

RESOURCE MOBILIZATION FOR DISADVANTAGED ENTREPRENEURS: EVIDENCE
FROM FIELD EXPERIMENTS IN MOROCCO

by

OUAFAA HMADDI

A DISSERTATION

Presented to the Department of Management, Lundquist College of Business
and the Division of Graduate Studies of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy

September 2022

DISSERTATION APPROVAL PAGE

Student: Ouafaa Hmaddi

Title: Resource Mobilization for Disadvantaged Entrepreneurs. Evidence from Field Experiments in Morocco.

This dissertation has been accepted and approved in partial fulfillment of the requirements for the Doctor of Philosophy degree in the Management by:

Andrew Nelson	Chairperson
Lauren Lanahan	Advisor
Peter Younkin	Core Member
Saurabh Lall	Institutional Representative

and

Krista Chronister	Vice Provost for Graduate Studies
-------------------	-----------------------------------

Original approval signatures are on file with the University of Oregon Division of Graduate Studies.

Degree awarded September 2022

© 2022 Ouafaa Hmaddi

DISSERTATION ABSTRACT

Ouafaa Hmaddi

Doctor of Philosophy

Department of Management, Lundquist College of Business

September 2022

Title: Resource Mobilization for Disadvantaged Entrepreneurs. Evidence from Field Experiments in Morocco.

This dissertation is composed of one conceptual review chapter and two empirical chapters with the following abstracts. In the first chapter, I adopt a resource mobilization framework, which delineates the process in three stages: search, access, and transfer. In doing so, I explore how resource mobilization is closely linked to entrepreneur's resource endowments. I identify the main issues for the mechanisms of each stage which helps highlight the problematic path of resource mobilization when entrepreneurs lack the necessary endowments. I then suggest an adapted path with macro and micro-level solutions to potentially overcome such issues.

In the second chapter, I challenge the premise that resource holders must “pick winners” because they are most likely to convert the support into tangible and positive entrepreneurial outcomes by asking when does selection matter less? This chapter's core premise is that expanding access to resources by removing selection barriers can help enhance two key entrepreneurial outcomes: action and persistence. I find that removing selection barriers to the provision of knowledge and financial resources significantly increases the likelihood of entrepreneurs engaging in action and persistence independent of their initial stock of resources. These findings help de-emphasize the role of endowment and selection in the resource

mobilization process and highlight the importance of inclusion in the allocation of entrepreneurial resources.

In the third chapter, I examine the question: do entrepreneurs incorporate what they learn? Are they behaviorally experimenting? I argue that entrepreneurs within such environments may need more than the explicit knowledge on how to experiment to navigate the ambiguous and informal markets where they operate. I use a field experiment in the context of an acceleration program spanning the 12 regions of Morocco, where I randomized access to knowledge resources (training and mentoring) among other resources. I then take advantage of the staff quasi-random assignment of the mentor-entrepreneur pairs to evaluate the effect of having a matched mentor who would have the appropriate tacit knowledge to help entrepreneurs localize and contextualize the explicit knowledge they acquired. I find that having access to tacit knowledge increases the probability to engage in behavioral experimentation by 20 percent. These findings suggest that tacit knowledge helps entrepreneurs incorporate their learning into their decision-making.

CURRICULUM VITAE

NAME OF AUTHOR: Ouafaa Hmaddi

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon, Eugene
Cornell University, Ithaca
Ecoles Mohammadia d'Ingenieurs, Morocco

DEGREES AWARDED:

Doctor of Philosophy, Management, 2022, University of Oregon
MPA, 2017, Cornell University
B.S., Industrial Engineering, 2013, Ecole Mohammadia d'Ingenieurs

AREAS OF SPECIAL INTEREST:

Entrepreneurship, Field experiments, Strategy

PROFESSIONAL EXPERIENCE:

Consultant, Deloitte, 2013-2015

GRANTS, AWARDS, AND HONORS:

Fulbright, 2015-2017
RRBM Dare to Care, 2022
SMS Dissertation Grant, 2022

ACKNOWLEDGMENTS

Fifty years ago, at the age of nine, Hmad (equivalent of Ahmed in Arabic) made it out of the Moroccan Atlas Mountains to the capital city Rabat, carrying nothing but the dream that Imazighen people start and grow successful businesses because they are the best in commerce.¹ Upon arrival to the medina in Rabat, he realized being an Amazigh was not the magic ingredient, but rather access to resources. Why, how, and which resources enable this success? Ahmed did not have those answers then.

