faculties at both universities had a higher intention strength than those studying at business or other faculties ( $p<0.1$ ). Students studying at Champasak University in southern Laos had significantly higher intention to engage in agripreneurship than students studying at NUoL in Vientiane, the capital of Laos ( $p<0.05$ ). However, students with family backgrounds in business and subsistence farming did not have significantly different intention strength from those without (Table 3.3).

### **3.5.2 Demographic determinants of constructs underlying perception towards agripreneurship**

Multiple regression analyses explored the key determinants of student perceptions (Table 3.4). No demographic factor was found to have a direct, significant relationship with strength of intention to be an agripreneur. Two TPB constructs, ATT and PBC significantly increased intention strength ( $p<0.01$ ) whereas SN did not (Supplementary Figure 3.5). Table 3.4 illustrates the magnitude of the predicted impact of ATT and PBC on intention were similar, with a 1 point increase in responses on the 7 point Likert Scale estimated to increase intention by 0.19 and 0.23 respectively on the same scale. Having a background of on-farm work indirectly increased intention strength by significantly increasing ATT ( $p<0.01$ ) by an estimated 0.74 points, whereas having a commercial agriculture background and more rural place of origin indirectly increased intention strength by significantly increasing PBC by 0.44 and 0.27 points respectively ( $p<0.05$ ). The explanatory power of the ATT and PBC models were low, accounting for 2.7% and 8.2% of the variance respectively. The explanatory power of the intention model accounted for 14.5% of the variance. Differences in Gender, having a business background, having a subsistence farming background, area of studies and university of enrolment did not directly or indirectly influence intention.



**Table 3.3** The influence of different demographic characteristics on Lao youth ATT, SN, PBC and INT to engage in agripreneurial career, on a Likert-scale from 1 to 7.

Demographic factors		Mean (STD)			
		Attitude	Subjective norms	Perceived Behavioural Control	Intention
<b>AVERAGE</b>		4.97	4.51	4.96	4.48
<b>Family occupational backgrounds</b>	Business (No)	5.03 (1.54)	4.53 (0.93)	5.03 (1.37)	4.56 (1.20)
	Business (Yes)	4.87 (1.37)	4.40 (0.90)	4.82 (1.40)	4.33 (1.41)
	M–W U p (value)	0.239	0.392	0.196	0.199
	M–W U Sig.	ns	ns	ns	ns
	Subsistence farming (No)	4.79 (1.45)	4.57 (0.87)	4.93 (1.31)	4.35 (1.35)
	Subsistence farming (Yes)	5.08 (1.50)	4.47 (0.95)	4.98 (1.42)	4.56 (1.24)
	M–W U p (value)	0.103	0.239	0.538	0.163
	M–W U Sig.	ns	ns	ns	ns
	Commercial Agriculture/agribusiness (No)	4.87 (1.49)	4.48 (0.92)	4.79 (1.39)	4.36 (1.29)
	Commercial Agriculture/agribusiness (Yes)	5.27 (1.46)	4.60 (0.92)	5.47 (1.23)	4.83 (1.19)
	M–W U p (value)	0.046	0.503	0.000	0.0012
	M–W U Sig.	**	ns	***	**
	On-farm work (No)	4.88 (1.48)	4.46 (.92)	4.88 (1.38)	4.42 (1.28)
	On-farm work (Yes)	5.69 (1.35)	4.92 (0.83)	5.54 (1.22)	4.91 (1.25)
M–W U p (value)	0.002	0.028	0.009	0.079	
M–W U Sig.	***	**	***	*	

<b>Place of origin</b>	urban	4.90 (1.48)	4.52 (0.82)	4.92 (1.36)	4.55 (1.17)
	semi-rural	5.32 (1.24)	4.50 (0.94)	5.19 (1.36)	4.58 (1.17)
	rural	5.14 (1.62)	4.58 (0.89)	5.60 (1.18)	4.93 (1.41)
	K–W p (value)	0.304	0.982	0.007	0.215
	K–W Sig.	ns	ns	***	ns
<b>Gender</b>	Female	4.78 (1.43)	4.56 (0.96)	4.83 (1.46)	4.42 (1.36)
	Male	5.16 (1.52)	4.46 (0.88)	5.09 (1.29)	4.54 (1.35)
	M–W U p (value)	0.031	0.456	0.156	0.765
	M–W U Sig.	**	ns	ns	ns
<b>Area of studies</b>	Agriculture, Environment and Forestry	5.17 (1.40)	4.63 (1.11)	4.91 (1.44)	4.86 (1.29)
	Business	4.36 (1.10)	4.52 (0.89)	5.04 (1.38)	4.40 (1.45)
	Others	5.06 (1.56)	4.48 (0.88)	4.96 (1.37)	4.42 (1.23)
	K–W p (value)	0.005	0.427	0.893	0.059
	K–W Sig.	***	ns	ns	*
<b>University of enrolment</b>	National University of Laos	4.93 (1.53)	4.63 (0.93)	4.83 (1.36)	4.40 (1.26)
	Champasak University	5.15 (1.32)	5.08 (0.87)	5.44 (1.35)	4.78 (1.34)
	M–W U p (value)	0.422	0.769	0.001	0.034
	M–W U Sig.	ns	ns	***	**

\*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.1$

**Table 3.4** Summary of 3 regression models of the influence of demographic factors on TPB' constructs: ATT, SN, PBC towards agripreneurship, and of demographic factors and TPB' constructs on the INT strength of Lao students to engage in agripreneurship.

Model summary statistics and coefficients	Model dependent variable			
	Attitude	Subjective Norms	Perceived Behavioural Control	Intention
<b>Adjusted R Square</b>	0.027	0.042	0.082	0.145
<b>Standard Error of the Estimate</b>	1.438	8.32694	1.284	1.116
<b>ANOVA F</b>	1.731	2.151	3.332	4.199
<b>Constant</b>	3.988 (0.628)***	5.048 (0.364)***	3.701 (0.555)***	2.664 (0.607)***
<b>Gender</b>	0.260 (0.205)	-0.116 (0.120)	0.220 (0.182)	-0.044 (0.162)
<b>Place of origin type (Rural/Urban)</b>	0.077 (0.127)	-0.027 (0.074)	0.266 (0.111)*	0.027 (0.100)
<b>Subsistence farming background</b>	0.306 (0.226)	-0.058 (0.131)	0.038 (0.200)	-0.084 (0.179)
<b>Commercial agriculture/agribusiness background</b>	0.152 (0.232)	0.054 (0.135)	0.435 (0.204)*	0.170 (0.183)
<b>On-farm work background</b>	0.744 (0.306)***	0.549 (0.180)**	0.388 (0.273)	-0.106 (0.245)
<b>Business background</b>	0.105 (0.232)	-0.221 (0.136)	-0.027 (0.207)	-0.214 (0.182)
<b>Area of studies</b>	0.067 (0.137)	-0.106 (0.079)	0.084 (0.120)	-0.068 (0.107)
<b>University of enrolment</b>	0.069 (0.232)	-0.021 (0.136)	0.389 (0.206)	-0.024 (0.184)
<b>Attitude</b>	n/a	n/a	n/a	0.193 (0.057)***
<b>Subjective Norms</b>	n/a	n/a	n/a	0.007 (0.010)
<b>Perceived Behavioural Control</b>	n/a	n/a	n/a	0.234 (0.066)***

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

## **3.6 Discussion**

### **3.6.1 Influences of family occupational background on perceptions and intention towards agripreneurship**

In this study, undergraduate students with a family background in commercial agriculture/agribusiness or on-farm work had significantly more favourable ATT scores, SN, PBC and intention to enter a career in agripreneurship than other students. Coming from rural locations also emerged as the significant determinant of PBC in the regression analysis. This finding reinforces the TPB, as PBC is related to an individual's perception about their personal capabilities, self-confidence, creativity and risk-taking (Ambad & Damit, 2016). It is expected that students from rural areas have a higher confidence relating to agricultural activities. They would also be expected to have stronger network ties (Freire-Gibb & Nielsen, 2014), which has been identified as a significant determinant that positively affected the growth of small and medium agricultural enterprises (Ajayi, 2016), especially for female entrepreneurs (Agarwal et al., 2022). It has also been observed that there is more likelihood of those living in rural regions, such as southern Laos, to engage in self-employment than those in Vientiane, the urban capital (Xayavongsa & Pholpirul, 2019).

Not all agricultural family backgrounds surveyed significantly influenced TPB constructs as indicated by youth perceptions. Rather, this was specific to a background related to commercial agriculture/agribusiness or on-farm work but not related to subsistence farming. The higher PBC of the students with commercial agriculture/agribusiness family background might come from their past experience and seeing their family able to gain improved incomes from commercial agriculture/agribusiness, which is unlike students from subsistence farming backgrounds who may rarely see family earning incomes from their agricultural activities by

definition. Similarly, the more positive attitude towards agripreneurship of students with on-farm labouring family occupational backgrounds reported in our study may be because these students or their family members see the farms they work for, which are normally more advanced, technologically innovative, at a bigger scale and market-oriented, given that they can employ labour from outside the household. In Laos, these commercial farms usually allocate a budget that is used to obtain extra extension service support either from public, private, or non-government agencies. The support ranges from broad to specific aspects, such as market linkage and facilitation, product creation and value-adding, and technical support (Alexander et al., 2017). For the group of students who observed first-hand commercial scale production, agriculture might be perceived as a desirable career, with both innovation challenges and financial rewards. This has been observed in studies that report young workers returning to family farms after employment in other farms and/or sectors through migration, were more likely to reinvest capital earned and apply skills and knowledge acquired off-farm, to improve their farms in an enterprising manner (Arindam et al., 2018; Petit et al., 2018).

In contrast to other agriculture-related family occupational backgrounds in this study, having a background of subsistence farming did not positively influence intention, and students with this background rated approval of agripreneur as a career from normative referents as being lower. This may be a consequence of parents in Laos who practice smallholder/subsistence farming being likely to encourage their children to continue studying towards a higher degree so they can work in an office environment in non-agricultural domains like finance, accounting and banking (LFN, 2021). Similar trends are reported throughout Asia that referent groups are often in favour of young relatives leaving farming related livelihood activities and migrating to urban centres in search of employment opportunities (Humphrey, 2006). Furthermore, the generally low productivity of subsistence farming systems in Laos may be a contributing factor, because productivity must first increase to exceed the subsistence requirements of the

household for it to transition to agripreneurship, after which it becomes more plausible to evolve towards production of more lucrative food or non-food high-value cash crops based on market competitiveness (De Janvry et al., 2011).

Undergraduate students with business family backgrounds unrelated to agriculture did not have stronger intentions towards agripreneurship careers than those without. In other research, parents' entrepreneurial experience played a positive role in influencing individual perception and intention to engage in entrepreneurship (Yang, 2013), but likely in areas other than agriculture. In the case of our study, it appears that the decision to embark in an agripreneurial career is not simply promoted by a business background, indicating the influence of agriculture-specific exposures and capacities in the decision-making process.

Our findings indicate that the promotion of agripreneurship by the Government of Laos would be most effective when it reaches young people who have experience as or are exposed to commercial agriculture/agribusiness because they are more likely to engage in an agripreneurial career, hold a significantly positive attitude toward this career, and have more potential to achieve their goals with this career. This cohort could serve as role models for other youth with different backgrounds that are less inclined towards agripreneurship, who may require different strategies and a people-centred approach rather than a one-size-fits-all approach to policy (Shattuck et al., 2019). This is demonstrated in our finding that urban residents, on average, feel less capable of succeeding as an agripreneur than rural residents, likely as a result of their lived experience involving less exposure to farming, although the underlying causes may be addressed by future research. Accordingly, outreach to urban youth may focus on developing confidence whilst rural youth may appeal to existing confidence.

### **3.6.2 Influences of gender on perceptions of agripreneurship and intention to select it as a career**

While males in our study were likely to hold more favourable attitudes towards agripreneurship than females, there was no direct influence of gender on Lao students' intention strength for selecting agripreneurship as a career. A study on gendered roles in agrarian transition in Laos by Moglia et al. (2020) found that females prioritised, and had a more favourable attitude towards, off-farm activities and modern, non-traditional economy than males. Another study in Cambodia also found that there were more female-headed households involved in all types of non-agricultural activities (Rahut & Micevska Scharf, 2012), and females in the Mekong region were more likely than men to be entrepreneurs in the tourism sector (Nguyen et al., 2020). Our finding is limited to agripreneurship, and not an indication of the intentions of females towards entrepreneurial ideas in general.

### **3.6.3 Faculty enrolment influence on perceptions of agripreneurship and intention to select it as a career**

Attending an agricultural-related faculty, as opposed to other study areas, did not emerge as a significant determinant in this study. Our findings on family background support the literature, as students in business faculties are less interested in agripreneurship (Yang, 2013), but the finding that students of other faculties, such as law or engineering, did not have a significantly lower interest in agriculture, may be contrary to expectation. The finding could be explained, to some extent, by the fact that the agricultural sector is a dominant employer of young people in Laos (75%) (Manikham, 2018), that 40% of Lao farmers have secondary jobs (Shattuck et al., 2019), and that even in urban areas, 47% of the households have members who have practice agriculture (Shattuck et al., 2019). Thus, it is probable that Lao students enrolled in non-agricultural faculties would still have some connection to agriculture and consider the

possibility of agripreneurship. These students may have some exposure to agriculture for securing food either formally or informally, generating household income and livelihoods, unlike residents in urban areas of developed countries with fewer agricultural connections (Gray et al., 2020; Pourias et al., 2015).

### **3.7 Limitations**

It must be stated that whilst our sample can be considered representative of university students, it cannot be considered representative of all Lao youth, and thus our result is impacted by selection bias. Although we accessed a roughly equal number of participants of urban and rural/semi-rural origin, it is likely that the average opportunity for employment and education is greater for these youth than the national average. However, our findings are generally consistent with the lived experiences of practicing youth agripreneurs in Laos including those without tertiary education (Thephavanh et al., 2022).

### **3.8 Conclusion**

Our results indicate that significant relationships exist between self-assessments towards becoming an agripreneur and intention to be an agripreneur amongst Lao university students. Statistical comparisons of groups with differing demographic characteristics found differences in intention and motivational antecedents of intention, as defined in the TPB. Our regression analysis found that demographic factors were not accurate predictors of intention, whereas self-assessments of motivational antecedents of intention, namely ATT and PBC, were statistically significant predictors. Various demographic factors could significantly influence self-assessments of motivational antecedents of intention, however, according to the models, and indirectly influence intention.



### 3.9 Implications

Entrepreneurship has been promoted by governments in several countries as a means to boost national economic growth (Koellinger & Roy Thurik, 2012), and the involvement of youth, especially rural youth from subsistence farming backgrounds, is necessary to ensure the sustainability and inclusiveness of growth. Although we find that certain family occupational backgrounds, namely commercial agriculture/agribusiness, contribute to greater youth intention to practice agripreneurship, subsistence farming did not. This represents a challenge to the Government of Laos because the sustainable and inclusive commercialisation of agriculture requires youth from subsistence farming households to engage in more entrepreneurial modes of agriculture, and this group is also at the greatest risk of being left behind as Laos modernizes. It may be a signal for other institutions throughout the developing world that promote commercial agriculture to ensure that young subsistence farmers are being reached by their approaches and included. The stronger influence of TPB constructs on intention than demographic variables, and the relatively low explanatory power of the models for predicting ATT, SN and PBC from demographic variables, indicates other factors might encourage or discourage youth from a career in agripreneurship that are not captured by demographic differences. Young subsistence farmers require an enabling environment that supports them to raise productivity to exceed their needs, to allow them to transition to fully entrepreneurial agriculture, driven by market demand and profit maximisation. The effect of policy support and services that make up the enabling environment for agripreneurship on youth's intention to practice this career warrants examination.

### 3.10 References

- Agarwal, S., Ramadani, V., Dana, L.-P., Agrawal, V., & Dixit, J. K. (2022). Assessment of the significance of factors affecting the growth of women entrepreneurs: study based on experience categorization. *Journal of Entrepreneurship in Emerging Economies*, 14(1), 111–136. <https://doi.org/10.1108/JEEE-08-2020-0313>
- Ajayi, B. (2016). The Impact of Entrepreneurial Orientation and Networking Capabilities on the Export Performance of Nigerian Agricultural SMEs. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 2(1), 1–23. <https://doi.org/10.1177/2393957515619720>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I. (2006). How to construct a TPB questionnaire. <https://people.umass.edu/aizen/pdf/tpb.measurement.pdf>.
- Alexander, K., Case, P., Jones, M., & Connell, J. (2017). Commercialising smallholder agricultural production in Lao People's Democratic Republic. *Development in Practice*, 27(7), 965–980. <https://doi.org/10.1080/09614524.2017.1353064>
- Ambad, S.N.A., & Damit, D. H. D. A. (2016). Determinants of Entrepreneurial Intention among Undergraduate Students in Malaysia. *Procedia Economics and Finance*, 37, 108–114. [https://doi.org/10.1016/S2212-5671\(16\)30100-9](https://doi.org/10.1016/S2212-5671(16)30100-9)
- Arindam, N., Sujeet, K. J., Asif, M., Sanjit, M., Jancy, G., D.K, G., K.K, D., & T.K, M. (2018). Predictive Factors Affecting Indian Rural Farm Youths' Decisions to Stay in or Leave Agriculture Sector. *Agricultural Science and Technology*, 20(2), 221–234

- Astuti, R.D., & Martdianty, F. (2012). Students' Entrepreneurial Intentions by Using Theory of Planned Behavior: The Case in Indonesia. *The South East Asian Journal of Management*, 6(2). <https://doi.org/10.21002/seam.v6i2.1317>
- Bouichou, E., Abdoulaye, T., Allali, K., Bouayad, A., & Fadlaoui, A. (2021). Entrepreneurial intention among rural youth in moroccan agricultural cooperatives: The future of rural entrepreneurship. *Sustainability (Basel, Switzerland)*, 13(16), 9247–. <https://doi.org/10.3390/su13169247>
- Buyinza, J., Nuberg, I. K., Muthuri, C. W., & Denton, M. D. (2020). Psychological Factors Influencing Farmers' Intention to Adopt Agroforestry: A Structural Equation Modeling Approach. *Journal of Sustainable Forestry*, 39(8), 854–865. <https://doi.org/10.1080/10549811.2020.1738948>
- Cele, L., & Wale, E. (2020). Determinants of smallholders' entrepreneurial drive, willingness and ability to expand farming operations in KwaZulu-Natal. *Development in Practice*, 30(8), 1028–1042. <https://doi.org/10.1080/09614524.2020.1764501>
- Chaudhary, R. (2017). Demographic factors, personality and entrepreneurial inclination: A study among Indian university students. *Education & Training (London)*, 59(2), 171–187. <https://doi.org/10.1108/ET-02-2016-0024>
- Cramb, R. & Newby, J. (2016). *Trajectories of rice-based farming systems in mainland Southeast Asia*. Australian Centre for International Agricultural Research (ACIAR).
- De Janvry, A. & Elisabeth, S. (2011). Subsistence Farming as a Safety net for Food-Price Shocks. *Development in Practice*, 21(4–5), 472–480. <https://doi:10.1080/09614524.2011.561292>

- Dias, C.S., Rodrigues, R. G., & Ferreira, J. J. (2019). What's new in the research on agricultural entrepreneurship? *Journal of Rural Studies*, 65, 99–115. <https://doi.org/10.1016/j.jrurstud.2018.11.003>
- dos Santos, E.A., & Brito de Almeida, L. (2018). To pursue a career in accounting or not: a study based on the Theory of Planned Behavior. *Revista Contabilidade & Finanças*, 29(76), 114–128. <https://doi.org/10.1590/1808-057x201804890>
- Fitz-Koch, S., Nordqvist, M., Carter, S., & Hunter, E. (2018). Entrepreneurship in the Agricultural Sector: A Literature Review and Future Research Opportunities. *Entrepreneurship Theory and Practice*, 42(1), 129–166. <https://doi.org/10.1177/1042258717732958>
- Freire-Gibb, L.C., & Nielsen, K. (2014). Entrepreneurship within Urban and Rural Areas: Creative People and Social Networks. *Regional Studies*, 48(1), 139–153. <https://doi.org/10.1080/00343404.2013.808322>
- Gorgievski, M., Stephan, U., Laguna, M., & Moriano, J. (2018). Predicting entrepreneurial career intentions: Values and the theory of planned behavior. *Journal of Career Assessment*, 26(3), 457–475. <https://doi.org/10.1177/1069072717714541>
- Gray, L., Elgert, L., & WinklerPrins, A. (2020). Theorizing urban agriculture: north–south convergence. *Agriculture and Human Values*, 37(3), 869–883. <https://doi.org/10.1007/s10460-020-10015-x>
- Humphrey, J. (2006). Prospects and Challenges for Growth and Poverty Reduction in Asia. *Development Policy Review*, 24(s1), s29–49. <https://doi.org/10.1111/j.1467-7679.2006.00340.x>

- Jaleta, M., Berhanu, G., & Firk, H. (2009). *Smallholder Commercialization: Processes, Determinants and Impact*. Discussion Paper No. 18. Improving Productivity and Market Success (IPMS) of Ethiopian Farmers Project, ILRI (International Livestock Research Institute), Nairobi, Kenya. 55 pp.  
<https://www.marketlinks.org/sites/default/files/resource/files/ILRI%20-%20Smallholder%20Commercialization%20Processes.pdf>.
- Kalitanyi, V., & Bbenkele, E. (2019). Measuring University Students' Perceptions about the Role of Self-efficacy on Entrepreneurial Intentions in Cape Town. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 5(2), 214–232.  
<https://doi.org/10.1177/2393957519863900>
- Kautonen, T., van Gelderen, M., & Fink, M. (2015). Robustness of the Theory of Planned Behavior in Predicting Entrepreneurial Intentions and Actions. *Entrepreneurship Theory and Practice*, 39(3), 655–674. <https://doi.org/10.1111/etap.12056>
- Kibuka, G. (2010). *An examination of factors that influence entrepreneurial intention of high school students in Kenya*. ProQuest Dissertations Publishing.
- Kim, D.D.E. (2018). Demographic differences in perceptions of media brand personality: a multilevel analysis. *International Journal on Media Management (Saint Gall, Switzerland)*, 20(2), 81–106. <https://doi.org/10.1080/14241277.2017.1410481>
- Koellinger, P.D., & Roy Thurik, A. (2012). ENTREPRENEURSHIP AND THE BUSINESS CYCLE. *The Review of Economics and Statistics*, 94(4), 1143–1156.  
[https://doi.org/10.1162/REST\\_a\\_00224](https://doi.org/10.1162/REST_a_00224)

- Kusakabe, K., & Chanthoumphone, C. (2021). Transition from Subsistence Agriculture to Rubber Plantations in Northern Laos: Analysis of Household Livelihood Strategies by Ethnicity and Gender. *SAGE Open*, 11(2), 215824402110114–. <https://doi.org/10.1177/21582440211011463>
- Lalani, B., Dorward, P., Holloway, G., & Wauters, E. (2016). Smallholder farmers' motivations for using Conservation Agriculture and the roles of yield, labour and soil fertility in decision making. *Agricultural Systems*, 146, 80–90. <https://doi.org/10.1016/j.agsy.2016.04.002>
- Lao Farmer Network (LFN). (2021). The Show: [Parent's HOPE] Why Do Young People Deny to Work in the Agriculture Sector? Lao Farmer Network Facebook Page. Lao Farmer Network. <https://www.facebook.com/page/344672219042330/search/?q=parent%20hope>
- Manikham, D. (2018). Youth and Agri-Entrepreneurship in Lao PDR. *FFTC Agricultural Policy Platform (FFTC-AP)*. [http://ap.ffc.agnet.org/ap\\_db.php?id=925](http://ap.ffc.agnet.org/ap_db.php?id=925)
- Manivong, V., Cramb, R., & Newby, J. (2014). Rice and Remittances: Crop Intensification versus Labour Migration in Southern Laos. *Human Ecology: an Interdisciplinary Journal*, 42(3), 367–379. <https://doi.org/10.1007/s10745-014-9656-6>
- Moglia, M., Alexander, K. S., Thephavanh, M., Thammavong, P., Sodahak, V., Khounsy, B., Vorlasan, S., Larson, S., Connell, J., & Case, P. (2018). A Bayesian network model to explore practice change by smallholder rice farmers in Lao PDR. *Agricultural Systems*, 164, 84–94. <https://doi.org/10.1016/j.agsy.2018.04.004>

Nguyen, A., Hoffmann, J., Baines, L., Ra, R., Elias, R., & Haneef, C. (2020). *RAPID GENDER ANALYSIS DURING COVID-19 PANDEMIC: Mekong Sub-Regional Report, Cambodia, Lao People's Democratic Republic, Myanmar, Thailand and Viet Nam*. UNICEF, UN WOMEN, CARE.  
<https://www.unicef.org/eap/media/6871/file/Rapid%20Gender%20Analysis%20during%20COVID-19%20Pandemic.pdf>

Nguyen, C. (2018). Demographic factors, family background and prior self-employment on entrepreneurial intention - Vietnamese business students are different: why? *Journal of Global Entrepreneurship Research*, 8(1), 1–17. <https://doi.org/10.1186/s40497-018-0097-3>

OECD. (2017). *Unlocking the Potential of Youth Entrepreneurship in Developing Countries from Subsistence to Performance*. OECD Publishing.  
<https://doi.org/10.1787/9789264277830-en>

Petit, O., Kuper, M., & Ameer, F. (2018). From worker to peasant and then to entrepreneur? Land reform and agrarian change in the Saïss (Morocco). *World Development*, 105, 119–131. <https://doi.org/10.1016/j.worlddev.2017.12.031>

Pindado, E., & Sánchez, M. (2017). Researching the entrepreneurial behaviour of new and existing ventures in European agriculture. *Small Business Economics*, 49(2), 421–444. <https://doi.org/10.1007/s11187-017-9837-y>

Pouratashi, M. (2015). Entrepreneurial Intentions of Agricultural Students: Levels and Determinants. *The Journal of Agricultural Education and Extension*, 21(5), 467–477. <https://doi.org/10.1080/1389224X.2014.960528>

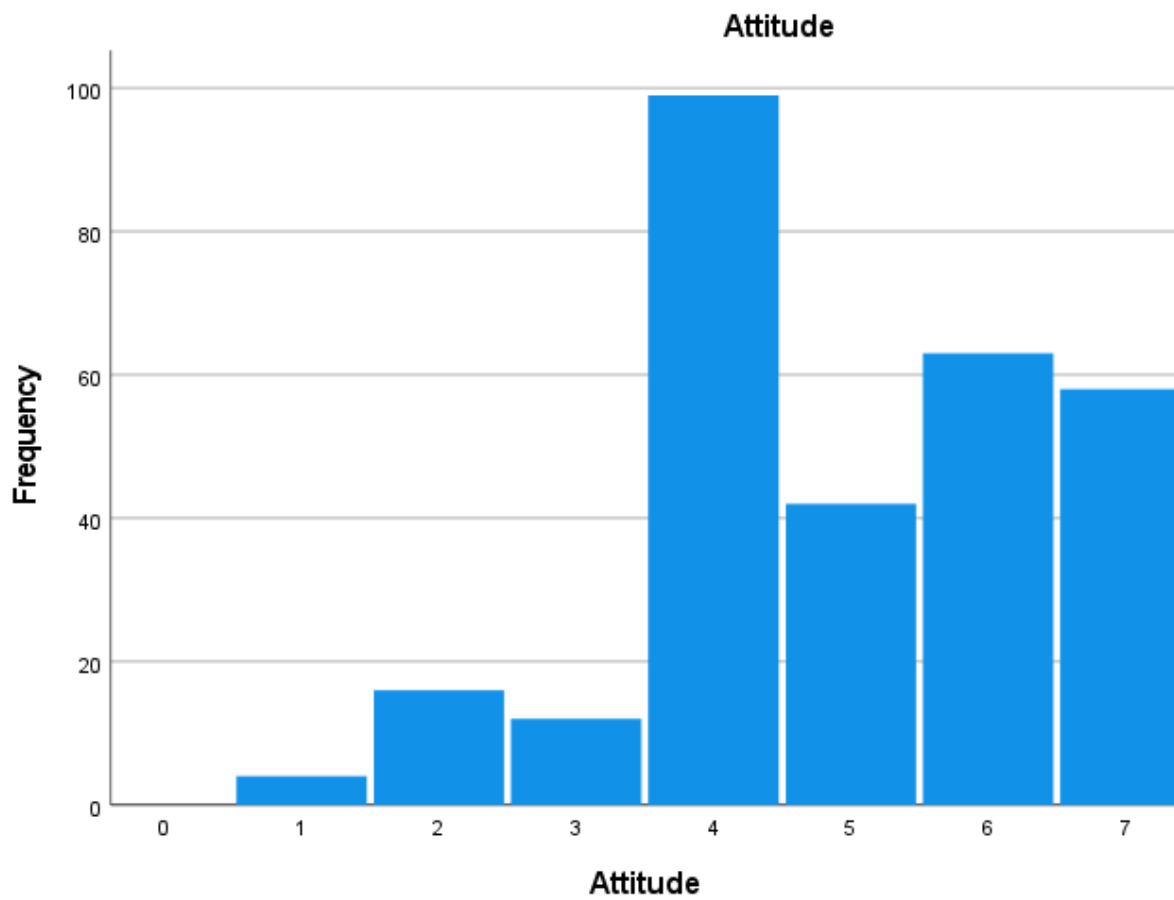
- Pourias, J., Aubry, C., & Duchemin, E. (2016). Is food a motivation for urban gardeners? Multifunctionality and the relative importance of the food function in urban collective gardens of Paris and Montreal. *Agriculture and Human Values*, 33(2), 257–273. <https://doi.org/10.1007/s10460-015-9606-y>
- Rahut, D.B., & Micevska Scharf, M. (2012). Non-farm employment and incomes in rural Cambodia: NON-FARM EMPLOYMENT AND INCOMES IN CAMBODIA. *Asian-Pacific Economic Literature*, 26(2), 54–71. <https://doi.org/10.1111/j.1467-8411.2012.01345.x>
- Rahut, D.B., Mottaleb, K. A., & Ali, A. (2017). Occupation choice in the agricultural and non-agricultural sectors by the rural youth and females in Bhutan. *Journal of Animal and Plant Sciences*, 27(3), 978–985. <https://www.thejaps.org.pk/docs/v-27-03/35.pdf>
- Schlaegel, C., & Koenig, M. (2014). Determinants of Entrepreneurial Intent: A Meta-Analytic Test and Integration of Competing Models. *Entrepreneurship Theory and Practice*, 38(2), 291–332. <https://doi.org/10.1111/etap.12087>
- Senties Portilla, G. (2017). Land concessions and rural youth in Southern Laos. *The Journal of Peasant Studies*, 44(6), 1255–1274. <https://doi.org/10.1080/03066150.2017.1396450>
- Shattuck, A., Manivong, V., & Vongthilard, S. (2019). *Towards ‘People Centred Agriculture: Rethinking rural labour, youth employment and the agrarian transition in Laos*. Department of Policy and legal Affairs, Ministry of Agriculture and Forestry, Laos. <https://www.laofab.org/document/view/4069>



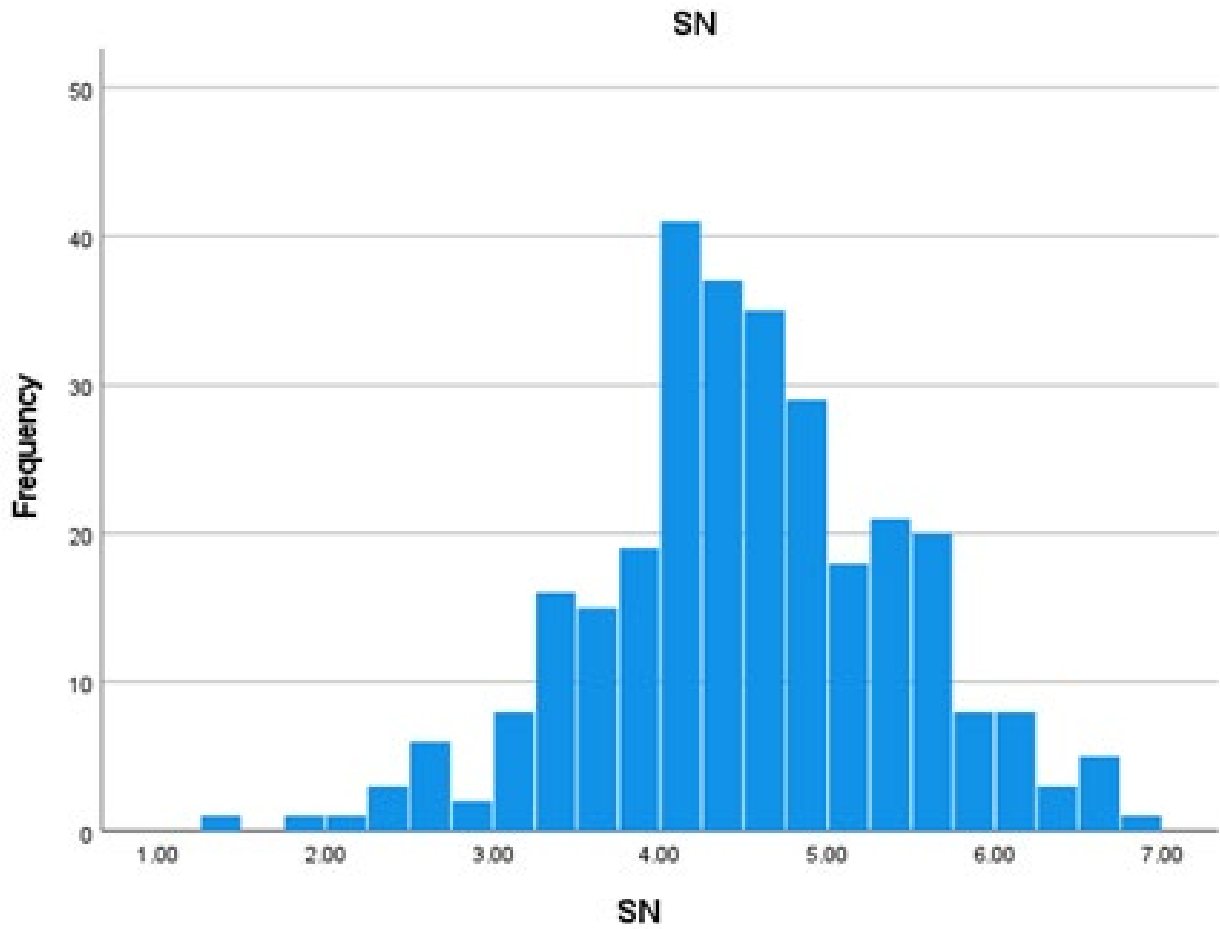
- Solikhah, B. (2014). An Application of Theory of Planned Behavior towards CPA Career in Indonesia. *Procedia, Social and Behavioral Sciences*, 164, 397–402.  
<https://doi.org/10.1016/j.sbspro.2014.11.094>
- Thephavanh, M., Philp, J.N.M., Nuberg, I., Denton, M., & Alexander, K. (2022). Narrative Insights Reveal the Motivations of Young Agricultural Entrepreneurs in Laos. *Sustainability*, 14(20), 13113. <https://doi.org/10.3390/su142013113>
- Tiraieyari, N., & Krauss, S. E. (2018). Predicting youth participation in urban agriculture in Malaysia: insights from the theory of planned behavior and the functional approach to volunteer motivation. *Agriculture and Human Values*, 35(3), 637–650.  
<https://doi.org/10.1007/s10460-018-9854-8>
- UN. (2018). *WORLD YOUTH REPORT: Youth and the 2030 Agenda for Sustainable Development*. United Nations Department of Economic and Social Affairs  
<https://www.un.org/development/desa/youth/wpcontent/uploads/sites/21/2018/12/WorldYouthReport-2030Agenda.pdf>
- Vongpraseuth, P., & Phengsavatdy, M. (2021). *Report Youth Unemployment Issues in Lao PDR*. United Nations Development Programme.  
<https://www.la.undp.org/content/laopdr/en/home/library/report--youth-unemployment-issues-in-lao-pdr.html>
- Webster, N., & Ganpat, W. (2014). St Vincent Youth and Careers in Agriculture. *The Journal of Agricultural Education and Extension*, 20(1), 49–64.  
<https://doi.org/10.1080/1389224X.2013.775952>

- White, B. (2012). Agriculture and the Generation Problem: Rural Youth, Employment and the Future of Farming. *IDS Bulletin (Brighton, 1984)*, 43(6), 9–19. <https://doi.org/10.1111/j.1759-5436.2012.00375.x>
- Xayavongsa, D., & Pholphirul, P. (2019). Delay of gratification and business performance in least developed countries: Evidence from Lao PDR. *Journal of Entrepreneurship in Emerging Economies*, 11(4), 492–514. <https://doi.org/10.1108/JEEE-10-2018-0104>
- Yang, J. (2013). The Theory of Planned Behavior and Prediction of Entrepreneurial Intention among Chinese Undergraduates. *Social Behavior and Personality*, 41(3), 367–376. <https://doi.org/10.2224/sbp.2013.41.3.367>
- Zakaria, H., Adam, H., & Abujaja, A. (2014). Assessment of agricultural students of university for development studies intention to take up self-employment in agribusiness. *International Journal of Information Technology and Business Management*, 21(1): 53–67.

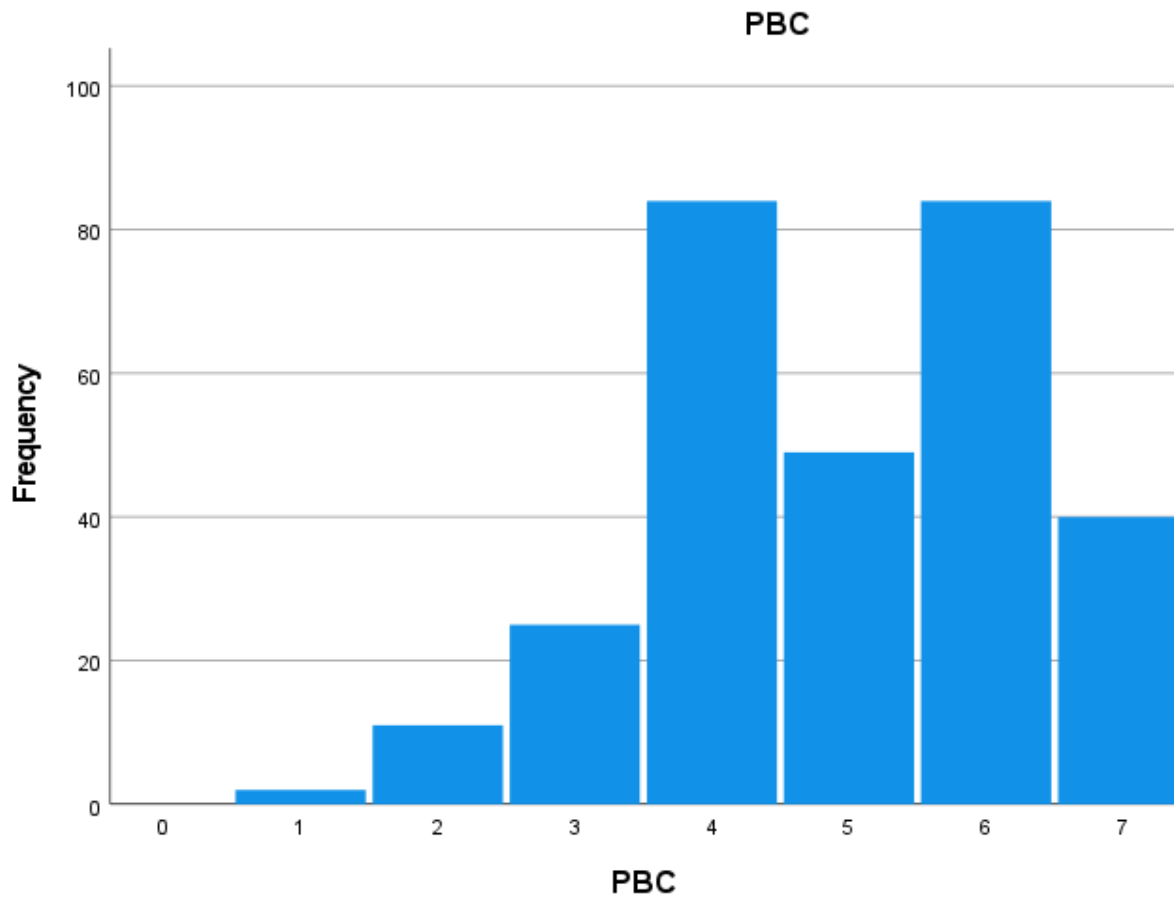
### 3.11 Supplementary data



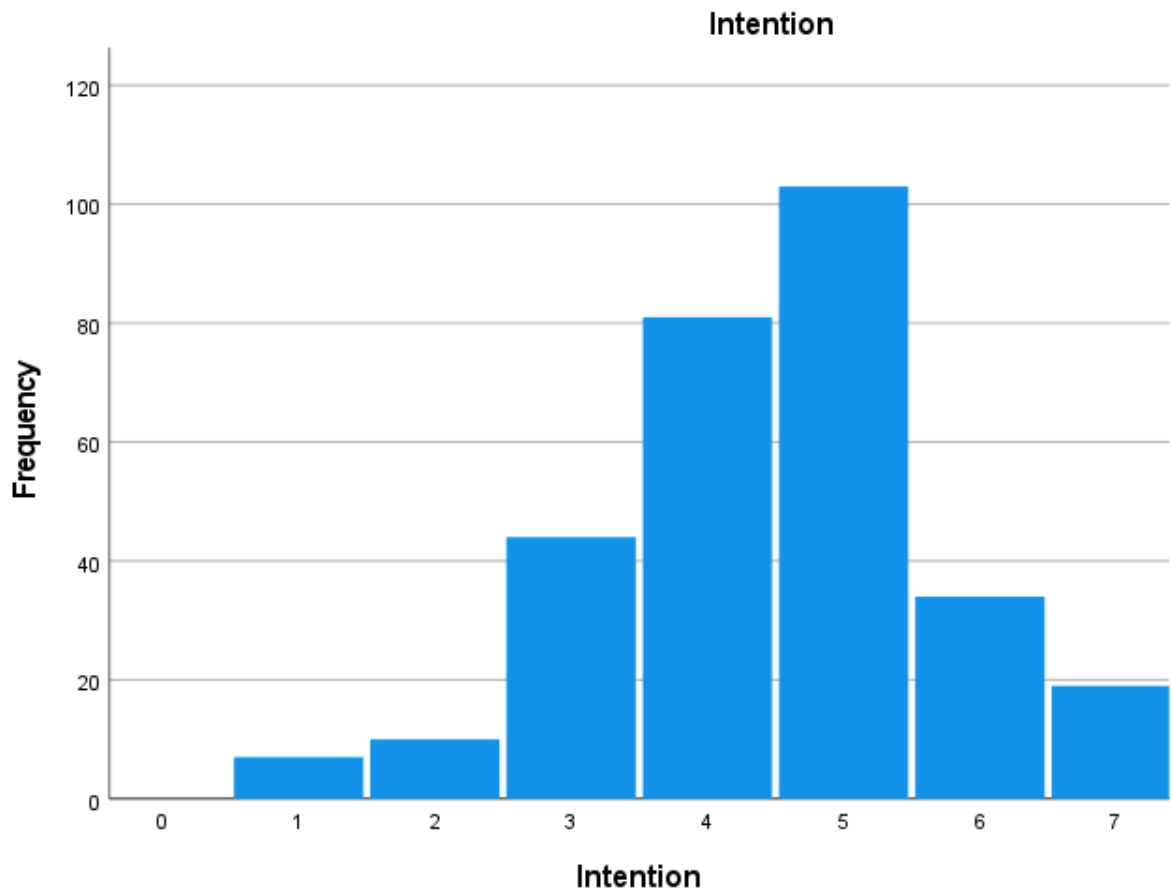
**Supplementary Figure 3.1** Frequency distribution of participants' Attitude scores as indicated by the extent to which students like the idea of agriprenurship as a career on a 7-point Likert scale.



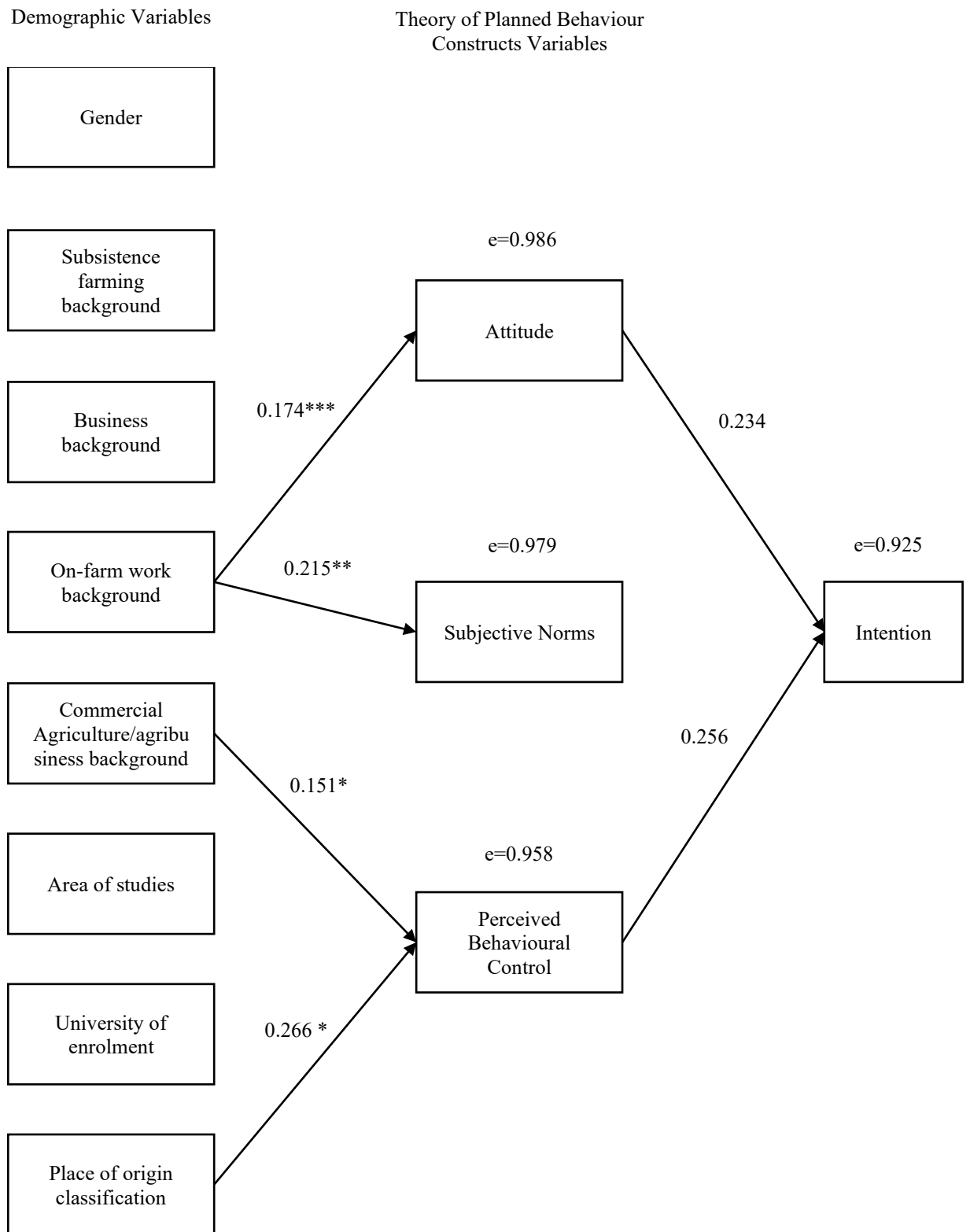
**Supplementary Figure 3.2** Frequency distribution of Subjective Norms (SN) scores as indicated by the perceived extent to which normative referents approve of agripreneurship as a career, weighted by motivation to comply, on a 7-point Likert scale.



**Supplementary Figure 3.3** Frequency distribution of participants' Perceived Behavioural Control (PBC) scores as indicated by the perceived likelihood of achieving their career goals with this career, on a 7-point Likert scale.



**Supplementary Figure 3.4** Frequency distribution of participants' self-reported intention strength to be an agripreneur on a 7-point Likert scale.



\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ ;  $e$  = error term of model

**Supplementary Figure 3.5** Path diagram showing standardized coefficients of determination ( $\beta$ ) from multiple linear regressions. (Non-significant Coefficients are omitted for clarity. Coefficients were determined between 8 Demographic Variables and each Theory of Planned Behaviour Construct variable, and between intention and all other variables).

# **Chapter Four: Determinants of intention to engage in small and medium scale agricultural entrepreneurship amongst Lao youth: A Structural Equation Modeling Approach**

Manithaythip Thephavanh<sup>1,2</sup>, Joshua Philp<sup>1</sup>, Ian Nuberg<sup>1</sup>, Igusti Darmawan<sup>3</sup>, Matthew Denton<sup>1</sup>

<sup>1</sup>The University of Adelaide School of Agriculture, Food and Wine

<sup>2</sup>National Agriculture and Forestry Research Institute, Laos

<sup>3</sup>The University of Adelaide School of Education



## 4.1 Statement of Authorship

Title of Paper	Determinants of intention to engage in small and medium scale agricultural entrepreneurship amongst Lao youth: A Structural Equation Modeling Approach		
Publication Status	<input type="checkbox"/> Published <input type="checkbox"/> Accepted for Publication <input checked="" type="checkbox"/> Submitted for Publication <input type="checkbox"/> Unpublished and Unsubmitted work written in manuscript style		
Publication Details	Submitted as Research paper to Journal of Agribusiness in Developing and Emerging Economies  Status: It has been reviewed. The revised manuscript will be submitted back to the journal soon.		

### Principal Author

Name of Principal Author (Candidate)	Manithaythip Thephavanh		
Contribution to the Paper	Conceptualisation, Data collection, Data curation, Formal analysis, Interpretation of findings, Investigation, Methodology, Project administration, Validation, Visualisation, Writing—original draft, Writing—review and editing		
Overall percentage (%)	90%		
Certification:	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature and is not subject to any obligations or contractual agreements with a third party that would constrain its inclusion in this thesis. I am the primary author of this paper		
Signature		Date	06/01/2023

### Co-Author Contributions

By signing the Statement of Authorship, each author certifies that:

- i. the candidate's stated contribution to the publication is accurate (as detailed above);
- ii. permission is granted for the candidate to include the publication in the thesis; and
- iii. the sum of all co-author contributions is equal to 100% less the candidate's stated contribution.

Name of Co-Author	Joshua N.M. Philp		
Contribution to the Paper	Conceptualisation, Investigation, Methodology, Supervision, Validation, Visualisation, Writing—review and editing		
Signature		Date	06/01/2023

Name of Co-Author	Ian Nuberg		
Contribution to the Paper	Conceptualisation, Supervision, Reviewing of manuscript		
Signature		Date	09/01/2023

Name of Co-Author	Igusti Darmawan		
Contribution to the Paper	Formal analysis, Investigation, Methodology, Validation, Visualisation, Reviewing of manuscript		
Signature		Date	09/01/2023

Name of Co-Author	Matthew D. Denton		
Contribution to the Paper	Conceptualisation, Funding acquisition, Project administration, Resources, Supervision, Reviewing of manuscript		
Signature		Date	09/01/2023

## 4.2 Abstract

**Purpose:** This exploratory research investigated the factors that influence the intention of youth to select agricultural entrepreneurship (agripreneurship) as a career, using university undergraduate students in the Lao People's Democratic Republic (Laos) as a case study.

**Design/methodology/approach:** A hypothetical framework of determinants of intentions to engage in agripreneurship was developed and a survey of indicators derived from this was administered to undergraduate students in Laos. The framework was then tested using a structured equation model.

**Findings:** Our model showed the intentions of students to engage in agripreneurship in Laos is most strongly influenced by (1) their evaluation of knowledge about agriculture and business and their perceived access to resources, (2) attitudes towards the outcomes of having a career as an agripreneur, (3) their perceived capability in performing a career as agripreneur, (4) their perceived policy support, and (5) the support from educational sector.

**Research limitations/implications:** We demonstrated the Theory of Planned Behaviour, the Entrepreneurial Event Model and the "Careership" theoretical frameworks all include factors which significantly influenced intentions towards agripreneurship amongst Lao youth, but omitted significant determinants and included non-significant indicators. Our study was limited to the measurement of intentions, rather than agripreneurship itself.

**Managerial or Policy Implications:** The strong influence of student's evaluation of their knowledge about agriculture and business, and perceived capability to practice agripreneurship, indicate more youth will select this career if the educational sector could supply this knowledge, accompanied by raising the confidence of youth to apply it. Furthermore, policy and educational sectors could emphasise the positive aspects of

agripreneurship to improve attitudes and perceived support for agripreneurship from government policy, in addition to building technical knowledge and skills, as these strengthen intentions.

Originality/value: Our consolidated framework contributes new insights into the determinants of intention towards agripreneurship. These can enable decision makers in Laos to focus on certain beliefs and enabling environmental factors of intervention. These may provide a point of reference for other emerging economies faced with the need for transitioning to entrepreneurial modes of agriculture.

### **Keywords**

Agriculture, Agricultural products, Commercial services, Commodity markets, Community behaviour, Developing countries, Rural economies, Small to medium-sized enterprises

### **4.3 Introduction**

The adoption of more entrepreneurial modes of agriculture by rural youth can lead to better developmental outcomes because, generally speaking, youth are relatively more enterprising, innovative, risk-tolerant and accepting of new technologies (Arindam et al., 2018; Petit et al., 2018; Valle, 2012; White, 2012). Despite these potential contributions to development, research into the characteristics and circumstances that drive young people to engage in agricultural entrepreneurship (agripreneurship) in developing economies remains scarce (Buyinza et al., 2020; Freire-Gibb & Nielsen, 2014). Globally, constraints are faced by youth that may dampen their willingness to engage in agricultural careers. This is especially the case across varied emerging economies, with poor structural support from public, private and non-governmental agencies (Ambad & Damit, 2016), educational systems with fewer farming skills in their curricula (White, 2012), poor rural infrastructure (Giuliani et al., 2017; White, 2012)

and a mismatch between demand and supply in labour markets (Valle, 2012) have been identified. Furthermore, many international and regional development policies prioritise large-scale investments and neglect small-scale agriculture (Murray Li, 2009; White, 2012), which may discourage young people from small-scale agripreneurship (Arindam et al., 2018; Giuliani et al., 2017; Murray Li, 2009; Valle, 2012; White, 2012).

Identifying the perceptions youth hold about agripreneurship that strengthen or diminish motivation to select it as a career, and the extent of their influence, would be beneficial for creating targeted policies and interventions that engage the appropriate beneficiaries and modify enabling environments in a manner likely to improve and promote opportunities for agripreneurship. Accordingly, this exploratory research investigates the factors influencing the intention of youth to engage in small and medium scale agripreneurship as a career, using local university undergraduate students in the Lao People's Democratic Republic (Laos), a developing country in which approximately 70% of younger people reside in rural areas, as a case study. We hypothesised that perceptions about agripreneurship and the enabling environment would influence latent variables that can predict the strength of intention to practice agripreneurship as a career.

## **4.4 Method**

### **4.4.1 Conceptual framework for analysis of career intentions**

Multiple conceptual frameworks have been applied to identify determinants of certain behavioural intentions, including intention to embark on certain careers. These include the two widely adopted frameworks for entrepreneurial intentions related research (Ahuja et al., 2019). These include the Theory of Planned Behaviour (Ajzen, 1991), the Entrepreneurial Event Model (Shapero & Shokol, 1982), and the "Careership", a sociological theory of career

decision making (Hodkinson & Sparkes, 1997) modified from the Social Theory of Practice (Bourdieu, 1977).

The Theory of Planned Behaviour (TPB) is a well-established model for understanding and predicting behaviour (Gorgievski et al., 2018). It has been successfully applied as a framework for studies in developing countries that measure youth career intentions (dos Santos & Brito de Almeida, 2018; Solikhah, 2014), farming practice intentions (Lalani et al., 2016; Senger et al., 2017), youth intentions towards participating in urban agriculture (Tiraieyari & Krauss, 2018), and school leavers' entrepreneurial intentions (Ambad & Damit, 2016; Astuti & Martdianty, 2012; Dias et al., 2019; Kibuka, 2010; Yang, 2013). Its validity as a theoretical framework for entrepreneurial career intentions and behaviour prediction has been repeatedly demonstrated (Kautonen et al., 2015; Schlaegel & Koenig, 2014). When conceptualised according to TPB, agripreneurship is a behaviour performed by an individual according to the individual's intention to engage in it, which itself is influenced by three constructs (factors): (1) the value the individual places on the behaviour (Attitude); (2) perceived approval from significant others (Subjective Norms); and (3) the perception of the ease with which it can be performed (Perceived Behaviour Control). Subjective norms are determined by strength of injunctive/descriptive normative beliefs and weight of that strength to influence motivation to comply (Ham et al., 2015).

While the TPB can be used to predict the individuals' intention to perform the behaviour, Shapero & Shokol (1982) presented the Entrepreneurial Event model (EEM) as a better fit for specifically predicting the intentions related to entrepreneurship or business engagement (Kibuka, 2010). The EEM is an intentional model specific to the domain of entrepreneurship, and accounts for certain entrepreneurial factors. Schlaegel & Koenig (2014) argued the EEM can be integrated with the TPB for a more complete analysis of entrepreneurial intentions.

According to the EEM, the intention to start a business derive from perceptions of desirability and the feasibility of the type of business, and an individual's propensity to act upon opportunities. Perceived Desirability (DES) refers to individuals' evaluation on whether a particular business or career would match their desires (Shapero & Sokol, 1982). Propensity to Act (PA) is defined as a stable personality characteristic (Krueger & Brazeal, 1994) facilitating individuals to act on their desires and a willingness to overcome the risks, adversity and uncertainty they face while starting or running a business of their choice (Krueger et al., 2000). Perceived Feasibility refers to individual self-evaluation of the many aspects that together could determine whether they feel capable of achieving a particular entrepreneurial career or not (Shapero & Sokol, 1982). This evaluation may include the perception of their own capabilities and/or their ability to access to particular resources for a purpose of starting or running an entrepreneurial career, and an assessment of their related knowledge or education (Ozaralli & Rivenburgh, 2016).

Despite the high accuracy of TPB in the prediction of individuals' intention or behaviour, there is still space for other factors that contribute to individuals' intentions towards behaviour within this theoretical framework (Ajzen, 1991; Karimi, 2020). This included urging future research applying TPB to integrate the theory with other factors, such as institutional support and/or the enabling environment (Buyinza et al., 2020). Agu et al. (2021) have similarly integrated TPB, EEM and Entrepreneurship Education as a conceptual framework in their study. Furthermore, it has been argued that career choices are a part of on-going interactions of an individual within different elements of the enabling environment, such as institutional support and governmental policies (Hodkinson & Sparkes, 1997). In brief, the reality for young people is complex, being governed by the extent that the environment enables them to be entrepreneurial in agriculture, and their own perceptions of rural opportunities, and their ability and willingness to capitalise on them.

The roles of environmental and personal factors in decision making are captured, respectively, in the concepts of the “Field” and “Habitus”, as conceptualised in the Social Theory of Practice (Bourdieu, 1977). Field comprises enabling environments such as institutional support and governmental policies. There is a trend for youth career decision-making studies applying Social Theory of Practice, with “Careership”: a sociological theory of career decision making (Hodkinson & Sparkes, 1997) providing the fundamental framework used or modified to suit a variety of contexts. This theory posits young people are rational and pragmatic when it comes to selecting a career and most make career decisions based on personal preferences, personal identity/characteristics, social structure (i.e., culture), values, norms of action, perceived information, opportunities and risks, and family background (Hodkinson & Sparkes, 1997). These are categorised under the Habitus concept. Individuals’ power and negotiating relations, perceptions and reactions to stakeholders and regulations in the Field depend on their Habitus and capital owned, as well as opportunities arising. The forms of capital include economic, social, cultural, symbolic and bodily aspects (Hodkinson & Sparkes, 1997).

#### **4.4.2 Consolidated Framework of hypothesised determinants of intention to engage in agripreneurship**

The Theory of Planned Behaviour, the Entrepreneurial Event Model, and the Careership theory share many common factors (Krueger et al., 2000; Liñán & Fayolle, 2015) whilst others are unique to one framework (Table 4.1). In this study, we used a novel consolidated framework: AgriPreneurial Career Framework (APCF) to assess the direct and indirect effects of hypothesized factors that influence intentions to be an agripreneur (Figure 4.1).

The hypothesised factors used in the framework were selected according to this conceptual framework, and adapted from a literature review of global factors which encourage or discourage youth in agriculture (Table 4.1), key informant interviews with senior academics



and researchers in Laos and online surveys with Lao youth students and early and mid-career professionals. Interviews with key informants were used to identify dominant beliefs about the enabling environment and expected outcomes of agripreneurship. The online surveys were used to identify dominant beliefs about agripreneurship. These beliefs were incorporated as possible indicators of the field in the framework.

**Table 4.1** Common and unique factors from three theoretical frameworks for investigation career intention in agripreneurship.

<b>AgriPreneurial Career Framework Hypothesised latent factors</b>	<b>Theoretical basis</b>		
	<b>Theory of Planned Behaviour</b>	<b>Entrepreneurial Event Model</b>	<b>Careership Theory</b>
Attitude towards the outcomes of having a career as an agripreneur (ATT)	Attitude	Perceived Desirability	Habitus (values)
Perceived approval from close normative referents (SN)	Subjective norms		Habitus and Capital (social, culture, norm of action)
Weight of normative referent's influence on motivation to select a career as agripreneur (SNi)			
Perceived Capability in performing a career as agripreneur (PCP)	Perceived Behaviour Control	Perceived Feasibility	Habitus (perceived information, opportunities and risks, family background)
Perceived Desirability (DES)	Attitude	Perceived Desirability	Habitus (personal preferences)
Perceived effect of resources on feasibility (FESr)	Perceived Behaviour Control	Perceived Feasibility	Capital (resources)
Perceived effect of knowledge about agriculture and business on feasibility (FESkn)	Perceived Behaviour Control	Perceived Feasibility	Capital
Propensity to Act (PA)	Perceived Behaviour Control	Propensity to Act	Habitus (personal identity/characteristics)
Perceived Agricultural Extension services (EXT)			Field: perception of these enabling environments
Perceived Agricultural Policy (POL)			
Perceived Financial support/credit access (FINANCE)			
Perceived Information sharing and distributing (INFO)			
Perceived Infrastructure and transportation (TRANS)			

Perceived Taxation and registration support  
(TAX)

Perceived Research, development and  
technology (SciTech)

Perceived Market support (MAR)

Perceived Educational support (EDU)

---

Importance of Agricultural Extension  
services (EXTi)

Importance of Agricultural Policy (POLi)

Importance of Financial support/credit  
access (FINANCEi)

Importance of Information sharing and  
distributing (INFOi)

Importance of Infrastructure and  
transportation (TRANSi)

Importance of Taxation and registration  
support (TAXi)

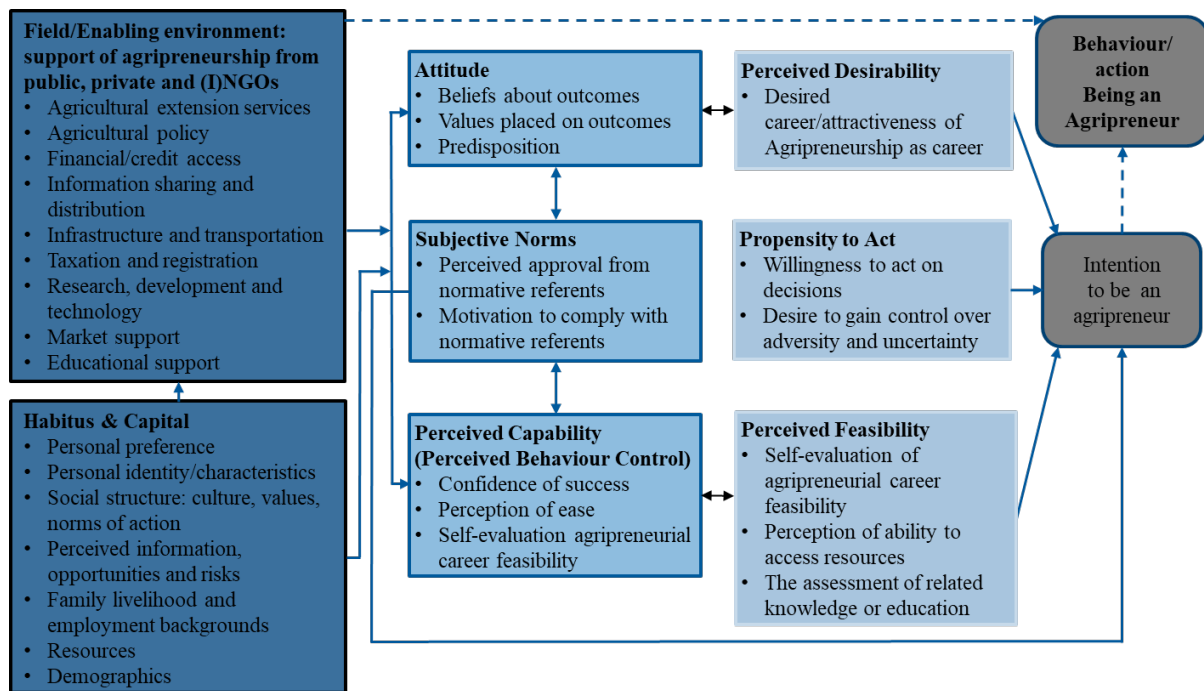
Importance of Research, development and  
technology (SciTechi)

Importance of Markets support (MARI)

Importance of Educational support (EDUi)

---

Field: importance of  
these enabling  
environment on  
decision-making to  
engage in  
agriprenurship



Dashed arrows indicate a possible influence of one construct to another, blue arrows indicate direct influence of one construct to another, blue two-headed arrows indicate mutual influence between constructs, black two-headed arrows indicate constructs that are considered interchangeable from previous research.

**Figure 4.1** AgriPreneurial Career Framework (APCF). *Adapted from the Theory of Planned Behaviour (Ajzen, 1991), the Entrepreneurial Event Model (Shapero & Shokol, 1982), and the Careership Theory (Hodkinson & Sparkes, 1997), with author modifications.*

### **4.4.3 Survey instrument and hypothesised indicators**

A survey instrument was developed with questions corresponding to each of the factors in the APCF (Supplementary Table 4.1). The questionnaire was then translated into Lao language and pilot-tested with 38 final year high school students in central Laos in October, 2019. This school is located in the main campus of the National University of Laos in Vientiane (NUoL), in the capital city of Laos. It is representative of a peri-urban area. This school is unique, as these students come from different rural areas in several districts and provinces in Laos, and this school has students from several ethnicities as its name implies: School for Gifted and Ethnic students. Contents, structures and language used in the questionnaire were modified based on feedback from the pilot survey of high school students. The pilot survey served as a testing ground for two separate subsequent surveys of both high school and university students. The current paper reports on the survey of university students.

### **4.4.4 Data collection**

Surveys of career perceptions and intentions were undertaken at two out of the total five state universities in Laos during January and February, 2020. These were the NUoL in Vientiane Capital, and Champasak University in southern Laos. All research involving human participants described in this study was approved by the University of Adelaide Human Research Ethics Committee, approval in number H-2019-110. Informed consent was obtained from all participants in the study.

#### *4.4.4.1 Sample population*

The survey was administered to 298 Lao undergraduate students (Table 4.2). The subjects were representative of young people who have not yet begun their careers, who volunteered to participate in this survey and self-reported their perceptions. Although NUoL hosts a large

proportion of total university enrolments in Laos, including students from many different regions in the country, previous studies of youth perceptions involving university students have suggested broader geographical scope may increase the representativeness of the sample (Kalitanyi & Bbenkele, 2019). Accordingly, Champasak University, separated from NUoL by approximately 610 km and located in southern Laos, was included. In 2018-2019 academic year, there were 21,264 undergraduate domestic students enrolled at NUoL and 5,554 enrolled at Champasak University. From these total, 235 students from NUoL and 63 from Champasak University participated in this study (Table 4.2). The sample consisted of 44 students studying at agriculture, environment and forestry faculties, 209 students studying at business faculties, and 45 students studying in other faculties (Table 4.2). The distribution across faculties was proportionate to each faculty's share of total enrolments. 49 % student participants were female and 51 % were male.

**Table 4.2** Overview of demographic characteristics of study participants.

<b>Variable</b>	<b>Category</b>	<b>Number</b>	<b>Percentage</b>
<b>Total participants</b>	All	298	100.0
<b>University of enrolment</b>	National University of Laos	235	78.9
	Champasak University	63	21.1
	Agriculture, environment and forestry	44	14.8
<b>Area of studies</b>	Business	45	15.1
	Other	209	70.1
<b>Gender</b>	Female	146	49.0
	Male	152	51.0

#### **4.4.5 Data analysis**

A Structural Equation Model (SEM) developed in IBM SPSS Amos 26® was used to test complex relationships among factors in the APCF and to identify which factors significantly influenced students' intention to engage in agripreneurship in Laos. Initially, 26 independent latent variables were investigated (Table 4.3).



**Table 4.3** Hypothesised latent variables.

<b>Variable type</b>	<b>Latent Variable</b>
<b>Dependent</b>	Intention to be small and medium scale agripreneur (INT).
<b>Independent</b>	<p>Attitudes towards a career as an agripreneur (ATT).</p> <p>Perceived approval from normative referents* to choose agripreneurial career (SN).</p> <p>Weight of SN influencing on motivation to comply a career as agripreneur (SNi).</p> <p>Perceived Capability in performing a career as agripreneur (PCP).</p> <p>Perceived desirability of agripreneurship a career (DES).</p> <p>Perception of feasibility to be a small and medium scale agripreneur, in an aspect of Perceived effect of resources on feasibility (FESr).</p> <p>Perception of feasibility to be a small and medium scale agripreneur, in an aspect of Perceived effect of knowledge about agriculture and business on feasibility (FESkn).</p> <p>Propensity to Act (PA) or Perceived personal stable personality characteristic of the respondents.</p> <p>Perceived enabling environment or structural support** from public, private and (international) non-governmental organisations in Laos for youth involvement in agriculture as entrepreneurs (EXT, POL, FINANCE, INFO, TRANS, TAX, SciTech, MAR, EDU).</p> <p>The importance of each enabling environment on decision-making to engage in agripreneurship (EXTi, POLi, FINANCEi, INFOi, TRANSi, TAXi, SciTechi, MARI, EDUi).</p>
<b>Notes:</b>	<p>* “normative referents” are the most influential person(s) in the respondent’s life. It may be parents, grandparents, guardians, siblings, and cousins and relatives.</p> <p>** The structural supports consist of agricultural extension services, agricultural policy support, financial support/credit access, information sharing and distributing, infrastructure and transportation, taxation and registration, research, development and technology, market support, and educational support.</p>

#### *4.4.5.1 Validation of the measurement model*

A measurement model was constructed to test the complex relationships amongst observed or measured variables and latent variables (factors), and identify which factors significantly influenced students' intentions to engage in agripreneurship in Laos. As these factors are latent variables, based on established theoretical frameworks, the relationship between the latent factors and their observed or measured variables (the measurement model) were investigated. Confirmatory Factor Analysis (CFA) in Amos was used to evaluate the validity of the measurement model, using an alternative-model approach to confirm the structure/grouping of the variables for each factor and select one of four alternative conceptual models that had the best fit indices. These steps include drawing one factor, two (or more) orthogonal factors, two correlated factors, and hierarchical models in Amos for each latent variable, running a CFA for each, validating and modifying all of the four alternative models for each factor, and selecting the best modified model for each factor. Each of the 26 factors were individually subjected to CFA for each alternative model in Amos. Goodness of Fit (GOF) and construct validity are two CFA outputs required for validation of the measurement model (Hair, 2010).

Goodness of Fit was assessed by Relative Chi-Square ( $\chi^2/df$ ), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA) (Buyinza et al., 2020). These indices were assessed by comparing model fit indices of the final model with GOF thresholds established in the literature. To satisfy the threshold, the relative or normed chi-square ( $\chi^2/df$ ) value should be less than or equal 3.0 (Dang et al., 2014); IFI and TLI should be equal or more than 0.9 (Buyinza et al., 2020), CFI should have marginal levels from 0.8 to 0.9 (Hair et al., 1998 cited in Dang et al., 2014); and RMSEA should range between 0.03 and 0.08 (Dang et al., 2014).

Construct validity was assessed by standardized factor loadings (Hair et al., 2014), average variance extracted (AVE) (Dang et al., 2014; Dragan & Topolšek, 2014; Hair, 2010) and construct reliability (CR) (Dang et al., 2014; Dragan & Topolšek, 2014). To be acceptable, all standardised factor loadings should be above 0.5 and have a statistically significant p value ( $p < 0.05$ ) (Hair, 2010). AVE for each construct should be greater than or equal 0.5 to be accepted (Dang et al., 2014; Dragan & Topolšek, 2014; Hair, 2010). CR should be above or equal 0.7 to be accepted (Dang et al., 2014; Dragan & Topolšek, 2014). The range between 0.6 and 0.7 could be considered acceptable too, in a case when other indicators of a model's construct validity are good (Hair, 2010).

Fit and validity indices were checked after running the CFA for each factor. Modifications were made for factors that did not meet the criteria. Modifications included removing insignificant ( $p > 0.05$ ) and lower factor loading indicator variables ( $< 0.5$ ) (Hair et al., 2014) until GOF indices of each factor met the threshold.

#### *4.4.5.2 Validation of the structural model*

Once the measurement model was validated, modified and satisfied, the best modified model for each factor was sequentially added to the structural model (Buyinza et al., 2020; Dang et al., 2014). Estimation was required with every addition. The process of structural model estimation was running the SEM to see if GOF indices (same criteria as measurement model validation), followed by modification until the model fitted. The modifications included cutting off measured variables that were not statistically significant ( $p > 0.05$ ) and had lower factor loading ( $< 0.5$ ) (Hair et al., 2014). Correlations amongst different measured variables were also checked. To improve the fitness of the model, the relationships (arrows) amongst variables that had low correlations or none that were statistically significant with each other were removed.

For some factors all of their measured variables were removed from the structural model. These processes are repeated until GOF indices meet an acceptable threshold.

## **4.5 Results**

### **4.5.1 Model validity**

Of the 26 hypothesised latent variables, 18 were retained in the final model (Table 4.4), eight latent variables were removed during structural model validation in order to satisfy the model GOF indices. Only statistically significant variables with standardised factor loadings above 0.5 were retained in our final model. These acceptable loadings illustrated the strong relationship among observed variables and their associated factors; contributing to the validity of the factors retained in the model (Hair, 2010). Most AVE and CR are in acceptable ranges, which are above 0.5 for AVE and above 0.7 for CR, except for some marginal values: AVE and CR of Attitude and Perceived Desirability factors (Table 4.4). However, since our study is exploratory, a CR below 0.7 is acceptable (Hair et al., 1998 cited in Dang et al., 2014). Similarly, though AVE for Attitude and Perceived Desirability factors in our model are at marginal levels (0.673 and 0.686, respectively), if other respective model's construct validity indicators, such as factor loadings and CR are at acceptable levels, AVE between 0.6 and 0.7 can be considered acceptable (Hair, 2010 cited in Dang et al., 2014).

**Table 4.4** Indicators for measuring latent variables in the final model of determinants of intention to choose an agripreneurial career, the average variance extracted (AVE) and construct reliability (CR) for each latent variable, and standardized factor loadings for each indicator.

<b>Latent variables</b>	<b>AVE</b>	<b>CR</b>	<b>Measured indicators</b>	<b>Standardized factor loadings</b>
<b>ATT</b>	0.407	0.673	Belief that agripreneurs are own boss and control own time	0.610
			Like for agripreneurship as a career	0.659
			Pride in having own agricultural products	0.644
<b>SN</b>	0.515	0.760	Belief guardians would encourage/discourage	0.701
			Belief siblings would encourage/discourage	0.761
			Belief cousins would encourage/discourage	0.688
<b>PCP</b>	0.503	0.752	Having the confidence to become an agripreneur	0.736
			Belief own past experience can help become an agripreneur	0.674
			Having a high chance of succeeding as an agripreneur	0.716
<b>DES</b>	0.422	0.686	Desirability of being own boss and controlling own time	0.674
			Desirability of liking own career	0.622
			Desirability of pride in own career	0.651
<b>FESr</b>	0.724	0.887	Access to capital	0.897
			Access to land	0.820
			Access to markets	0.833
<b>PA</b>	0.560	0.914	Own perseverance, hardworking and commitment	0.726
			Own self-efficacy	0.795
			Own Entrepreneurial alertness	0.720
<b>FESkn</b>	0.690	0.816	Own Agricultural education	0.852
			Own Business education	0.808
<b>EXTi</b>	0.628	0.870	Influence of market linkage and facilitating	0.718
			Influence of agricultural products' value creating and adding	0.815
			Influence of opportunities to trying new farming system/technology	0.837
			Influence of support for business planning	0.795
<b>POL</b>	0.584	0.807	Perceived policy supporting youth in agripreneurship	0.706
			Perceived effectiveness of policies supporting agripreneurship	0.826

			Perceived effectiveness of policies supporting youth in agripreneurship	0.755
<b>POLi</b>	0.600	0.814	Influence of the policy supporting youth in agripreneurship	0.687
			Influence of the effectiveness of policies supporting agripreneurship	0.813
			Influence of the effectiveness of policies supporting youth in agripreneurship	0.806
<b>SciTech</b>	0.647	0.845	Perceived Agricultural Research	0.715
			Perceived Laboratory facility	0.836
			Perceived agricultural research application	0.854
<b>SciTech</b>	0.543	0.781	Influence of chance to access/adopt technology/modern practices	0.691
			Influence of Agricultural Research	0.750
			Influence of Agricultural research results application	0.768
<b>MAR</b>	0.601	0.818	Perceived agricultural markets access	0.789
			Perceived agricultural market stability	0.831
			Perceived agricultural products sale prices	0.70
<b>MARi</b>	0.524	0.767	Influence of agricultural products market demand	0.765
			Influence of agricultural markets access	0.721
			Influence of agricultural products export potential	0.682
<b>EDU</b>	0.617	0.828	Perceived farming knowledge/skills/activities in school curriculum	0.738
			Perceived business knowledge/skills/activities in school curriculum	0.779
			Perceived agripreneurship knowledge/skills/activities in school curriculum	0.836
<b>EDUi</b>	0.676	0.862	Influence of farming knowledge/skills/activities in school curriculum	0.814
				0.820
			Influence of business knowledge/skills/activities in school curriculum	0.832
			Influence of agripreneurship knowledge/skills/activities in school curriculum	
<b>INFO</b>	0.613	0.825	Perceived access to agricultural information	0.759
			Perceived access to agricultural market demand information	0.867
			Perceived access to agricultural market pricing information	0.714
<b>INFOi</b>	0.614	0.827	Influence of access to agricultural market demand information	0.824
			Influence of access to agricultural market pricing information	0.778

All criteria for the Goodness of Fit Indices of our final model met the required threshold (Table 4.5). These are including  $\chi^2/df = 1.447$ , IFI = 0.917, TLI = 0.906, CFI = 0.915, and RMSEA = 0.039. The acceptable range of  $\chi^2/df$  is less than or equal 3 (Dang et al., 2014). IFI and TLI acceptable levels are at least or more than 0.9 (Buyinza et al., 2020). CFI values from 0.8 to 0.9 are considered marginal levels (Hair et al., 1998 cited in Dang et al., 2014). RMSEA is considered acceptable if it is between 0.03 and 0.08 (Dang et al., 2014) indicating an acceptable fit of our final model.

**Table 4.5** The final structural model goodness of fit.

<b>Index</b>	<b>Threshold</b>	<b>Structural model</b>
$\chi^2/df$	1-3	1.447
Incremental Fit Index	$\geq 0.90$	0.917
Tucker-Lewis Index	$\geq 0.90$	0.906
Comparative Fit Index	0.8 to 0.9	0.915
Root Mean Square Error of Approximation	$\leq 0.07$	0.039



#### **4.5.2 Determinants of Intention to enter a career as an agripreneur**

The results show that the intention of students to engage in agripreneurship in Laos is most strongly influenced by their own evaluation of knowledge about agriculture and business ( $\beta=0.409, p<0.05$ ) and their perceived access to resources (perceived effect of resources on feasibility) ( $\beta=0.352, p<0.05$ ), attitudes towards the outcomes of having a career as an agripreneur ( $\beta=0.218, p<0.05$ ), their perceived capability in performing a career as agripreneur ( $\beta=0.178, p<0.05$ ), their perceived policy support ( $\beta=0.167, p<0.05$ ), and the support from educational sector ( $\beta=0.139, p<0.05$ ) (Table 4.6).