Today, Ahmed never reached that big dream but has started and sustained a couple of small businesses. His fifty-year journey as a disadvantaged entrepreneur gave him some answers to the questions from his early days in the medina. The most important lesson he claims is knowledge helps you make the right decisions and financial means help you test your options, but most importantly, the mere idea and belief of the possibility of accessing resources enables you to start something.

Influenced by my father Ahmed's journey, I have constantly sought to help disadvantaged entrepreneurs like my father start and scale businesses, either individually or through volunteering for organizations such as Enactus Morocco. In 2015, I left Morocco with many questions and sought answers in a policy degree and a part-time job with an accelerator to work with and learn from American start-ups. In 2017, I was left with the same questions. Five years later, I am so happy and proud to be graduating with a dissertation that tackles some of these questions. It is a privilege that I was able to work on topics close to my heart which made the dissertation a very enjoyable experience. However, my dissertation would never have reached its current level of intellectual rigor if not for the innumerable advice of my advisors.

I thank the members of my dissertation committee for their guidance in designing, framing, writing, and revising this body of work. I extend my deepest gratitude to my advisor, Lauren Lanahan. Thank you for taking me on this journey with an open mind, a smile, and many pieces of chocolate. You inspired me to do meaningful work through your dedication, perseverance, and integrity. Your guidance inspired me to continue working on challenging days. Thank you for understanding and accommodating my personal interests, goals, and challenges through these years. You have become a true mentor to me, and I am thankful for your incredible support and all I have learned from and with you.

My special thanks to Pete Younkin, for inspiring me and empowering me to leverage my strengths and my background knowledge. Your creativity, positive energy, and belief in my abilities have tremendously helped me find my bearings in the research landscape. The field work in this dissertation has significantly benefited from Pete's generous guidance and feedback, and I have learned so much from our frequent and engaging discussions.

I also offer my sincerest thanks to Andrew Nelson for chairing my dissertation committee, and for all the support and guidance he provided since the first lunch we had when I visited the Lundquist College of Business (LCB) as a prospective student. I highly appreciate your interest in this research and the time you have taken to review and improve my work. It has been a great privilege to immerse myself in the study of management under your competent guidance and in the productive research environment you create.

I am also grateful for the support of Saurabh Lall, an inspiring scholar whom I had the great fortune of working with. Thank you, Saurabh for your guidance on how to navigate the challenges of running field experiments within challenging contexts and how to mobilize resources for such experiments. Thank you

¹ Imazighen (referred to as "Berbers" by some media outlets) are an ethnic group indigenous to North Africa

for inspiring me to conduct independent research that is not only rigorous and policy-relevant, but also mindful of the people whose behavior we study.

I further extend my appreciation to my colleagues in the Management department who have been a source of knowledge and motivation from day one. Specifically, I would like to express my sincere thanks to Anne Parmigiani, Mike Russo, Alan Meyer, and Alex Murray, for the constructive feedback on my work and ideas during my PhD journey. Special thanks to Chris Liu, Dave Wagner, Jeff Stolle, Ryan Wilson, and Diane Del Guercio for offering guidance and support to PhD students. Also, I would like to thank the faculty of the Department of Management, the PhD program, the staff at the Lundquist College of Business (LCB), and the staff at the Research Compliance Services office of the University of Oregon for their continued support. To all the wonderful friends I made during this program and during my time as a visiting student at Rotman School of Management, thank you.

Throughout the PhD program, I worked with wonderful co-authors who significantly helped shape my writing, my thinking, and my approach to research. I would like to thank, Juanita Gonzales-Uribe, Amol Joshi, and Daniel Armanios for inspiring me to become a better researcher one project at a time.