**Table 4.6** Structural relations of FESkn, FESr, ATT, PCP, POL, and EDUi on Lao youth intention (INT) to engage in agripreneurship.

<b>Structural relation</b>	<b>Standardized parameter</b>	<b>p (value)</b>	<b>Sig.</b>
Perceived effect of knowledge about agriculture and business on feasibility ---> Intention	0.409	0.008	***
Perceived effect of resources on feasibility ---> Intention	-0.352	0.017	**
Attitude towards the outcomes of having a career as an agripreneur ---> Intention	0.218	0.003	***
Perceived Capability in performing a career as agripreneur ---> Intention	0.178	0.026	**
Perceived Policy Support ---> Intention	0.167	0.008	***
Importance of Educational support ---> Intention	0.139	0.015	**
<b>Indirect effects</b>			
<i>Perceived Desirability ---&gt; Attitude towards the outcomes of having a career as an agripreneur</i>	<i>0.870</i>	<i>0.001</i>	<i>***</i>
<i>Propensity to Act---&gt; Perceived Capability in performing a career as an agripreneur</i>	<i>0.550</i>	<i>0.001</i>	<i>***</i>

Perceived approval from close normative referents namely siblings, guardians, cousins and relatives, another factor of TPB, does not significantly influence their intention to engage in agripreneurship. The seven areas of enabling environment and their importance, investigated factors derived from the Career Theory also do not significantly influence the students' intention to engage or start a career as agripreneur. Perceived Desirability of an agripreneurship career and Propensity to Act, the other two factors of the EEM, did not significantly influence students' intention directly but indirectly influence through their attitudes and perceived capability in performing a career as an agripreneur ( $p < 0.05$ ).

## **4.6 Discussion**

### **4.6.1 Determinants of intention amongst Lao Youth**

The SEM was developed according to our framework identified Perceived Feasibility arising from agriculture and business knowledge, and access to Resources, Attitude, Perceived Capability, Perceived Policy support and the Importance of support from Educational sector, were the most significant factors influencing the intentions of students to enter an agripreneurial career. Subjective Norms and another seven sectors of the enabling environment were not significant factors influencing the students' intentions towards agripreneurship. Perceived Desirability and Propensity to Act did not significantly influence the students' intentions directly, but indirectly significantly influenced their intentions through their Attitude and Perceived Capability.

#### *4.6.1.1 Knowledge and Education Support*

Perceived Feasibility arising from agriculture and business knowledge was the strongest positive in determinant of intentions in our model. Furthermore, students who believed that educational support was important to agricultural success were more likely to have a higher

intention to engage in agripreneurship. The positive loadings indicate that equipping Lao youth with greater agriculture and business knowledge would strengthen their intentions more than any other hypothesised determinant. The average effect of education support was only slightly above neutral. This suggests that there is scope for the educational sectors in Laos to improve the environment supporting agripreneurial careers. This might be done through reforming the educational curriculum to focus on integration of (agricultural) entrepreneurship, business and farming knowledge and skills (Table 4.6).

Entrepreneurship training has been shown to increase the likelihood of youth entering self-employment jobs (Morrar et al., 2022). For agricultural students specifically, Zamani & Mohammadi (2018) showed that integrating entrepreneurial skills for agricultural students in the Iranian curriculum would both helped improve their capacity to remain in agriculture, especially as entrepreneurs and competencies in the general workforce market. The integration of entrepreneurship in the agricultural sector is essential for highly agrarian developing countries (da Silva, 2009) as it could help promote the interconnecting and developing of economic structures (Solesvik et al., 2012). Not only for graduates and the economy, but as a strategy in facilitating farmers to grow their business and thrive (Fitz-Koch et al., 2018; Sandhu & Hussain, 2021). Adeyanju et al. (2021) argued that Nigerian farmers are likely to turn themselves into agripreneurs when they receive entrepreneurial education and trainings. Similarly, the blending of agriculture in entrepreneurship courses in Tanzanian colleges significantly influenced students' agripreneurial intentions (Nade Paschal & Malamsha, 2021).

#### *4.6.1.2 Access to resources*

Perceived access to resources was the second most influential factor on students' intentions towards an agripreneurial career in Laos. Interestingly, perceived access to resources alone had a relatively strong negative loading factor, indicating that the higher perceived access to

resources, the lower students' intention towards an agripreneurial career. Although it may be expected that ability to access to resources will increase confidence in starting entrepreneurial tasks (Ozaralli & Rivenburgh, 2016), it could be that a large resource endowment may cause individuals to preferentially target career choices other than agriculture. Furthermore, our definition of small-medium scale of agripreneurship (0.5-3 hectares) may not appeal or apply for participants with larger land endowments, as those who have more options to derive income from renting their land out to domestic and international investors, another booming trend in agrarian Laos, or becoming a large scale agripreneurs. This result suggests that agripreneurship that simply increases the resources available to youth for agripreneurship may not be an appropriate course of action for increasing the number of agripreneurs and sustainable agricultural food supply.

#### *4.6.1.3 Attitude*

Attitude was the third strongest influence of Lao students' intentions to be agripreneur, according to the SEM and the second strongest positive influence. The positive loading factor indicates that students with more favourable beliefs about the outcomes of being an agripreneur were more likely to have a higher intention to become an agripreneur as a career, this is consistent with the TPB (Ajzen, 1991). This finding is not surprising. This is likely due to attitudes playing a vital role in individuals' intentions and behaviours across many psychological theories and studies (Agu et al., 2021; Ahuja et al., 2019; Ajzen, 1991; Ajzen & Fishbein, 2000; Ambad & Damit, 2016; Kibuka, 2010; Shapero & Sokol, 1982; Solikhah, 2014). It even been suggested being used as a tool to encourage the behaviour. For example, building positive attitudes towards agriculture, entrepreneurship and agribusiness for students through education has been recommended in other developing contexts, so as to attract more youth towards careers relating to agriculture (Chýlová et al., 2019), entrepreneurship (Ambad

& Damit, 2016) and agribusiness (Steven et al., 2015). Chýlová et al. (2019) also urged the policy, agricultural and educational sectors to put their effort into changing the students' attitudes to a more positive one towards agribusiness, as a strategy to attempt increasing students' favouring an agribusiness career. Accordingly, to encourage more youth into agripreneurship, the Government of Laos namely the Ministry of Agriculture and Forestry, and the faculty of agriculture should not limit their effort to building or transferring technical knowledge and skills aspects to youth or students, but should also emphasise the positive aspects of agripreneurship.

#### *4.6.1.4 Perceived Capability*

The positive loading of Perceived Capability to perform as an agripreneur indicates that students who perceived they have the capability to perform as an agripreneur, or believe that they have a higher chance to be succeed in the career, are more likely to have a higher intention to be an agripreneur. This is consistent with the Theory of Planned Behaviour (Ajzen, 1991) and several studies that found Perceived Behaviour Control is a determinant of an individuals' intention to act, including participation in urban agriculture by youth in Malaysia (Tiraieyari & Krauss, 2018), pursuing certified practising accountant (CPA) related careers in Indonesia (Solikhah, 2014), entrepreneurship in Malaysia (Ambad & Damit, 2016), and smallholder farmers' motivations for using conservation agriculture in Mozambique (Lalani et al., 2016). As this factor is driven by an individual's assessment of their own capability, which may not reflect their actual capability, purely technical knowledge and the enabling environment may not necessarily result in more widespread intention to practice agripreneurship, unless there is also awareness raising and youth entrepreneurship empowerment. Given a higher Propensity to Act was associated with higher Perceived Capability to perform as an agripreneur in our

study, empowerment programs may increase intention by focusing on willingness to act on decisions, risk tolerance, self-efficacy and entrepreneurial alertness.

#### *4.6.1.5 Policy Support*

Perceived policy support was found to have a significant positive influence on intentions, indicating that students who perceived the support from the government for the purpose of starting, working and being successful in agripreneurial career were more likely to have a higher intention to engage this career. The average rating students provided for policy support was between “neutral” and “slightly good”. Perceptions of the effectiveness of policies that support on commercial agricultural production, business and entrepreneurship in general, and in particular with youth, and perceptions of policy aims for supporting youth for commercial agricultural production, business and entrepreneurship had the strongest factor loadings on Perceived policy support (Table 4.4). This indicates there is scope for increasing Lao youth intentions to be agripreneurs by improving the effectiveness of policy support for agripreneurship, and reforming commercial agricultural production, business and entrepreneurship policies to better focus on youth, and by ensuring that perceptions amongst career decision makers are also improved. Conducive policies have been considered having a crucial role in contributing to the growth of agripreneurship (Bignotti et al., 2021), and a better understanding of individuals’ intentions (i.e, entrepreneurial intentions), the better policy makers could produce conducive policies (Urbano et al., 2019). Conducive policies could bring about better enabling environment conditions supporting agripreneur practices, for example financial reforms and access, tax exemption, improving market access, farmers’ organisations and networks (Bignotti et al., 2021).

## **4.6.2 Theoretical contribution**

### *4.6.2.1 The Theory of Planned Behaviour*

Our study reinforces the strong body of literature reporting the importance of attitude as defined by the TPB on career intention (Ahuja et al., 2019; Ajzen, 1991; Ambad & Damit, 2016; Kibuka, 2010; Solikhah, 2014). The relevance of Subjective Norms was shown to vary greatly across studies (Cavazos-Arroyo et al., 2017). As with students in our study, the entrepreneurial intentions of university students from different fields of studies in Italy, and students from Nigeria were not significantly influenced by indicators of Subjective Norms (Agu et al., 2021; Tognazzo et al., 2017). In the case of Italian students, it was argued that cultural aspects, specifically living with parents for longer (Tognazzo et al., 2017) were important. However, in a study of agripreneurship intentions in the “Agricultural Young Entrepreneurship Growing Program” in Indonesia, which also measured the three TPB factors, Subjective Norms was the only factor that significantly influenced intentions (Rizki et al., 2017). Accordingly, there are likely geographic, social or cultural factors that determine if Subjective Norms influence decisions related to agripreneurship. The different results of Subjective Norms on intentions reinforce the argument that, although Subjective Norms was identified as an important factor influences individuals’ intentions under the TPB; the relationship between them still questionable (Cavazos-Arroyo et al., 2017).

### *4.6.2.2 The Entrepreneurial Event Model*

The strong influence of both factors related to Perceived Feasibility on intentions provides support for the notion that integrating EEM with TPB may produce a more complete understanding of entrepreneurial intentions and behaviour-related studies. The indirect influence of EEM factors: Perceived Desirability and Propensity to Act on students’ intentions



through their Attitude and Perceived Capability, respectively, reinforced the notions that the relationship of the three EEM factors might not be linear but more complex (Vuorio et al., 2018).

Our results have some differences to another study conducted with Nigerian students that consolidated both TPB and EEM, with Entrepreneurship Education in their framework (Agu et al., 2021). Attitude significantly influenced intentions, whereas Subjective Norms and Perceived Desirability did not significantly influence intentions in both studies. In contrast to our study, Perceived Feasibility was not a significant influence on intentions, whilst Propensity to Act was the factor which most directly influenced Nigerian university students' intentions to engage in sustainability entrepreneurship. Based on the EEM framework, this finding could mean that the main driver influencing Nigerian youth intention in sustainable entrepreneurship depends on the level of entrepreneurial characteristics individuals may have, such as their willingness to overcome any risks, adversities and uncertainties that may arise. In contrast, for the Lao youth, the most important driver influencing their intention to engage in agripreneurial career is their self-evaluation of if they have knowledge of agriculture and business or not. Thus, our findings could mean that Lao youth want to feel secure prior making a decision to select an agripreneurial career. These findings may indicate cultural differences, specifically a stronger tendency towards pragmatism when selecting a career. Nevertheless, it should be noted that though both Agu et al. (2021) and our study considered developing countries, they were in the different continents and cultures. The focus areas of entrepreneurial intentions were also different, one was in sustainable entrepreneurship, and the other in agripreneurship. That conceptual framework was based on TPB, EEM and Entrepreneurship Education, whereas our framework was based on TPB, EEM and Careership: a sociological theory of career decision making. Further study is needed to investigate the differences between Lao and Nigerian youth' entrepreneurial characteristics and their agriculture and business knowledge levels.

#### 4.6.2.3 *The Careership Theory*

The significant influence on intentions of POL and EDUi factors (the Field as defined in Careership) in our study's results demonstrates the claim made by the original proponent of the TPB and others that, despite the high accuracy in the prediction of individuals' intentions or behaviour of the three TPB factors, there are other factors that contribute to individuals' intentions towards behaviour (Ajzen, 1991; Karimi, 2020). Our study filled this gap by consolidating the Careership theory which contains institutional support and/or the enabling environment factors into more personal factors theories, i.e., TPB and EEM. This had been suggested by several previous researchers (Bourdieu, 1977; Buyinza et al., 2020; Hodgkinson & Sparkes, 1997). However, not all the investigated enabling environment factors significantly influenced youth intentions to engage in an agripreneurial career in Laos. This indicates that future research should consider including demographic factors into the consolidating framework as previous research across various fields has found that perceptions of the same stimuli can vary across demographic dimensions (Kim, 2018). Factors which have been found to influence perceptions include gender (Pindado & Sánchez, 2017), age, race/ethnicity, education (Yang, 2013), cultural aspects (Tognazzo et al., 2017), marital status, geographical locations (Kusakabe & Chanthoumphone, 2021), and individual/family livelihood activities (Chaudhary, 2017).

Furthermore, to validate the appropriateness of the frameworks, we recommend future research should not only focus on intentions but on actual behaviour. For example, in our case which focused on determinants of students' intentions to become agripreneurs, in the next (follow-up) research it is recommended to investigate factors influencing individuals' actual career choices. This could be investigated among those who have already entered an agripreneurial career. It would allow checking whether or how much the consolidated frameworks applied in

this study legitimate or reflect the real world. Along with this, it is recommended the future research should investigate the challenges and opportunities faced by young agripreneurs, which they may affect youth's intentions to engage in an agripreneurial career.

## **4.7 Conclusion**

Our exploratory SEM identified factors in our hypothesised framework of determinants of career intentions that significantly influenced the intention of Lao youth to engage in agriculture as entrepreneurs, in addition to clarifying the direction and magnitude of this influence. In concert with the results obtained from the survey, this information can enable decision makers in Laos to target certain beliefs and enabling environment factors for interventions, with knowledge and education related to agripreneurship being the most influential factors. Furthermore, our consolidated framework demonstrated that whilst the TPB, EEM and Careership theoretical frameworks all incorporate factors which significantly influence intentions towards agripreneurship amongst Lao youth, they also omit significant determinants and include non-significant indicators. Compared with other analyses of intention towards agripreneurship that have applied the aforementioned frameworks, there are differences from our study which relate to the indicators chosen or other differences between participants and their enabling environments. Accordingly, exploratory research is likely needed on a case-by-case basis for future research that aims to identify determinants of intention towards agripreneurship in other settings.

## 4.8 References

- Adeyanju, D., Mburu, J., & Mignouna, D. (2021). Youth Agricultural Entrepreneurship: Assessing the Impact of Agricultural Training Programmes on Performance. *Sustainability (Basel, Switzerland)*, *13*(4), 1697–. <https://doi.org/10.3390/su13041697>
- Agu, A.G., Kalu, O. O., Esi-Ubani, C. O., & Agu, P. C. (2021). Drivers of sustainable entrepreneurial intentions among university students: an integrated model from a developing world context. *International Journal of Sustainability in Higher Education*, *22*(3), 659–680. <https://doi.org/10.1108/IJSHE-07-2020-0277>
- Ahuja, V., Akhtar, A., & Wali, O. P. (2019). Development of a comprehensive model of social entrepreneurial intention formation using a quality tool. *Journal of Global Entrepreneurship Research*, *9*(1), 1–27. <https://doi.org/10.1186/s40497-019-0164-4>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I., & Fishbein, M. (2000). Attitudes and the Attitude-Behavior Relation: Reasoned and Automatic Processes. *European Review of Social Psychology*, *11*(1), 1–33. <https://doi.org/10.1080/14792779943000116>
- Ambad, S.N.A., & Damit, D. H. D. A. (2016). Determinants of Entrepreneurial Intention among Undergraduate Students in Malaysia. *Procedia Economics and Finance*, *37*, 108–114. [https://doi.org/10.1016/S2212-5671\(16\)30100-9](https://doi.org/10.1016/S2212-5671(16)30100-9)

- Arindam, N., Sujeet, K. J., Asif, M., Sanjit, M., Jancy, G., D.K, G., K.K, D., & T.K, M. (2018). Predictive Factors Affecting Indian Rural Farm Youths' Decisions to Stay in or Leave Agriculture Sector. *Agricultural Science and Technology*, 20(2), 221–234
- Astuti, R.D., & Martdianty, F. (2012). Students' Entrepreneurial Intentions by Using Theory of Planned Behavior: The Case in Indonesia. *The South East Asian Journal of Management*, 6(2). <https://doi.org/10.21002/seam.v6i2.1317>
- Bignotti, A., Antonites, A. J., & Kavari, U. J. (2021). Towards an agricultural entrepreneurship development model: an empirical investigation in Namibia's agricultural communities. *Journal of Enterprising Communities*., 15(5), 684–708. <https://doi.org/10.1108/JEC-02-2021-0030>
- Bourdieu, U.P. (1977). *Outline of a Theory of Practice*. Cambridge University Press.
- Buyinza, J., Nuberg, I. K., Muthuri, C. W., & Denton, M. D. (2020). Psychological Factors Influencing Farmers' Intention to Adopt Agroforestry: A Structural Equation Modeling Approach. *Journal of Sustainable Forestry*, 39(8), 854–865. <https://doi.org/10.1080/10549811.2020.1738948>
- Cavazos-Arroyo, J., Puente-Díaz, R., & Agarwal, N. (2017). An examination of certain antecedents of social entrepreneurial intentions among Mexico residents. *Revista Brasileira de Gestão de Negócios*, 19(64), 180–218. <https://doi.org/10.7819/rbgn.v19i64.3129>
- Chaudhary, R. (2017). Demographic factors, personality and entrepreneurial inclination: A study among Indian university students. *Education & Training (London)*, 59(2), 171–187. <https://doi.org/10.1108/ET-02-2016-0024>

- Chýlová, H., Michálek, P., Rymešová, P., & Natovová, L. (2019). Future Agriculturists: Czech and U.S. Agricultural Students' Attitudes towards Agriculture. *Scientia Agriculturae Bohemica*, 50(4), 251–258. <https://doi.org/10.2478/sab-2019-0035>
- da Silva, C.A., Baker, D., Shepherd, A. W., Jenane, C., & Miranda-da-Cruz, S. (2009). Agro-industries for development. In *Agro-industries for Development*. CABI. <https://doi.org/10.1079/9781845935764.0000>
- Dang, H. L., Li, E., Nuberg, I., & Bruwer, J. (2014). Understanding farmers' adaptation intention to climate change: A structural equation modelling study in the Mekong Delta, Vietnam. *Environmental Science & Policy*, 41, 11–22. <https://doi.org/10.1016/j.envsci.2014.04.002>
- Dias, C. S., Rodrigues, R. G., & Ferreira, J. J. (2019). What's new in the research on agricultural entrepreneurship? *Journal of Rural Studies*, 65, 99–115. <https://doi.org/10.1016/j.jrurstud.2018.11.003>
- dos Santos, E. A., & Brito de Almeida, L. (2018). To pursue a career in accounting or not: a study based on the Theory of Planned Behavior. *Revista Contabilidade & Finanças*, 29(76), 114–128. <https://doi.org/10.1590/1808-057x201804890>
- Dragan, D., & Topolšek, D. (2014, June 19–21). *Introduction to Structural Equation Modeling: review, methodology and practical applications*. Conference paper. The 11th International Conference on Logistics & Sustainable Transport, University of Maribor, Faculty of Logistics, Celje, Slovenia. [https://www.researchgate.net/publication/267810858\\_Introduction\\_to\\_Structural\\_Equation\\_Modeling\\_Review\\_Methodology\\_and\\_Practical\\_Applications](https://www.researchgate.net/publication/267810858_Introduction_to_Structural_Equation_Modeling_Review_Methodology_and_Practical_Applications)

- Fitz-Koch, S., Nordqvist, M., Carter, S., & Hunter, E. (2018). Entrepreneurship in the Agricultural Sector: A Literature Review and Future Research Opportunities. *Entrepreneurship Theory and Practice*, 42(1), 129–166. <https://doi.org/10.1177/1042258717732958>
- Freire-Gibb, L. C., & Nielsen, K. (2014). Entrepreneurship within Urban and Rural Areas: Creative People and Social Networks. *Regional Studies*, 48(1), 139–153. <https://doi.org/10.1080/00343404.2013.808322>
- Giuliani, A., Mengel, S., Paisley, C., Perkins, N., Flink, I., Oliveros, O., & Wongtschowski, M. (2017). Realities, perceptions, challenges and aspirations of rural youth in dryland agriculture in the Midelt Province, Morocco. *Sustainability (Basel, Switzerland)*, 9(6), 871–. <https://doi.org/10.3390/su9060871>
- Gorgievski, M. T., Stephan, U., Laguna, M., & Moriano, J. A. (2018). Predicting Entrepreneurial Career Intentions: Values and the Theory of Planned Behavior. *Journal of Career Assessment*, 26(3), 457–475. <https://doi.org/10.1177/1069072717714541>
- Hagglblade, S., Chapoto, A., Drame-Yayé, A., Hendriks, S. L., Kabwe, S., Minde, I., Mugisha, J., & Terblanche, S. (2015). Motivating and preparing African youth for successful careers in agribusiness. *Journal of Agribusiness in Developing and Emerging Economies*, 5(2), 170–189. <https://doi.org/10.1108/JADEE-01-2015-0001>
- Hair, J. F. (2010). *Multivariate data analysis* (7th ed.). Prentice Hall.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate Data Analysis*. Pearson Education Limited.

- Ham, M., Jeger, M., & Frajman Ivković, A. (2015). The role of subjective norms in forming the intention to purchase green food. *Economic Research - Ekonomska Istraživanja*, 28(1), 738–748. <https://doi.org/10.1080/1331677X.2015.1083875>
- Hodkinson, P., & Sparkes, A. C. (1997). Careership: a sociological theory of career decision making. *British Journal of Sociology of Education*, 18(1), 29–44. <https://doi.org/10.1080/0142569970180102>
- Kalitanyi, V., & Bbenkele, E. (2019). Measuring University Students' Perceptions about the Role of Self-efficacy on Entrepreneurial Intentions in Cape Town. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 5(2), 214–232. <https://doi.org/10.1177/2393957519863900>
- Karimi, S. (2020). The role of entrepreneurial passion in the formation of students' entrepreneurial intentions. *Applied Economics*, 52(3), 331–344. <https://doi.org/10.1080/00036846.2019.1645287>
- Kautonen, T., van Gelderen, M., & Fink, M. (2015). Robustness of the Theory of Planned Behavior in Predicting Entrepreneurial Intentions and Actions. *Entrepreneurship Theory and Practice*, 39(3), 655–674. <https://doi.org/10.1111/etap.12056>
- Kibuka, G. (2010). An examination of factors that influence entrepreneurial intention of high school students in Kenya. *ProQuest Dissertations Publishing*. ISBN: 1124972641
- Kim, D. D. E. (2018). Demographic differences in perceptions of media brand personality: a multilevel analysis. *International Journal on Media Management (Saint Gall, Switzerland)*, 20(2), 81–106. <https://doi.org/10.1080/14241277.2017.1410481>



- Krueger, N. F., & Brazeal, D. V. (1994). Entrepreneurial Potential and Potential Entrepreneurs. *Entrepreneurship Theory and Practice*, 18(3), 91–104. <https://doi.org/10.1177/104225879401800307>
- Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5), 411–432. [https://doi.org/10.1016/S0883-9026\(98\)00033-0](https://doi.org/10.1016/S0883-9026(98)00033-0)
- Kusakabe, K., & Chanthoumphone, C. (2021). Transition from Subsistence Agriculture to Rubber Plantations in Northern Laos: Analysis of Household Livelihood Strategies by Ethnicity and Gender. *SAGE Open*, 11(2). <https://doi.org/10.1177/21582440211011463>
- Lalani, B., Dorward, P., Holloway, G., & Wauters, E. (2016). Smallholder farmers' motivations for using Conservation Agriculture and the roles of yield, labour and soil fertility in decision making. *Agricultural Systems*, 146, 80–90. <https://doi.org/10.1016/j.agsy.2016.04.002>
- Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: Citation, thematic analyses, and research agenda. *International Entrepreneurship and Management Journal*, 11(4), 907–933. <https://doi.org/10.1007/s11365-015-0356-5>
- Morrar, R., Amara, M., & Syed Zwick, H. (2022). The determinants of self-employment entry of Palestinian youth. *Journal of Entrepreneurship in Emerging Economies*, 14(1), 23–44. <https://doi.org/10.1108/JEEE-06-2020-0184>

- Murray Li, T. (2009). Exit from agriculture: a step forward or a step backward for the rural poor? *The Journal of Peasant Studies*, 36(3), 629–636. <https://doi.org/10.1080/03066150903142998>
- Nade Paschal, B., & Malamsha, C. K. (2021). The influence of agri-entrepreneurship courses studied on youth farm entrepreneurial intention: Evidence from Folk Development Colleges in Tanzania. *South African Journal of Economic and Management Sciences*, 24(1), e1–e9. <https://doi.org/10.4102/sajems.v24i1.3788>
- Ozaralli, N., & Rivenburgh, N. K. (2016). Entrepreneurial intention: antecedents to entrepreneurial behavior in the U.S.A. and Turkey. *Journal of Global Entrepreneurship Research*, 6(1), 1–. <https://doi.org/10.1186/s40497-016-0047-x>
- Petit, O., Kuper, M., & Ameer, F. (2018). From worker to peasant and then to entrepreneur? Land reform and agrarian change in the Saïss (Morocco). *World Development*, 105, 119–131. <https://doi.org/10.1016/j.worlddev.2017.12.031>
- Pindado, E., & Sánchez, M. (2017). Researching the entrepreneurial behaviour of new and existing ventures in European agriculture. *Small Business Economics*, 49(2), 421–444. <https://doi.org/10.1007/s11187-017-9837-y>
- Rizki, N.R., Burhanuddin, & Budi, P.W. (2017). Entrepreneurship intention in agricultural sector of young generation in Indonesia. *Asia Pacific Journal of Innovation and Entrepreneurship (Online)*, 11(1), 76–89. <https://doi.org/10.1108/APJIE-04-2017-022>
- Sandhu, N., & Hussain, J. (2021). Entrepreneurship the mediating role of finance and entrepreneurial education for small farmers in developing countries: evidence from

- India. *International Journal of Entrepreneurial Behaviour & Research*, 27(6), 1403–1422. <https://doi.org/10.1108/IJEBR-09-2020-0600>
- Schlaegel, C., & Koenig, M. (2014). Determinants of Entrepreneurial Intent: A Meta-Analytic Test and Integration of Competing Models. *Entrepreneurship Theory and Practice*, 38(2), 291–332. <https://doi.org/10.1111/etap.12087>
- Senger, I., Borges, J. A. R., & Machado, J. A. D. (2017). Using the theory of planned behavior to understand the intention of small farmers in diversifying their agricultural production. *Journal of Rural Studies*, 49, 32–40. <https://doi.org/10.1016/j.jrurstud.2016.10.006>
- Shapiro, A., & Sokol, L. (1982). Social dimensions of entrepreneurship. In C.A. Kent, D.L. Sexton & K.H. Vesper (Eds). *Encyclopedia of entrepreneurship*. Prentice Hall.
- Solesvik, M. Z., Westhead, P., Kolvereid, L., & Matlay, H. (2012). Student intentions to become self-employed: The Ukrainian context. *Journal of Small Business and Enterprise Development*, 19(3), 441–460. <https://doi.org/10.1108/14626001211250153>
- Solikhah, B. (2014). An Application of Theory of Planned Behavior towards CPA Career in Indonesia. *Procedia, Social and Behavioral Sciences*, 164, 397–402. <https://doi.org/10.1016/j.sbspro.2014.11.094>
- Steering Committee for Lao Census of Agriculture. (2021). *3<sup>rd</sup> Lao census of agriculture 2019/2020*. Lao Statistics Bureau.
- Tiraeyari, N., & Krauss, S. E. (2018). Predicting youth participation in urban agriculture in Malaysia: insights from the theory of planned behavior and the functional approach to

volunteer motivation. *Agriculture and Human Values*, 35(3), 637–650.  
<https://doi.org/10.1007/s10460-018-9854-8>

Tognazzo, A., Gianecchini, M., & Gubitta, P. (2017). Educational Context and Entrepreneurial Intentions of University Students: An Italian Study. In *Entrepreneurship Education* (Vol. 7, pp. 47–74). Emerald Publishing Limited.  
<https://doi.org/10.1108/S2040-724620170000007008>

Urbano, D., Audretsch, D., Aparicio, S., & Noguera, M. (2019). Does entrepreneurial activity matter for economic growth in developing countries? The role of the institutional environment. *International Entrepreneurship and Management Journal*, 16(3), 1065–1099. <https://doi.org/10.1007/s11365-019-00621-5>

Valle, F.D. (2012). *Exploring Opportunities and Constraints for Young Agro-Entrepreneurs in Africa*. Food and Agriculture Organization (FAO).

Vuorio, A. M., Puumalainen, K., & Fellnhofer, K. (2018). Drivers of entrepreneurial intentions in sustainable entrepreneurship. *International Journal of Entrepreneurial Behaviour & Research*, 24(2), 359–381. <https://doi.org/10.1108/IJEER-03-2016-0097>

White, B. (2012). Agriculture and the Generation Problem: Rural Youth, Employment and the Future of Farming. *IDS Bulletin (Brighton. 1984)*, 43(6), 9–19.  
<https://doi.org/10.1111/j.1759-5436.2012.00375.x>

Yang, J. (2013). The Theory of Planned Behavior and Prediction of Entrepreneurial Intention among Chinese Undergraduates. *Social Behavior and Personality*, 41(3), 367–376.  
<https://doi.org/10.2224/sbp.2013.41.3.367>

Zamani, N., & Mohammadi, M. (2018). Entrepreneurial learning as experienced by agricultural graduate entrepreneurs. *Higher Education, 76*(2), 301–316.

<https://doi.org/10.1007/s10734-017-0209-y>

## 4.9 Supplementary

**Supplementary Table 4.1** Observed indicators and scales used for measuring each factor in the final measurement mode.

Latent variable	Measured Indicators	Scales (1-7)
<b>Attitude (ATT)</b>	Being an agripreneur is attractive as a career because you are your own boss and in control of your own time.	Strongly disagree - Strongly agree
	Being an agripreneur is attractive as a career because you work with nature and in a healthier environment.	
	Agripreneurship is a career that I like.	
	It will make me proud to have my own products.	
<b>Subjective Norms (SN)</b>	How strongly do you believe your parents, grandparents or guardians would encourage you to choose agripreneurship as a career?	Strongly discourage - Strongly encourage
	How strongly do you believe your siblings would encourage you to choose agripreneurship as a career?	
	How strongly do you believe your cousins and relatives would encourage you to choose agripreneurship as a career?	
	How strongly do you believe your close friends would encourage you to choose agripreneurship as a career?	
<b>Importance of Subjective Norms (SNi)</b>	When it comes to matters of career, how importance do you think the view of siblings of you influencing your decision-making on career selection?	Strongly not influencing - Strongly influencing
	When it comes to matters of career, how importance do you think the view of cousins and relatives of you influencing your decision-making on career selection?	

When it comes to matters of career, how importance do you think the view of close friends of you influencing your decision-making on career selection?

When it comes to matters of career, how importance do you think the view of teachers/lecturers of you influencing your decision-making on career selection?

When it comes to matters of career, how importance do you think the view of others influencing your decision-making on career selection?

---

<b>Perceived Capability (PCP)</b>	I am confident that if I wanted to I could be an agripreneur.	Strongly disagree - Strongly agree
	My past experience will be very valuable in starting a career as agripreneur.	
	If I tried to start my career in agripreneurship, I would have a high chance of succeeding.	
	If I want to start my career in agripreneurship, I have enough resources (land, capital, machinery or tools, etc.).	

---

<b>Perceived Desirability (DES)</b>	In my career it is desirable that I can be my own boss and in control of my own time rather than work for someone else.	Strongly not desirable - Strongly desirable
	In my career it is more desirable that I can work in a rural environment rather than an urban environment	
	It is desirable that I choose the carer I like	
	In my career it is desirable that I feel proud of what I produce	
	In my career it is desirable that I can contribute to the food security of Laos	

---

<b>Propensity to Act (PA)</b>	Please evaluate your following skills: Perseverance, hardworking, commitment for a purpose of starting, working and being successful in agripreneurial career.	Extremely poor - Extremely good
	Please evaluate your following skills: Self-efficacy for a purpose of starting, working and being successful in agripreneurial career.	
	Please evaluate your following skills: Entrepreneurial alertness for a purpose of starting, working and being successful in agripreneurial career.	

Please evaluate your following skills: Love/like and Eagerness to learn for a purpose of starting, working and being successful in agripreneurial career.

Please evaluate your following skills: Being able to face the adverse effects/risks for a purpose of starting, working and being successful in agripreneurial career.

<b>Perceived knowledge about agriculture and business (FESkn)</b>	<p>Please evaluate your Agricultural knowledge for a purpose of starting, working and being successful in agripreneurial career.</p> <p>Please evaluate your Business knowledge for a purpose of starting, working and being successful in agripreneurial career.</p> <p>Please evaluate your farming family / background for a purpose of starting, working and being successful in agripreneurial career.</p>	Extremely poor - Extremely good
<b>Perceived Feasibility (of resources) (FESr)</b>	<p>Please evaluate your resources accessibility (Capital) for a purpose of starting, working and being successful in agripreneurial career.</p> <p>Please evaluate your resources accessibility (Land) for a purpose of starting, working and being successful in agripreneurial career.</p> <p>Please evaluate your resources accessibility (Market) for a purpose of starting, working and being successful in agripreneurial career.</p> <p>Please evaluate your resources accessibility (Labour) for a purpose of starting, working and being successful in agripreneurial career.</p> <p>Please evaluate your resources accessibility (Water/Irrigation) for a purpose of starting, working and being successful in agripreneurial career.</p>	Extremely poor - Extremely good
<b>Perceived Enabling Environment in Laos: Agricultural Extension services support (EXT)</b>	<p>Please rate the availability of these following enabling environment to you if you want to get access to them; if you are the agripreneur: Extension services related to technical support.</p> <p>Please rate the availability of these following enabling environment to you if you want to get access to them; if you are the agripreneur: Extension services related to market linkage and facilitating.</p>	Extremely poor - Extremely good



Please rate the availability of these following enabling environment to you if you want to get access to them; if you are the agripreneur: Extension services related to agricultural products' value creating and adding.

Please rate the availability of these following enabling environment to you if you want to get access to them; if you are the agripreneur: Opportunities to get support on trying new farming system and technology.

Please rate the availability of these following enabling environment to you if you want to get access to them; if you are the agripreneur: Opportunities to get support on business planning.

Please rate the availability of these following enabling environment to you if you want to get access to them; if you are the agripreneur: Extension services that match your need.

Please rate the availability of these following enabling environment to you if you want to get access to them; if you are the agripreneur: Regular and continuous agricultural extension support.

---

**Importance of  
Perceived Enabling  
Environment in  
Laos: Agricultural  
Extension services  
support (EXTi)**

Please rate the significance of these following factors on influencing your decision to engage in agripreneurial career: Extension services related to technical support.

Please rate the significance of these following factors on influencing your decision to engage in agripreneurial career: Extension services related to market linkage and facilitating.

Please rate the significance of these following factors on influencing your decision to engage in agripreneurial career: Extension services related to agricultural products' value creating and adding.

Please rate the significance of these following factors on influencing your decision to engage in agripreneurial career: Opportunities to get support on trying new farming system and technology.

Strongly not influencing - Strongly influencing

Please rate the significance of these following factors on influencing your decision to engage in agripreneurial career: Opportunities to get support on business planning.

Please rate the significance of these following factors on influencing your decision to engage in agripreneurial career: Extension services that match your need.

Please rate the significance of these following factors on influencing your decision to engage in agripreneurial career: Regular and continuous agricultural extension support.

---

**Perceived Enabling Environment in Laos: Agricultural Policy support (POL)**

Please rate Policy support Agriculture as commercial production/business/entrepreneurship in Laos.

Please rate Policy support on youth in commercial agricultural production/business/entrepreneurship in Laos.

Please rate Effectiveness of policies support relating to commercial agricultural production/business/entrepreneurship in Laos.

Please rate Effectiveness of policies support relating to youth in commercial agricultural production/business/entrepreneurship in Laos.

Extremely poor - Extremely good

Please rate about the Government of Laos's priority of agricultural sector comparing to other sectors.

Please rate about Subsidies allocation for agribusiness/agripreneurship sectors for emergency or business failure.

Please rate Management and monitoring of agricultural related activities at all levels in Laos.

---

**Importance of Perceived Enabling Environment in Laos: Agricultural Policy support (POLi)**

Please rate the significance of Policy support Agriculture as commercial agricultural production/business/agripreneurship in Laos, on influencing your decision to engage in agripreneurial career.

Please rate the significance of Policy support on youth in commercial agricultural production/business/agripreneurship in Laos, on influencing your decision to engage in agripreneurial career.

Strongly not influencing - Strongly influencing

Please rate the significance of Effectiveness of policies support relating to commercial agricultural production/business/agripreneurship in Laos, on influencing your decision to engage in agripreneurial career.

Please rate the significance of Effectiveness of policies support relating to youth in commercial agricultural production/business/agripreneurship in Laos, on influencing your decision to engage in agripreneurial career.

Please rate the significance of the Government of Laos's priority of agricultural sector comparing to other sectors, on influencing your decision to engage in agripreneurial career.

Please rate the significance of Subsidies allocation for agribusiness/agripreneurship sectors for emergency or business failure, on influencing your decision to engage in agripreneurial career.

Please rate the significance of Management and monitoring of agricultural related activities at all levels in Laos, on influencing your decision to engage in agripreneurial career.

---

<p><b>Perceived Enabling Environment in Laos: Financial support/credit access (FINANCE)</b></p>	<p>Please rate your perception about Amount of financial support available in Laos.          Please rate your perception about Sources of credit/loan those can access in Laos.          Please rate your perception about The procedure to get credit/loan (simple/complex) in Laos.          Please rate your perception about Interest rate in Laos.          Please rate your perception about Length of credit/loan in Laos.          Please rate your perception about Accessing to credit/loan information in Laos.</p>	<p>Extremely poor - Extremely good</p>
<p><b>Importance of Perceived Enabling Environment in Laos: Financial</b></p>	<p>Please rate your perception about Amount of financial support available in Laos.          Please rate your perception about Sources of credit/loan those can access in Laos.          Please rate your perception about The procedure to get credit/loan (simple/complex) in Laos.</p>	<p>Strongly not influencing - Strongly influencing</p>

<b>support/credit access (FINANCEi)</b>	Please rate your perception about Interest rate in Laos. Please rate your perception about Length of credit/loan in Laos.	
	Please rate your perception about Accessing to credit/loan information in Laos.	
<b>Perceived Enabling Environment in Laos: Information sharing/distribution (INFO)</b>	Please rate your perception about Access to the agricultural related information in Laos. Please rate your perception about Access to market demand information in Laos. Please rate your perception about Access to market pricing information in Laos. Please rate your perception about Cost of accessing to agricultural related information in Laos.	
<b>Laos: Information sharing/distribution (INFO)</b>	Please rate your perception about Time use for accessing to the agricultural related information in Laos. Please rate your perception about Reliability (workable) of the information in Laos. Please rate your perception about Number of ways/modes to access to the agricultural related information in Laos. Please rate your perception about Modernise and digitalise of those information sharing platforms in Laos.	Extremely poor - Extremely good
<b>Importance of Perceived Enabling Environment in Laos: Information sharing/distribution (INFOi)</b>	Please rate the significance of Access to the agricultural related information on influencing your decision to engage in agripreneurial career. Please rate the significance of Access to market demand information on influencing your decision to engage in agripreneurial career. Please rate the significance of Access to market pricing information on influencing your decision to engage in agripreneurial career. Please rate the significance of Cost of accessing on influencing your decision to engage in agripreneurial career. Please rate the significance of Time use for accessing on influencing your decision to engage in agripreneurial career.	Strongly not influencing - Strongly influencing

Please rate the significance of Reliability (workable) of the information on influencing your decision to engage in agripreneurial career.

Please rate the significance of Number of ways/modes to access on influencing your decision to engage in agripreneurial career.

Please rate the significance of Modernise and digitalise of those information sharing platforms on influencing your decision to engage in agripreneurial career.

<b>Perceived Enabling Environment in Laos: Infrastructure and transportation (TRANS)</b>	Please rate your perception about Convenience of transportation for transporting products in Laos. Please rate your perception about Cost of transportation in Laos. Please rate your perception about Future potential (for agricultural products export in 2020 when the construction of Laos-China rail way complete for example) in Laos.	Extremely poor - Extremely good
<b>Importance of Perceived Enabling Environment in Laos: Infrastructure and transportation (TRANSi)</b>	Please rate the significance of Convenience of transportation for transporting products on influencing your decision to engage in agripreneurial career. Please rate the significance of Cost of transportation on influencing your decision to engage in agripreneurial career. Please rate the significance of Future potential for agricultural products export on influencing your decision to engage in agripreneurial career.	Strongly not influencing - Strongly influencing
<b>Perceived Enabling Environment in Laos: Taxation and registration (TAX)</b>	Please rate your perception about Taxation and registration procedure (related to agricultural products transportation, storage, import-export, etc.) Please rate your perception about Cost related to Taxation and registration	Extremely poor - Extremely good
<b>Importance of Perceived Enabling Environment in</b>	Please rate the significance of Taxation and registration procedure (related to agricultural products transportation, storage, import-export, etc.) on influencing your decision to engage in agripreneurial career.	Strongly not influencing - Strongly influencing

<b>Laos: Taxation and registration (TAXi)</b>	Please rate the significance of Cost related to Taxation and registration on influencing your decision to engage in agripreneurial career.	
<b>Perceived Enabling Environment in Laos: Research, development and technology (SciTech)</b>	<p>Please rate your perception about Research (i.e., on good quality cultivars, new techniques) in Laos.</p> <p>Please rate your perception about Laboratory facility for agricultural research in Laos.</p> <p>Please rate your perception about Apply of research results for agricultural research in Laos.</p>	Extremely poor - Extremely good
<b>Importance of Perceived Enabling Environment in Laos: Research, development and technology (SciTechi)</b>	<p>Please rate the significance of Chance in accessing and adopting the technology or new technique/new and modern machines on influencing your decision to engage in agripreneurial career.</p> <p>Please rate the significance of Cost of accessing to them on influencing your decision to engage in agripreneurial career.</p> <p>Please rate the significance of Access to instruction for applying them on influencing your decision to engage in agripreneurial career.</p> <p>Please rate the significance of Research (ie., on good quality cultivars, new techniques) on influencing your decision to engage in agripreneurial career.</p> <p>Please rate the significance of Laboratory facility for agricultural research on influencing your decision to engage in agripreneurial career.</p> <p>Please rate the significance of Apply of research results on influencing your decision to engage in agripreneurial career.</p>	Strongly not influencing - Strongly influencing
<b>Perceived Enabling Environment in Laos: Market support (MAR)</b>	<p>Please rate your perception about Small and mediums scale farmers' supply capacity in Laos.</p> <p>Please rate your perception about Access to markets in Laos.</p> <p>Please rate your perception about Market stability in Laos.</p> <p>Please rate your perception about Selling price in Laos.</p>	Extremely poor - Extremely good

Please rate your perception about Price stability in Laos.

Please rate your perception about Products development and value added in Laos.

Please rate your perception about Potential for agricultural products export in Laos.

Please rate your perception about International/regional market competitiveness in Laos.

---

**Importance of  
Perceived Enabling  
Environment in  
Laos: Market  
support (MARi)**

Please rate the significance of Market demand for agricultural products on influencing your decision to engage in agripreneurial career.

Please rate the significance of Small and mediums scale farmers' supply capacity on influencing your decision to engage in agripreneurial career.

Please rate the significance of Access to markets on influencing your decision to engage in agripreneurial career.

Please rate the significance of Market stability on influencing your decision to engage in agripreneurial career.

Please rate the significance of Selling price on influencing your decision to engage in agripreneurial career.

Please rate the significance of Price stability on influencing your decision to engage in agripreneurial career.

Please rate the significance of Products development and value added on influencing your decision to engage in agripreneurial career.

Please rate the significance of Potential for agricultural products export on influencing your decision to engage in agripreneurial career.

Please rate the significance of International/regional market competitiveness on influencing your decision to engage in agripreneurial career.

Strongly not influencing - Strongly influencing

---

**Perceived Enabling  
Environment in**

Please rate your perception about Educational support: Farming related knowledge, skills and activities being integrated in school curriculums in Laos.

Extremely poor - Extremely good

<b>Laos: Educational Support (EDU)</b>	Please rate your perception about Educational support: Business related knowledge, skills and activities being integrated in school curriculums in Laos.	
	Please rate your perception about Educational support: Agripreneurship related knowledge, skills and activities being integrated in school curriculums in Laos	
<b>Importance of Perceived Enabling Environment in</b>	Please rate the significance of Educational support: Farming related knowledge, skills and activities being integrated in school curriculums in Laos; on influencing your decision to engage in agripreneurial career.	
<b>Laos: Educational Support (EDUi)</b>	Please rate the significance of Educational support: Business related knowledge, skills and activities being integrated in school curriculums in Laos; on influencing your decision to engage in agripreneurial career.	Strongly not influencing - Strongly influencing
	Please rate the significance of Educational support: Agripreneurship related knowledge, skills and activities being integrated in school curriculums in Laos; on influencing your decision to engage in agripreneurial career.	



# Chapter Five: Narrative Insights Reveal the Motivations of Young Agricultural Entrepreneurs in Laos

## 5.1 Statement of Authorship

Title of Paper	Narrative Insights Reveal the Motivations of Young Agricultural Entrepreneurs in Laos
Publication Status	<input checked="" type="checkbox"/> Published <input type="checkbox"/> Accepted for Publication <input type="checkbox"/> Submitted for Publication <input type="checkbox"/> Unpublished and Unsubmitted work written in manuscript style
Publication Details	Thephavanh, M., Philp, J.N.M., Nuberg, I., Denton, M., & Alexander, K. (2022). Narrative Insights, Reveal the Motivations of Young Agricultural Entrepreneurs in Laos. <i>Sustainability</i> , 14(20), 13113. <a href="https://doi.org/10.3390/su142013113">https://doi.org/10.3390/su142013113</a>

### Principal Author

Name of Principal Author (Candidate)	Manithaythip Thephavanh		
Contribution to the Paper	Conceptualisation, Data collection, Data curation, Formal analysis, Interpretation of findings, Investigation, Methodology, Project administration, Validation, Visualisation, Writing—original draft, Writing—review and editing		
Overall percentage (%)	85%		
Certification:	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature and is not subject to any obligations or contractual agreements with a third party that would constrain its inclusion in this thesis. I am the primary author of this paper		
Signature		Date	06/01/2023

### Co-Author Contributions

By signing the Statement of Authorship, each author certifies that:

- i. the candidate's stated contribution to the publication is accurate (as detailed above);
- ii. permission is granted for the candidate to include the publication in the thesis; and
- iii. the sum of all co-author contributions is equal to 100% less the candidate's stated contribution.

Name of Co-Author	Joshua N.M. Philp		
Contribution to the Paper	Conceptualisation, Formal analysis, Interpretation of findings, Funding acquisition, Methodology, Supervision, Validation, Visualisation, Writing—original draft, Writing—review and editing		
Signature		Date	06/01/2023

Name of Co-Author	Ian Nuberg		
Contribution to the Paper	Conceptualisation, Supervision		
Signature		Date	09/01/2023

Name of Co-Author	Matthew D. Denton		
Contribution to the Paper	Conceptualisation, Funding acquisition, Project administration, Resources, Supervision, Writing—review and editing		
Signature		Date	09/01/2023

Name of Co-Author	Kim Alexander		
Contribution to the Paper	Conceptualisation, Data curation, Formal analysis, Interpretation of findings, Funding acquisition, Validation, Writing—review and editing		

Signature		Date	06/01/2023
-----------	--	------	------------

## 5.2 Abstract

Article

# Narrative Insights Reveal the Motivations of Young Agricultural Entrepreneurs in Laos

Manithaythip Thephavanh <sup>1,2,\*</sup>, Joshua Neil Monty Philp <sup>1</sup>, Ian Nuberg <sup>1</sup>, Matthew Denton <sup>1</sup> and Kim Alexander <sup>3</sup>

<sup>1</sup> School of Agriculture, Food and Wine, The University of Adelaide, Urrbrae, SA 5064, Australia

<sup>2</sup> National Agriculture and Forestry Research Institute, Vientiane P.O. Box 7170, Laos

<sup>3</sup> Faculty of Science, Agriculture, Business and Law, University of New England, Armidale, NSW 2351, Australia

\* Correspondence: manithaythip.thephavanh@adelaide.edu.au

**Abstract:** The participation of youth in agricultural entrepreneurship (agripreneurship) is beneficial for the sustainable development of agrarian societies that are transitioning towards the commercialization of agriculture. Accordingly, we investigated the phenomena that motivate practicing young, small- and medium-scale agripreneurs to pursue their careers, using the Lao People's Democratic Republic (Laos) as a case study. To achieve this, we applied narrative inquiry techniques to the accounts of 74 young Laotian agripreneurs regarding their entry into agripreneurship. This enabled us to identify and describe common and influential paradigms that were subsequently interpreted from the perspective of entrepreneurship and behavioral studies of career decision making to explain the influence of motivations on the young agripreneurs. Our study has shown that despite the characteristics that set agripreneurship in Laos apart from entrepreneurship in general, commonly identified typologies of entrepreneurial motivation, particularly income, extrinsic benefits and emotional paradigms also motivate Lao youth to become agripreneurs. The application of narrative inquiry has revealed the emphasis some practicing agripreneurs in Laos place on the attainability of their career, which resulted in its practice by both opportunity-driven and necessity-driven entrepreneurs, with implications for the sustainable development of other countries in transition to commercial agriculture.

**Keywords:** youth; agripreneurship; motivation; Laos; narrative analysis; sustainable development



**Citation:** Thephavanh, M.; Philp, J.N.M.; Nuberg, I.; Denton, M.; Alexander, K. Narrative Insights Reveal the Motivations of Young Agricultural Entrepreneurs in Laos. *Sustainability* **2022**, *14*, 13113. <https://doi.org/10.3390/su142013113>

Received: 26 September 2022

Accepted: 9 October 2022

Published: 13 October 2022

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

## 1. Introduction

The pursuit of entrepreneurial opportunities in agriculture (agripreneurship) by youth has been promoted as a strategy to improve their livelihood opportunities and encourage their retention in agriculture, as the global transition of populations from rural to urban lifestyles may potentially compromise the sustainability of agricultural production [1]. In the developing world, agripreneurship has been hailed as a powerful tool for promoting the socioeconomic integration of young people and the key to avoiding rural depopulation [2]. The adoption of more entrepreneurial modes of agriculture by rural youth can

### 5.3 Introduction

The pursuit of entrepreneurial opportunities in agriculture (agripreneurship) by youth has been promoted as a strategy to improve their livelihood opportunities and encourage their retention in agriculture, as the global transition of populations from rural to urban lifestyles may potentially compromise the sustainability of agricultural production (Giuliani et al., 2017). In the developing world, agripreneurship has been hailed as a powerful tool for promoting the socioeconomic integration of young people and the key to avoiding rural depopulation (Bouichou et al., 2021). The adoption of more entrepreneurial modes of agriculture by rural youth can lead to greater developmental outcomes because youth are relatively more enterprising, innovative, risk-tolerant and accepting of new technologies (Arindam et al., 2018; Petit et al., 2018; Valle, 2012; White, 2012). Thus, agripreneurship has become well established as a development strategy to facilitate youth empowerment, particularly in Africa (Williams & Hovorka, 2013) and South America (Yamaguchi et al., 2020). Despite the increasing interest of research on the agricultural sector's potential to provide sustainable, income-generating opportunities for rural youth in developing countries, the challenges of youth participation in this sector and the options for overcoming them (Babu & Zhou, 2020; Bouichou et al., 2021; Mmbengwa et al., 2021; Refiswal et al., 2021; Yamaguchi et al., 2020), and scientific literature on agripreneurship in developing countries has largely been neglected by mainstream research on entrepreneurship (Dias et al., 2019; Fitz-Koch et al., 2018).

Encouraging more youth to effectively pursue small and medium scale agripreneurship opportunities where it may benefit them requires an understanding of the phenomena that may motivate them to choose this career as opposed to other careers. Motivations are foundational to an individuals' decision-making processes because they contribute to underlying rationales that accompany decision-making processes (Chinyamurindi & Shava, 2019). Accordingly,

they are key predictors to a person's subsequent demonstration of entrepreneurial behaviour (Chinyamurindi & Shava, 2019).

The predominant conceptualisation in entrepreneurship motivation, opportunity-necessity differentiation, also known as push-pull, acknowledges that entrepreneurship can be an employment choice out of necessity, or a positive choice to take advantage of an opportunity. However, it is becoming increasingly accepted that the opportunity-necessity differentiation oversimplifies the complex motivations underlying entrepreneurship (Kelley et al., 2011). Therefore, studies often differentiate motivations into a range of typologies, which commonly include variations of achievement, challenge, learning, independence, autonomy, income security, financial success, recognition and status, and sometimes include family, role models, dissatisfaction and community and social motivations (Stephan et al., 2015). Despite increasing interest from scholars and policy makers about the importance of entrepreneurship and potential benefits to agriculture (Dzingirai, 2021), most theoretical and descriptive research has not adequately considered agripreneurship in developing contexts in which employment in cash economies is a less universal livelihood strategy and subsistence farming is common. The extent to which youth in Laos are motivated by established motivational factors from entrepreneurship literature factors to choose their careers, and to which they perceive agripreneurship as being able to cater to these motivations is unknown. Qualitative studies on entrepreneurs have identified aspects specific to relatively unique populations of entrepreneurs (Stephan et al., 2015), indicating that qualitative methods are appropriate for exploring motivational factors and decision-making processes of young agripreneurs to correctly identify phenomena that can motivate youth to effectively pursue small and medium scale agripreneurship opportunities.

The aim of this study is to identify and describe the phenomena that motivate young small and medium scale agripreneurs to pursue their career, and the processes of their influence, using the Lao People's Democratic Republic (Laos) as a case study. To achieve this aim, we applied qualitative narrative inquiry techniques to the accounts provided by 74 young Laotian agripreneurs of their entry into agripreneurship. Our approach enabled us to identify and describe common and influential paradigms that influence the motivations of young agripreneurs in small and medium scale agripreneurial careers. By understanding these phenomena and the nature of their impact on the selection of agripreneurship as a career by youth, it may be possible for decision-makers to design interventions that result in more young people choosing this career and contributing to the sustainability of global food production.

## **5.4 Materials and Methods**

### **5.4.1 Research Approach**

The study applied qualitative content analysis (Weber, 1990), supplemented with narrative inquiry techniques, namely paradigmatic analysis of narratives and diachronic narrative analysis approaches, to both identify and understand the phenomenological drivers of the decision to become an agripreneur (Polkinghorne, 1995; Smith, 2000). Narrative analysis procedures reveal the constructed story of an individual participant, while paradigmatic analysis of narratives uses both inductive and deductive means to identify common and contrasting themes between stories (Polkinghorne, 1995; Sharp et al., 2018). These analysis methods can be used separately, or in combination, depending on the aims of the research (Sharp et al., 2018). Similar qualitative methods have previously been applied successfully in studies which seek to understand influential phenomena that drive career selection, including studies of entrepreneurial careers (Essers & Benschop, 2009; Nguyen et al., 2014; Rae, 2005; Saili et al., 2018) and careers for the public good that decision makers wish to promote, such

as agripreneurship (Nguyen et al., 2014; Saili et al., 2018), nursing (Neilson & Lauder, 2008; Price et al., 2013) and teaching (Fazal et al., 2019). All human research activities described in this study were approved by the University of Adelaide Human Research Ethics Committee, H-2019-110. Informed consent was obtained from all participants in the study.

#### **5.4.2 Case Study Context**

Laos is largely rural (Alexander et al., 2010; Senties Portilla, 2017), with the youngest population in Asia (Vongpraseuth & Phengsavatdy, 2021) and is in transition to a more commercial agriculture sector (MAF, 2015; MPI, 2016) with three dominant commercial farming modalities: concessions, contract farming and small-investor farming. Development policies have prioritized large-scale investment over small-scale agriculture (Alexander et al., 2017; Murray Li, 2009; White, 2012), with the smallholder scheme receiving the least support from the government compared with other schemes (Samm, 2020), despite the potential contribution the commercialisation of smallholder agriculture leading to livelihood development.

In addition to a decreasing share of the population engaging in agriculture, Laos is also experiencing a low involvement of young people in agriculture. A recent study found that the average age of the agricultural workers is eight years older than non-agricultural workers in Laos (Goto & Douangngeune, 2017). The Lao Census of Agriculture (Steering Committee for Lao Census of Agriculture, 2014) also revealed that nearly 20% of people from farming households were aged 45 or over. Given this decline, it is necessary to understand and promote youth engagement in agriculture to ensure the sustainability of food production in Laos.



### 5.4.3 Sampling and Participants

A total of 74 young, small and medium scale agripreneurs were recruited using purposive and snowball sampling techniques (Babbie, 2010) to participate in this research. The initial criteria for participation were (1) being a small to medium scale agripreneur with land-holdings ranging from 0.5 to 3 hectares according to the Lao Census of Agriculture (Steering Committee for Lao Census of Agriculture, 2014), (2) being aged between 15 and 35, or a “youth”, as defined by the Lao People’s Revolutionary Youth Union (LYU & UNFPA, 2014), and (3) being willing to participate voluntarily.

The research team was provided with agripreneurs profiles from the Lao Farmer Network (LFN), the largest network of commercial farmers groups or organisations in Laos with more than 4,000 members, within 58 farmers’ organisations across 13 provinces throughout Laos (AFA, nd). There were 1,120 members of LFN classified as young agripreneurs in 2019. Participants were accessed from Vientiane Capital and Vientiane province in central Laos, and from Champasak and Salavan provinces in southern Laos. These provinces are demographically and geographically diverse, with a variety of agripreneurial modalities. In total, 757 young agripreneurs were registered with the LFN under 11 farmers’ organisations, including 659 in the coffee industry and 57 acting as a dual vegetables growers and collectors (middlepersons). Key contacts in the farmers’ organisations were approached with selection criteria suggesting suitable participants within their organisations. Prospective participants were contacted by the organisations. The selection of 5 to 10 representatives by each organisation was based on voluntary availability. Additional participants were referred by either young agripreneurs, local community members or other organisations that the research team interacted with during the fieldwork period. Participants older than 35 years were considered if they were less than 40 and had been practicing agripreneurship for several years

or were referred for participation because of their story or insight into youth circumstances, especially amongst organisations where there were no younger agripreneurs available.

#### **5.4.4 Data Collection**

In-depth interviews (Chase, 2011) were used to obtain narrative responses from the 74 participating agripreneurs. Before starting each interview, the research team introduced the research project, objectives and length of interview, and requested the signed consent from each research participant. The course of the discussion was largely set by respondents, following a broad question of what motivated them to become an agripreneur. Interviews were conducted at the young agripreneurs' farms, cafe or at farmers' organisations offices in the Lao language for approximately 90 min. The research team allocated 5 Lao researchers to interview participants from October, 2019 to February, 2020. Interviews were transcribed verbatim or recorded with the participant's informed consent.

#### **5.4.5 Data Analysis**

As a prelude to the analysis, a comprehensive familiarity with the gathered information and individual narratives as relayed by the participants was achieved by reviewing the content of the interviews. Both paradigmatic analysis of narratives and diachronic narrative analysis (Polkinghorne, 1995) were applied to synthesize and configure the data into explanations of the drivers of the decision to become an agripreneur by Lao youth. Paradigmatic analysis of narratives was applied to identify the common elements amongst the collected narratives to produce themes that offered explanations as to the narrative course, in this case, the transformation into an agripreneur. Paradigms were considered based on their frequency across participant responses, and the significance placed by individuals on these themes within their responses. Close attention was paid to linguistic practices such as word choice, repetition,

hesitation and laughter when analysing the responses and identifying paradigms (Chase, 2011). The identified paradigms were characterized and the processes by which they influenced the participants to become agripreneurs were described. Diachronic narrative analysis (Polkinghorne, 1995) was applied to construct the story of individual participants from the gathered paradigms of their responses to examine the influences of phenomena on the narrative conclusion, i.e., becoming an agripreneur.

## **5.5 Results**

### **5.5.1 Participants**

The LFN identified 52 volunteers who participated in the research, whilst a further 22 participants were identified through snowball sampling. Of these participants, 6 were from independent farmers' organisations (outside LFN) and 16 did not belong to a farmers' group or organisation. 1.4 % of the participants have no education, 16.2% had primary education, 59.5% had secondary education, and 23% had post-secondary education. Characteristics of participating agripreneurs are presented in Table 5.1.

**Table 5.1** Key characteristics of participating young agripreneurs ( $n = 74$ ).

<b>Characteristic</b>	<b>Category</b>	<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>	Female	50	67.6
	Male	24	32.4
<b>Age</b>	≤20	15	20.3
	21–25	11	14.9
	26–30	12	16.2
	31–35	20	27
	36–40	16	21.6
<b>Marital status</b>	Single	24	32.4
	Married	50	67.6
	None	1	1.4
<b>Education</b>	Primary school	12	16.2
	Secondary	44	59.5
	College, University	13	17.6
	Master's degree	4	5.4
<b>Location</b>	Vientiane Capital	27	36.5
	Vientiane province	14	18.9
	Champasak	23	31.1
	Salavan	10	13.5
<b>Member of farmers' group</b>	No	16	21.6
	Yes (groups under LFN)	52	69
	Yes (group outside LFN)	6	9.4
<b>Years as agripreneur</b>	≤1 year	12	16.2
	2–3 years	27	36.5
	4–6 years	7	9.5
	7–9 years	11	14.9
	≥10 years	17	23
<b>Agricultural sector</b>	Coffee or coffee combined with other crops/livestock/tourism	30	40.7
	Fruits	3	4.1
	Mainly livestock	12	16.2
	Mainly vegetables	19	25.7
	Rice or rice combined with other crops/poultry	8	10.8
	Agriculture and education	2	2.7

### 5.5.2 Narrative Paradigms

All participants responded to the semi-structured interview approach describing their experiences narratively. They described their decision to become agripreneurs within the context of specific circumstances and personal motivations that drove the decision. Circumstances and motivations varied between individuals but showed considerable overlap across narratives, allowing for their identification as relevant phenomena and an insight into how these phenomena can influence the decision to become an agripreneur. It was common for agripreneurs who were interviewed to identify multiple phenomena when recounting why they became agripreneurs.

We identified five predominant paradigms in the gathered narratives that influenced the practicing small and medium scale agripreneurs to choose their careers: (1) Income, (2) Extrinsic benefit, (3) Attainability, (4) Emotional and (5) Societal-communal. The narrative paradigms are described in detail as follows. Amongst these paradigms, some typologies regarding specific motivating circumstances were also identified. The frequencies with which the predominant paradigms and selected motivation typologies within those paradigms that were encountered across the 74 gathered narratives are reported in Table 5.2.

**Table 5.2** Frequency of identified paradigms and select specific motivations.

<b>Paradigm</b>	<b>Specific Motivation (If Applicable)</b>	<b>Frequency</b>
<b>Income</b>	Market potential	21
	Other income motivations	31
	Total	52
<b>Extrinsic benefit</b>	Self-employment	6
	Control of working time and/or place	10
	Other benefit motivations	13
	Total	29
<b>Attainability</b>	Positive circumstances	17
	Negative circumstances	19
	Total	36
<b>Emotional</b>	Passion for agriculture	23
	Pride and sense of accomplishment	16
	Total	39
<b>Societal-communal</b>	Influence from close referents	7
	Other influences	11
	Total	18

### 5.5.3 Income Paradigm

The need, desire or market potential to generate income was the most common theme that occurred in the stories provided by young agripreneurs as they described what motivated them to become an agripreneur. This need or desire to generate income was oftentimes related to one or more specific purpose, including personal independence, supporting children/and or parents financially, financing schooling, study materials and/or machinery (e.g., vehicles) for themselves or others, extending their existing resources and time in activities to escape poverty and/or developing their agricultural livelihoods through reducing labour and increasing efficiencies.

#### *Beliefs about Income and Market Potential of Agripreneurship*

Some participants indicated that they believed agripreneurship compared favourably with other career choices in terms of income generation, with a young agripreneur indicating that the potential to earn money was greater than that of a governmental employee, generally considered to be a desirable career. Most believed agripreneurship would lead to achievement of their desires in generating income.

The income potential of agripreneurship was sometimes narratively connected to specific market opportunities. Young agripreneurs who incorporated market phenomena into their responses predominantly indicated that involvement in this career could result in good income as particular agricultural products were in constant market demand. For example, one participant stated, “cattle are always demanded by the market”, whilst another stated “coffee is popular among tourists”. Young agripreneurs also considered potential markets when choosing their career as indicated by participants stating, “there are not many suppliers for these types of products”, and “I saw coffee imported from abroad, so I want to produce Lao coffee and sell

domestically”. Considering demand and supply, young agripreneurs looked towards favourable markets as demonstrated by the claim “agricultural products are valuable and have good prices, so there is little chance of making losses”. Some agripreneurs who had contractual agreements within the private sector stated that the demand was so high that the private company gave them bonuses as an incentive to encourage them to increase or maintain their supply capacity and product quality.

#### **5.5.4 Extrinsic Benefit Paradigms**

Whilst income is a common consideration in all manner of career decisions, the selection of agripreneurship specifically as a means of meeting the desire or need to obtain income is based on a complex array of beliefs about agripreneurship in terms of circumstances and personal identity. Participants identified other characteristics of agripreneurship that appealed to them and resulted in their choice of career and satisfying income requirement. However, acting on positive beliefs about the benefits of agripreneurship to become an agripreneur was not exclusively discussed in the context of achieving a source of income that had these benefits. In these accounts, the perceived benefits were a motivation. The most common benefits that were described by participants motivating them to become agripreneurs were related to self-employment, control of their time, self-sufficiency and learning and personal/professional development opportunities.

##### *5.5.4.1 Self-Employment*

Benefits related to self-employment were a common theme amongst participants’ motivation for choosing agripreneurship as a career. This motivation could be expressed in terms of seeking to obtain desirable advantages of self-employment, by becoming an agripreneur. Examples mentioned were, opportunities to be their “own boss” or avoiding undesirable



disadvantages of an employee, for example “working for others”. Furthermore, they stated that this career created personal happiness when they managed their own businesses and were responsible for business decisions.

#### *5.5.4.2 Control of Working Time and Place*

Control of one’s working time and place was a recurrent theme in explanations of why young Laotians chose to become agripreneurs. Agripreneurship may satisfy the desire to manage one’s time because it is more flexible, and young agripreneurs can design their working time and shifts. As remarked by agripreneurs, “this job does not require me to work every day” and “I only need to work in the morning”. This contrasts with typical office workers and labourers that have a fixed working time. In some responses, the benefits of controlling working hours were placed in the context of other time demands, such as “taking care children” or “staying with parents” or enabling them to “rest during the day” or work “part-time in order to study”. Agripreneurial careers may also allow the young agripreneurs to work in their hometown, with several agripreneurs placing value on being able to “live in my hometown” and “not having to leave my home”.

#### *5.5.4.3 Self-Sufficiency*

Achieving self-sufficiency for food production was an important desired aspect according to several agripreneurs. Young agripreneurs could produce their own food and reduce household expenditure and by knowing the source of their food they could be confident about food safety. Self-sufficiency was linked to an eco-friendly and sustainable lifestyle that appealed to some participants and gave them a sense of pride, with one participant stating “I don’t want to buy vegetables and rice. I want to have home-grown products because it is better for my health”.

Another believed that by becoming an agripreneur, they were “promoting good health and environmental conservation by consuming organic vegetables”.

#### *5.5.4.4 Learning and Personal/Professional Development*

A desire and willingness to learn was identified by young agripreneurs as a key influence on their decision to pursue an agripreneurial career. They built their careers by exploring opportunities and were willing to learn by doing. They explained that basic skills required for this career included fundamental knowledge about agricultural production, processing, value adding, marketing, business, communications, resources management, teamwork, and leadership. Due to climate change, market fluctuation, agrarian transition, digitalisation, changes of policy, trade, social-economic, and infrastructure, this career required young people to continuously build on their knowledge and skills. Despite facing challenges, young agripreneurs generally expressed a willingness and confidence in their ability to learn, adapt and overcome obstacles. Expressions of willingness and confidence from various agripreneurs included such statements as “I have a desire to learn about agricultural techniques”, “I have a desire to learn how to grow coffee”, and “I am willing to learn about growing and selling organic vegetables and conserve the environment”.

#### *5.5.4.5 Career Security*

An agripreneurial career experiences could provide a sense of security for youth, in contrast to activities such as non-agricultural business, politics, services and office work, which were perceived as fluctuating and unstable due to the possibility of staff lay off or job downgrades. In contrast, agripreneurship were perceived to provide more stable and secure employment.

### **5.5.5 Attainability Paradigms**

Participants based their decision to become an agripreneur on the attainability of the career. Agripreneurship was widely described as an attainable career, being neither too hard nor requiring inaccessible inputs or qualifications; however, these descriptions of attainability were framed either positively or negatively by the participant.

#### *5.5.5.1 Positive Framing of Attainability*

Positive framing occurred in the context of descriptions of personal resources and capacities that made it easier for an individual to become an agripreneur or to practice agripreneurship. Specific resources that participants identified that enabled them to practicably attain an agripreneurship career included fundamental agricultural materials, tools, farm infrastructure and land. Access to these resources could be either through their own resources or inherited from their family with an agricultural background, or through the communal resources of their farmers groups. As an example, one participant remarked: “my parents built the fundamentals of this job for me. I was familiar with this job, and I have my own land”. Access to resources including inheritance or land use rights or borrowing land was clearly advantageous at the early stage of their business.

#### *5.5.5.2 Negative Framing of Attainability*

Negative framing of attainability in narratives was characterized by descriptions of resources, capacities, qualifications and options that the agripreneur lacked or lost, which drove them to select agripreneurship as an attainable career. Characteristic negative framing included responses such as “because of poverty, we, youth, have less job choices”, “I do not have any proper qualifications”, “I do not have high education” and “I am not good at study”. In these narratives, agripreneurship was characterized as a career that could be embarked upon and

practiced despite the perceived personal shortcomings. Without other career options, possessing fewer skills and experiences and with limited resources, these participants became agripreneurs, as recounted by one participant: “I do not have a job choice, I have a limited capital, but agriculture does not require a high investment”. Similarly, another participant recalled, “If I was not doing this job, I have no idea what I would be doing. I only have skills and experiences in farming because when I was 19 years old, I was mainly involved in helping my family farm, so I decided to start to do it on my own.” Some youths were faced with actions related to significant life events that motivated them to enter into an accessible career. In one such case, a couple decided to make use of their land as self-employed agripreneurs after marriage, because the participant “did not know what else to do to earn money”, because they “have not got any qualifications to apply for a job”.

The attainability of agripreneurship as a career enabled a safety net for young agripreneurs who had failed in their initial goals. These goals included their initially preferred business activity. For example, one participant recalled, “I failed in another business, so I do not have another job to do, so I turn to this job because agriculture is the main livelihood and income generation here in my community”. Other setbacks were recalled, relating to education attainment, with one participant explaining, “I failed to gain entrance to university to continue my studies, and I have only a coffee farm to fall back on”, and another explaining: “I did not have a chance to continue my studies so I started an agripreneurship business in my hometown”.

Similarly, some participants could not continue earning an income as they had in the past and needed to look for an alternative income opportunity, thereby increasing their resilience. For example, a young agripreneur located in the new Mekong River dam construction site in Champasak traditionally had relied on fishing for her livelihood and lacked skills to take up other activities. Faced with a calamity, she explained “I could not catch as much fish as before

the dam was built and with less fish caught in 2019, I joined a commercial and clean agricultural project in our village and then started an agripreneurial business”.

### **5.5.6 Emotional Paradigms**

#### *5.5.6.1. Passion for Agriculture*

Intense positive emotions related to the pursuit of fulfilment and self-expression, and strong inclinations towards agriculture, entrepreneurship and/or agripreneurship, were a prominent feature in the responses of participants used to explain their choice to become an agripreneur. Passionate descriptions included “love” for agricultural activities and farming in general. Some participants expressed specific passionate thoughts about an involvement with specific plants, vegetables or livestock. Their passions were deeply personal or linked to their family background, remembrances from their childhood, their interest in consuming specific agricultural products, their happiness achieving in this career and valued reflections. For example, one young agripreneur in Champasak engaged in this career based on her parents’ love story. Her father was a coffee trader, her mother was a coffee farmer, and they met because her father regularly bought coffee from her mother. To her, coffee trees were linked to her birth and her happiness. Her parents sent her to Vientiane province, central Laos, to study English, and after graduating from college she returned to her hometown in the South of Laos and renovated her parents’ old coffee farm. By chance, she meet a trader from Japan with whom she could communicate in English, and they decided to become business partners to export coffee to the United Kingdom and Japan.

#### *5.5.6.2 Pride and Sense of Accomplishment*

Pride was a commonly discussed emotional driver in becoming an agripreneur. Participants who described pride as motivation for choosing agripreneurship indicated that they believed in

advance that being an agripreneur, or certain expected outcomes of practicing agripreneurship, would result in feelings of pride and a sense of accomplishment that they desired to obtain; therefore, they became agripreneurs in accordance with this desire. This was often related to altruistic motivations such as protecting environmental and human health, assisting other farmers, providing financial support to family members, being independent/self-reliant, and producing products for local consumption. For example, organic young agripreneurs highlighted they had a sense of pride because organic vegetables helped the environment and was good for both farmers and customers' health. Some felt they experienced joy through assisting other farmers. Some participants claimed this career was a way to assist other farmers and youth in terms of being a good role model, creating more job opportunities, creating more platforms for exchange of knowledge and skills, upgrading agricultural products and prices, and improving the reputation of Lao local agricultural products. For example, several young agripreneurs in Salavan and Champasak, in Southern Laos, spoke of their motivation to be involved in upgrading agricultural products and prices and increasing the reputation of local Lao agricultural products. One participant stated that he grew up observing his parents successfully work in agricultural coffee production to generate an income. His ambition is to further develop the coffee sector in Laos, particularly in his hometown, where the majority of locals produce coffee. He is involved with the local coffee farmers' cooperatives and works towards improving the quality and price of Lao coffee, with aspirations to export internationally.

#### **5.5.7 Societal-Communal Paradigms**

Participants described various social pressures and encouragements that contributed to their decision to become an agripreneur. These included support or encouragement from their significant others, seeing the successful cases of other agripreneur role models and perceptions

of community or governmental or (International) Non-Governmental Organisations ((I)NGO) projects that support realising their ambitions.

#### *5.5.7.1 Interpersonal and Cultural Influences*

Compliance with perceived social influences was a recurrent theme in participant responses. Desires and encouragement of family members, and personal desires to conform to and maintain their cultural heritage, motivated young Laotians to choose agripreneurship as a career. Several participants highlighted that the encouragement or desires of their family compelled them, or that the career had approval from those close to them. Participants recounted this with examples including, “my grandparents implanted the idea to never abandon agricultural work”, “my grandmother established a farmers group, so I joined her”, “my neighbour encouraged me to do this job as it can generate income”, “my parents taught me to do this job” and “my mother did not want me to leave our community because we need people to help out in our family”.

#### *5.5.7.2 Role Models*

Role models provided motivation for youth to engage in this career, with participants recounting having observed salient agripreneurs who have achieved desirable outcomes and wished to attain similar benefits for themselves. As participants remarked, they “saw many people do this job and they have a lot of money”, and “saw other people who do this job successfully”. Role models were often people who resided within or outside their communities, family members or others. In some examples, the role models were the parents of the participants who recalled, “I see my parents they can earn money by growing vegetables, so I want to do the same” or “I grow up seeing my parents do agriculture for a living and generate income. We are well off due to coffee growing”.

Some agripreneurs were motivated by the desire to become role models themselves. For example, two colleagues working for a private company in Vientiane Capital teamed up as business partners to establish a small-scale hydroponic farm and claimed their motivation to engage in this agripreneurial career was based on “helping farmers to earn more income”. They stated that they could be good role models for other youth in Laos involved in urban smart farming. They had a working example of a profitable enterprise from farming in small urban areas. Innovative practices emerged from their learnings, field observation and by accessing knowledge and skills via YouTube. This was an example of part-time agripreneurs who were gainfully employed in primary careers involving supply chains and finance. These experiences underpinned their part-time agripreneurship, and benefitted their business acumen, creating a sense of pride.

#### *5.5.7.3 Community and Governmental/(I)NGO Projects*

Support from communities, namely the existence of strong farmer groups, organisations or cooperatives in their communities and governmental or (I)NGO projects support were also highlighted as a vital drivers facilitating young agripreneurs to engage in an agripreneurial career. Young agripreneurs highlighted that support existed in their communities and they felt that they could access this support and the support would facilitate their start-up business ideas. Support usually arose from local farmers groups, and agricultural or rural community development projects. Participants claimed “I have a farmers’ group to support me to raise pigs and to do cultivation”, “I have support and encouragement from a project”, “I am feeling more comfortable doing this career after joining the farmers’ group”, “before I only produced for consumption purposes, but with a commercial agriculture promotion project in my village, I started producing for commercial purposes” and “I joined a commercial and clean agriculture project in our village, and then started an agripreneurial business”.



## **5.6 Discussion**

### **5.6.1 Influence of Narrative Paradigms on Agripreneurial Motivation**

The paradigms that emerged from the gathered narratives are generally consistent with phenomena that influence career decisions relating to both agriculture and entrepreneurship in the literature.

#### *5.6.1.1 Income Paradigm*

Our finding that income was the most consistently referenced paradigm amongst the responses is consistent with studies of both agricultural and non-agricultural entrepreneurship career decisions (Barbieri & Mahoney, 2009). The reported belief that the income potential agripreneurship compares favourably with other jobs in Laos explains the decision of income motivated youth to choose this career. However, this belief did not appear to be prevalent across the study participants. Instead, the influence of income potential on the choice to become an agripreneur varied amongst our gathered narratives, and sometimes income motivations were emphasized less than non-financial motivations, or not at all. For example, participants from subsistence farming backgrounds tended to set goals to emerge from poverty by integrating or linking to a more market driven or commercialised production. Meanwhile, those from commercial agricultural backgrounds pursued more value adding and processing businesses. In addition, some participants including those from farming backgrounds highlighted non-financial motivational factors, namely passion as their motivation to engage in agripreneurship prior to financial reward. Our finding that agripreneurs who inherit a farm were more motivated by financial factors while agripreneurs who do not inherit a farm were more motivated by non-financial factors has previously been observed in the European Union (Dobryagina, 2020) and suggests a relationship between income motivation and opportunity-driven agripreneurship;

however, the findings related to subsistence farming, poverty and financial pressures better fit the conceptualisation of necessity-driven agripreneurship. It has been noted that there is no strong distinction of motives related to income security and financial success based on the opportunity-necessity differentiation of motivation from previous studies (Stephan et al., 2015). We attribute this to the broad appeal of income generation.

#### *5.6.1.2 Extrinsic Benefit Paradigms*

According to dominant models for understanding and predicting behaviours, namely the Theory of Planned Behaviour (Ajzen, 1991) and its derivatives, positive attitudes towards a behaviour can arise from beliefs about the benefits associated with that behaviour, and in turn increase the likelihood that one who holds those beliefs will engage in that behaviour (Gorgievski et al., 2018). This model has been broadly applied and validated in a range of behavioural studies including those which treat a career choice as a behaviour (Kautonen et al., 2015; Schlaegel & Koenig, 2014). Participants in our study tended to conform to this model by recounting desirable benefits of being an agripreneur, specifically earning potential, being self-employed, having control of working hours, being self-sufficient for household food needs, engaging in opportunities for learning and personal/professional development and career security. These benefits of agripreneurship identified as motivating participants in our study to become agripreneurs show considerable overlap with commonly identified motivation typologies for both agripreneurs (Nguyen et al., 2021; Saili et al., 2018) and entrepreneurs in general (Stephan et al., 2015). In the narratives that we gathered, youth who had an awareness of these possible benefits and a desire to obtain them became agripreneurs in accordance with this desire. Participants were generally satisfied that their motivating beliefs were accurate and becoming an agripreneur fulfilled their desires, indicating that increasing awareness of the personal benefits of agripreneurship might result in more favourable attitudes amongst

prospective career decision makers and may lead to greater engagement of youth in agripreneurship.