While conducting my studies in Morocco, I was particularly fortunate to meet some of the brightest researchers, leaders, and entrepreneurs in the country. To Tareq Sawalmeh, Kawtar Benhima, Nour El Houda Recham, and Ziad Asli, the four wonderful research assistants who helped me collect data for this dissertation during one of the most challenging times in my life, thank you. Special thanks to Naouar El Houti who managed the acceleration program with deep engagement and skin in the game.

Most importantly, to all the entrepreneurs I met before, during, and after the field experiment, I am especially appreciative of the precious time you all granted me, and of the stories and experiences you shared with me. I am inspired by your ingenuity, modesty, and resilience.

Finally, my deepest gratitude goes to Adnane Addioui for responding to my LinkedIn message and believing in this project from the first time I pitched it to him in 2019. To all the wonderful people of the Moroccan Center for Innovation and Social Entrepreneurship, thank you for hosting me as field researcher within your organization.

There are many other individuals who helped me in lesser roles along the way and I would like to thank each of them for their enduring support. I also thank the organizations and people who helped financially support this project. Special thanks to Abby Davidson for her tremendous support during the process of applying to SGB (Small and Growing Businesses) Evidence Fund to kickstart this project. The project has also received funding from the African Leadership Academy, the International Growth Center at the London School of Economics, the University of Oregon Kageyama Fund, the Responsible Research in Business and Management, and the Strategic Management Society. Their support helped immensely in the preparation of this document.

I also would not have been able to finish my PhD without the constant support of my wonderful friends on both sides of the Atlantic Ocean: Ghita, Mimi, Ghita, Shreya, Youssef, Andrew, and Salma. Thank you for inspiring me and always being there for me. Many more friends have been an integral part of my academic and social life and I am immensely grateful for their support.

In this wonderful journey of five years, I did not only complete my dissertation, but also got married and fought a life-threatening disease. I would not have been able to accomplish all of this without the support of my husband Michael. His constant trust in my ability made me go the extra mile. Most importantly,

Michael gave me the privilege of being part of a big and wonderful family in the U.S. Their support made all my challenges feel like a fun family adventure. To all the Foleys, thank you so much!

I started these acknowledgements with my father's journey which also became my mother's journey since they met. Two disadvantaged entrepreneurs with no resources and big dreams. Their inspiring journey led me to live most of my childhood and teenage years with the most wonderful grandparents. Their unconditional love, wisdom, and resilience made me the person I am today. I cannot thank them enough. I dedicate this work to my late grandparents in the hope that my love and gratitude may reach them in some way.

TABLE OF CONTENTS

INTRODUCTION	1
THE RESOURCE MOBILIZATION PATH FOR LOW ENDOWED ENTREPRENEURS. WHAT DOES THE LITERATURE TELL US?	4
1.1 INTRODUCTION	4
1.2 THEORITICAL BACKGROUND	5
1.3 MECHANISMS OF RESOURCE MOBILIZATION: Search, Access & Transfer	7
1.3.1 <i>Search Mechanisms: Networks</i>	9
1.3.2 <i>Access Mechanisms: Signals, Symbols, and Narratives</i>	15
1.3.3 <i>Transfer Mechanisms: Formal and Informal Governance</i>	22
1.4 CONCLUSION	27
WHEN DOES SELECTION MATTER LESS? EQUALIZING ACCESS TO ENTREPRENEURIAL RESOURCES AND ITS EFFECTS ON ENTREPRENEURIAL OUTCOMES.	30
2.1 INTRODUCTION	30
2.2 THEORITICAL BACKGROUND	33
2.3 THEORY AND HYPOTHESES	36
2.3.1 <i>Entrepreneurial action</i>	37
2.3.2 <i>Entrepreneurial persistence</i>	41
2.4 EMPIRICAL CONTEXT AND DESIGN	44
2.4.1 <i>Empirical setting</i>	46
2.4.2 <i>Empirical Design</i>	47
2.4.3 <i>Experimental Procedure</i>	48
2.4.4 <i>Data Collection</i>	49
2.4.5 <i>Descriptive statistics of the sample at baseline</i>	50
2.5 EMPRICAL ANALYSIS AND RESULTS	53
2.5.1 <i>Results</i>	54
2.6 DISCUSSION	55
3.1.1 <i>Resource mobilization theory</i>	57
3.1.2 <i>Practical implications</i>	60