#### *5.6.1.3 Attainability Paradigms*

The attainability paradigms we describe appear to be reflective of the predominant conceptualisations in entrepreneurship motivation: opportunity-necessity differentiation. Whilst it is observed that entrepreneurs in developing countries are more likely to be necessity-driven (Kelley et al., 2011; Nguyen et al., 2014) our examination of attainability as a narrative paradigm in our results indicates that it has motivated both necessity-driven and opportunity-driven youth to become agripreneurs. Youth who described themselves as becoming agripreneurs because they had skills and resources that would make a successful practice of agripreneurship attainable closely follow patterns of behaviour described across entrepreneurship literature as opportunity entrepreneurs, as becoming an agripreneur enabled them to capitalise on the perceived opportunity. The attainability paradigm we observed also provides an explanation as to why necessity-driven youth would choose agripreneurship, as opposed to other careers, when faced with economic hardship. That both necessity-driven and opportunity-driven youth became agripreneurs because of the attainability of this career is reflective of dominant models for understanding and predicting behaviours, which posit that people are much more likely to intend to enact certain behaviours, such as embarking on a career, when they feel that they can enact them successfully (Ajzen, 1991; Gorgievski et al., 2018).

#### *5.6.1.4 Emotional Paradigms*

The prevalence of emotional paradigms across our gathered narratives demonstrates that drivers of agripreneurship have some commonality with drivers of entrepreneurship in general,

in that passion and other intrinsic factors are widely considered to be crucial in motivating entrepreneurial behaviour (Murnieks et al., 2014). Regarding agripreneurship specifically, passion has been found to be the strongest career motivation of practicing young agripreneurs in a study undertaken in Malaysia, because it allowed them to accept as worthwhile the anticipated tasks that were unpleasant and would cause them to encounter dirt and harsh climates (Saili et al., 2018). Furthermore, passion for agriculture and/or agripreneurship appears to sometimes cause youth to forgo other career opportunities. Amongst participants in our study, one young agripreneur who was supported by her parents to pursue higher education in Vientiane province, under the expectation that she would find a white-collar job in Vientiane, instead returned home and became an agripreneur because of her strong passion for agriculture. Similar phenomena have emerged amongst young agripreneurs in other settings, with passion identified as a motivation to remain in agriculture when hypothetically presented with a white-collar career alternative, despite the mainstream appeal of the latter (Saili et al., 2018).

Our finding that young Laotian agripreneurs often acted in accordance with, or sought pride from, becoming an agripreneur is best explained by examining the individual examples in the context of other associated motivations in the same narrative. Pride was widely described in the context of ownership, accomplishment, discretionary power, helping others and living in accordance with their personal values, common motivations in entrepreneurship and decision literature (Douglas & Fitzsimmons, 2013). Despite these factors providing extrinsic benefits to the agripreneur and/or their communities, the intrinsic benefit of pride appears to be especially meaningful for the interviewed participants.

#### *5.6.1.5 Societal-Communal Paradigms*

The importance of the significant others, namely parents or guardians, family members and close friends on an individual's decision making in selecting agriculture as a career path has

been emphasized in other studies including amongst undergraduate students in the USA (Herren et al., 2011), amongst farmer entrepreneurs in Africa (Mpetile & Chinyamurindi, 2021), in Asia, amongst Malaysian youth agripreneurs (Saili et al., 2018) and Gen Y in Malaysia (Yusoff et al., 2019). Family members and close friends are considered the most influential people for decisions related to entrepreneurship (Khor, 2017), including entrepreneurship in the agricultural sector (Saili et al., 2018; Yusoff et al., 2019). Young agripreneurs in Malaysia acknowledged that emotional and financial support, and agricultural opportunities and exposures from their families motivated them to engage in agripreneurship (Saili et al., 2018). The pursuit by an individual of a career that is believed by that individual to have approval from peers and people of importance is explained by the Theory of Planned Behaviour, which posits that individuals are more likely to enact a behaviour, such as pursuing a career, if they believe that it has approval by peers and people of importance (Ajzen, 1991; Gorgievski et al., 2018).

Although the influence of significant others has been shown to be a widespread influence on youth agripreneurs, it has been reported that parents and older generations throughout Asia were often in favour of their young generations leaving farming-related livelihood activities and migrating to urban centres in search of employment opportunities (Humphrey, 2006). Similar trends are reported for parents in Laos, where they are likely to encourage their children to continue studying towards a higher degree so that they could work in an office environment or in non-agricultural fields such as finance, accounting and banking (LFN, 2020). These circumstances were also observed in some of the gathered narratives in our study, where some Lao young agripreneurs highlighted that support and encouragement from their parents, guardians and family members were significant factors in motivating them into both agripreneurship and other careers. The influence of the expectations and approval of others on decisions to act a certain way is moderated by motivation to comply with those others,

according to the Theory of Planned Behaviour, which will vary amongst individuals according to their stability against pressure from their social environment (Păunescu et al., 2018). In the case of some youth agripreneurs, the willingness to comply with parents may have been less than with other family members and close friends (Yusoff et al., 2019). The influence of role models on youth agripreneurs who participated in our study is reflective of a consistent observation amongst studies of youth agripreneurship in other contexts (Haggblade et al., 2015), especially for raising awareness and shaping/stimulating interests for early stage agripreneurs (Arafat et al., 2020; Saili et al., 2018). Role models thus could be incorporated in policy intervention to encourage, reform or change individuals' aspirations and future-oriented behaviour (Nandi & Nedumaran, 2021).

### **5.6.2 Limitations**

Our findings, particularly those regarding statistical frequencies of responses, are not necessarily generalizable, given the limited sample size (approximately 7% of young farmers in the LFN though an unknown percentage of all young farmers and agripreneurs in Laos). However, the consistency of our explanations of the observed paradigms that reflect dominant conceptualisations in both behavioural and entrepreneurship research (Ajzen, 1991; Gorgievski et al., 2018; Stephan et al., 2015) indicates that our findings reflect the broader phenomena acting on youth in Laos and in agrarian societies undergoing commercialisation. Given that our study sample population were all practicing agripreneurs, the phenomena influencing their decision to become agripreneurs are biased towards positive motivators; therefore, our results do not identify phenomena that may negatively impact the decision to choose this career. Narrative insights have revealed the motivational aspirations of young agripreneurs, guiding them to engage in a meaningful career, as found in both behavioural and entrepreneurship research.

## 5.7 Conclusions

Our study has shown that despite the characteristics that set agripreneurship in Laos apart from entrepreneurship in general, commonly identified typologies of entrepreneurial motivation present in the literature, particularly income, extrinsic benefits and emotional paradigms also motivate Lao youth to become agripreneurs specifically. The application of narrative inquiry has revealed the emphasis some practicing agripreneurs in Laos place on the attainability of their career, which resulted in its practice by both opportunity-driven and necessity-driven entrepreneurs. Small and medium scale agripreneurship in Laos may be more attainable than in other country contexts because Laos is an emerging and developing nation with a largely rural population (Senties Portilla, 2017), in which approximately 75% of young people in Laos work in the agricultural sector (Manikham, 2018). As our research has shown, there exist young people in Laos with poor resource endowments who had the capacity to become agripreneurs but did so only after motivation by family, friends and role models. If this were to hold true for other rural youth in similar circumstances, it may present an opportunity to engage them by raising awareness of the extrinsic benefits one can obtain by practicing agripreneurship, and by cultivating passion and pride towards agripreneurship as a career. Future research may benefit from identifying the phenomena that limit the engagement of otherwise capable rural youth in agripreneurship, particularly those who are subsistence farmers who have yet to make a transition to commercially-oriented agriculture.

## 5.8 References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Alexander, K., Case, P., Jones, M., & Connell, J. (2017). Commercialising smallholder agricultural production in Lao People’s Democratic Republic. *Development in Practice*, 27(7), 965–980. <https://doi.org/10.1080/09614524.2017.1353064>
- Alexander, K.S., Millar, J., & Lipscombe, N. (2010). Sustainable development in the uplands of Lao PDR. *Sustainable Development (Bradford, West Yorkshire, England)*, 18(1), 62–70. <https://doi.org/10.1002/sd.428>
- Arafat, M.Y., Saleem, I., Dwivedi, A. K., & Khan, A. (2020). Determinants of agricultural entrepreneurship: a GEM data based study. *International Entrepreneurship and Management Journal*, 16(1), 345–370. <https://doi.org/10.1007/s11365-018-0536-1>
- Arindam, N., Sujeet, K. J., Asif, M., Sanjit, M., Jancy, G., D.K, G., K.K, D., & T.K, M. (2018). Predictive Factors Affecting Indian Rural Farm Youths’ Decisions to Stay in or Leave Agriculture Sector. *Agricultural Science and Technology*, 20(2), 221–234
- Asian Farmers’ Association for Sustainable Rural Development (AFA) (nd). <https://asianfarmers.org/member-lao-farmer-network-lfn/>
- Babbie, E.R. (2010). *The Practice of Social Research* (12<sup>th</sup> ed.). Wadsworth Cengage Learning.
- Babu, S.C., & Zhou, Y. (2020). Youth entrepreneurship in agriculture and rural development: Nigeria. *IDEAS Working Paper Series from RePEc*.



- Barbieri, C., & Mahoney, E. (2009). Why is diversification an attractive farm adjustment strategy? Insights from Texas farmers and ranchers. *Journal of Rural Studies*, 25(1), 58–66. <https://doi.org/10.1016/j.jrurstud.2008.06.001>
- Bouichou, E., Abdoulaye, T., Allali, K., Bouayad, A., & Fadlaoui, A. (2021). Entrepreneurial intention among rural youth in Moroccan agricultural cooperatives: The future of rural entrepreneurship. *Sustainability (Basel, Switzerland)*, 13(16), 9247–. <https://doi.org/10.3390/su13169247>
- Chase, S.E. (2011). Narrative inquiry. In *The Sage Handbook of Qualitative Research* (4th ed.) Denzin, N.K., Lincoln, Y.S., (Eds.). Sage.
- Chinyamurindi, W.T., & Shava, H. (2019). The influence of economic motivation, desire for independence and self-efficacy on willingness to become an entrepreneur. *The Southern African Journal of Entrepreneurship and Small Business Management*, 11(1), 1–12. <https://doi.org/10.4102/sajesbm.v11i1.234>
- Dias, C.S., Rodrigues, R. G., & Ferreira, J. J. (2019). What's new in the research on agricultural entrepreneurship? *Journal of Rural Studies*, 65, 99–115. <https://doi.org/10.1016/j.jrurstud.2018.11.003>
- Dobryagina, N. (2020). Agricultural entrepreneurship fostering from behavioral decision theory perspective. Celebrity branding impact on financial and non-financial motivation. *The European Journal of Finance*, 1–17. <https://doi.org/10.1080/1351847X.2020.1841663>

- Douglas, E.J., & Fitzsimmons, J. R. (2013). Intrapreneurial intentions versus entrepreneurial intentions: distinct constructs with different antecedents. *Small Business Economics*, 41(1), 115–132. <https://doi.org/10.1007/s11187-012-9419-y>
- Dzingirai, M. (2021). The role of entrepreneurship in reducing poverty in agricultural communities. *Journal of Enterprising Communities*, 15(5), 665–683. <https://doi.org/10.1108/JEC-01-2021-0016>
- Essers, C., & Benschop, Y. W. . (2009). Muslim businesswomen doing boundary work : The negotiation of Islam, gender and ethnicity within entrepreneurial contexts. *Human Relations (New York)*, 62(3), 403–424. <https://doi.org/10.1177/0018726708101042>
- Fazal, S., Naz, S., Khan, M. I., & Pedder, D. (2019). Barriers and enablers of women’s academic careers in Pakistan. *Asian Journal of Women’s Studies*, 25(2), 217–238. <https://doi.org/10.1080/12259276.2019.1607467>
- Fitz-Koch, S., Nordqvist, M., Carter, S., & Hunter, E. (2018). Entrepreneurship in the Agricultural Sector: A Literature Review and Future Research Opportunities. *Entrepreneurship Theory and Practice*, 42(1), 129–166. <https://doi.org/10.1177/1042258717732958>
- Gorgievski, M., Stephan, U., Laguna, M., & Moriano, J. (2018). Predicting entrepreneurial career intentions: Values and the theory of planned behavior. *Journal of Career Assessment*, 26(3), 457–475. <https://doi.org/10.1177/1069072717714541>
- Giuliani, A., Mengel, S., Paisley, C., Perkins, N., Flink, I., Oliveros, O., & Wongtschowski, M. (2017). Realities, Perceptions, Challenges and Aspirations of Rural Youth in

- Dryland Agriculture in the Midelt Province, Morocco. *Sustainability (Basel, Switzerland)*, 9(6), 871–. <https://doi.org/10.3390/su9060871>
- Goto, K., & Douangneune, B. (2017). Agricultural modernisation and rural livelihood strategies: the case of rice farming in Laos. *Revue Canadienne D'études Du Développement*, 38(4), 467–486. <https://doi.org/10.1080/02255189.2017.1263553>
- Haggblade, S., Chapoto, A., Drame-Yayé, A., Hendriks, S. L., Kabwe, S., Minde, I., Mugisha, J., & Terblanche, S. (2015). Motivating and preparing African youth for successful careers in agribusiness. *Journal of Agribusiness in Developing and Emerging Economies*, 5(2), 170–189. <https://doi.org/10.1108/JADEE-01-2015-0001>
- Herren, C.D., Cartmell, D. D., & Robertson, J. T. (2011). Perceptions of Influence on College Choice by Students Enrolled in a College of Agricultural Sciences and Natural Resources. *NACTA Journal*, 55(3), 54–60.
- Humphrey, J. (2006). Prospects and Challenges for Growth and Poverty Reduction in Asia. *Development Policy Review*, 24(s1), s29–49. <https://doi.org/10.1111/j.1467-7679.2006.00340.x>
- Kautonen, T., van Gelderen, M., & Fink, M. (2015). Robustness of the Theory of Planned Behavior in Predicting Entrepreneurial Intentions and Actions. *Entrepreneurship Theory and Practice*, 39(3), 655–674. <https://doi.org/10.1111/etap.12056>
- Kelley, D.J., Singer, S., & Herrington, M. (2011). *Global Entrepreneurship Monitor (GEM) Global Report 2011*; Babson College. <https://gemconsortium.org/report/gem-2011-global-report>

- Khor, P. (2017). A Phenomenological Study of the Lived Experiences of the Generation X and Y Entrepreneurs. *Sinergi : Jurnal Ilmiah Ilmu Manajemen*, 7(2).  
<https://doi.org/10.25139/sng.v7i2.363>
- LFN. (2020). The Show: [Parent's HOPE] Why Do Young People Deny to Work in the Agriculture Sector? Lao Farmer Network Facebook Page. Lao Farmer Network.  
<https://www.facebook.com/page/344672219042330/search/?q=parent%20hope>
- LYU., & UNFPA. (2014). *Adolescent and Youth Situation Analysis Lao People's Democratic Republic*. Lao People's Revolutionary Youth Union (LYU), Lao PDR; United Nations Population Fund (UNFPA), Lao PDR. [https://lao.unfpa.org/sites/default/files/pub-pdf/Final\\_Eng\\_AYSA%20Report.pdf](https://lao.unfpa.org/sites/default/files/pub-pdf/Final_Eng_AYSA%20Report.pdf)
- MAF. (2015). *Agriculture Development Strategy to 2025 and Vision to the year 2030*. Ministry of Agriculture and Forestry. <https://www.maf.gov.la/wp-content/uploads/2016/01/MDS-2025-and-Vision-to-2030-Eng.pdf>
- Manikham, D. (2018). Youth and Agri-Entrepreneurship in Lao PDR. *FFTC Agricultural Policy Platform (FFTC-AP)*. [http://ap.ffc.agnet.org/ap\\_db.php?id=925](http://ap.ffc.agnet.org/ap_db.php?id=925)
- Mmbengwa, V.M., Qin, X., & Nkobi, V. (2021). Determinants of youth entrepreneurial success in agribusiness sector: the case of Vhembe district municipality of South Africa. *Cogent Social Sciences*, 7(1). <https://doi.org/10.1080/23311886.2021.1982235>
- Mpetile, Z., & Chinyamurindi, W. (2021). Motivational factors into agriculture as a career path: narratives of Black emerging farmers as entrepreneurs in South Africa. *Journal of Enterprising Communities*, 15(5), 739–754. <https://doi.org/10.1108/JEC-02-2021-0029>

- MPI. (2016). 8th Five-Year National Socio-Economic Development Plan (2016–2020). Ministry of Planning and Investment. <https://www.undp.org/laopdr/publications/8th-five-year-national-socio-economic-development-plan-2016%E2%80%932020>
- Murnieks, C.Y., Mosakowski, E., & Cardon, M. S. (2014). Pathways of Passion: Identity Centrality, Passion, and Behavior among Entrepreneurs. *Journal of Management*, 40(6), 1583–1606. <https://doi.org/10.1177/0149206311433855>
- Murray Li, T. (2009). Exit from agriculture: a step forward or a step backward for the rural poor? *The Journal of Peasant Studies*, 36(3), 629–636. <https://doi.org/10.1080/03066150903142998>
- Nandi, R., & Nedumaran, S. (2021). Understanding the Aspirations of Farming Communities in Developing Countries: A Systematic Review of the Literature. *European Journal of Development Research*, 33(4), 809–832. <https://doi.org/10.1057/s41287-021-00413-0>
- Neilson, G.R., & Lauder, W. (2008). What do high academic achieving school pupils really think about a career in nursing: Analysis of the narrative from paradigmatic case interviews. *Nurse Education Today*, 28(6), 680–690. <https://doi.org/10.1016/j.nedt.2008.03.008>
- Nguyen, C., Frederick, H., & Nguyen, H. (2014). Female entrepreneurship in rural Vietnam: an exploratory study. *International Journal of Gender and Entrepreneurship*, 6(1), 50–67. <https://doi.org/10.1108/IJGE-04-2013-0034>
- Nguyen, G.N.T., Hoang, T. G., Nguyen, T. M., & Ngo, T. T. (2021). Challenges and enablers of women entrepreneurs' career advancement in Vietnam's coffee industry. *Journal of Enterprising Communities*, 15(1), 76–95. <https://doi.org/10.1108/JEC-04-2020-0075>

- Păunescu, C., Popescu, M., & Duennweber, M. (2018). Factors Determining Desirability of Entrepreneurship in Romania. *Sustainability (Basel, Switzerland)*, *10*(11), 3893–. <https://doi.org/10.3390/su10113893>
- Petit, O., Kuper, M., & Ameer, F. (2018). From worker to peasant and then to entrepreneur? Land reform and agrarian change in the Saïss (Morocco). *World Development*, *105*, 119–131. <https://doi.org/10.1016/j.worlddev.2017.12.031>
- Polkinghorne, D.E. (1995). Narrative configuration in qualitative analysis. *International Journal of Qualitative Studies in Education*, *8*, 5–23. <https://doi.org/10.1080/0951839950080103>
- Price, S.L., McGillis Hall, L., Angus, J. E., & Peter, E. (2013). Choosing nursing as a career: a narrative analysis of millennial nurses' career choice of virtue. *Nursing Inquiry*, *20*(4), 305–316. <https://doi.org/10.1111/nin.12027>
- Rae, D. (2005). Entrepreneurial learning: a narrative-based conceptual model. *Journal of Small Business and Enterprise Development*, *12*(3), 323–335. <https://doi.org/10.1108/14626000510612259>
- Refiswal, E., Julianti, T., Supriana, & Iskandarini. (2021). Development strategy of young agricultural entrepreneurs. *IOP Conference Series: Earth and Environmental Science*, *782*(2), 22059–. <https://doi.org/10.1088/1755-1315/782/2/022059>
- Saili, A.R., Saili, J., Safai'ee, M. binti M., & Hamzah, N. M. (2018). Dissecting Factors Causing Active Behaviors Associated with Continuity of Youth Participation in Agro-Preneurship: A Qualitative Study on Youth Farmers in Sarawak. *Global Business and Management Research*, *10*(2), 253–262.

- Samm, M. (2020). *Increasing Agricultural Commercialisation and Enhancing Food Security and Nutrition in Lao PDR: A Framework for Balanced Policy Analysis, Planning and Programming*. Laos Department of Policy and Legal Affairs, Ministry of Agriculture and Forestry: Vientiane, Lao PDR. <https://www.laofab.org/document/download/4579>
- Schlaegel, C., & Koenig, M. (2014). Determinants of Entrepreneurial Intent: A Meta-Analytic Test and Integration of Competing Models. *Entrepreneurship Theory and Practice*, 38(2), 291–332. <https://doi.org/10.1111/etap.12087>
- Senties Portilla, G. (2017). Land concessions and rural youth in Southern Laos. *The Journal of Peasant Studies*, 44(6), 1255–1274. <https://doi.org/10.1080/03066150.2017.1396450>
- Sharp, N.L., Bye, R.A., & Cusick, A. (2018). Narrative Analysis. In *Handbook of Research Methods in Health Social Sciences*; Liamputtong, P., (Ed.). Springer. [https://doi.org/10.1007/978-981-10-2779-6\\_106-1](https://doi.org/10.1007/978-981-10-2779-6_106-1)
- Smith, C.P. (2000). Content analysis and narrative analysis. In *Handbook of Research Methods in Social and Personality Psychology*; Reis, H.T., Judd, C.M., (Eds.). Cambridge University Press.
- Steering Committee for Lao Census of Agriculture (2014). *2nd Lao Census of Agriculture 2010/2011*. Lao Statistics Bureau. <https://catalog.ihsn.org/catalog/4686/download/59188>
- Stephan, U., Hart, M., & Drews, C.C. (2015). *Understanding Motivations for Entrepreneurship: A Review of Recent Research Evidence*. Rapid Evidence Assessment paper. Enterprise Research Centre.

- Valle, F.D. (2012). *Exploring Opportunities and Constraints for Young Agro-Entrepreneurs in Africa*. Food and Agriculture Organization (FAO).
- Vongpraseuth, P., & Phengsavady, M. (2021). *Report Youth Unemployment Issues in Lao PDR*. United Nations Development Programme.  
<https://www.la.undp.org/content/laopdr/en/home/library/report--youth-unemployment-issues-in-lao-pdr.html>
- Weber, R.P. (1990). *Basic Content Analysis*, 2nd ed. Sage Publications.
- White, B. (2012). Agriculture and the Generation Problem: Rural Youth, Employment and the Future of Farming. *IDS Bulletin (Brighton, 1984)*, 43(6), 9–19.  
<https://doi.org/10.1111/j.1759-5436.2012.00375.x>
- Williams, M., & Hovorka, A. J. (2013). CONTEXTUALIZING YOUTH ENTREPRENEURSHIP: THE CASE OF BOTSWANA'S YOUNG FARMERS FUND. *Journal of Developmental Entrepreneurship*, 18(4), 1350022–.  
<https://doi.org/10.1142/S1084946713500222>
- Yamaguchi, K., Stefenon, S. F., Ramos, N. K., dos Santos, V. S., Forbici, F., Klaar, A. C. R., Ferreira, F. C. S., Cassol, A., Marietto, M. L., Yamaguchi, S. K. F., & de Borba, M. L. (2020). Young people's perceptions about the difficulties of entrepreneurship and developing rural properties in family agriculture. *Sustainability (Basel, Switzerland)*, 12(21), 1–12. <https://doi.org/10.3390/su12218783>
- Yusoff, A., Ahmad, N. H., & Abdul Halim, H. (2019). Unravelling agropreneurship activities among Malaysian Gen Y: Social institutional factors as enablers. *International Journal*



*of Entrepreneurial Behaviour & Research*, 25(3), 457–479.

<https://doi.org/10.1108/IJEBR-07-2017-0213>

## **Chapter Six: Perceptions of the institutional and support environment amongst young agricultural entrepreneurs in Laos**

Manithaythip Thephavanh<sup>1,2</sup>, Joshua Philp<sup>1</sup>, Ian Nuberg<sup>1</sup>, Matthew Denton<sup>1</sup>, Silva Larson<sup>3</sup>

<sup>1</sup>The University of Adelaide School of Agriculture, Food and Wine

<sup>2</sup>National Agriculture and Forestry Research Institute, Laos

<sup>3</sup>University of the Sunshine Coast School of Science, Technology and Engineering

## 6.1 Statement of Authorship

Title of Paper	Perception of the institutional and support environment amongst young agricultural entrepreneurs in Laos
Publication Status	<input checked="" type="checkbox"/> Published <input type="checkbox"/> Accepted for Publication <input type="checkbox"/> Submitted for Publication <input type="checkbox"/> Unpublished and Unsubmitted work written in manuscript style
Publication Details	Thephavanh, M., Philp, J.N.M., Nuberg, I., Denton, M., & Larson, S. (2023). Perceptions of the Institutional and Support Environment amongst Young Agricultural Entrepreneurs in Laos. <i>Sustainability</i> , 15(15), 4219. <a href="https://doi.org/10.3390/su15054219">https://doi.org/10.3390/su15054219</a>

### Principal Author

Name of Principal Author (Candidate)	Manithaythip Thephavanh		
Contribution to the Paper	Conceptualisation, Data collection, Data curation, Formal analysis, Interpretation of findings, Investigation, Methodology, Project administration, Validation, Visualisation, Writing—original draft, Writing—review and editing		
Overall percentage (%)	80%		
Certification:	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature and is not subject to any obligations or contractual agreements with a third party that would constrain its inclusion in this thesis. I am the primary author of this paper		
Signature		Date	06/01/2023

### Co-Author Contributions

By signing the Statement of Authorship, each author certifies that:

- i. the candidate's stated contribution to the publication is accurate (as detailed above);

- ii. permission is granted for the candidate to include the publication in the thesis; and
- iii. the sum of all co-author contributions is equal to 100% less the candidate's stated contribution.

Name of Co-Author	Joshua N.M. Philp		
Contribution to the Paper	Conceptualisation, Interpretation of findings, Funding acquisition, Methodology, Supervision, Validation, Visualisation, Writing—review and editing		
Signature		Date	06/01/2023

Name of Co-Author	Ian Nuberg		
Contribution to the Paper	Conceptualisation, Supervision, Reviewing of manuscript		
Signature		Date	09/01/2023



Name of Co-Author	Matthew D. Denton		
Contribution to the Paper	Conceptualisation, Funding acquisition, Project administration, Resources, Supervision, Writing—review and editing		
Signature		Date	09/01/2023

Name of Co-Author	Silva Larson		
Contribution to the Paper	Conceptualisation, Data curation, Formal analysis, Interpretation of findings, Validation, Visualisation, Writing—original draft, Writing—review and editing		
Signature		Date	06/01/2023

## 6.2 Abstract

Article

# Perceptions of the Institutional and Support Environment amongst Young Agricultural Entrepreneurs in Laos

Manithaythip Thephavanh <sup>1,2,\*</sup>, Joshua Neil Monty Philp <sup>1</sup>, Ian Nuberg <sup>1</sup>, Matthew Denton <sup>1</sup>  and Silva Larson <sup>3</sup> 

<sup>1</sup> School of Agriculture, Food and Wine, The University of Adelaide, Urrbrae, SA 5064, Australia

<sup>2</sup> National Agriculture and Forestry Research Institute, Vientiane P.O. Box 7170, Laos

<sup>3</sup> School of Science, Technology and Engineering, University of the Sunshine Coast, Sippy Downs, QLD 4556, Australia

\* Correspondence: manithaythip.thephavanh@adelaide.edu.au or thephavanh.mntt@gmail.com

**Abstract:** Efforts to achieve inclusive and sustainable agricultural-sector growth in developing economies will benefit from agricultural entrepreneurship (agripreneurship) by young farmers. However, challenges that hinder transition from subsistence to commercial agriculture remain. A better understanding of enablers and constraints that young farmers experience can facilitate the development of an enabling environment for sustainably transitioning from subsistence into commercial agriculture. We interviewed 74 young agricultural entrepreneurs (agripreneurs) in Laos, a country with a young and highly rural population, to explore their perceptions of institutions and support functions that enable or limit agripreneurship. Respondents reported that institutions and support functions have generally improved to make agripreneurship easier than before, with infrastructure, logistics, and new platforms for information sharing, banking, marketing, and delivery identified as specific improvements. However, agripreneurs identified weaknesses in the nature, scope, and quality of agricultural information and extension services that limit their performance; difficulties in accessing loans with favorable conditions, which discourages investment; opaque and costly payments and red tape processes that frustrate business establishment, operations, and regulatory compliance; and a lack of targeted policy actions towards enabling youth agripreneurship, which leaves youth feeling unsupported. Improvements in infrastructure, promotion of agri-careers, and more transparency of taxation, registration, and administration fees/systems are recommended.

**Keywords:** youth; young agricultural entrepreneurs; agripreneurship; enabling environment; institutions and support functions; Laos



Citation: Thephavanh, M.; Philp, J.N.M.; Nuberg, I.; Denton, M.; Larson, S. Perceptions of the Institutional and Support Environment amongst Young Agricultural Entrepreneurs in Laos. *Sustainability* **2023**, *15*, 4219. <https://doi.org/10.3390/su15054219>

Academic Editor: Stephan Weiler

Received: 13 January 2023

Revised: 18 February 2023

Accepted: 22 February 2023

Published: 26 February 2023



## 1. Introduction

Agricultural entrepreneurship (agripreneurship) by young farmers is essential to the sustained, inclusive, and sustainable economic growth of developing agrarian economies, with great potential to provide full and productive employment and decent work [1]. Approximately 87% of the world's population of young people aged 15 to 24 years live in developing countries, with the majority living in rural areas in sub-Saharan Africa and South and South East Asia [2]. Employment and entrepreneurial opportunities for youth living in economically stagnant rural areas of developing countries remain limited, poorly remunerated, and of poor quality [3]. Rural youth continue to face challenges related

### **6.3 Introduction**

Agricultural entrepreneurship (agripreneurship) by young farmers is essential to the sustained, inclusive and sustainable economic growth of developing agrarian economies, with great potential to provide full and productive employment and decent work (FAO, CTA & IFAD, 2014). Approximately 87% of the world's population of young people aged 15 to 24 live in developing countries, with the majority living in rural areas in sub-Saharan Africa and South and South East Asia (UN, 2013). Employment and entrepreneurial opportunities for youth living in economically stagnant rural areas of developing countries remain limited, poorly remunerated and of poor quality (OECD, 2017). Rural youth continue to face challenges related to unemployment, underemployment and poverty (UN, 2018). Accordingly, The UN has raised the need to increase opportunity for employment globally, especially for young people, through Sustainable Development Goals (UN, 2018).

The agricultural sector's potential to serve as a meaningful source of livelihood opportunities for rural youth is internationally acknowledged in both literature and practice, and agripreneurship has been hailed as a powerful tool for promoting the socio-economic integration of young people and the key to avoiding rural depopulation (Bouichou et al., 2021; Mmbengwa et al., 2021; Refiswal et al., 2021; World Bank, 2012; Yamaguchi et al., 2020). However, scientific literature on agripreneurship has largely focused on developed countries (Dias et al., 2019), whereas developing countries have been neglected by comparison (Fitz-Koch et al., 2018). A better understanding of the constraints, opportunities and support that young farmers have in developing regions can facilitate the development of an enabling environment for transitioning from subsistence into commercial agriculture (Shattuck et al., 2019). Specifically, research exploring young farmers' perspectives of the institutions and

support functions that enable or limit agripreneurship would contribute significantly to the literature on agripreneurship in developing countries (Fitz-Koch et al., 2018).

Lao Peoples Democratic Republic (Laos) has the youngest population in Asia, with a median age of 23 (Vongpraseuth & Phengsavatdy, 2021). Despite being a rapidly urbanising country, 64% of the population still lives in rural areas (World Bank, 2022). Similar to other developing countries, Lao youth are facing limited employment opportunities, limited education in rural areas, a lack of voice in decision-making, and a mismatch between youth workforce skills and the workforce market demand (LYU & UNFPA, 2014; Vongpraseuth & Phengsavatdy, 2021). This lack of choices traps youth in a poverty cycle, as they remain in non-remunerated or subsistence-level work (LYU & UNFPA, 2014). Consequently, approximately half of the young Laotians who practice agriculture are non-wage family workers (Manikham, 2018). In response, the Government of Laos identified the development of the agricultural sector as the “Major Battlefield”, prioritising the shift from subsistence farming into commercial or market-oriented economy and development of agricultural market systems (MAF, 2015). However, challenges related to support functions, and institutional, policy, and social challenges still hinder this transformation (Alexander et al., 2017; Cele & Wale, 2020; Shattuck et al., 2019), and the overall development of the agricultural sector in Laos is considered to be below its potential (MAF, 2015).

In this paper we explore the perspectives of 74 practicing agripreneurs regarding the role the institutional and support environment in Laos plays in enabling their agripreneurship. In Section 2, we conceptualise the agriculture market systems in which they operate as being supported by institutions and support functions that together form an enabling (or otherwise) environment within which agriculture production takes place. We explore the role of both formal institutions, such as political and legislative systems, and informal institutions, such as

norms, values, and attitudes, in addition to several support services reported in the literature, namely, infrastructure, finance, and information. Using content analysis to identify negative and positive influences and processes, in Section 3 we report on obstacles perceived by participants, as well as their suggestions and recommendations for improvements. By relating these perceptions to the literature on the institutions and supporting functions that make up the enabling environment, in Section 4 we propose recommendations which may foster and support agripreneurship in Laos and other developing countries.

## **6.4 Materials and Methods**

### **6.4.1 Conceptual approach**

Our conceptual approach is guided by the Theory of Planned Behaviour, a model applied to understand and predict individual behaviours [Gorgievski et al., 2018]. According to the Theory of Planned Behaviour, there are three independent determinants underlying an individual's intention to perform a behaviour that are the result of the individual's beliefs: attitudes towards the behaviour, subjective norms with respect to the behaviour, and perceived control over the behaviour (Ajzen, 1991). Despite the uncertainty of the exact nature of the relationships between these three main factors, the accuracy in prediction of human behavioural intentions from these three factors is well-founded and broadly accepted (Ajzen, 1991; Ajzen, 2012; Murphy et al., 2017). In this paper, we specifically explore young agripreneurs' control beliefs, that is, perceptions of the presence of factors facilitating and preventing the performance of a certain behaviour (agripreneurship). Furthermore, the concept of control beliefs is closely linked to "perceived feasibility" as described in the Entrepreneurial Event Model (Liñán & Fayolle, 2015; Schlaegel & Koenig, 2014). In this model (Shapero & Shokol, 1982), perceived feasibility refers to individual self-evaluation of many aspects that together could determine whether an individual feels capable of performing a particular

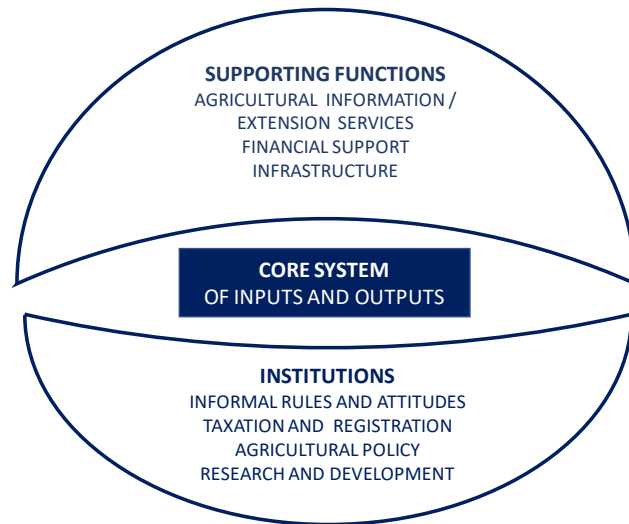


entrepreneurial career or not. This evaluation may include the perception of their ability to access particular resources for the purpose of starting or running their entrepreneurial career, and the assessment of their related knowledge, education, and context (Ozaralli & Rivenburgh, 2016).

The aim of the research presented in this paper is to explore control beliefs or perceived feasibility in more detail. Our approach to identify influential factors was guided by the market system framework approach described by the International Labor Organization (ILO, 2021), as this framework was previously used in the literature to explore perceptions of market system participants in relation to the presence of facilitating and preventing factors (Larson et al., 2023). In the market systems framework, potential facilitating and preventing factors are organized around the core production system of inputs and outputs (and the exchange of goods and services between the providers on the supply side and consumers on demand side); this is embedded in the enabling environment consisting of supporting functions and institutions. Supporting functions are defined as those that inform, support and shape the market system, such as information, skills, infrastructure (public and private physical structures such as roads, railways, bridges, tunnels, water supply, sewers, electrical grids, and telecommunications), finance, and access to markets (ILO, 2021, p.17). We also included supporting functions identified in the literature from the developing countries, specifically, education, access to information and communication technology (ICT), and exposure to agricultural extension agents (Anwarudin et al., 2019). Institutions included in the ILO framework (2021, p.17) are the legislative and regulatory environment including policies, voluntary standards, laws and informal rules and social norms. As per North (1990), in this paper we define “institutions” as the rules and norms that individuals follow in their daily lives, and formal and informal constraints, and their enforcement characteristics. We thus include both formal institutions, such as political and legislative systems, and informal institutions, such as norms, values, and

attitudes. Both types of institutions have been reported in the literature as facilitating or constraining entrepreneurial activities in the agricultural sector, depending on their characteristics (de Wolf et al., 2007; Stenholm & Hytti, 2014). An enabling environment for agripreneurship requires that formal rules are aligned with the informal norms that individuals follow, favour entrepreneurial activity, and are effectively enforced in an environment that operates under a rule of law (Sautet, 2020).

Following the literature review, we conducted a pilot study eliciting perceptions of Lao youth about the enabling environment for agripreneurial careers. The pilot study was conducted in June 2019 as an online survey with open-ended questions. Nineteen young people from or living in rural areas of Laos, including high school and undergraduate students, young agripreneurs, business owners and early and mid-career professionals, employed in private, government and international organisations, participated. The pilot study reinforced the influence of certain institutions and supporting functions on agripreneurial capacity with a strong emphasis on the supporting functions. We thus arrived at our final conceptualisation of the relevant institutions and supporting functions of the Lao agripreneurial market system (Figure 6.1), which was used to shape the questionnaire for our study.



**Figure 6.1** Conceptualisation of the agripreneurial market system embedded in institutions and supporting functions that together form an enabling (or otherwise) environment.

#### **6.4.2 Study participants**

A total of 74 young agripreneurs working in small and medium scale operations participated in this research (Table 6.1). Small and medium scale farms are defined in Laos as farms between 0.5 and 3 hectares (Steering Committee for Lao Census of Agriculture, 2014) while youth is defined as all people aged between 15 and 35 (LYU & UNFPA, 2014). Although the ILO (2020) defines youth as people under the age of 25, it is not uncommon for youth policies in South East Asia to extend the limit upwards (as an example, the National Youth Development Policy of Malaysia defines youth as people aged 15 to 40 (The Government of Malaysia, 1997). All participants in this study were below 40 years of age and 51.4% were 30 or younger (Table 6.1). Our study extended the age of respondents to 40, if those respondents were representatives of the younger members who were unavailable or were recommended for participation by other young respondents as their mentors or role models. Sampling was initiated through the Lao Farmer Network (LFN). The LFN is the biggest network of commercial farmer groups and organizations in Laos, comprising more than 4,000 members in 58 farmers' organizations in 13 provinces throughout Laos (LFN, 2022). It was established in 2014 in order to strengthen small holders' cooperation, promote peer-to-peer learning, information sharing, and policy dialogues, and support farmers with farming techniques, processing of agricultural products, and marketing (LFN, 2022). Sampling snowballed outside of the LFN to encompass young agripreneurs not belonging to any farmer organisation but who were recommended for participation by either agripreneurs, communities or organisations. More women (67.6%) than men participated, and majority of the respondents were married (67.6%), and educated (Table 6.1).

**Table 6.1** Key characteristics of participating young agripreneurs ( $n=74$ ).

		<b>Number</b>	<b>Percent</b>
<b>Gender</b>	Female	50	67.6
	Male	24	32.4
<b>Age</b>	≤ 30	38	51.4
	31-40	36	48.6
<b>Marital status</b>	Single	24	32.4
	Married	50	67.6
<b>Education</b>	None	1	1.4
	Primary school	12	16.2
	Secondary	44	59.5
	Higher degree	17	23
<b>Member of farmers group</b>	No	16	21.6
	Yes (groups under LFN)	52	69.0
	Yes (group outside LFN)	6	9.4
<b>Years as agripreneur</b>	≤ 1 year	12	16.2
	2-3 years	27	36.5
	4-9 years	18	24.5
	≥10 years	17	23.0
<b>Agricultural sector</b>	Only coffee or combined with other crops/livestock/tourism	30	40.7
	Mainly vegetables	19	25.7
	Mainly livestock	12	16.2
	Only rice or combined with other crops/poultry	8	10.8
	Fruits	3	4.1
	Agriculture and education	2	2.7
<b>Province</b>	Vientiane Capital	27	36.5
	Vientiane province	14	18.9
	Champasak	23	31.1
	Salavan	10	13.5

Relatively new agripreneurs with less than one year of experience were 16.2% of participants, and 36.5% had been in agricultural business between two and three years, while 23% had been operating as agripreneurs for more than 10 years. The most represented agricultural sector was coffee production, on its own or in combination with other crops, followed by vegetables and livestock production (Table 6.1). Respondents were interviewed across four provinces: Vientiane Capital (36.5% of respondents) and Vientiane Province (18.9%) in central Laos, and Champasak (31.1%) and Salavan (13.5%) provinces in southern Laos.