WOULD YOU GIVE ME YOUR PHONE NUMBER? THE EFFECT OF TACIT KNOWLEDGE ON EXPERIMENTAL LEARNING. EVIDENCE FROM A RANDOMIZED FIELD EXPERIMENT IN MOROCCO.	61
3.1 INTRODUCTION	61
3.2 THEORY BACKGROUND AND DEVELOPMENT	65
3.2.1 <i>Incompatibility in logics and the role of tacit knowledge</i>	68
3.3 EMPIRICAL CONTEXT	71
3.4 RESEARCH DESIGN	74
3.4.1 <i>Data</i>	75
3.4.2 <i>Measures</i>	77
3.4.3 <i>Descriptive stats</i>	79
3.5 EMPIRICAL ANALYSIS AND RESULTS	80
3.5.1 <i>Estimation strategy</i>	80
3.5.2 <i>Results</i>	81
3.6 DISCUSSION	85
3.6.1 <i>Limitations and boundary conditions</i>	87
DISCUSSION AND CONCLUDING REMARKS	90
APPENDIX – FIGURES AND TABLES	92
REFERENCES	111

LIST OF FIGURES

1 Total early-stage entrepreneurial activity (tea) and established business ownership (ebo) (both % of adults aged 18–64, 2020)	92
1.1 The resource mobilization path for low endowed entrepreneurs. Identified issues and proposed adaptations.	93
2.1 The relationship between randomized access to resources and entrepreneurial outcomes	93
2.2 Average marginal effects with 95 percent confidence intervals, on entrepreneurial action.	94
2.3 Average marginal effects with 95 percent confidence intervals, on entrepreneurial persistence.	95
3.1 Histogram of the total number of experimentation activities	95
3.2 Acquiring knowledge resources does not affect experimentation activities	96
3.3 Acquiring tacit knowledge resources increases experimentation activities	97
3.4 Among those who acquired knowledge, acquiring tacit knowledge resources increases experimentation activities	98

LIST OF TABLES

2.1 Descriptive statistics	99
2.2 Linear and non-linear regression results for entrepreneurial action	101
2.3 Linear and non-linear regression results for entrepreneurial action. T1 & t2 comparison	102
2.4 Linear and non-linear regression results for entrepreneurial persistence	103
3.1 Illustration of the key difference in mentor-entrepreneur interactions between a matched and a non-matched pair.	104
3.2 Explanation of experimentation activities	105
3.3 Descriptive statistics	106
3.4 Linear probability model (lpm) estimation for perceived and behavioral experimentation	108
3.5 Negative binomial model estimation for behavioral experimentation	108
3.6 Linear probability model estimation for behavioral experimentation	109
3.7 Negative binomial model estimation of mentor match effect on behavioral experimentation	110

INTRODUCTION

Entrepreneurship holds the potential to bridge inequality gaps, empower individuals, and improve livelihoods (Bruton, Ketchen, & Ireland, 2013; Sutter, Bruton, & Chen, 2019). Particularly in developing contexts, entrepreneurship has emancipatory potential, enabling the disadvantaged individual to embark on the exploitation of opportunities (Alvarez, Barney, McBride, & Wuebker, 2014; Rindova, Barrey, & Ketchen, 2009). However, ventures that seek to grow and thrive in such contexts often face severe resource constraints (Desa & Basu, 2013; Grichnik, Brinckmann, Singh, & Manigart, 2014). This is even more salient for disadvantaged entrepreneurs lacking the initial stock of resource endowments, be it human, social, or financial capital (Assenova, 2020; Reypens, Bacq, & Milanov, 2022). Thus, the question of how these entrepreneurs mobilize the resources they need in resource-constrained contexts is central to entrepreneurship and management research.

Beyond the theoretical importance of addressing this question, it also has large practical implications. In fact, whether it is formal or informal, growth-oriented, or small businesses, entrepreneurship is the dominant occupation in these contexts, especially for disadvantaged entrepreneurs. The 2020/2021 Global Report by the Global Entrepreneurship Monitor illustrates the phenomenon of entrepreneurship dominance in resource constrained contexts through their total early-stage entrepreneurial activity (TEA) metric, which measures the percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business.² Figure 1 illustrates the differences in such activity in developed contexts (low levels of TEA) compared to developing contexts (high levels of TEA). For instance, the TEA metric revealed that, as of 2021,

² <https://www.gemconsortium.org/file/open?fileId=50691>

one in two adults in Angola, and approximately one in three adults in Togo, Panama, and Colombia, are starting or running a new business venture. Of the report's six participating economies in Latin America and the Caribbean region, it was found that at least one in five adults are starting or running a new business. Converse to this, at the other end of the scale, Europe & North America have the lowest levels of early-stage entrepreneurship, with 14 of their 20 economies having less than one in 10 adults starting or running a new business. Some countries like Italy and Germany possess an even lower rate, with one in 20 adults or less starting or running a new business in 2020. Europe and North America's low levels of Total Early-Stage Entrepreneurial Activity (TEA) compared to the high level of TEA in economies of West Africa, Latin America, and the Caribbean region points to the latter as representing entrepreneur populations that can benefit from deeper research on how resource-constrained business ventures can better navigate the process of entrepreneurship.

Overall, entrepreneurial activity in developing and emerging economies is growing fast which illustrates a gap in extant literature's overemphasis on developed contexts (George, Howard-Grenville, Joshi, & Tihanyl, 2016). This creates a vital mandate for researchers to shed light on such contexts and examine how disadvantaged entrepreneurs mobilize resources which is the focus on this dissertation.

In a first step, this calls for a holistic understanding of the resource mobilization process, the mechanisms that prior research has postulated, and a delineation of how these mechanisms might benefit or hurt the low endowed entrepreneur. This foundational understanding is needed before anchoring subsequent empirical work in the resource mobilization process. Thus, the first chapter of this body of work investigates the phenomenon of resource mobilization by low-endowed entrepreneurs within resource constrained contexts. By drawing on the recent framework

of resource mobilization by Clough, Fang, Vissa, and Wu (2019), I develop a conceptual review where I highlight the main issues faced by low endowed entrepreneurs at each stage of the process (search, access, and transfer) and for each of the mechanisms involved.

The second and third chapters delve into specific stages of the resource mobilization process. Specifically, the second chapter focuses on the access stage by questioning the main assumption of different access mechanisms. That is, providing access to resources must involve some type of selection which is often based on the entrepreneur's endowment. In investigating whether selection matters in the provision of resources, I focus on two entrepreneurial outcomes given their relevance within the context of early-stage entrepreneurship and given their sensitivity to selection: entrepreneurial action and persistence. The third chapter focuses on the transfer stage by investigating the transfer of knowledge resources and how it impacts entrepreneurial experimentation.

The two empirical chapters have emerged out of a single research project with the broad objective to understand early-stage ventures' resource mobilization in resource-scarce contexts. Specifically, I chose to investigate the questions in these chapters through a randomized field experiment within an acceleration program in Morocco specifically designed for this project. Such setting epitomizes the process of resource mobilization within a resource constrained context.

The three chapters work together to inform our collective understanding of resource mobilization for disadvantaged entrepreneurs within resource constrained environments, of interest to both organizational and entrepreneurship scholars. The dissertation concludes with a brief discussion of these studies' key findings, their implications for theory and practice, and the avenues for future research they suggest.

CHAPTER 1

The Resource Mobilization Path for Low Endowed Entrepreneurs. What Does the Literature Tell Us?