### **6.4.3 Data collection and analysis**

Participants were interviewed face-to-face, using a semi-structured approach (Chase, 2011). We asked participants to evaluate support functions and institutional arrangements, provided by either the government (public sphere), private companies, or (International) Non-Governmental Organisations ((I)NGOs) and farmers groups/organisations. As per our conceptual model (Figure 6.1), discussions on support functions included access to agricultural information and extension services, financial support, and infrastructure. In terms of institutions, we first explored informal rules, norms and values-specifically, positive and negative views that participants perceive society places on agripreneurship. Formal institutional arrangements discussed included taxation and registration, policy, and research and development.

Data were translated from Lao into English by an experienced agricultural researcher, and entered into a spreadsheet database. Then, three content analysis (Weber, 1990) were performed: interactions with the embedded environment that were enabling; interactions with the embedded environment that were hindering; and participants' suggestions and recommendations for improvements. For each content analysis, young agripreneurs' responses were categorised in themes. Similar responses, based on words or meanings, were placed in

the same category. The remaining content was placed as new lists, and the process was repeated. Reporting of the findings in the Results section followed logical chain data synthesis.

## **6.5 Results**

The findings presented in the sections below are organised as per our conceptual model to present data gathered on agricultural information and extension services, financial support, infrastructure, informal rules and values, taxation and registration, agricultural policy, and research and development. Each of these domains has been discussed as an enabling environment, before young agripreneurs identified specific aspects as barriers potentially hindering their success. Our findings are summarised in Table 6.2 and are presented as percentages of respondents mentioning a specific theme. The data in Table 6.2 are disaggregated by gender and presented as percentages of all female and all male respondents mentioning a specific theme. We note in Table 6.2 that some themes were mentioned by a higher percentage of female participants, while other have been mentioned by proportionally more males than females. However, given the size of our sample, more evidence would be needed to form the basis of recommendations related to gender.

**Table 6.2** Enabling and hindering factors for each domain explored, as reported by young agripreneurs: percentage of respondents (%) and number of respondents mentioning (*n*), and as percentage of all female respondents (%F, *n*=50) and all male respondents (%M, *n*=24). Total respondents: 74.

Domain	Enabling Factors	% and <i>n</i>	% F	% M	Hindering Factors	% and <i>n</i>	% F	% M
Agricultural information and extension services	Receiving technical advice/training	44.6 (33)	50	33	Inadequacy of extension staff and their service	43.2 (32)	38	54
	Village visits	33.8 (25)	26	50	Limited scope: more training in technical areas	36.5 (27)	28	54
	Peers and farmer groups/organizations	31.1 (23)	26	42	Lack of coordination and consumer education	33.8 (25)	36	29
	Social media, TV, radio	23.0 (17)	24	21	Limited nature of information provided	28.4 (21)	24	37
Financial support					Limited scope: more non-technical training	18.9 (14)	24	8
	Availability of financial providers	41.9 (31)	40	46	High interest rates with short loan period	33.8 (24)	38	21
	Financial support from farmer groups/village funds	10.8 (08)	10	13	Extensive “red tape” and asset guarantees	20.3 (15)	14	33
	Loans/ grants from development projects or (I)NGOs	4.1 (03)	6	0	Awareness and assistance with application	17.6 (13)	18	17
					No emergency insurance	9.5 (07)	10	8
					Lack of transparency in case of a grant	4.1 (03)	4	4
Infrastructure	Improvements in infrastructure	40.5 (30)	38	46	Poor road conditions, especially in rainy seasons	52.7 (39)	58	42
	Access to private and shared vehicles	5.4 (04)	6	4	Lack of logistics/storages/hospitals/schools	9.5 (07)	6	17
	Improved telephony and IT infrastructure	5.4 (04)	4	8	Lack of irrigation	5.4 (04)	6	4
					Expensive and unreliable electricity	4.1 (03)	6	0
					Negative impact from dam construction	2.7 (02)	4	0
					Expensive and unreliable transportation	2.7 (02)	2	4
Informal rules and attitudes	Economic related benefits	25.7 (19)	26	25	Negative perceptions of farm conditions/tasks	23.0 (17)	16	37
	Emotional benefits	17.6 (13)	18	17	Perceptions of agripreneurial investments as risky	16.2 (12)	14	21
	High market demand and niche market potentials	16.2 (12)	14	21	Lack of support and education for this career	16.2 (12)	18	12
	Extrinsic benefits	14.9 (11)	18	8				
	Modernization of agriculture	4.1 (03)	6	0				
Taxation and registration	Only few payments	16.2 (12)	22	4	Expensive	16.2 (12)	14	21
	Tax system in Laos has improved	10.8 (08)	8	17	Need to pay for many things and at too many levels	8.1 (06)	10	4



	Happy to pay fee to village/farmer groups	9.5 (07)	14	0	Slow and not transparent procedures	8.1 (06)	8	8
					Should be no tax on small agripreneurs	4.1 (03)	6	0
					Increase tax on imported agricultural products	1.4 (01)	2	0
	Supporting commercial agriculture in Laos	23.0 (17)	26	17	Lack of appropriate strategies for policy follow-up	13.5 (10)	10	21
Agricultural policy	Increases chance to get support from (I)NGOs and donors	18.9 (14)	18	21	Ineffectively implemented and monitored	9.5 (07)	10	8
	Creating jobs, including youth	13.5 (10)	18	4	Not applied thoroughly	9.5 (07)	4	21
	Motivates agripreneurs to be persistent	6.7 (05)	8	4	Not focused on youth	9.5 (07)	10	8
					Lack of budget to implement the policy	5.4 (04)	6	4
	Rice, vegetables and animal cultivars are available	14.8 (11)	12	21	Cultivars suitable to or adaptable to Lao climate	25.7 (19)	28	21
Research and development	Many research organizations and agricultural graduates	12.2 (09)	12	13	Cultivars of low quality and insufficient	16.2 (12)	12	25
	Availability of the modern technologies	10.8 (08)	10	13	Need for further R&D to reduce imports	12.2 (09)	14	8
					Low progress compared to other countries and region	8.1 (06)	4	17

### **6.5.1 Agricultural information and extension services**

As presented in Table 6.2, the enabling information and extension services most frequently highlighted by young agripreneurs were improvements to technical advice, guidance and training (44.6%) that pertained variously to horticulture, commercial production, pest and disease prevention and management, post-harvest management, production planning, agribusiness, product promotion, agro-tourism, new techniques, animal raising, fertiliser application, chemical use, non-chemical use, and Good Agricultural Practice. Extension staff, organisations and projects were reported as visiting farmers in their villages to share information and give advice (33.8%). Platforms on social media, TV and radio programs, and community speakers, were used for sharing and exchanging agricultural information (23%). Young agripreneurs, both in groups and as non-group members, also reported getting information from their peers and farmer groups/organisations (31.1%). Young agripreneurs identified three salient limitations to agricultural information and extension services that constrain commercial agriculture or young agripreneurship in Laos: inadequate performance of extension staff (43.2%); lack of coordination and consumer education (33.8%); and limited nature (28.4%) and scope (36.5% technical and 18.9% non-technical) of information provided (Table 6.2). Regarding the nature of information provided, agripreneurs suggested more practical hands-on activities, follow up and monitoring. Agripreneurs also recommended for more visualisation and innovation such as the use of posters and videos, particularly when working with ethnic minorities. In terms of scope, young agripreneurs identified additional technical and non-technical areas that require more support. Technical areas suggested included the following: non-typical crops that are newly introduced to Laos; effective pest management, disease control and management, compost and fertiliser making, fertiliser application, soil improvement, climate change adaptation, production of vegetables in the rainy season, processing, productivity improvement and product quality. Limitations linked to

information about agricultural machinery were also discussed, including concerns about the risk of injury when using machinery and technology without appropriate training. A lack of knowledge about farm machines also increases the risk of agripreneurs buying a poor-quality machine from dishonest suppliers. Non-technical areas discussed were product development, branding and marketing. However, most discussions were on the need for entrepreneurial training, business planning and financial literacy. It was noted that the educational system in Laos does not provide any of such training; thus, although young agripreneurs might be familiar with agriculture, they lack market system skills.

Agripreneurs also suggested improvements in performance of extension staff (43.2%, Table 6.2). Visits to villages should be more frequent, and extended to more villages that currently do not get any support. Participants reported that extension staff sometimes lacked accountability in performing their tasks, lacked honesty in keeping commitments, and paid little attention to the work of agripreneurs. In addition, they reported extension service providers' lack of suitable knowledge, leadership skills, and an understanding of their roles, as well as poor delivery and communication. The need for "incentives" and "motivation" to "inspire" the extension staff was also noted.

A lack of coordination amongst different government offices, (I)NGOs, projects and other agricultural services stakeholders, was also noted as a third major obstacle by over one-third of respondents (Table 6.2). They suggested that service delivery, including distribution of information such as weather forecasting, price fluctuation information, and disease outbreaks should be faster. In addition, the information should be accurate, clear, up to date, workable and easy to understand. In particular, there were discussions on the need for consumer education about good agricultural practice and organic production. The promotion of niche markets like organic agriculture was discussed frequently, as well as the need for

environmental protection, including water management and tree planting in the suitable land areas, as well as the need for coordinated assistance with branding and advertising.

### **6.5.2 Financial support**

The improved availability of financial providers, including the Agricultural Promotion Bank, was reported by around 42% of agripreneurs as an enabling aspect (Table 6.2). However, high interest rates with short loan periods (33.8% of respondents) and extensive “red tape” (20.3%) remain as obstacles (Table 6.2). This discourages some agripreneurs from applying for a loan from the financial providers as they are afraid they will end up with debt. Agripreneurs, especially small-scale ones (10.8%), reported a preference for borrowing from the farmers group or village’s fund. The interest is lower, and they do not need to have an asset guarantee. However, farmer groups and the village funds have a limited amount of funds available for loaning, and if some members borrow and do not return, others cannot access that fund. As a result of the inaccessibility of credit, some agripreneurs reported the need to turn to “informal” loans, with extremely high interest rates. Although often creating hardship and suffering, the practice of informal loaning is maintained as there are few other choices. Non-group agripreneurs also commented on the lack of transparency with respect to grant funds (Table 6.2).

Proposed solutions to problems with financial services included the need for general and specific financial training, including training in the process of accessing finance, writing the application/business proposals, and the consequences of loan defaulting (mentioned by 17.6% of respondents, Table 6.2). Increased access to, awareness of and variety of providers of the small and medium enterprise loans, were discussed. Agripreneurs also raised concerns regarding the failure of their business when there is some emergency such as a natural disaster

(9.5% of respondents, Table 6.2). Therefore, comprehensive emergency/risk insurance is needed for the compensation of production and financial losses in such cases.

### **6.5.3 Infrastructure**

In general, as reported by more than 40% of the respondents, infrastructure in Laos has improved over time (Table 6.2). Agripreneurs reported improved access to roads, rail, irrigation, electricity, and private and shared vehicles. Improved telephony and IT infrastructure is allowing not only for new platforms and services, such as online delivery and access to logistics companies, but also for financial services such as banking services and money transfers. Improved road and rail linkages with other countries in the region raise the opportunity to transport domestic agricultural products to other countries, and several agripreneurs were particularly interested in exports. They also reported schools and hospitals/clinics as components necessary for their well-being and quality of life.

Despite these positive developments, agripreneurs also reported limitations of the infrastructure in Laos (Table 6.2), mostly regarding poor road conditions (52.7%), lack of logistics, storage, hospitals, schools and other aspects (9.5%), insufficient irrigation for agricultural production (5.4%) and expensive and unreliable of electricity (4.1%). Long-distance travel still requires a long time, affecting the quality of agricultural products. In the worst cases, especially with a lack of proper storage, agripreneurs have to dump their products. It was also noted that the condition of the roads are getting worse during rainy seasons and that roads often flood, preventing agripreneurs from reaching markets and selling produce, and preventing traders from coming to buy produce at the farm gates/communities. Electricity was reported as being very expensive and sometimes unreliable (Table 6.2). There was also a desire for irrigation systems to be improved and better maintained. Another concern discussed by agripreneurs located along the main river was a recently built upstream hydroelectric dam

(Table 6.2). They reported that the dam resulted in difficulty in accessing to water for agriculture and household consumption, as well as a reduced availability of food sources (i.e., fish). Some communities reported that the dam created changes in the water flow, which made the river unsuitable for their traditional mode of transportation.

#### **6.5.4 Informal rules and attitudes**

No informal rules or norms that would prevent certain population segments (i.e., ethnic minorities, women) from achieving agripreneurial careers were noted. Discussion on this topic mainly pertained to societal views and the perception of agripreneurship as a suitable career for young people. Respondents reported experiences with, and the perceptions of, both positive and negative norms towards agripreneurship in Lao society.

The dominant positive views were related to the economic benefits of agripreneurship. More than a quarter of the respondents perceived that agripreneurship can create employment and income, with high market demand for agricultural products both domestically and for export, and is thus being considered as a good job (Table 6.2). Nearly 18% of young agripreneurs reported emotional benefits to being in a career as small and medium scale agripreneurs. The benefits included feeling proud and loving the job. Some saw themselves as respected, in an important sector contributing income for their communities, districts and provinces, and some are even seen as a role model for youth. Approximately 16% of participants reported that there is a high demand and growth potential for niche markets of agricultural products in Laos, such as organic, natural and native species, due to the news and health concerns of consumers. The next most prevalent positive view was related to the extrinsic benefits of agripreneurship (14.9%). For example, it is perceived as an honest job, which allows agripreneurs to manage their own time, continue their Lao ancestors' family tradition, be food self-sufficient, and select diverse varieties of crops and animals to invest in. They also stated that agriculture is regarded

as the “Backbone of the nation”, with farmers playing a vital role contributing to the national food security and incomes. As a result, more people see value in this career. In addition, the career does not require a large initial investment, and there are modern technologies available to assist with the job (Table 6.2).

The negative perceptions of agriculture that might be present in Lao society, as reported by young agripreneurs (Table 6.2), mainly included negative perceptions of farm conditions/tasks such as a hard work, being exposed to the sun, smelling bad and being dirty, and requiring labour and capital (23%). Additionally, it might be perceived as a risky investments because agricultural products are perceived by some as being difficult to sell, not achieving a good price, having a short shelf-life, and being exposed to the risk of the disease and natural disasters. As a result, returns and income were perceived as being insecure (16.2%). The young agripreneurs also believed agripreneurship lacks support by the government in comparison to other sectors (Table 6.2). Some indicated that society looks down on farming-related jobs and perceive farming as a poor and backwards career. Public statements such as, “agriculture never makes people rich”, “it is a job for poor people”, and “only those who cannot find any other jobs do agriculture”, were encountered by respondents. Moreover, some reported that agricultural work is not good for their health, for example, when the farmers apply chemicals on the farms. Producing organically usually requires more work and investment to be certified and gain trust, but leads to a higher price than that of non-organic products. The higher price could then result in fewer consumers buying the products.

Formal education was also reported to limit agripreneurship by shaping norms regarding agricultural careers. Participants reported that they believed the education system prefers non-agricultural careers as an indicator of success and therefore young people do not have much interest in agriculture. A broader critique of the education system was that it does not promote

entrepreneurship more generally, including critical thinking, creativity, ambition and vision. Furthermore, young agripreneurs said that students do not have opportunities for study tours to see successful agripreneurial cases and hence do not have any agripreneurs as role models.

#### **6.5.5 Taxation and registration**

Agripreneurs discussed land and vehicle taxes and administration fees that they need to pay to implement their business. More than 10% of agripreneurs stated that the tax system in Laos had improved, thanks to a new “one door service” system (Table 6.2). Most agripreneurs reported no issues with paying tax; they claimed that it is their duty, and that they pay tax to follow the law. Paying certain fees, such as business registration fees and annual fees for organic certification, allows them to obtain receipts which they can present as a proof of registration/certification to consumers. This was seen as a good way to gain trust from the consumers. To maintain product quality and make consumers confident in their products, some agripreneurs even reported inviting inspection and certification. Group members stated that they are happy to pay a fee to the district, village and farmers groups because when there is a problem, they have someone to help immediately. Furthermore, the fee collected is used as the group’s shared fund for the benefits of the group members. Businesses registered under the farmers organisation do not need to pay for business tax, but pay only agricultural land tax. In terms of the service support for tax payments, young agripreneurs reported that it is convenient to pay tax these days, as they no longer need to go to the town as there are village tax officers located in their communities.

Some respondents complained about the high cost of some taxes and administration fees associated with being an agripreneur (Table 6.2). For example, the business registration fee, annual fee for organic certification, and vehicle tax have been reported as expensive. Some group members in particular reported that they are not happy to pay tax beyond a certain point.



They complained about the need to pay for many things and at too many levels: the farmers groups, village, district, province and the central government (Table 6.2). In addition, practices of collecting “service fees” and fee collection at checkpoints remain, and these should be made faster and more transparent. The main argument was that the government should not collect any tax other than agricultural land tax from small and medium scale agripreneurs or enterprises (Table 6.2). Some non-group agripreneurs argued that it is not fair: if the government has supported foreign investment in Laos, the government should also support Lao people by not collecting tax from local Lao agripreneurs. One participant also suggested that the government should increase tax on imported agricultural products.

#### **6.5.6 Agricultural policy**

Nearly 23% of young agripreneurs noted the current agricultural policy aspiration to support commercial agriculture in Laos (Table 6.2). Guiding direction and advice under the governmental policy support on commercial agriculture drove Lao agripreneurs to be more curious to learn new techniques to improve their farm productivity, consider market demand-based production plans, produce more varieties of produce, observe other agripreneurs’ succeed, work together with other agripreneurs and other stakeholders, and aim for export abroad. It is also perceived by 18.9% of respondents as playing a part in increasing the likelihood of support, grants and loans from private and (I)NGOs sectors and donors , as well as attracting foreign customers, and as creating jobs for communities and individuals, including youth (13.5% of respondents). Having an agricultural policy that supports commercial agriculture also motivates agripreneurs to be persistent despite having problems. The government has also issued other relevant measures to facilitate commercial agriculture in Laos, namely, a policy on establishing farmers groups/organisations and promoting niche agricultural products such as organic foods.

The main areas for policy improvements reported (Table 6.2) were the lack of appropriate follow-up strategies and oversight, as well as the lack of a budget to implement the policy. In addition, agripreneurs would like more input and inclusion in policy making, as they see it as impractical, and not focused on youth (Table 6.2). Finally, broken promises damage the trust agripreneurs have in government support. For example, one agripreneur relayed, “last year, [the Government] said they would provide us fertiliser and seeds. They did not come. Also, in earlier years they said they would provide loans without interest. Four years later, there has not been anything happening”.

### **6.5.7 Research and development**

Perceptions of research and development provided by agripreneurs mainly related to seed production (14.8%, Table 6.2). Laos was seen as producing rice, vegetables and animal cultivars in specialised research centres (12.2%); however, some respondents reported that the cultivars and seeds produced do not meet their needs, while others are not available in Laos. However, a problem with the imported seeds is that they cannot be kept, as the next generation results in lower quality. Agripreneurs claimed that, with the exception of rice, other Lao seeds are not well suited to local climate and conditions (25.7%) and need to be of better quality (16.2%); some germinate, some do not; some have lot of weeds, and are not resistant to pest, fungi and viruses. This lack of support results in investors and agripreneurs doing their own research and experimentation; and relying on imported expensive seeds. Agripreneurs suggested that the government should improve support for seed production and cultivars, support or promote agripreneurs on seed saving, and improve and promote the use of Lao native seeds. The increasing availability of the modern technologies was reported by agripreneurs as providing convenience, time and labour savings, and accelerating the growth of agriculture at a greater pace in recent years (10.8%). There was difference in the technology narrative of

agripreneurs belonging to and not belong to farmers groups and others. While those in farmers groups wanted more project support with the machines and tractors, several independent agripreneurs were not in favour of support regarding access to vehicles, machines and input materials. They claimed that those assets are not sustainable and that in the long term they make farmers dependent on the help from governments or (I)NGOs.

## **6.6 Discussion**

The agricultural sector is described in the entrepreneurship literature as being both highly regulated and receiving a high level of support (Alsos et al., 2011; Fitz-Koch et al., 2018). However, the agripreneurial literature is heavily focused on American and European markets and is not representative of the sector context in Laos or many other developing countries. Few studies have been conducted in a developing context, but they highlight the role of institutional effects, education, access to information and communication technology and exposure of agricultural extension agents in shaping youth entrepreneurship (Anwarudin et al., 2019; Williams & Hovorka, 2013). Economic parameters such as the size of the business, turnover, capital investment, profits, and employment are also of critical importance but are beyond scope of this study. The extent to which supporting functions and formal and informal institutions in Laos create an enabling environment for agripreneurship, is largely unknown. Our literature review and pilot study resulted in the selection of seven domains to explore. Domains such as financial support, infrastructure, and taxation and registration were discussed by our participants in ways similar to those reported in the literature. Discussions on the domain of agricultural information and extension services clearly indicate the importance of ICT, in particular social media sites, as means of obtaining information. This, indeed, is increasingly the case across countries, but is nonetheless an important finding that opens up novel means of communication, information sharing, and education. Another observation of interest is related to agricultural policy domain. Participants in the research perceive and acknowledge that recent

official governmental support for commercial agriculture in Laos has resulted in increased support from (I)NGOs and donors for agripreneurship. It comes as no surprise that (I)NGOs and donors respond to national policy changes, but we find it encouraging that this response has been observed and perceived by agripreneurs—the intended beneficiaries—themselves.

The participants in our study appeared more educated than the average for rural youth in Laos. Only 18% of our cohort had not finished secondary school, in stark contrast to reports by Lao Statistics Bureau (2017) that while 54% of rural students attend lower secondary school, only 28% attend upper-secondary school or continue with higher education. The high education levels of our study cohort might indicate that agripreneurship is indeed an entrepreneurial career attracting well-educated youth. However, given our relatively small sample size and participant elicitation methods, this proposition requires further study. We also propose further study in terms of the influence of gender on agripreneurial perceptions. In our data (Table 6.2), we note some differences, potentially gender-based, in the percentages of male and female participants discussing specific themes. We also note findings from the literature that suggest that gender influences intentions and/or preferences towards a particular career, including agripreneurship, however the effect varied between studies (Cele & Wale, 2020). Although the effect of gender on intention towards agripreneurship has not been studied in Laos, Moglia et al. (2020) reported rural females had a more favourable attitude towards off-farm activities and modern, non-traditional economies than males. Given the limited sample size, we do not provide any strong recommendations in this respect but rather suggest that further gendered research is needed.

In the next two sections, we discuss our findings in relation to the positive and hindering influences of supporting functions and institutional arrangements, before making specific

recommendations for further improving the agri-system environment for young agripreneurs in Laos.

### **6.6.1 Perceived enablers of agripreneurship**

Positive experiences and perceptions were reported in relation to all domains tested. The main positive development

The main positive development in relation to agricultural information in Laos was related to a better connection of new and digitalised communication technologies, with young agripreneurs now able to access and exchange agricultural information through online and remote platforms and social media. This trend is in line with trend in other developing countries, where social media and mobile telephony have been linked to improved information access in remote areas (Aker & Ksoll, 2016; CTA, 2017; Fletschner & Kenney, 2011; MercyCorps, 2019; Misaki et al., 2018; OECD, 2019; Steinfield et al., 2015). With the reforms in the financial system in Laos during 2016 and 2018 in Laos (World Bank, 2019), agripreneurs reported both improvements in access to financial services and an increase in the number of financial providers. They were also of the opinion that infrastructure, such as transportation systems and logistics, has significantly improved in recent years.

Agripreneurship was perceived by many as a desirable career. The main positive societal views found were similar to feelings reported in the literature, such as pride and heritage (Giuliani et al., 2017), farmers providing a “back bone of the nation” (Pelzom et al., 2018) and playing a vital role in contributing to the national food security (Manivong et al., 2016). Interest was particularly high in relation to market-oriented farming in niche markets, such as organic production (Arindam et al., 2018; Giuliani et al., 2017; Metelerkamp et al., 2019). The trend of additional value being placed by the society on organic, natural and native species products

could create an opportunity for young agripreneurs to identify niche markets in the value chains (Bwalya, 2014). Alternatively, young agripreneurs could take advantage from these new trends by engaging in other related businesses, such as processing, service providing (i.e., linking farmers to the markets), and ICT optimising (i.e., market information service, e-advisory service) (Mulema et al., 2021).

Young agripreneurs reported having to pay land tax only, and reported that they receive a business tax exemption for agricultural products if they pay a regular membership fee, and register their businesses under farmers organisation. They also acknowledged the positive impacts of current agricultural policy in Laos, with aspiration to support commercial agriculture and other positive measures implemented by the government, such as policy on establishing farmers groups/organizations and promoting niche agricultural products such as organic foods (Ling & Chanthavong, 2022). Government support encourages young Lao agripreneurs to be more curious, to learn new techniques, and to improve their farm productivity. They also reported increasing opportunities to obtain support, grants, and loans from private and (I)NGOs sectors and donors. This support reportedly allows them to develop market demand–based production plans, produce more varieties of produce, work together with other agripreneurs and other stakeholders, and aim for export abroad. Importantly, agripreneurs reported that having an agricultural policy that supports commercial agriculture motivates them to be persistent despite having problems. In relation to research and development in Laos (Alexander et al., 2017; Manivong et al., 2016), agripreneurs noted the presence of many research institutes and expressed hope for further improvements in terms of the variety and quality of seeds and advice provided.

### **6.6.2 Perceived limitations to agripreneurship**

Agricultural extension in Laos is supported by the government, private organisations and (I)NGOs. Our findings suggest that agricultural extension services are ineffectively implemented, in line with a study that also reports ineffective agricultural extension in Laos (Manivong et al., 2016). Specifically, young agripreneurs perceived a limited nature and scope of information services provided, inadequate performance of extension staff, and a lack of coordination and consumer education, as key impediments. Thanks to Agriculture in Laos remains largely subsistence-based, with lower usage of improved technologies and machinery (Manivong, 2014; Samm, 2020). As suggested both in our study and elsewhere (Bannalath et al., 2021; Insisienmay, 2022; Manivong et al., 2016; UNDP & UNICEF, 2021), there should be increased support regarding non-technical aspects, such as business planning, financial management and market access and linkages. This support should be provided both at the individual agripreneur level, and at the level of leadership for farmers groups and organisations (Ling & Chanthavong, 2022). Particularly poor access to agricultural information and knowledge exchange opportunities for rural remote regions, ethnic minorities and at small-scale farmers, previously reported in the literature (Khumya & Kusakabe, 2015) were validated with our study. It appears that Laos is predominantly focused on production aspects and is less focused on technology transfer and information dissemination (Bartlett, 2012). The educational system in Laos was perceived as providing some knowledge and skills relating to farming, but limited or no education on agripreneurship and business skills. The literature also indicates a lack of entrepreneurship and business-related activities (Shattuck et al., 2019), not only in agriculture but more widely, with Laos scoring the lowest compared to other ASEAN members (OECD, 2018).

Access to finance and credit was still reported as a challenge in this study, specifically with respect to high interest, short loan periods, and difficulty in getting loans. Significant limitations imposed by the lack of insurance were also noted. Finance and insurance limitations reported in our study are in line with findings from other studies in Laos (Bannalath et al., 2021; Cramb, 2020; GIZ, 2017; Ling & Chanthavong, 2022; Manivong et al., 2016), other ASEAN countries such as Cambodia and Myanmar (OECD, 2018), and other developing countries, especially low-income African counties (Kiros & Meshesha, 2022; Peprah et al., 2021). In comparison to other ASEAN countries, the financial system in Laos was reported in the literature as being under-developed (OECD, 2018), with the World Bank (2019) assessing it at a much lower level than in other regional East Asian countries. The need for financial literacy and awareness and understanding of support already available was also noted, here and elsewhere (OECD, 2018), as well as the need to address the specific financial needs of youth (Ripoll et al., 2017; Shattuck et al., 2019).

Limitations reported in relation to infrastructure, in this study and elsewhere, include transportation, storage and irrigation facilities (Kisaalita et al., 2018; Manivong, 2014; Manivong et al., 2016; Steering Committee for Lao Census of Agriculture, 2021; World Bank, 2019). In addition, this study found that the lack of continuous function across seasons is limiting the capacity of agripreneurs to benefit. Examples include road quality conditions, electricity supply, agricultural products storage facilities, and water ways for boat transportation, which suffer during rainy seasons.

Negative societal view of agricultural work as dirty (Ouko et al., 2022), old-fashioned (Alao et al., 2015) and harsh (Giuliani et al., 2017; Zidana et al., 2020) relegates agriculture as less-promising career for the poor, the elderly and the poorly educated (Alao et al., 2015; Metelerkamp et al., 2019; Prasetyaningrum et al., 2022). However, there appears to be a



growing differentiation between “agriculture” and “agripreneurship”, with latter perceived as a career of interest.

Better information and understanding with respect to of policy, tax and the legal system would reduce negative impacts on business growth and livelihoods (Kusakabe & Chanthoumphone, 2021). Agripreneurs reported that “unofficial” payments persist, adding to calls in the literature for transparency in the system (LFN, 2020; OECD, 2018; World Bank, 2019).

Lack of policy focus on small and medium scale enterprises and on young agripreneurs was also noted here and in the literature (Alexander et al., 2017). Indeed, a policy support for commercial agriculture in Laos, such as the National Agricultural Commodity Production and Food Security Programme (NACPFSP), issued in 2015/2016 in response to the Agriculture Development Strategy to 2025 and vision to the year 2030, should account for all three main commercial farming modalities in Laos: concessions, contract farming and small-investor farming. However, its follow-up Strategic Action and strategic programs were more focused on the first and second modalities of commercial farming, providing little technical and financial support for the small farmers (Samm, 2020). Better translation of agricultural policy into specific actions, and in particular actions targeting youth, is also required. To achieve this in a meaningful way, youth should be included in decision-making at all levels (LYU & UNFPA, 2014).

Research and development in Laos was regarded by young agripreneurs as less modernised than in other countries in the region. A lack of research and development has also been reported in the literature as one of the institutional challenges faced by farmers in Laos (Alexander et al., 2017; Manivong et al., 2016). OECD report (2018, p.62) concluded institutional in Laos “...lack a strong research base and mechanisms for cooperation between academia and the

private sector. Policy makers may also lack necessary skills and experience, and may be constrained by requests coming from the donor side”.

### **6.6.3 How can agri-system environment be made more supportive for young agripreneurs?**

Improving entrepreneurship education, employment opportunities, education in rural areas, and youth voice in decision-making, are all needed in order to improve livelihood outcomes for young generations (LYU & UNFPA, 2014; Manikham, 2018; Vongpraseuth & Phengsavatdy, 2021). Our findings and other research indicate that further improvement could be made in the areas of agricultural information and extension services, financial support, infrastructure, promotion of agricultural careers, taxation and registration systems, policy implementation, and research and development. The challenges we identified have elements in common with the broader challenges facing agripreneurship in the developing world (Dias et al., 2019), specifically:

- Our research supports calls for further improvements to the nature, scope and quality of agricultural information and extension services. In particular, there is a need for agripreneur education in relation to non-agricultural, non-technical aspects such as business planning, understanding of financial systems, market linkages and customer needs. We also recommend providing information on alternative agricultural products such as organic products and new species.
- Barriers agripreneurs and young people in general face in relation to access to finance and financial products are well documented in the literature, and are supported by this research. Our findings confirm the need for lower-interest credits and longer loan periods. Specifically, we recommend the development of a system of agricultural insurance. In addition to a general call for further improvements in infrastructure,

specific difficulties faced during rainy season are noted against pests, diseases and climate events. The availability of agricultural insurance is vital for de-risking agripreneurial investments, and perceptions of risk were high in our study, both within respondent groups and as wider societal concerns.

- We support the general call for further improvements in infrastructure, but in addition recommend addressing specific difficulties faced during rainy seasons, as noted in our research.
- In terms of taxation, registration, and administration, further transparency at all levels is encouraged.
- Agricultural policy is noted as moving in the right direction. Our findings support calls for more targeted actions towards enabling the work of small enterprises and youth in general.
- There appears to be room for improving the “image” of agricultural careers, where farmers are not seen only as poor subsistence farmers but modern entrepreneurs, filling exciting niches and meeting emerging consumer demands. Research and development initiatives should follow suit, moving beyond rice to new products and varieties.
- We note some potentially gender-based differences in our data, and note findings from the literature that suggest that gender influences intentions and/or preferences towards a particular career. We therefore recommend the study of the influence of gender on agripreneurial perceptions, both in terms of perceived barriers and enablers.

## **6.7 Conclusions**

In this paper we explored the perspectives of 74 practicing young agripreneurs regarding the role the institutional and support environment in Laos plays in enabling their agripreneurship. Similar to what has been found in other developing countries, we found that our participants perceive supporting functions and institutions as essential for enabling youth agripreneurship,

and that the enabling environment in Laos has generally improved to make agripreneurship easier than before. Our research supports calls for further improvements to the following: the nature, scope and quality of extension services; the provision of information on alternative agricultural and organic products; non-technical education such as business planning; access to lower-interest credits, longer loan periods and agricultural insurance; improvements in infrastructure during rainy seasons; the promotion of agri-careers; improved system transparency; and further targeted policy actions towards enabling the work of small enterprises, and youth in general.

## 6.8 References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I. (2012). The theory of planned behavior. In P. A. M. Van Lange, A. W. Kruglanski, E. T. Higgins (Eds.), *Handbook of theories of social psychology* (pp. 438–459). SAGE Publications Inc.
- Aker, J.C& Ksoll, C. (2016). Can mobile phones improve agricultural outcomes? Evidence from a randomized experiment in Niger. *Food Policy*, 60, 44–51. <https://doi.org/10.1016/j.foodpol.2015.03.006>
- Alao, O., Torimiro, D., & Ayinde, J. (2015). Perception of Youth Roles in Agricultural Innovation Management System among Arable Crop Farmers in Farming Communities of Osun State, Nigeria. *American Journal of Experimental Agriculture*, 5(2), 124–133. <https://doi.org/10.9734/AJEA/2015/11608>
- Alexander, K., Case, P., Jones, M., & Connell, J. (2017). Commercialising smallholder agricultural production in Lao People’s Democratic Republic. *Development in Practice*, 27(7), 965–980. <https://doi.org/10.1080/09614524.2017.1353064>
- Alsos, G.A., Carter, S., Ljunggren, E., & Welter, F. (Eds.) (2011). *The Handbook of Research on Entrepreneurship in Agriculture and Rural Development*. Edward Elgar.
- Anwarudin, O., Sumardjo, S., Satria, A., & Fatchiya, A. (2018). A Review on Farmer Regeneration and Its Determining Factors in Indonesia. *International Journal of Progressive Sciences and Technologies*, 10(2), 218–230. <https://ijpsat.org/index.php/ijpsat/article/download/574/321>

- Arindam, N., Sujeet, K. J., Asif, M., Sanjit, M., Jancy, G., D.K, G., K.K, D., & T.K, M. (2018). Predictive Factors Affecting Indian Rural Farm Youths' Decisions to Stay in or Leave Agriculture Sector. *Agricultural Science and Technology*, 20(2), 221–234
- Bannalath, K., Insisienmay, S., & Songvilay, L. (2021). A study on strategies to improve productivity in agriculture sector. Case study: agribusiness sector. *In NIER Research Summarise 2021*, Laos National Institute for Economic Research (NIER).
- Bartlett, A. (2012). *Dynamics of Food Security in the Uplands of Laos: A Summary of 10 Years of Research*. Northern Uplands Development Programme (NUDP) and National Agriculture and Forestry Research Institute (NAFRI), Vientiane, Laos. Available online at [https://www.academia.edu/1906961/Dynamics\\_of\\_Food\\_Security\\_in\\_the\\_Uplands\\_of\\_Laos\\_a\\_summary\\_of\\_10\\_years\\_of\\_research](https://www.academia.edu/1906961/Dynamics_of_Food_Security_in_the_Uplands_of_Laos_a_summary_of_10_years_of_research).
- Bouichou, E., Abdoulaye, T., Allali, K., Bouayad, A., & Fadlaoui, A. (2021). Entrepreneurial intention among rural youth in Moroccan agricultural cooperatives: The future of rural entrepreneurship. *Sustainability (Basel, Switzerland)*, 13(16), 9247–. <https://doi.org/10.3390/su13169247>
- Bwalya, R. (2014). An Analysis of the Value Chain for Indigenous Chickens in Zambia's Lusaka and Central Provinces. *Journal of Agricultural Studies*, 2(2), 32–51. <https://doi.org/10.5296/jas.v2i2.5918>
- Cele, L., & Wale, E. (2020). Determinants of smallholders' entrepreneurial drive, willingness and ability to expand farming operations in KwaZulu-Natal. *Development in Practice*, 30(8), 1028–1042. <https://doi.org/10.1080/09614524.2020.1764501>

- Chase, S.E. (2011). Narrative inquiry. *In The Sage Handbook of Qualitative Research* (4th ed.), Denzin, N.K., Lincoln, Y.S., (Eds.). Sage.
- Cramb, R. (2020). *White Gold: The Commercialisation of Rice Farming in the Lower Mekong Basin*, (1st ed.). Springer Singapore. <https://doi.org/10.1007/978-981-15-0998-8>
- CTA. (2017). EcoFarmer: bundling information and financial services. The Technical Centre for Agricultural and Rural Cooperation. <https://spore.cta.int/en/dossiers/article/ecofarmer-bundling-information-and-financial-services-sid0e5aee44f-bdc2-4ac1-9c2e-31737377f302>
- de Wolf, P., McElwee, G., & Schoorlemmer, H. (2007). The European farm entrepreneur: a comparative perspective. *International Journal of Entrepreneurship and Small Business*, 4(6), 679–692. <https://doi.org/10.1504/IJESB.2007.014979>
- Dias, C.S., Rodrigues, R. G., & Ferreira, J. J. (2019). What's new in the research on agricultural entrepreneurship? *Journal of Rural Studies*, 65, 99–115. <https://doi.org/10.1016/j.jrurstud.2018.11.003>
- FAO., CTA., & IFAD. (2014). *Youth and Agriculture: Key Challenges and Concrete Solutions*. The Food and Agriculture Organization of the United Nations; the Technical Centre for Agricultural and Rural Cooperation; the International Fund for Agricultural Development. <https://www.fao.org/3/i3947e/i3947e.pdf>
- Fitz-Koch, S., Nordqvist, M., Carter, S., & Hunter, E. (2018). Entrepreneurship in the Agricultural Sector: A Literature Review and Future Research Opportunities. *Entrepreneurship Theory and Practice*, 42(1), 129–166. <https://doi.org/10.1177/1042258717732958>

- Fletschner, D., & Kenney, L. (2011). *Rural women's access to financial services: credit, savings and insurance*. ESA Working Papers, No. 11 - 07, FAO. <http://www.fao.org/economic/esa>.
- Giuliani, A., Mengel, S., Paisley, C., Perkins, N., Flink, I., Oliveros, O., & Wongtschowski, M. (2017). Realities, Perceptions, Challenges and Aspirations of Rural Youth in Dryland Agriculture in the Midelt Province, Morocco. *Sustainability (Basel, Switzerland)*, 9(6), 871–. <https://doi.org/10.3390/su9060871>
- GIZ. (2017). *Sector Skills Study for the Agriculture and Food Processing Sectors, Value Chain Analyses for Selected Subsectors of the Agriculture and Food Processing Sectors*. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and Indochina Research. [https://www.giz.de/en/downloads\\_els/Agri-%20and%20Food%20Processing%20Sector%20Skills%20Study\\_Laos\(1\).pdf](https://www.giz.de/en/downloads_els/Agri-%20and%20Food%20Processing%20Sector%20Skills%20Study_Laos(1).pdf)
- Gorgievski, M., Stephan, U., Laguna, M., & Moriano, J. (2018). Predicting entrepreneurial career intentions: Values and the theory of planned behavior. *Journal of Career Assessment*, 26(3), 457–475. <https://doi.org/10.1177/1069072717714541>
- ILO. (2020). *Global employment trends for youth 2020: Technology and the future of jobs*. International Labour Organization: International Labour Office. [https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms\\_737648.pdf](https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_737648.pdf)
- ILO. (2021). Value Chain Development for Decent Work. *In A Systems Approach to Creating More and Better Job* (3rd ed.), Swiss State Secretariat for Economic Affairs (SECO): Geneva, Switzerland. [https://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/---emp\\_ent/---ifp\\_seed/documents/publication/wcms\\_434362.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/---ifp_seed/documents/publication/wcms_434362.pdf)



- Insisienmay, S. (2022). *Regional Integration and Lao-China Economic Corridor*. Lao-China Economic Corridor Policy Dialogue, National Assembly, Laos.  
<https://www.laofab.org/document/download/5092>
- Khumya, T., & Kusakabe, K. (2015). Road Development, and Changes in Livelihood and Mobility in Savannakhet, Lao PDR. *Development in Practice*, 25(7), 1011–1024.  
<https://doi.org/10.1080/09614524.2015.1071782>
- Kiros, S., & Meshesha, G. B. (2022). Factors affecting farmers’ access to formal financial credit in Basona Worana District, North Showa Zone, Amhara Regional State, Ethiopia. *Cogent Economics & Finance*, 10(1). <https://doi.org/10.1080/23322039.2022.2035043>
- Kisaalita, W.S., Katimbo, A., Sempira, E., & Mugisa, D. (2018). EvaKuula saves Ugandan smallholder farmers’ evening milk. *Sustainable Energy Technologies and Assessments*, 29, 155–163. <https://doi.org/10.1016/j.seta.2018.08.002>
- Kusakabe, K., & Chanthavisith, C. (2021). Transition from Subsistence Agriculture to Rubber Plantations in Northern Laos: Analysis of Household Livelihood Strategies by Ethnicity and Gender. *SAGE Open*, 11(2).  
<https://doi.org/10.1177/21582440211011463>
- Lao Farmer Network (LFN) (2022). *Asian Farmers’ Association for Sustainable Rural Development*. Available online at <https://asianfarmers.org/member-lao-farmer-network-lfn/>
- Lao Farmer Network Secretariat. (2020). *Research on tax and other fees payment in agricultural value chain in Laos*, Pamphlet, November 2020. Available online at [www.lao44.org](http://www.lao44.org) (in Lao language only)

- Lao Statistics Bureau (2017). *Lao PDR Labour Force Survey 2017*. Ministry of Planning and Investment, Vientiane, Laos.
- Larson, S., Hoy, S., Thay, S., & Rimmer, M.A. (2023). Sustainable and inclusive development of finfish mariculture in Cambodia: Perceived barriers to engagement and expansion. *Marine Policy*, 148, 105439–. <https://doi.org/10.1016/j.marpol.2022.105439>
- Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: Citation, thematic analyses, and research agenda. *IDEAS Working Paper Series from RePEc*, 11(4), 907–933. <https://doi.org/10.1007/s11365-015-0356-5>
- Ling, S., & Chanthavong, K. (2022). *Approach to agribusiness development for small farmers*, Presentation to the Sub-sector Working Group on Farmers and Agri-business (SWG-FAB), Vientiane, Laos, 2022.
- LYU., & UNFPA. (2014). *Adolescent and Youth Situation Analysis Lao People's Democratic Republic*. Lao People's Revolutionary Youth Union (LYU), Lao PDR; United Nations Population Fund (UNFPA), Lao PDR. [https://lao.unfpa.org/sites/default/files/pub-pdf/Final\\_Eng\\_AYSA%20Report.pdf](https://lao.unfpa.org/sites/default/files/pub-pdf/Final_Eng_AYSA%20Report.pdf)
- MAF. (2015). *Agriculture Development Strategy to 2025 and Vision to the year 2030*. Ministry of Agriculture and Forestry. <https://www.maf.gov.la/wp-content/uploads/2016/01/MDS-2025-and-Vision-to-2030-Eng.pdf>
- Manikham, D. (2018). Youth and Agri-Entrepreneurship in Lao PDR. *FFTC Agricultural Policy Platform (FFTC-AP)*. [http://ap.fftc.agnet.org/ap\\_db.php?id=925](http://ap.fftc.agnet.org/ap_db.php?id=925)
- Manivong, V. (2014). *Agrarian Transition in Lowland Southern Laos: Implications for Rural Livelihoods*. PhD diss., University of Queensland.