1.1 INTRODUCTION

Inequality in access to entrepreneurial resources is primarily driven by the individual's resource endowment – their initial stock of resources (human, social and financial forms of capital). Namely, resource holders often favor entrepreneurs with higher endowments leading to an unfair distribution of resources (e.g., Gimmon & Levie, 2010; Ko & McKelvie, 2018). Within resource constrained environments such as developing and emerging economies, the unfair distribution of resources is likely to be heightened given their scarcity. Thus, simply injecting resources, public or private, in such environments might be highly ineffective in spurring entrepreneurial activity. In fact, it might even exacerbate the issues of low endowed individuals and perpetuate inequities.

Resource mobilization, as conceptualized by Clough, Fang, Vissa, and Wu (2019), may provide a useful theoretical framework for better understanding these issues. It is defined as a process for recognizing (as a result of search), acquiring (once access is provided), and integrating (following transfer) the resources needed for a business to take advantage of an opportunity (Stuart & Sorenson, 2007; Clough et al., 2019). The three distinct stages: search, access, and transfer, focus on how the resources injected within an environment are mobilized by individuals seeking these resources. In studying the different stages of resource mobilization, scholars have outlined the role of resource endowment. Those with initial higher human, social, and financial capital are

more likely to mobilize the resources they need (e.g., Clough et al. 2019; Anderson & Miller, 2003; Ito, 2018; Ko & McKelvie, 2018). Thus, investigating the mechanisms of each step in the process of resource mobilization can shed light on why injecting resources within resource constrained environment can be ineffective and might perpetuate inequities. I doing so, I ask the following questions: *Do certain mechanisms favor the highly endowed entrepreneur? And if so, how can we adapt these mechanisms to low endowed entrepreneurs in order to hopefully reduce the existing inequities or at least avoid perpetuating the gaps?*

To investigate these questions, I first briefly review the broad literature of resource mobilization and discuss the role of endowment. Then, I delve into the mechanisms of each stage of the resource mobilization process and discuss how such mechanisms might work for or against the low endowed individual, and in the case of the latter, I propose an adaptation of the mechanism to align it with the capabilities and context of the low endowed entrepreneur.

1.2 THEORITICAL BACKGROUND

The “processes by which entrepreneurs assemble the resources used to execute on an opportunity” (Clough et al., 2019, p. 240) are often challenging tasks for early-stage ventures (Brush et al., 2001; Baker & Nelson, 2005; Shane & Venkataraman, 2000). The challenge stems from information asymmetry and from uncertainty about the value of entrepreneurial opportunities and a firm’s ability to exploit them (Amit, Brander, & Zott, 1998) given its newness and smallness (Cooper, Gimeno-Gascon, & Woo, 1994; Stinchcombe, 1965). Resource providers tend to possess less information than entrepreneurs about certain opportunities in new business ventures, such as proposed means of leveraging opportunities to succeed in the venture. Moreover, the value of these opportunities is largely unknown prior to their exploitation (Shane, 2003; Stuart, Hoang, & Hybels,

1999). This lack of understanding renders resource holders reluctant to commit their resources to new ventures (Bhide, 2000; Schoonhoven & Romanelli, 2001).

However, entrepreneurs' initial access to resources is a self-reinforcing process that helps reduce asymmetries. Namely, it reduces the liabilities of newness and smallness (Cooper et al., 1994; Stinchcombe, 1965) and renders subsequent resource acquisitions easier (Shane & Cable, 2002). For example, the more that a venture receives in (non-redundant) certificates (Lanahan & Armanios, 2018), awards (Hallen, 2008), media attention (Petkova, Rindova, & Gupta, 2013), or other initial access, the more likely it is that the venture's existing resource mobilization efforts will succeed. The same argument applies to founders' personal resource endowments, which are often necessary to secure the initial stock of resources for the venture (Anderssen & Miller, 2003; Assenova, 2020).

Thus, the study of entrepreneurs' early stages of resource mobilization while considering their initial personal endowments is particularly important and intriguing. Taking this line of argument further, if entrepreneurs start with insufficient endowments (as those in resource-constrained environments typically do) yet strive to extend them into a productive bundle by seeking resources from outside, the processes of closing this gap are thus at the very heart of every resource-constrained entrepreneurial endeavor.

The role of resource endowments

Resource endowments are often used as a key indicator of an individual's capabilities (Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012; Krieger, Williams, & Moss, 1997; Lynch & Kaplan, 2000). Past research illuminates how prior resource endowments affect different entrepreneurial outcomes including survival (e.g., Anderson & Miller, 2003). Other studies examine how entrepreneurs' individual attributes and achievements help to determine their

resource mobilization mechanisms including educational attainment (e.g., Gartner, Frid, & Alexander, 2012), professional experience (e.g., Grichnik et al., 2014), and gender (e.g., Becker-Blease & Sohl, 2007). For instance, Grichnik and colleagues (2014) find that entrepreneurs' professional experiences and academic education levels affect whether their ventures engage in bootstrapping mechanisms, and if so, which specific bootstrapping behaviors they pursue.

However, many entrepreneurs lack these initial endowments to and yet they also mobilize resources successfully even within resource-constrained environments with high levels of inequalities. In the following conceptual review discussing the different mechanisms used at each stage of the resource mobilization process, I discuss how such entrepreneurs may overcome these hurdles.

1.3 MECHANISMS OF RESOURCE MOBILIZATION: Search, Access & Transfer

The literature on mechanisms of resource mobilization provides a range of approaches, all of which can ultimately be distilled into two primary pathways: resource seeking or making do with the resources at hand (e.g., bricolage) (Reypens et al. 2022; Baker & Nelson, 2005). In resource seeking, entrepreneurs can access existing resources from external resource holders (Villanueva, Van de Ven, & Sapienza, 2012), or acquire them for a market price. In using the resources at hand, entrepreneurs can opt for alternatives to existing resources held by external resource holders, substituting one intended resource with another, “making do” with the resources at their hands (Baker & Nelson, 2005), ultimately reallocating, recombining, repurposing, or creating a resource for their needs or salvaging resources that others have discarded (Boyd, 1990; Hillman, Withers, & Collins, 2009; McDougall & Oviatt, 2000). The dominant manifestation used in the literature for this pathway is the use of bricolage which is often presented as a response to

resource scarcity (e.g., Desa & Basu, 2013; Wierenga, 2020). Bootstrapping mechanisms are the second dominant mechanism in such contexts, in which bootstrapping aligns with the bricolage behavior as an entrepreneur makes an effort to reduce their reliance on external resource holders (Grichnik et al., 2014; Waleczek, Zehren, & Flatten, 2018).

In this conceptual review, I specifically focus on the first pathway, resource seeking (Reypens et al. 2022). That is, entrepreneurs attempting to mobilize resources from external resource holders. To be clear, by focusing on a single pathway, I do not intend to claim that using one path excludes the use of the other path. While most studies examine bricolage and/or bootstrapping in isolation from other resource mobilization mechanisms (e.g., Stenholm & Renko, 2016), and often contrast it to resource seeking (e.g., Desa & Basu, 2013), recent work by Reypens et al. (2022) show that entrepreneurs within resource-scarce environments can adopt both approaches alternatively, whereby bricolage is used selectively or occasionally and potentially alongside other resource mobilization behaviors. The authors examine the resource mobilization behaviors of seven early-stage medical technology ventures in Kampala, Uganda over a nine-month period, revealing that higher-performing ventures increased their resource-seeking behavior over time, but also alternated between engaging in higher and lower levels of bricolage. Overall, resource-seeking and using the resources readily available go hand in hand, but the current image in the literature often portrays the disadvantaged entrepreneur as primarily making do with the resources at hand to overcome its constraints. In this article, I seek to examine a different image of constrained disadvantaged entrepreneurs engaging in resource-seeking behavior.

To organize this conceptual review of the different mechanisms of resource mobilization from external resource holders and the role of endowment as a key antecedent, I borrow from Clough and colleagues (2019) process perspective. I organize my argument according to the three

distinct stages of resource mobilization: search, access, and transfer. In the following sections, I briefly review each stage, delve into the mechanisms involved for each stage and discuss how each mechanism is influenced by the entrepreneur's initial endowment of resources, focusing specifically on initial endowments of human capital and social capital. In doing so, I identify the issues that low endowed entrepreneurs face in their resource seeking pathway. I call this the problematic path. I then propose an adapted path that will leverage the attributes of low endowed entrepreneurs in their resource seeking journey. To preview these different paths and the overall mechanisms discussed in this review, please refer to the following figure.