- Manivong, V., Souvannavong, P., Souliyavongsa, K., Ouansamone, P., Sengphaxaiyalath, K., & Ingxay, P. (2016). *Rice Value Chain Finance in Lao PDR*. National Agriculture and Forestry Research Institute.
- MercyCorps. (2019). Agri-Fin Mobile Case Study - Lessons Learned on Service Delivery, Marketing and Capacity Building. <http://exchange.growasia.org/system/files/Agri-Fin%20Mobile%20Case%20Study%20-%20Lessons%20Learned%20on%20Service%20Delivery%2C%20Marketing%20and%20Capacity%20Building.pdf>
- Metelerkamp, L., Drimie, S., & Biggs, R. (2019). We're ready, the system's not - youth perspectives on agricultural careers in South Africa. *Agrekon*, 58(2), 154–179. <https://doi.org/10.1080/03031853.2018.1564680>
- Misaki, E., Apiola, M., Gaiani, S., & Tedre, M. (2018). Challenges facing sub-Saharan small-scale farmers in accessing farming information through mobile phones: A systematic literature review. *The Electronic Journal of Information Systems in Developing Countries*, 84, e12034–n/a. <https://doi.org/10.1002/isd2.12034>
- Mmbengwa, V.M., Qin, X., & Nkobi, V. (2021). Determinants of youth entrepreneurial success in agribusiness sector: the case of Vhembe district municipality of South Africa. *Cogent Social Sciences*, 7(1). <https://doi.org/10.1080/23311886.2021.1982235>
- Moglia, M., Alexander, K. S., Larson, S., (Giger)-Dray, A., Greenhalgh, G., Thammavong, P., Thephavanh, M., & Case, P. (2020). Gendered Roles in Agrarian Transition: A Study of Lowland Rice Farming in Lao PDR. *Sustainability (Basel, Switzerland)*, 12(13), 5403–. <https://doi.org/10.3390/su12135403>

- Mulema, J., Mugambi, I., Kansime, M., Chan, H. T., Chimalizeni, M., Pham, T. X., & Oduor, G. (2021). Barriers and opportunities for the youth engagement in agribusiness: empirical evidence from Zambia and Vietnam. *Development in Practice*, 31(5), 690–706. doi:10.1080/09614524.2021.1911949
- Murphy, A.M., Askew, K. L., & Sumner, K. E. (2017). Parents' Intentions to Allow Youth Football Participation: Perceived Concussion Risk and the Theory of Planned Behavior. *Sport, Exercise, and Performance Psychology*, 6(3), 230–242. <https://doi.org/10.1037/spy0000102>
- North, D. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.
- OECD. (2017). *Unlocking the Potential of Youth Entrepreneurship in Developing Countries from Subsistence to Performance*. OECD Publishing. <https://doi.org/10.1787/9789264277830-en>
- OECD. (2018). Lao PDR. *In SME Policy Index: ASEAN 2018: Boosting Competitiveness and Inclusive Growth*. OECD Publishing/Economic Research Institute for ASEAN and East Asia. <https://doi.org/10.1787/9789264305328-19-en>
- OECD. (2019). *Southeast Asia Going Digital: Connecting SMEs*. OECD Publishing. <https://www.oecd.org/digital/broadband/southeast-asia-connecting-SMEs-note.pdf>
- Ouko, K. O., Ogola, J. R. O., Ng'on'ga, C. A., & Wairimu, J. R. (2022). Youth involvement in agripreneurship as Nexus for poverty reduction and rural employment in Kenya. *Cogent Social Sciences*, 8(1), 2078527. <https://doi.org/10.1080/23311886.2022.2078527>

- Ozaralli, N., & Rivenburgh, N. K. (2016). Entrepreneurial intention: antecedents to entrepreneurial behavior in the U.S.A. and Turkey. *Journal of Global Entrepreneurship Research*, 6(1), 1–. <https://doi.org/10.1186/s40497-016-0047-x>
- Pelzom, T., & katel, O. (2018). Youth Perception of Agriculture and potential for employment in the context of rural development in Bhutan. *Development, Environment and Foresight*, 3(2), 92–106. <http://www.def-journal.eu/index.php/def/article/view/53>
- Peprah, J.A., Koomson, I., Sebu, J., & Bukari, C. (2021). Improving productivity among smallholder farmers in Ghana: does financial inclusion matter? *Agricultural Finance Review*, 81(4), 481–502. <https://doi.org/10.1108/AFR-12-2019-0132>
- Prasetyaningrum, D. I., Ruminar, H., & Irwandi, P. (2022). The Perception and Interest of Career Choices in Agriculture : Case of Agroecotechnology and Agribusiness Students. *HABITAT*, 33(2), 186–200. <https://doi.org/10.21776/ub.habitat.2022.033.2.19>
- Refiswal, E., Julianti, T., Supriana, & Iskandarini. (2021). Development strategy of young agricultural entrepreneurs. *IOP Conference Series. Earth and Environmental Science*, 782(2), 22059–. <https://doi.org/10.1088/1755-1315/782/2/022059>
- Ripoll, S., Andersson, J., Badstue, L., Büttner, M., Chamberlin, J., Erenstein, O., & Sumberg, J. (2017). Rural transformation, cereals and youth in Africa: What role for international agricultural research? *Outlook on Agriculture*, 46(3), 168–177. <https://doi.org/10.1177/0030727017724669>
- Samm, M. (2020). *Increasing Agricultural Commercialisation and Enhancing Food Security and Nutrition in Lao PDR: A Framework for Balanced Policy Analysis, Planning and*

*Programming*. Laos Department of Policy and Legal Affairs, Ministry of Agriculture and Forestry: Vientiane, Lao PDR. <https://www.laofab.org/document/download/4579>

Sautet, F. (2020). The Role of Institutions in Entrepreneurship: Implications for Development Policy. *Business and Public Administration Studies*, 14(2), 29–35. <https://www.bpastudies.org/index.php/bpastudies/article/view/242/463>

Schlaegel, C., & Koenig, M. (2014). Determinants of Entrepreneurial Intent: A Meta-Analytic Test and Integration of Competing Models. *Entrepreneurship Theory and Practice*, 38(2), 291–332. <https://doi.org/10.1111/etap.12087>

Shapero, A., & Sokol, L. (1982). Social dimensions of entrepreneurship. In C.A. Kent, D.L. Sexton & K.H. Vesper (Eds). *Encyclopedia of entrepreneurship*. Prentice Hall.

Shattuck, A., Manivong, V., & Vongthilard, S. (2019). *Towards 'People Centred Agriculture: Rethinking rural labour, youth employment and the agrarian transition in Laos*. Department of Policy and legal Affairs, Ministry of Agriculture and Forestry, Laos. <https://www.laofab.org/document/view/4069>

Steering Committee for Lao Census of Agriculture (2014). *2nd Lao Census of Agriculture 2010/2011*. Lao Statistics Bureau. <https://catalog.ihnsn.org/catalog/4686/download/59188>

Steering Committee for Lao Census of Agriculture (2021). *3rd Lao census of agriculture 2019/2020*. Lao Statistics Bureau. <http://lao44.org/content/3703/%E0%BA%AA%E0%BA%B0%E0%BA%96%E0%BA%B4%E0%BA%95%E0%BA%B4%E0%BA%81%E0%BA%B0%E0%BA%AA%E0%BA%B4%E0%BA%81%E0%BA%B32020>

- Steinfeld, C., Wyche, S., Cai, T., & Chiwasa, H. (2015, May 15–18). *The mobile divide revisited: Mobile phone use by smallholder farmers in Malawi*. In: Proceedings of the Seventh International Conference on Information and Communication Technologies and Development, Singapore. <https://doi.org/10.1145/2737856.2738022>
- Stenholm, P., & Hytti, U. (2014). In search of legitimacy under institutional pressures: A case study of producer and entrepreneur farmer identities. *Journal of Rural Studies*, 35, 133–142. <https://doi.org/10.1016/j.jrurstud.2014.05.001>
- The Government of Malaysia (1997). National Youth Development Policy. [http://www.youthpolicy.org/national/Malaysia\\_1997\\_National\\_Youth\\_Development\\_Policy.pdf](http://www.youthpolicy.org/national/Malaysia_1997_National_Youth_Development_Policy.pdf)
- Thephavanh, M., Philp, J.N.M., Nuberg, I., Denton, M., & Alexander, K. (2022). Narrative Insights Reveal the Motivations of Young Agricultural Entrepreneurs in Laos. *Sustainability*, 14(20), 13113. <https://doi.org/10.3390/su142013113>
- UN. (2013). Ten things to know about rural youth. United Nations Department of Economic and Social Affairs. <https://www.ifad.org/fr/web/latest/-/photo/ten-things-to-know-about-rural-youth>
- UN. (2018). *WORLD YOUTH REPORT: Youth and the 2030 Agenda for Sustainable Development*. United Nations Department of Economic and Social Affairs <https://www.un.org/development/desa/youth/wpcontent/uploads/sites/21/2018/12/WorldYouthReport-2030Agenda.pdf>

UNDP., & UNICEF. (2021). *Addressing Gender Barriers to Entrepreneurship Among Girls and Young Women in South-East Asia*. Bangkok: UNDP Bangkok Regional Hub and UNICEF East Asia and the Pacific Regional Office.

Vongpraseuth, P., & Phengsavatdy, M. (2021). *Report Youth Unemployment Issues in Lao PDR*. United Nations Development Programme.  
<https://www.la.undp.org/content/laopdr/en/home/library/report--youth-unemployment-issues-in-lao-pdr.html>

Weber, R.P. (1990). *Basic Content Analysis*, 2nd ed. Sage Publications.

Williams, M., & Hovorka, A. J. (2013). CONTEXTUALIZING YOUTH ENTREPRENEURSHIP: THE CASE OF BOTSWANA'S YOUNG FARMERS FUND. *Journal of Developmental Entrepreneurship*, 18(4), 1350022–.  
<https://doi.org/10.1142/S1084946713500222>

World Bank. (2012). *Agricultural Innovation Systems: An Investment Sourcebook*. In *Agricultural Innovation Systems*. World Bank Publications.  
<https://doi.org/10.1596/978-0-8213-8684-2>

World Bank. (2019). *Enabling the Business of Agriculture 2019 Country Profile Lao PDR*.  
<https://eba.worldbank.org/content/dam/documents/eba/LAO.pdf>

World Bank. (2022). *Data set: Lao PDR rural population*.  
<https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=LA>

Yamaguchi, K., Stefenon, S. F., Ramos, N. K., dos Santos, V. S., Forbici, F., Klaar, A. C. R., Ferreira, F. C. S., Cassol, A., Marietto, M. L., Yamaguchi, S. K. F., & de Borba, M. L. (2020). Young people's perceptions about the difficulties of entrepreneurship and



developing rural properties in family agriculture. *Sustainability (Basel, Switzerland)*, 12(21), 1–12. <https://doi.org/10.3390/su12218783>

Zidana, R., Kaliati, F., & Chrispine Shani. (2020). Assessment of Youth Engagement in Agriculture and Agribusiness in Malawi: Perceptions and Hindrances. *Journal of Entrepreneurship and Management*, 9(2), 19–.

# **Chapter Seven: General Discussion, Conclusion and Recommendations**

## **7.1 Chapter introduction**

This chapter synthesises the main conclusions from each of the results chapters to address the research questions presented in Chapter 1, and demonstrates the extent to which these questions have been answered. It then reviews these in the context of literature, highlights opportunities for future research and ends with recommendations for the Government and decision-makers in Laos to foster a vital and productive small and medium scale agripreneurship sector amongst Lao youth.

## **7.2 Mapping the research results to the research questions**

### **RQ1. Which demographic factors influence motivational antecedents of intention regarding agripreneurship amongst Lao youth?**

Chapter 3 identifies differences in the strength of intention to engage in agripreneurial careers between Lao university students with different family backgrounds, area of studies and university of enrolment. Compared with other studied demographic variables, intention to become an agripreneur was significantly higher amongst students from families practicing commercial agriculture or engaging in agribusiness, students from families with on-farm work experience, and students enrolled in agriculture, environment and forestry faculties, particularly at the more rural university. Attitudes about an agripreneurship career were more favourable amongst male students. The influence of significant others (Subjective Norms) was more favourable towards agripreneurial careers amongst students with family members who practiced on-farm work.

Students with rural and semi-rural origins, with commercial agriculture and/or agribusiness and on-farm work family backgrounds, and from those who studied in a rural university had a significantly higher perceived capacity to succeed as an agripreneur than others. Multiple regression indicated that no demographic factor was found to have a direct, significant relationship with strength of intention to be an agripreneur, however having a background of on-farm work indirectly increased intention strength by significantly increasing attitudes as defined under TPB, whereas having a commercial agriculture background and more rural place of origin indirectly increased intention strength by significantly increasing PBC. Collectively, these results indicate that exposure to commercial agriculture is the strongest demographic factor that influences intention. In this study, the total sample population of 298 represented 1.11% of the undergraduate students in 2018-2019 academic year across two out of the total five public universities in Laos. Within the total sample population, 25.5% were from commercial agriculture and/or agribusiness family background.

The significant influence of family backgrounds on students' perceptions is reported in other studies. For example, studies conducted by Sali et al. (2018) in Malaysia, and Kimaro et al. (2015) in Tanzania also found that youth from farming or agricultural backgrounds had more interest in agriculture than youth from non-farming family backgrounds. However, not all agricultural family backgrounds identified in this study significantly influenced youth perceptions. Rather, agricultural backgrounds specific to commercial agriculture/agribusiness or commercial on-farm work-related backgrounds were significant, while subsistence farming and business backgrounds were not. This might be because of students with commercial agriculture and/or agribusiness family backgrounds have a higher control belief. This high control belief might come from their past experience in seeing their family gaining improved incomes from agribusiness, unlike students from subsistence farming background who rarely see their family earning significant incomes from their farms. As Ajzen (1991) argued, an

individuals' Perceived Behavioural Control arises from their perception about the ease or difficulty of performing the behaviour, based on their perceived past experience and anticipated risk or obstacles.

Business family background students (32.2% of the sample population) were not a group who were interested in engaging in agripreneurial careers. This group could be considered to have access to resources, namely capital, business knowledge, skills and experiences that would increase Perceived Behavioural Control relating to a career as an agripreneur. This contrasts with other studies in developing countries such as India, Iran and Vietnam that identified positive relationships between business family backgrounds, or having self-employed parents, and university students' entrepreneurial intentions (Chaudhary, 2017; Nguyen, 2018; Pouratashi, 2015). In this case, the parents' entrepreneurial experience played a positive role in influencing individual perception and intention to engage in entrepreneurship (Yang, 2013), but likely in areas other than agriculture.

The models used to address this research question had relatively low explanatory power. This indicates there are other factors that might encourage or discourage youth in agripreneurial careers other than demographic factors and the three constructs of the Theory of Planned Behaviour. Young people are generally rational and pragmatic in selecting a career, and their career choice is a part of on-going interactions between personal factors and enabling environments (Hodkinson & Sparkes, 1997). Entrepreneurial research to identify both personal and environmental factors remain scarce (Freire-Gibb & Nielsen, 2014). Therefore, explorations of both personal and enabling environment are recommended for future studies, leading to subsequent research activities of the thesis that address Research Questions 2 and 3.

**RQ2. To what extent are perceptions about agripreneurship and the enabling environment motivational antecedents that influence intentions to be an agripreneur?**

The influence of perceptions about small and medium scale agripreneurship on Lao youth's intention to engage in an agripreneurial career was assessed in Chapter 4 using a structured equation model. Twenty-six perceptions about agripreneurship derived from the APCF were hypothesised to be determinants of intention. The factors significantly influencing intention strength were: the Perceived Feasibility arising from agriculture and business knowledge, and access to resources, Attitudes towards the outcomes of having a career as an agripreneur, perceived capability in performing a career as an agripreneur, perception of policy support, and the importance placed on educational support. Indirect determinants of intention were the desirability of the career to the individual, which influenced their attitudes towards the outcomes of having a career as an agripreneur, and their propensity to act, which influenced their perceived capability in performing a career as agripreneur.

The significant influence of an individual's evaluations of knowledge about agriculture and business on their intention to be an agripreneur identified in Chapter 4 reinforces two findings in Chapter 3. Firstly, experience, perceived knowledge relating to agriculture, and perceived understanding of agricultural processes and markets, play a role in decision making to embark on a career as an agripreneur. This is likely to be the reason that, amongst the demographic variables investigated under Chapter 3, students with family members who practice commercial agriculture and/or work as labourers in commercial agricultural enterprises had significantly higher intention to be agripreneurs than those who did not. Based on this result, it is recommended that a strategic policy of promotion of youth into a career as agripreneurs should target young people who have experience in, or are exposed to, commercial agriculture/agribusiness, and educational support relevant to agriculture and business.

Secondly, despite having a better position to access resources such as capital and business knowledge, skills and experience, than students in other family backgrounds, the business family background students were not the group who would be more engaged in agripreneurial careers in Laos (reported in Chapter 3). A relatively strong negative loading factor of perceived access to resources on intention to be an agripreneur (Table 4.6, Chapter 4) indicated that the higher perceived access to resources was, the lower the Lao students' intention into an agripreneurial career was, which suggests that agripreneurship is not constrained by resources. Increasing the number of agripreneurs and sustainable agricultural food supply through simply increasing the resources available to youth for agripreneurship therefore appears to be unfeasible. Despite this, some have argued that the ability to access resources will increase confidence in starting entrepreneurial tasks (Ozaralli & Rivenburgh, 2016). This did not apply in this research focussed on small and medium scale of agripreneurship. It could be that a large resource endowment may cause individuals to target other options to derive income, such as becoming a large-scale agripreneur instead of small to medium scale, renting their land out to domestic and international investors, or pursuing other career choices than agripreneurship, such as medicine, law, politics or non-agricultural businesses. Nevertheless, further investigation of the appropriateness of the APCF was recommended, especially in the context of actual behaviour, rather than intentions. This was carried amongst those who have already engaged or selected a career as agripreneurs (Research Question 3, Chapter 5).

**RQ3. What factors previously motivated currently-practicing young agripreneurs in Laos to enter a career as an agripreneur?**

Motivational factors that encourage youth to engage in an agripreneurial careers are determined in Chapter 5 via applied qualitative approaches. The studied population was comprised of 74

young agripreneurs who had already begun a career and were involved in these research activities. The results of applied narrative inquiry techniques from these interviews led to the identification of five paradigms that influenced the engagement of young small and medium scale agripreneurs: (1) Income, (2) Extrinsic Benefit, (3) Attainability, (4) Emotional, and (5) Societal-Communal.

The opportunity for good income frequently emerged in the stories provided by young Laotian agripreneurs as one of the factors motivating them to become agripreneurs. This differs from literature that found that agriculture was viewed as a less economically rewarding occupation, especially amongst youth (Kidido et al., 2017; Mibey, 2015; Tafere & Woldehanna, 2012; White, 2012). However, it should be noted that youth career decision-making is complex and may not be based on their perceived economic outcome of the career alone, but is influenced by other factors such as attitude towards a career, knowledge and experiences in the career paths, resources, capacity, passion, family support, market opportunities and enabling environment. In this case, apart from income, young Laotian agripreneurs have viewed small and medium scale agripreneurial careers as a means to bring them extrinsic and emotional benefits (Thephavanh et al., 2022).

The desirable benefits of being an agripreneur highlighted by young Laotian agripreneurs are being self-employed, having control of working hours, being self-sufficient for household food needs, career security and engaging in opportunities for learning and personal/professional development. They sometimes narratively connected the income potential of agripreneurship to specific market opportunities, corresponding to Perceived Feasibility as defined in the EEM, or Habitus and Field as defined in the Careership theory (Chapter 2, Table 2.1). These findings present a good case study that supports the suggestion that enabling environment related theory (i.e., the Careership theory) can be integrated to the elements from TPB, EEM for a more

complete understanding of agripreneurial intention (Agu et al., 2021; Buyinza et al., 2020; Schlaegel & Koenig, 2014).

Ajzen (1991, p.179) claimed that “Intentions to perform behaviours of different kinds can be predicted with high accuracy from attitudes towards the behaviour, subjective norms, and perceived behavioural control; and these intentions, together with perceptions of behavioural control, account for considerable variance in actual behaviour”. This is correlated with the current research findings that three of the predominant narrative paradigms identified in Chapter 5 as influencing the young agripreneurs engaging in agripreneurial career correspond to the three deterministic constructs of the TPB: Attitude, Subjective Norms and Perceived Behaviour Control. Positive Attitudes apparently arose from awareness of the personal benefits of agripreneurship. Support or encouragement from significant others including family members, role models, farmer groups, organisations or cooperatives in their communities, and governmental or (I)NGO projects motivated agripreneurs to choose their careers by increasing they perceived control over the outcome, and providing feelings of approval.

Agripreneurs also perceived agripreneurship as an attainable career, being neither too hard nor requiring inaccessible inputs or qualifications, further reinforcing the function of perceived control as a determinant. Descriptions of attainability were framed either positively or negatively, which reflected the predominant conceptualisations in entrepreneurship motivation: opportunity vs necessity. While literature showed entrepreneurs in developing countries are more likely to be necessity-driven (Kelley et al., 2011; Nguyen, 2014), the results from the examination of attainability as a narrative paradigm in this research indicates that it has motivated both necessity-driven and opportunity-driven youth to become agripreneurs. Opportunity-driven agripreneurs described themselves as becoming agripreneurs because they had skills and resources that enabled them to capitalise on the perceived opportunity that would



make them successful in the practice of agripreneurship. Meanwhile, necessity-driven individuals saw agripreneurship as a career that enabled a safety net for those who had failed in their initial goals, namely initial preferred business activity, pursued higher education and continued earning from previous or past income sources. That both necessity-driven and opportunity-driven youth became agripreneurs because of the attainability of this career is reflective of dominant models for understanding and predicting behaviours, which posit that people are much more likely to enact certain behaviours, such as embarking on a career, when they feel that they can enact them successfully (Ajzen, 1991; Gorgievski et al., 2018).

#### **RQ4. Is there an enabling institutional and support environment for young agripreneurs in Laos?**

Young agripreneurs reported that there are many supporting functions facilitating commercial agriculture in Laos. The areas of services supported, included technical advice, financial or credit access, market linkage, product development, agricultural information sharing and distribution, and farmers' group/organisation establishment. Some inputs/materials and grants are also provided to farmers groups/organisations. Financial access and infrastructure have improved compared with the past. Agripreneurs highlighted that the number of financial providers across the country has increased. Several places have access to roads, railway system, irrigation, electricity, private and shared vehicles, and some livelihood necessities such as schools and hospitals. New platforms and services also occurred in Laos such as online delivery, delivery services, logistics companies, online and offline banking service for money transfer.

Despite positive improvements and effective alignment between the aims of informal and formal institutions, the enabling environment in Laos is hampered by the limitations of supporting functions and institutions according to practicing agripreneurs. Extension and

information services were hampered by a perceived lack of practical activities, a lack of follow-up and monitoring, delay and inaccurate weather forecasting, price fluctuations and disease outbreak information, and a lack of visual data and forms of information that are easy to understand. Access to finance was limited by high interest and short loan periods. Starting and running agricultural related businesses were hindered by unclear administrative/fee/tax procedures and payments. Research and schools' values, curriculum design and learning-teaching method were blamed for not actively promoting younger generation and youth in small and medium scale agripreneurship. Poor road conditions, expensive electricity costs, and insufficient irrigation for agricultural production are identified as infrastructure limitations.

Young agripreneurs acknowledged the existence of policies, plans and programs issued by the government and other relevant sectors that are intended to support commercialisation and agripreneurship development in Laos. The young agripreneurs, however, raised a concern over the effectiveness of implementation and monitoring of these policies, and the lack of focus on small and medium scale youth agripreneurs. For example, there is a policy to support commercial agriculture in Laos such as the National Agricultural Commodity Production and Food Security Programme (NACPFSP) issued in 2015/2016 in response to the Agriculture Development Strategy to 2025 and vision to the year 2030. NACPFSP should account for all sectors of agriculture including rice, crops, livestock and forestry, across all three main commercial farming modalities in Laos: concessions, contract farming and small-investor farming. Its follow-up Strategic Action and strategic programs was more focussed on rice, and the first and second modes of commercial farming. This results in a low investment and improved technologies in other non-rice sectors, and lack of support for the small formal and semi-formal investor schemes in Laos.

Based on the feedback of the agripreneurs, the regulatory framework relating to taxes, registration and fees appears well-designed in that when value chain participants abide by the formal institutions, e.g., complying with organic certification and paying the fee in exchange for a certificate which increases their market competitiveness, the certainty of interactions within the market system are increased. Hence these institutions have approval from the agripreneurs, in principle. However, uncertainty arises from unclear fee structures and subsequent exploitation in the form of unofficial-payments (bribe-seeking). Addressing these can be expected to improve the enabling environment for agripreneurship.

Young agripreneurs reported that primary, secondary and high schools in Laos generally have integrated agriculture related knowledge and develop skills in their curriculum. However, the level varies depending on the schools' values, curriculum design/learning-teaching method and location. Few schools have integrated knowledge and skills related to agripreneurship into their curriculum. Young agripreneurs commented that the education they received tended to value non-agricultural careers as an indicator of success. This may shape informal norms and divert capacity away from agripreneurship.

The examination of young agripreneurs' perceptions of institutions and supporting functions demonstrates that they have an essential function in enabling agripreneurship by young farmers, however administrative obstacles and poor implementation of policies carry the risk of the opposite. A better understanding of constraints and opportunities that young agripreneurs face will facilitate development of an enabling environment for transitioning from subsistence into commercial agriculture (Shattuck et al., 2019), specifically from research shedding light on the perspective of the young agripreneurs themselves (Fitz-Koch et al., 2018).

**RQ5. Do motivational antecedents that influence intention to become an agripreneur amongst Lao youth who have yet to embark on a career reflect the motivations of practicing youth agripreneurs?**

The motivational antecedents that influence intention to become an agripreneur amongst Lao youth who have yet to embark on a career, identified in Chapter 4, have some overlap with the motivational antecedents of practicing youth agripreneurs, identified in Chapter 5; notably, the most influential consideration of students (Perceived Feasibility) being reflected in the strong prominence of beliefs about income and market potentials of agripreneurship as a motivation for currently-practicing entrepreneurs (Income Paradigm).

Perceived Feasibility was found to be the strongest motivational antecedent influencing students' behavioural intention towards taking on an agripreneurial career and was common through the narratives of practicing agripreneurs. However, different aspects of perceived feasibility were emphasised by each study. Students were most influenced by assessment of their own knowledge related to agriculture and business. Meanwhile, young agripreneurs were most influenced by assessment of whether they could generate income from agripreneurial career and if there is a market potential for agripreneurship. The inference that could be made from this result is that motivation changes over time. Prior to deciding on a career, one may be concerned regarding the level of sufficient knowledge of the discipline and practice. Then, at the more critical stage such as making a decision to enter into a career, their concern may shift to the potential outcomes or in the agripreneurship case, the level of ease or difficulty in selling their products or services and gaining market values or incomes.

Student's intentions to engage in agripreneurship was also influenced by their evaluation of their capacity to succeed in their role if they become an agripreneur. Similarly to the practicing agripreneurs, their intentions towards agripreneurship were influenced by a range of

Attainability-related phenomena, including personal resources and capacities that made it easier for them to become an agripreneur or to practice agripreneurship. Whilst access to resources evidentially motivated some young agripreneurs to engage in an agripreneurial career (Chapter 5), the SEM found a negative effect of perceived access to resource on students' intention to be an agripreneur (Chapter 4). These results illustrated that the relationship between access to resources and intention to be an agripreneur might not be linear. While access to resources could motivate youth to engage or influence their behavioural intention in an agripreneurial career, beyond a certain point, resources have a negative influence on intention.

Perceived Capability was strongly influenced by Propensity to Act (Chapter 4), which could indicate a more stable personality characteristic, compared with generational peers (Krueger & Brazeal, 1994). The stable personality characteristic facilitated individuals in acting on their desires and having a willingness to overcome any risks, adversity and uncertainty they face while starting or running a business of their choice and is associated with Propensity to Act in the EEM (Krueger & Brazeal, 1994; Krueger et al., 2000; Shapero & Shokol, 1982). Narrative analysis found in Chapter 5 also revealed the influenced of Propensity to Act-related phenomena on motivating practicing agripreneurs in agripreneurial career. For example, knowledge about agriculture and business was not considered an absolute requirement by the practicing young agripreneurs before making a decision to enter into a career as an agripreneur, with some motivated by their desire and willingness to learn, willingness to explore and learning by doing (this is framed in Chapter 5 under the Extrinsic Benefit Paradigms).

The desire to obtain certain benefits or outcomes was a strong motivational influence on both Lao youth who have yet to embark on a career, and currently practicing youth agripreneurs. Desire to be one's own boss, manage one's own time, having pride in their products and their

valence towards the career were specifically queried in the student surveys as determinants of Attitude towards agripreneurship, which itself significantly influenced intention strength towards agripreneurship (Chapter 4, Table 4.4). That young agripreneurs discussed all of these factors without specific prompting in their accounts of what motivated them to become agripreneurs (Chapter 5), is compelling evidence of the influence of these benefits over career decisions regarding agripreneurship. Consistent with the TPB, these findings demonstrate how a positive Attitude towards a behaviour can arise from beliefs about the benefits associated with that behaviour, and in turn increase the likelihood that one who holds those beliefs will engage in that behaviour (Gorgievski et al., 2018). This finding is consistent with much of the literature (e.g. Agu et al., 2021; Ahuja et al., 2019; Ajzen, 1991; Ajzen & Fishbein, 2000; Ambad & Damit, 2016; Kibuka, 2010; Shapero & Sokol, 1982; Solikhah, 2014), and the specific benefits identified show considerable overlap with those commonly identified for both agripreneurs (Nguyen et al., 2021; Saili et al., 2018) and entrepreneurs in general (Stephan et al., 2015). As a result of this common finding, interventions aiming to modify Attitude towards behaviours have been recommended in the scientific literature of many sectors, including agriculture and entrepreneurship. For example, building positive attitudes towards agriculture, and promoting entrepreneurship for students through education has been recommended in developed and developing contexts to attract youth towards careers relating to agriculture in the Czech Republic and the U.S. (Chýlová et al., 2019), and entrepreneurship in Malaysia (Ambad & Damit, 2016). Chýlová et al. (2019) also urged the development of policy regarding the agricultural and educational sectors to put their effort in changing the students' attitudes to be more positive towards agribusiness, as a strategy to increase students' interest in an agribusiness career. Accordingly, to encourage more youth into agripreneurship, the Government of Laos, namely the Ministry of Agriculture and the Faculty of Agriculture, should

not limit their efforts to building or transferring technical knowledge and skills aspects to youth or students, but instead, should also emphasise the positive aspects of agripreneurship.

Subjective Norms did not appear to influence the intention of the university students towards agripreneurship as a group. This contrasts with several accounts provided by young agripreneurs, who described various social pressures and encouragements that contributed to their decision to become an agripreneur. These included support or encouragement from their significant others, seeing the successful cases of other agripreneur role models and perceptions of community or governmental/(I)NGO projects that support realising their ambitions. This might be because compared with the general adult population, students were more likely to perceive they have been provided with management skills and abilities necessary for identifying opportunities and developing networks (Kautonen et al., 2015), so Subjective Norms (the views of their close referents) might not be considered when selecting a career.

The analysis in Chapter 3 found that family backgrounds played a significant role influencing students' intention to select an agripreneurial career. This finding was reflected in the narrative accounts of agripreneurs in Chapter 5, with family backgrounds being mentioned in association with phenomena relating to the attainability of the career, and emotional and societal-communal motivations. The importance of agriculture and entrepreneurship exposed through family backgrounds on individual career intention and choice was also observed in many other studies in developing contexts such as in India (Chaudhary, 2017), Iran (Pouratashi, 2015), Vietnam (Nguyen, 2018), Malaysia (Saili et al., 2018), Maghreb (White, 2015), Tanzania (Kimaro et al., 2015) and the Caribbean (Webster & Ganpat, 2014). Given that this was also observed in practicing and potential future agripreneurs in Laos during this research, the proposed recommendation of the Government of Laos' multipronged approach on intervention with young people in agrarian transition is reinforced.

The supporting functions of the enabling environment were found to be a significant factor motivating and influencing both undergraduate students and young practicing agripreneurs to engage in agripreneurial careers. However, there were differences between the supporting functions that influenced the intentions of youth (Chapter 4) and those that were identified by practicing young farmers as motivations for themselves to become agripreneurs (Chapter 5). The intention of students appeared to be influenced more by their assessment of the Government's Policy for supporting agriculture, and of the Educational Support or system as a whole, albeit weakly, whereas practicing agripreneurs were more likely to mention support from farmers groups/organisations/cooperatives, governmental and (I)NGO projects at the operational level. Overall, the perception from both potential and practicing agripreneurs is that the support is not outstanding, however, amongst young agripreneurs, exposure to the practical implementation of policies (such as governmental agricultural extension services through farmers groups, organisations, cooperatives, governmental, (I)NGO projects and private companies) had a positive effect on their motivation. Combined, the evidence from people who have not chosen their career and the feedback from those who have, it appears that if youth were to have greater exposure to the practical implementation of policies such as agricultural extension services and development or support projects, they would more likely choose to practice agripreneurship.

The significance of the enabling environment's influence on motivations strengthens the argument that despite the high accuracy in the prediction of the individuals' intention or behaviour of the three TPB factors, there are other factors that contribute to individuals' intention towards behaviour (Ajzen, 1991; Karimi, 2020). Also, these results add value to the APCF framework in addressing this by consolidating the Careership theory, which contains institutional support and/or the enabling environment factors into more personal factors theories, i.e., TPB and EEM that have been suggested by several previous research (Bourdieu,



1977; Buyinza et al., 2020; Hodgkinson & Sparkes, 1997). Both SEM analysis on determinant motivational antecedents that influence Lao undergraduate students' behavioural intentions to become agripreneurs (Chapter 4) and the narrative analysis on motivational factors that influenced Lao youth to become agripreneurs (Chapter 5) share common results. This demonstrates the applicability of the consolidated APCF framework for investigating youth perception and intention to engage in small and medium scale agripreneurship in agrarian transition countries.

**RQ6. Do the experiences with the enabling environment of practicing youth agripreneurs reflect the perceptions of the enabling environment amongst Lao youth who have yet to embark on a career?**

By comparing the experiences of practicing agripreneurs to the perceptions of Lao youth who have yet to choose their career, it is possible to identify key areas of the enabling environment that are underperforming and subsequently discouraging future agripreneurs from embarking on these careers.

Young agripreneurs were critical of the effectiveness of policy support for youth agripreneurship. They reported it to be not applied thoroughly, not practical, and not focus on engaging youth in agriculture in general, or as entrepreneurs (Chapter 6). The apparent ineffectiveness of policy support is also recognized by Lao students who have not yet selected a career, as evidenced by the university surveys (Chapter 4). On average, they rated the effectiveness of the overall policies support relating to commercial agricultural production / business / entrepreneurship, policy support on youth specifically in commercial agricultural production / business / entrepreneurship, and its effectiveness, as 4.72, 4.62 and 4.64 respectively. They fell between 4 and 5 in the 1 to 7 Likert scale, with 4 referring to neutral and 5 referring to slightly good level. This is a limiting factor on the creation of new

agripreneurs because these perceptions of policy significantly influenced the strength of intention to be an agripreneur (Chapter 4).

Young agripreneurs indicated that the formal education they had received was not enabling agripreneurship. The focus of education in primary and high school is on literacy and numeracy, whilst skills related to agriculture are only present in elective or extracurricular activities. In addition, young agripreneurs commented that the education they received tended to value non-agricultural careers as an indicator of success, which could be expected to influence their desirability towards agripreneurship as a career. The significance of this is that young Laotians who have not yet chosen a career evaluate their own knowledge of agriculture and business when choosing a career, and this has the strongest statistical influence on their intention of all the hypothesised indicators tested through exploratory SEM in Chapter 4. Young agripreneurs also identified flaws in the agricultural extension services available to them (Chapter 6). A stronger agricultural knowledge base, as delivered by more targeted education, may limit reliance on these services. However, Lao university students who were yet to choose a career did not express strong or consistent evaluations of extension services and these were not a significant determinant of their intention (Chapter 4). It is likely that students who did not enter into an agripreneurial career would not have an awareness of extension services and therefore would not have formulated an opinion.

Young agripreneurs highlighted a lack of resources as collateral that limited their access to finances or credit for running or expanding their agripreneurship. A result from SEM in Chapter 4 revealed that perceived access to resources was a statistically significant influence of Lao undergraduate students' intention to engage in an agripreneurial career. However, it has a negative loading factor, indicating that the higher perceived access to resources, the lower Lao students' intention was towards an agripreneurial career. This result reinforces the

conclusion in Chapter 4 that encouragement, or increasing the number of agripreneurs, could not be done by simply increasing the resources available to youth for agripreneurship. Although resources play a crucial role in facilitating agripreneurs to run their business, including increased chances to get access to financial support, improving access to financial or credit support to agripreneurs could not be done by simply improving access to resources; instead, a more strategic option is needed. For example, through establishing farmers organisations, reducing the loan interest rate with extended pay-back time, issuing a policy measure targeting improved youth access to finance, specific training or workshops on how to write applications and business proposals to the bank, and improving transparency from funds to farmers in case of grants (from the Chapter 6) would be more likely to be beneficial.

### **7.3 Future directions**

This thesis addresses research questions regarding the factors driving youth agripreneurship in Laos, and insights of young practicing agripreneurs on institutions and supporting functions that enable and/or hinder youth agripreneurship in Laos. However, the findings create new opportunities and raise new questions that fall outside the scope of this body of work. Each results chapter discusses the limitations specific to the associated research activities and identifies future opportunities (Chapters 3-6). Taken together, these opportunities can set the agenda for future research that would continue to identify scientific and managerial implications on this important topic that have potential implications for other developing agrarian countries.

#### **7.3.1 Expanding perspectives**

Whilst the sample population in Chapters 3 and 4 can be considered representative of Lao university students, it cannot be considered representative of all Lao youth, and thus the result is impacted by selection bias. Although a roughly equal number of participants of urban and

rural/semi-rural origin were accessed, it is likely that the average opportunity for employment and education is greater for these youth than the national average. Access to disadvantaged rural youth remains challenging due to remoteness and underdeveloped infrastructure. Given that these youth are those who could stand to gain the most from accessing the cash economy, there is strong merit in additional efforts to include them in research and development activities. It is worth noting that the findings derived from the undergraduate students presented in Chapters 3 and 4 are generally consistent with the lived experiences of practicing youth agripreneurs in Laos including those without tertiary education, as demonstrated in Chapters 5 and 6. These subsequent research activities with the practicing agripreneurs are valuable for examining the validity of the perceptions held by the undergraduate participants, although the research involving practicing agripreneurs is itself subject to survivorship bias when used to examine the driving forces on the decision to become an agripreneur, in that all participants were currently-practicing agripreneurs. The phenomena influencing their decision to become agripreneurs are therefore biased towards positive motivators, and the results do not cover those who rejected agripreneurship before or after embarking on it as a career. The participants were open about negative experiences in their personal narratives and perception of the enabling environment, however a complete picture of the strongest forces that drive youth away from agripreneurship cannot be obtained until such a population that has both an awareness of the career and has not embarked on it is identified and studied. Therefore, it is recommended that future research include youth with a variety of career outcomes amongst which agripreneurship was a possibility. This may best be implemented by a follow-up study of the undergraduate participants after they graduate and select a career.

Amongst the participants, there were some domains of the enabling environment that were not well understood or with which few had experience, especially amongst the students and very young agripreneurs. For example, many participants claimed not to have a deep understanding

of taxation and registration, agricultural policy, and research and development. This could reflect the weakness of information dissemination and extension services of the public. Thus, despite agripreneurs being the intended beneficiaries of these important institutions and supporting functions, they may not have the best understanding of them. Regardless, their perspectives are important, and their lack of perspective may indicate important areas of improvement. To partly offset these potential blind spots, this research was informed by interviews with key informants from the public sector, private sector and (I)NGOs, particularly in Chapter 2 where the enabling environment is characterised for the APCF. However, owing to the small number of relevant key informants accessed and in Laos generally, there is limited potential to rigorously analyse their views or the prevalence of their perspectives amongst informants. Future research could target specific key informants and stakeholders to assess the prevalence of certain perspectives amongst those with similar responsibilities, and to investigate how these experiences compare with the measurable situation in Laos. Overall, incorporating a greater number of perspectives can offset bias and elicit more information about the enabling environment. More participatory and interactive group activities, such as consultations workshops that share the findings of this thesis, would enable the exploration of points of consensus and disagreement amongst stakeholder perspectives and could strengthen a cooperation in improving enabling environment for agripreneurship in Laos.

### **7.3.2 Conceptual framework**

The results of our study applying TPB in Chapter 3, and our consolidated framework, APCF in Chapter 4, indicated that whilst all incorporate factors that significantly influence intentions towards agripreneurship amongst Lao youth, they also omit significant determinants and include non-significant indicators. Research questions 5 and 6 that compare our two different sample populations by cross checking the motivational antecedents that influence intention to

become an agripreneur amongst Lao youth who have yet to embark on a career, identified in Chapter 4, with the motivational antecedents of practicing youth agripreneurs, identified in Chapter 5 (Figure 7.1); and by comparing the experiences of practicing agripreneurs to the perceptions of Lao youth who have yet to choose their career to identify key areas of the enabling environment that are underperforming and subsequently discouraging future agripreneurs from embarking on these careers. The commonality of these results across analysis methods and participants, combined with support from the available literature, demonstrates the applicability of the APCF framework for investigating youth perception and intention to engage in small and medium scale agripreneurship in Laos and potentially other countries in agrarian transition. However, compared with other analyses of intention towards agripreneurship that have applied the aforementioned frameworks, there are differences from our study that relate to the indicators chosen or other differences between participants and their enabling environments. Accordingly, exploratory research is likely needed on a case-by-case basis for future research that aims to identify determinants of intention towards agripreneurship in other settings.

In Chapter 6 the institutional and support environment for young agripreneurs in Laos was examined from the perspective of practicing agripreneurs. These are key aspects of the ILO market systems framework that impact on agripreneurship, however, the core system of inputs and outputs in agripreneurial enterprises was not examined, i.e., market demand and supply, due to the diversity of enterprises. Our study included agripreneurs who managed enterprises including coffee, vegetables, livestock, rice, poultry, fruits, agro-tourism and agricultural education centres, each of which is subject to unique conditions and market forces. The selection of certain categories of enterprises in the future may enable a more complete application of the ILO market systems framework. Furthermore, other domains of the core system of inputs and outputs of the ILO market systems framework should also be recommended

for the future in depth study. For example, the areas relating to access to resources and market, and climate change adaptation, discussed briefly below.

- Access to resources was a significant factor influencing youth engagement in agripreneurship in results described in Chapters 3 and 4. Also, in Chapter 6, it is reported that young practicing agripreneurs highlighted an important connection between resource ownership or assets and access to financial loans. However, results in Chapter 4 indicated encouragement, or an increased number of agripreneurs, may not be achieved by simply increasing the resources available to youth for agripreneurship. Although resources play a crucial role in facilitating agripreneurs to run their business, including increased chances to get access to financial support, improving access to financial or credit support to agripreneurs could not be done by simply improving access to resources; instead, a more strategic option is needed.
- Market opportunities for generating income were found in Chapter 5 to be motivating Lao youth to become agripreneurs. Nevertheless, it was found that whilst income is a common consideration in all manner of career decisions, the selection of agripreneurship specifically as a means of meeting the desire or need to obtain income is based on a complex array of beliefs about agripreneurship in terms of circumstances and personal identity; acting on positive beliefs about the benefits of agripreneurship to become an agripreneur was not exclusively discussed in the context of achieving a source of income alone but included other perceived benefits such as extrinsic and emotional benefits (Chapter 5).

These results indicate that access to resources and markets and their relationship to youth engagement in agripreneurship are complex topics that could benefit from more detailed and in-depth research in the future. In addition to resources and market access, climate change adaptation was another area that was mentioned by young agripreneurs during the interviews

discussing their perceptions of the enabling environment that facilitated or hindered agripreneurship in Laos (Chapter 6). Also, Chapter 5 reports that achieving self-sufficiency was one of the most common extrinsic benefits that motivated youth to become agripreneurs. Their description of self-sufficiency was linked to an eco-friendly and sustainable lifestyle. The young agripreneurs also acknowledged the importance of conserving the environment while practicing agriculture and see it as a pathway to new niche market potentials such as agritourism and organic produce (Chapter 6). They also aware of the need for climate change adaptation. For example, they raised concern on the need to improve research especially on seed varieties adapted to climate variability and shocks. Regarding the nexus between agriculture and the environment, it would be worthwhile to conduct more detailed research in relation to youth agripreneurs and climate change adaptation and their pathways to sustainable agriculture.

### **7.3.3 Area and Scope of study**

The participating young agripreneurs whose perspectives were analysed in Chapters 5 and 6 included members of farmers' groups and those without such associations. There are indications in the results that the experiences and benefits of accessing agricultural information and extension services, financial support, taxation and registration, resources and markets varied between those who were members of a farmers' group and those who were not (Chapter 6). A comparative study has not yet been undertaken. A comparative study on pathways into agripreneurship, as well as access to resources and markets between young agripreneurs who join farmers' group and those that do not join groups may be of interest to future research. Agricultural information and extension services and financial support are also interesting sectors to conduct in-depth study about because they are also considered the most important sectors that justify the success of agripreneurs especially at small scales in rural high agrarian



developing countries. There are many support services from the development organisations and foreign aid programs on these two areas, their conditions however were perceived as still poorly accessed by young agripreneurs in our study (Chapter 6). Therefore, future research is needed to investigate and identify this support in more depth and detail, so more effective and strategic methods to improve these areas can be found.

Investigating the extent of integrating entrepreneurship and agribusiness knowledge in either Agricultural information and extension services, or school and university curricula in Laos is another area that might be considered for in the future research. The literature review in Chapter 2 found that agricultural information and extension services in Laos were significantly focused on production issues and lack support in other aspects that normally have been provided in most countries such as education, changing attitudes and developing human resources. While production issues are considered of core importance in facilitating farmers doing agriculture productively, it is not enough for farmers who produce for commercial purposes or are moving into more agripreneurial modes. Several studies confirm the importance of integrating entrepreneurial education and training in agricultural sectors either in extension service and educational curriculum (Section 4.6, Chapter 4). Despite its importance, practicing agripreneurs reported entrepreneurial and business-related knowledge and skills have been excluded in the scope of agricultural information and service provided, thus requested a need for entrepreneurial training, business planning and financial literacy (Chapter 6). They also reported agripreneurship has been less focussed, devalued and not promoted by formal education in Laos. This aligns with the result found in Chapter 4 amongst the sampled undergraduate students that also suggests there is scope for the educational sectors in Laos to improve the environment supporting agripreneurial careers. Also, the SEM analysis in Chapter 4 indicated that equipping Lao youth with greater agriculture and business knowledge would strengthen their intentions to engage in agripreneurial careers. Examining the consequences of

measures such as these to strengthen the enabling environment for agripreneurship and agripreneurial outcomes could be a further research area.

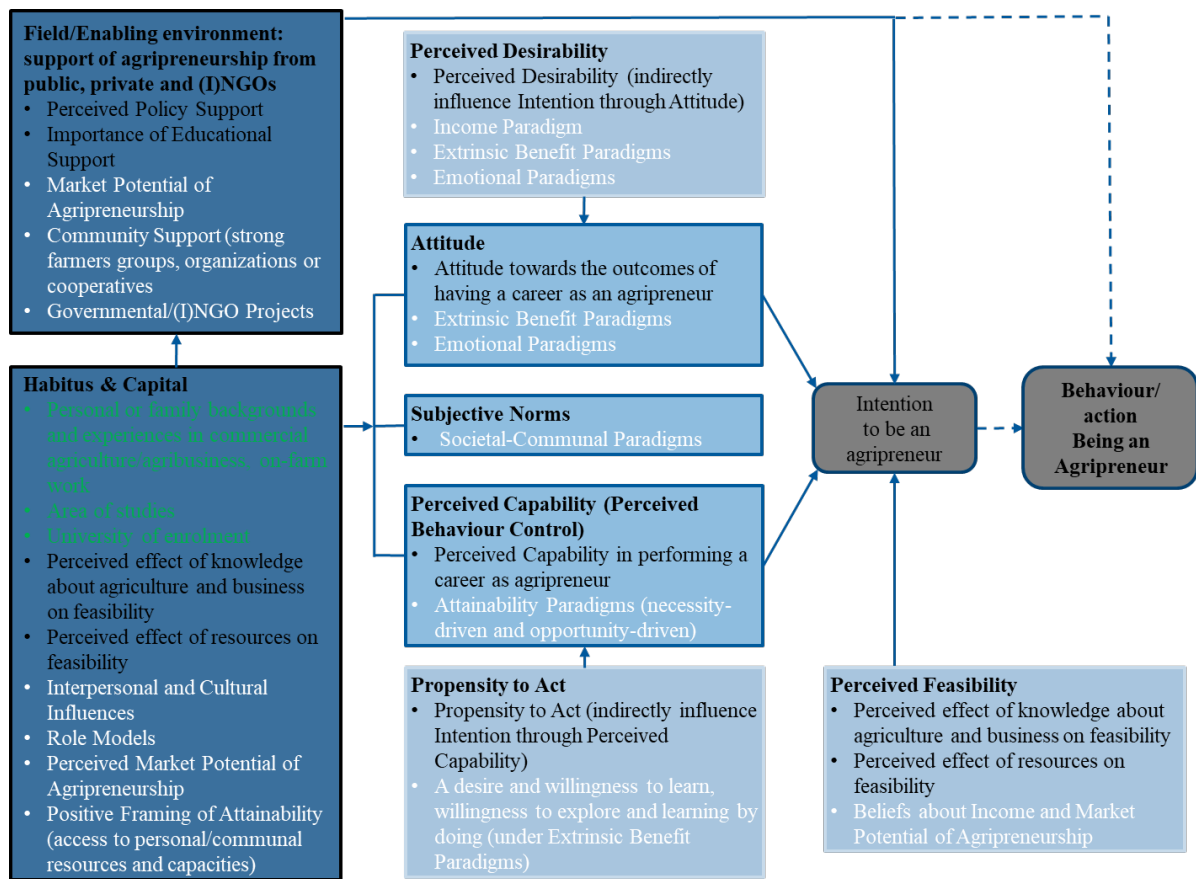
#### **7.4 Conclusion and summary of recommendations**

This thesis identifies and describes the motivational antecedents that influence youth intention and engagement in agripreneurship, and investigates the interactions amongst those antecedents, using Laos as a case study. It applies both quantitative and qualitative social research methodologies to identify factors that influence youth to be agripreneurs, and to determine the relative strength of these factors, from the perspective of key institutions, including young agripreneurs and young people who have not yet begun their careers.

The demographic factors found to influence intention towards agripreneurship amongst Lao youth were family backgrounds, area of studies and university of enrolment, whilst motivational antecedents of intention, namely Attitudes, Subjective Norms and Perceived Behavioural Control, were also variously influenced by demographic variables. The internal and environmental factors found to be motivational antecedents influencing intention to be an agripreneur amongst youth who had not yet chosen a career were their evaluation of their own knowledge about agriculture and business, perceived access to resources and attitudes towards the outcomes of having a career as an agripreneur. Currently practicing young agripreneurs in Laos were motivated to enter a career as an agripreneur by 5 phenomenological paradigms: (1) Income, (2) Extrinsic Benefit, (3) Attainability, (4) Emotional, and (5) Societal-Communal factors. The motivational antecedents that influence intention to become an agripreneur amongst Lao youth who have yet to embark on a career have some overlap with the motivational antecedents of practicing youth agripreneurs; notably, the most influential consideration of students (Perceived Feasibility) was reflected in the strong prominence of the belief about income and market potential of agripreneurship as a motivation for currently

practicing entrepreneurs. Furthermore, Perceived Capability, as reflected by the self-evaluation of students' capacity to succeed as an agripreneur, influenced their intentions to engage in agripreneurship, and was also a significant motivator of practicing agripreneurs to embark on their career. The enabling environment in Laos is hampered by the limitations to supporting functions, despite positive improvements and effective alignment between the aims of informal and formal institutions, reported by the practicing entrepreneurs.

The various analyses presented in this thesis, guided by the APCF, have identified factors regarding individuals, their beliefs and the enabling environments that significantly determine motivational antecedents/factors influencing undergraduate students and young agripreneur engagement in agripreneurial careers in Laos. The influence of the enabling environment as an antecedent of motivation to become an agripreneur was prominent in the results, notably in the statistical analyse presented in Chapter 3, the SEM analysis of Chapter 4 and the narrative analysis of Chapter 5. Figure 7.1 presents the APCF with additional information linking details and evidence to corresponding research activities present in thesis.



Dashed arrows indicate a possible influence of one construct to another, blue arrows indicate direct influence of one construct to another.

**Figure 7.1** AgriPreneurial Career Framework (APCF) with coloured information corresponding to research activities in this thesis (Green = Chapter 3, Black = Chapter 4, White = Chapter 5).

The commonality of these results across analysis methods and participants, combined with support from the available literature, demonstrates the applicability of the APCF framework for investigating youth perception and intention to engage in small and medium scale agripreneurship in Laos and potentially other countries in agrarian transition.

The following recommendations to assist the promotion of agripreneurship have arisen from the research:

- 1. Adopt a people-centred approach that recognises the varying influence of demographic characteristics on agripreneurial intention and motivational antecedents.**

The analysis presented in Chapter 3 indicates that young people who have had exposure to commercial agriculture or agribusiness are more likely to have a higher intention to be an agripreneur at present. They are more likely to engage in an agripreneurial career because they hold significantly positive attitudes and perceive that they have agency in achieving their life goals in this career. This demographic could serve as role models for other youth with different backgrounds if appropriately engaged and supported.

A different approach is necessary for youth with a background of subsistence agriculture. Although the inclusion of youth engaged in smallholder and subsistence farming in the commercialisation of the agricultural sector could significantly assist Laos in its national poverty reduction scheme, having a subsistence farming background did not appear to cause students to have a higher intention to be an agripreneur. This represents a challenge to the Government of Laos, because the sustainable and inclusive commercialisation of agriculture requires youth from subsistence farming households to engage in more entrepreneurial modes of agriculture, and this group is also at the greatest risk of being left behind as Laos

modernizes. Young subsistence farmers require an enabling environment that supports them to raise productivity to exceed their needs, to allow them to transition to fully entrepreneurial agriculture, driven by market demand and profit maximisation.

In regard to urban residents, the narratives of practicing agripreneurs in Chapter 5 demonstrate how urban residents may also become agripreneurs. However, due to the differences in urban and rural backgrounds, it was found in Chapter 3 that urban residents, on average, perceived themselves to have a lower capacity to succeed as agripreneurs than rural residents did. Accordingly, outreach to urban youth may focus on developing confidence whilst rural youth may appeal to existing confidence. Raising their confidence may be through the encouragement of family members, seeing and knowing the current urban youth agripreneur role models, and support from community and governmental/(I)NGOs projects, because these social-communal factors were found in Chapter 5 to be a significant motivational influence on youth agripreneurs, and exposure to agriculture was found, in Chapter 3, to increase youth intentions towards agripreneurial careers.

## **2. Reduce barriers to finance for subsistence farmers to enable commercialisation.**

In Chapter 6, it was reported that access to finance was a limitation for young agripreneurs to invest in their enterprises. As the available loan repayment periods are too short for agricultural ventures which are generally governed by annual cycles, increasing these may encourage more investment. Furthermore, subsistence farmers may require specific training or workshops on how to write the application/business proposals to the bank, given low levels of literacy and limited interaction with the cash economy. Small and medium scale young agripreneurs may also require support regarding improving non-technical skills such as identifying and creating niche markets and value adding and product development, advertisement and marketing, which could

enable them to grow their business, be more competitive and to pay back loans on time. The transparency from funds to farmers in case of grants could be improved.

**3. Raise awareness of the benefits and values of agripreneurship, integrate agripreneurship knowledge and address institutional biases in the educational sector.**

It was found in in Chapter 5 that pride and passion for agriculture can strongly motivate youth to become agripreneurs, however several issues regarding societal perceptions and education systems were identified in Chapter 6 that may limit the valence of youth to agripreneurship. Persistent negative attitudes such as those related to cleanliness, labour and income potential remain, even though the experience of agripreneurs indicates they are often untrue or are at least achievable. The education system has a role to play by not excluding agripreneurial careers from ideals of success and by integrating agriculture and business knowledge in the school curriculum, as this knowledge was found to be a strong determinant of intention in Chapter 4. By doing this, pride in positive outcomes of agripreneurship can be encouraged, such as self-sufficiency, self-employment, organic food production, being a role model, and improving farming practices and the image of local agricultural products (to be more innovative, creative, competitive and value-added).

**4. Emphasise the role of motivations and personal capacities rather than resource endowments when promoting agripreneurship.**

Although in Chapter 5 some agripreneurs drew attention to resources such as land that enabled them to become agripreneurs more easily, the career was often described as one that was attainable to youth from subsistence farming backgrounds and/or those with little options or resources. Furthermore, the results from Chapter 4 indicate that students with more resources are less likely to intend to be a small and medium scale

agripreneur. Thus, the relationship of access to personal resources and intention to be a small and medium scale agripreneur may not be linear, due to the complex interplay motivations, resources and other opportunities including careers that are more closely associated with success. Accordingly, the promotion of agripreneurship should appeal to youth by emphasising and raising awareness of the positive motivations and attainability of this career.

**5. Increase the certainty of interactions with formal institutions by increasing transparency and accessibility of information relating to registration and fees.**

Young agripreneurs showed agreement with the principles of the formal institutions which regulate their enterprises, and described actualised benefits of compliance. However, their willingness and ability to comply was eroded by exploitative and unpredictable unofficial payments and impenetrable bureaucratic procedures. This can be addressed by developing the administrative and payment procedures systems to be more digitalised, cashless and transparent. Additionally, reviewing public organisations roles and responsibilities, and improving coordination within and across different organisations is required for a reduction of administrative obstacles and services to the customers or young agripreneurs.

**6. Improve the effectiveness of policy support for youth agripreneurship.**

In Chapter, 6 policies were reported to be not applied thoroughly, not practical, and not focused enough on engaging youth and small-scale investment in agriculture in general, or as entrepreneurs. A reason for this is that the Strategic Actions and strategic programs for the policy implementation do not cover all elements that the policy highlighted. Measurable indicators with specific timeframes for each and individual element of the policy should be included in the policy implementation. Furthermore, maintaining regular and frequent monitoring, evaluation and reporting is necessary to



improve an effectiveness of any policy or activity implementation, and such request for a more frequent and regular monitoring and evaluation of agricultural extension services was raised in the young agripreneurs' responses in Chapter 6. Additionally, increasing the opportunity for rural youth and small scale agripreneurs to be actively involved in policy decision-making is needed, because it is reported in Chapter 2 that the lack of youth voices in decision-making, especially rural youth, and a mismatch between young workforces skills and the workforce market demand are an obstacle for youth in Laos to move out of a poverty cycle, and from unremunerated or subsistence level work.

## 7.5 References

- Agu, A.G., Kalu, O. O., Esi-Ubani, C. O., & Agu, P. C. (2021). Drivers of sustainable entrepreneurial intentions among university students: an integrated model from a developing world context. *International Journal of Sustainability in Higher Education*, 22(3), 659–680. <https://doi.org/10.1108/IJSHE-07-2020-0277>
- Ahuja, V., Akhtar, A., & Wali, O. P. (2019). Development of a comprehensive model of social entrepreneurial intention formation using a quality tool. *Journal of Global Entrepreneurship Research*, 9(1), 1–27. <https://doi.org/10.1186/s40497-019-0164-4>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I., & Fishbein, M. (2000). Attitudes and the Attitude-Behavior Relation: Reasoned and Automatic Processes. *European Review of Social Psychology*, 11(1), 1–33. <https://doi.org/10.1080/14792779943000116>
- Ambad, S.N.A., & Damit, D. H. D. A. (2016). Determinants of Entrepreneurial Intention among Undergraduate Students in Malaysia. *Procedia Economics and Finance*, 37, 108–114. [https://doi.org/10.1016/S2212-5671\(16\)30100-9](https://doi.org/10.1016/S2212-5671(16)30100-9)
- Bourdieu, U.P. (1977). *Outline of a Theory of Practice*. Cambridge University Press.
- Buyinza, J., Nuberg, I. K., Muthuri, C. W., & Denton, M. D. (2020). Psychological Factors Influencing Farmers' Intention to Adopt Agroforestry: A Structural Equation Modeling Approach. *Journal of Sustainable Forestry*, 39(8), 854–865. <https://doi.org/10.1080/10549811.2020.1738948>

- Chaudhary, R. (2017). Demographic factors, personality and entrepreneurial inclination: A study among Indian university students. *Education & Training (London)*, 59(2), 171–187. <https://doi.org/10.1108/ET-02-2016-0024>
- Chýlová, H., Michálek, P., Rymešová, P., & Natovová, L. (2019). Future Agriculturists: Czech and U.S. Agricultural Students' Attitudes towards Agriculture. *Scientia Agriculturae Bohemica*, 50(4), 251–258. <https://doi.org/10.2478/sab-2019-0035>
- Freire-Gibb, L.C., & Nielsen, K. (2014). Entrepreneurship within Urban and Rural Areas: Creative People and Social Networks. *Regional Studies*, 48(1), 139–153. <https://doi.org/10.1080/00343404.2013.808322>
- Gorgievski, M., Stephan, U., Laguna, M., & Moriano, J. (2018). Predicting entrepreneurial career intentions: Values and the theory of planned behavior. *Journal of Career Assessment*, 26(3), 457–475. <https://doi.org/10.1177/1069072717714541>
- Hodkinson, P., & Sparkes, A. C. (1997). Careership: a sociological theory of career decision making. *British Journal of Sociology of Education*, 18(1), 29–44. <https://doi.org/10.1080/0142569970180102>
- Karimi, S. (2020). The role of entrepreneurial passion in the formation of students' entrepreneurial intentions. *Applied Economics*, 52(3), 331–344. <https://doi.org/10.1080/00036846.2019.1645287>
- Kautonen, T., van Gelderen, M., & Fink, M. (2015). Robustness of the Theory of Planned Behavior in Predicting Entrepreneurial Intentions and Actions. *Entrepreneurship Theory and Practice*, 39(3), 655–674. <https://doi.org/10.1111/etap.12056>

- Kelley, D.J., Singer, S., & Herrington, M. (2011). *Global Entrepreneurship Monitor (GEM) Global Report 2011*; Babson College. <https://gemconsortium.org/report/gem-2011-global-report>
- Kibuka, G. (2010). An examination of factors that influence entrepreneurial intention of high school students in Kenya. *ProQuest Dissertations Publishing*. ISBN: 1124972641
- Kidido, J.K., Bugri, J. T., & Kasanga, R. K. (2017). Youth Agricultural Land Access Dimensions and Emerging Challenges under the Customary Tenure System in Ghana: Evidence from Techiman Area. *Journal of Land and Rural Studies*, 5(2), 140–163. <https://doi.org/10.1177/2321024917700940>
- Kimaro, P.J., Towo, N.N., & Moshi, B.H. (2015). Determinants of rural youth's participation in agricultural activities: the case of Kahe East Ward in Moshi rural district, Tanzania. *International Journal of Economics, Commerce and Management*, 3(2), 1–47. <http://ijecm.co.uk/wp-content/uploads/2015/02/3235.pdf>
- Krueger, N. F., & Brazeal, D. V. (1994). Entrepreneurial Potential and Potential Entrepreneurs. *Entrepreneurship Theory and Practice*, 18(3), 91–104. <https://doi.org/10.1177/104225879401800307>
- Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5), 411–432. [https://doi.org/10.1016/S0883-9026\(98\)00033-0](https://doi.org/10.1016/S0883-9026(98)00033-0)
- Mibey, M. C. (2015). *Factors Influencing Youth Involvement in Agribusiness Projects In Bomet Central Subcounty, Kenya*. Masters dissertation. University of Nairobi.

- Nguyen, C. (2018). Demographic factors, family background and prior self-employment on entrepreneurial intention - Vietnamese business students are different: why? *Journal of Global Entrepreneurship Research*, 8(1), 1–17. <https://doi.org/10.1186/s40497-018-0097-3>
- Nguyen, C., Frederick, H., & Nguyen, H. (2014). Female entrepreneurship in rural Vietnam: an exploratory study. *International Journal of Gender and Entrepreneurship*, 6(1), 50–67. <https://doi.org/10.1108/IJGE-04-2013-0034>
- Nguyen, G.N.T., Hoang, T. G., Nguyen, T. M., & Ngo, T. T. (2021). Challenges and enablers of women entrepreneurs' career advancement in Vietnam's coffee industry. *Journal of Enterprising Communities.*, 15(1), 76–95. <https://doi.org/10.1108/JEC-04-2020-0075>
- Ozaralli, N., & Rivenburgh, N. K. (2016). Entrepreneurial intention: antecedents to entrepreneurial behavior in the U.S.A. and Turkey. *Journal of Global Entrepreneurship Research*, 6(1), 1–. <https://doi.org/10.1186/s40497-016-0047-x>
- Pouratashi, M. (2015). Entrepreneurial Intentions of Agricultural Students: Levels and Determinants. *The Journal of Agricultural Education and Extension*, 21(5), 467–477. <https://doi.org/10.1080/1389224X.2014.960528>
- Saili, A.R., Saili, J., Safai'ee, M. binti M., & Hamzah, N. M. (2018). Dissecting Factors Causing Active Behaviors Associated with Continuity of Youth Participation in Agro-Preneurship: A Qualitative Study on Youth Farmers in Sarawak. *Global Business and Management Research*, 10(2), 253–262.

- Schlaegel, C., & Koenig, M. (2014). Determinants of Entrepreneurial Intent: A Meta-Analytic Test and Integration of Competing Models. *Entrepreneurship Theory and Practice*, 38(2), 291–332. <https://doi.org/10.1111/etap.12087>
- Shapiro, A., & Sokol, L. (1982). Social dimensions of entrepreneurship. In C.A. Kent, D.L. Sexton & K.H. Vesper (Eds). *Encyclopedia of entrepreneurship*. Prentice Hall.
- Shattuck, A., Manivong, V., & Vongthilard, S. (2019). *Towards 'People Centred Agriculture: Rethinking rural labour, youth employment and the agrarian transition in Laos*. Department of Policy and legal Affairs, Ministry of Agriculture and Forestry, Laos. <https://www.laofab.org/document/view/4069>
- Solikhah, B. (2014). An Application of Theory of Planned Behavior towards CPA Career in Indonesia. *Procedia, Social and Behavioral Sciences*, 164, 397–402. <https://doi.org/10.1016/j.sbspro.2014.11.094>
- Stephan, U., Hart, M., & Drews, C.C. (2015). *Understanding Motivations for Entrepreneurship: A Review of Recent Research Evidence*. Rapid Evidence Assessment paper. Enterprise Research Centre.
- Tafere, Y., & Woldehanna, T. (2012, March 19–21). *Rural youth aspiring to occupations beyond agriculture: Evidence from young lives study in Ethiopia*. [Conference paper]. The Young People, Farming and Food Conference, Accra, Ghana. [https://assets.publishing.service.gov.uk/media/57a09ddde5274a31e0001ab8/Tafere\\_Woldehanna\\_\\_Rural\\_youth\\_aspiring\\_to\\_occupations.pdf](https://assets.publishing.service.gov.uk/media/57a09ddde5274a31e0001ab8/Tafere_Woldehanna__Rural_youth_aspiring_to_occupations.pdf)

- Thephavanh, M., Philp, J.N.M., Nuberg, I., Denton, M., & Alexander, K. (2022). Narrative Insights Reveal the Motivations of Young Agricultural Entrepreneurs in Laos. *Sustainability*, 14(20), 13113. <https://doi.org/10.3390/su142013113>
- Webster, N., & Ganpat, W. (2014). St Vincent Youth and Careers in Agriculture. *The Journal of Agricultural Education and Extension*, 20(1), 49–64. <https://doi.org/10.1080/1389224X.2013.775952>
- White, B. (2012). Agriculture and the Generation Problem: Rural Youth, Employment and the Future of Farming. *IDS Bulletin (Brighton. 1984)*, 43(6), 9–19. <https://doi.org/10.1111/j.1759-5436.2012.00375.x>
- White, B. (2015). Generational dynamics in agriculture: reflections on rural youth and farming futures. *Agricultures (Montrouge)*, 24(6), 330–334. <https://doi.org/10.1684/agr.2015.0787>
- Yang, J. (2013). The Theory of Planned Behavior and Prediction of Entrepreneurial Intention among Chinese Undergraduates. *Social Behavior and Personality*, 41(3), 367–376. <https://doi.org/10.2224/sbp.2013.41.3.367>

# APPENDICES

## Appendix I: Poster presented at the 2022 TropAg INTERNATIONAL AGRICULTURE CONFERENCE, Brisbane Convention and Exhibition Centre in Australia 31 October to 02 November, 2022

### IS THERE AN ENABLING ENVIRONMENT FOR YOUTH AGRIPRENEURSHIP IN LAOS?

Manithaythip Thephavanh<sup>1,2</sup>, Joshua Philp<sup>1</sup>, Ian Nuberg<sup>1</sup>, Matthew Denton<sup>1</sup>, Silva Larson<sup>3</sup>

<sup>1</sup>The University of Adelaide School of Agriculture, Food and Wine; <sup>2</sup>National Agriculture and Forestry Research Institute, Laos; <sup>3</sup>University of the Sunshine Coast  
Email: manithaythip.thephavanh@adelaide.edu.au



#### Introduction

The participation of youth in small and medium scale agricultural entrepreneurship (agriprenership) is beneficial for the sustainable development of agrarian societies that are transitioning towards the commercialization of agriculture (Thephavanh et al., 2022). In Laos, a country with a young and highly rural population, the government has prioritised shifting from subsistence farming into more commercialized and entrepreneurial models of agriculture. However, institutional, policy and social challenges that hinder transformation remain (Alexander et al., 2017; Shattuck et al., 2019).

#### Methods

We conducted semi-structured face-to-face interviews with 74 young agripreneurs, during which participants described their experiences with support functions and institutional arrangements in the enabling environment that were hypothesised to influence their capacity to commence and practice agriprenership (Fig. 1a). Content analysis was applied to identify trends in the interactions that were enabling or limiting, which were then used to evaluate the support functions and institutional arrangements. The 8 emergent support functions and institutional arrangements were Agricultural Extension and Information services, Financial support/credit access, Infrastructure, Technology, Policy, Taxation/registration/regulations, Research and Educational curriculum (Fig. 1b).

#### Results and Discussion

Young agripreneurs reported that there are many supporting functions and institutional arrangements facilitating commercial agriculture and entrepreneurial agriculture in Laos. However, young agripreneurs also reported that despite positive improvements and effective alignment between the aims of informal and formal institutions, the enabling environment in Laos is hampered by the limitations of supporting functions and institutions. The perceptions held about the queried support functions and institutional arrangements are shown in Fig. 2.

#### Conclusion

The examination of young agripreneurs' perceptions of supporting functions and institutions demonstrates that they have an essential function in enabling agriprenership by young agripreneurs. However, administrative obstacles and poor implementation of policies carry the risk of having the opposite effect. A better understanding of constraints and opportunities that young agripreneurs face will facilitate a development of an enabling environment for transitioning from subsistence into commercial agriculture (Shattuck et al., 2019), specifically from research shedding light on the perspective of the young agripreneurs themselves (Fitz-Koch et al., 2018).

#### Recommendations

1. Reduce financial barriers for subsistence farmers and small and medium scale agripreneurs.
2. Raise awareness of the benefits and values of agriprenership, integrate agriprenership knowledge and address institutional biases in the educational sector.
3. Emphasise the role of motivations and personal capacities rather than resource endowments when promoting agriprenership.
4. Increase the certainty of interactions with formal institutions by increasing transparency and accessibility of information relating to registration and fees.
5. Improve the effectiveness of policy support for youth agriprenership.

#### References

Alexander, K., Case, P., Jones, M., & Connel, J. (2017). Commercialising smallholder agricultural production in Lao People's Democratic Republic. *Development in Practice*, 27(7), 965-980. <https://doi.org/10.1080/09614524.2017.1333616>  
Fitz-Koch, S., Weipert, M., Carter, S., & Huijts, F. (2018). Entrepreneurship in the Agricultural Sector: A Literature Review and Future Research Opportunities. *Entrepreneurship Theory and Practice*, 43, 139-186. <https://doi.org/10.1177/1542724317723258>  
International Labour Organization (ILO) (2012). A SYSTEM APPROACH TO CREATING MORE AND BETTER JOBS. POLICY BRIEF: THE LABOUR MARKET SYSTEMS DEVELOPMENT FOR DECENT WORK. [https://www.ilo.org/mcp5/docs/default-source/efm/efm\\_enf\\_2012\\_001.pdf](https://www.ilo.org/mcp5/docs/default-source/efm/efm_enf_2012_001.pdf)  
Shattuck, A., Manning, N., & Yongtharak, S. (2019). Towards 'People-Centred Agriculture': Reconnecting rural labour, youth employment and the agrarian transition in Laos. *Department of Policy and Legal Affairs, Ministry of Agriculture and Forestry, Laos*. <https://www.laifab.org/document/2019/05/20190520>  
Thephavanh, M., Philp, J., Nuberg, I., Alexander, K. (2022). Narrative Insights Reveal the Motivations of Young Agricultural Entrepreneurs in Laos. *Sustainability* 14, 13113. <https://doi.org/10.3390/su140113113>

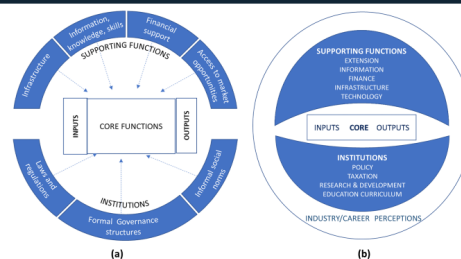


Fig. 1 (a) Generic conceptualisation of the market system (adapted from ILO, 2021) and (b) conceptualisation of the emergent support functions and institutional arrangements for young agripreneurs in Laos



Fig. 2 Perceptions of support functions and institutional arrangements held by young agripreneurs in Laos





## Appendix II: Human Research Ethics Committee Approval



RESEARCH SERVICES  
OFFICE OF RESEARCH ETHICS, COMPLIANCE  
AND INTEGRITY  
THE UNIVERSITY OF ADELAIDE

LEVEL 4, RUNDLE MALL PLAZA  
50 RUNDLE MALL  
ADELAIDE SA 5000 AUSTRALIA

TELEPHONE +61 8 8313 5137  
FACSIMILE +61 8 8313 3700  
EMAIL hreo@adelaide.edu.au

CRICOS Provider Number 00123M

Our reference 33569

25 August 2022

Dr Joshua Philp  
School of Agriculture, Food & Wine-WT

Dear Dr Philp

**ETHICS APPROVAL No:** H-2019-110  
**PROJECT TITLE:** Engaging youth in agricultural entrepreneurship in Laos

The extension request and personnel change is approved as submit in July 2022.

The ethics amendment for the above project has been reviewed by the Secretariat, Human Research Ethics Committee and is deemed to meet the requirements of the *National Statement on Ethical Conduct in Human Research 2007 (Updated 2018)*.

You are authorised to commence your research on: 02/07/2019

The ethics expiry date for this project is: 31/07/2023

### NAMED INVESTIGATORS:

Chief Investigator:	Dr Joshua Philp
Student - Postgraduate Doctorate by Research (PhD):	Miss Manithaythip Thephavanh
Associate Investigator:	Associate Professor Matthew Denton
Associate Investigator:	Associate Professor Ian Nuberg
Associate Investigator:	Manivanh Phimpachanhvongsod
Associate Investigator:	Phonealoun Chanthabouasone

Ethics approval is granted for three years and is subject to satisfactory annual reporting. The form titled Annual Report on Project Status is to be used when reporting annual progress and project completion and can be downloaded at <http://www.adelaide.edu.au/research-services/oreci/human/reporting/>. Prior to expiry, ethics approval may be extended for a further period.

Participants in the study are to be given a copy of the information sheet and the signed consent form to retain. It is also a condition of approval that you immediately report anything which might warrant review of ethical approval including:

- serious or unexpected adverse effects on participants,
- previously unforeseen events which might affect continued ethical acceptability of the project,
- proposed changes to the protocol or project investigators; and
- the project is discontinued before the expected date of completion.

Yours sincerely,

Miss Sarah Harman  
Secretary

The University of Adelaide