1.3.1 Search Mechanisms: Networks

Clough and colleagues (2019) develop a model where new resources are searched for and recognized through social networks (Grossman, Yli-Renko, & Janakiraman, 2012). They argue that startups possess an initial personal endowment—constituted by human, social and other forms of capital—which then shapes resource search and the accumulation of an eventual, organization-level endowment. In the following sub-section, I discuss the two main forms of searching for resources through social networks and the role of endowment in shaping the search process: pre-existing networks, and network formation.

1.3.1.1 Pre-existing Networks

“There is little doubt that entrepreneurs’ ties provide them with resources and/or access to resources” (Khayesi & George, 2011, p. 473). The tie can be direct or indirect (Shane & Cable, 2002), or strong or weak, depending on the frequency and intensity of interactions (Granovetter, 1973). In all cases, ties will aid entrepreneurs in resource mobilization (Hallen & Eisenhardt, 2012). This is depicted in the large literature discussing the role of network mechanisms in

entrepreneurial resource mobilization (e.g., Hallen, 2008; Shane & Stuart, 2002; Villanueva et al., 2012).

Notably, the key role of these ties is that they can be used to convey information (Shane & Cable, 2002), send positive signals (Hsu, 200), or instill shared understandings and trust (Ozdemir, Moran, Zhong, & Bliemel, 2016). This presents two issues for entrepreneurs with low social and human capital. First, they do not have these ties in the first place, and second, even for entrepreneurs who can form these ties as I will discuss in the following subsection (network formation), they lack the resource endowment to intentionally send the positive signals that are often conveyed through these ties. Let us focus on the first issue, the lack of a pre-existing social capital. I will discuss the second issue in the access stage.

By virtue of human nature, almost every individual is embedded within a social network. Thus, even disadvantaged entrepreneurs with low social capital have some ties as they are embedded within their community. However, two issues arise regarding the low-endowed entrepreneur pre-existing network: (i) lack of useful connections (weak network composition) and (ii) over-embeddedness (weak network structure). First, a network is only useful if it is composed of the right connections to get the entrepreneur access to resources. Disadvantaged entrepreneurs lack those kinds of connections. Second, whereas embeddedness within a network can enable access to resources and opportunities, over-embeddedness can constrain this access through factors such as cognitive and relational lock-in (Busch & Barkema, 2020; Maurer & Ebers, 2006). Disadvantaged entrepreneurs with low social capital suffer from over-embeddedness. Thus, not only do these entrepreneurs lack the necessary ties to build and potentially broaden their network, but they are also often over-embedded in their small network and thus lack the social tools to navigate and search for resources outside their homogenous group.

One solution to the weak composition issue, is to broaden the local networks of disadvantaged entrepreneurs via decentralization of public social resources. It has been established through multiple experiments in different countries (Bergh, 2021), that decentralization can help channel resources to disadvantaged individuals who may have been ignored in a centralized network of public resources. For example, the so-called “advanced regionalization” of investment centers that support local entrepreneurs in Morocco has been a successful model in strengthening the network composition of local entrepreneurs (Bergh, 2021). Morocco’s “advanced regionalization” was a response to the people demand for equal access to resources during the “Arab Spring”.^{3,4}

However, injecting social capital resources locally through decentralization might be ineffective if the disadvantaged entrepreneur does not take advantage of these resources. Recall, my starting point that injecting resources within a resource constrained environment is not sufficient. Thus, to strengthen the composition, we need to first fix the network structure issue of over-embeddedness. Those who are successful in overcoming their lack of social capital are often those who can overcome the cognitive lock-in effects caused by over-embeddedness.

A potential solution to aid entrepreneurs in emancipating themselves of a small, homogeneous network and over-embeddedness lies in taking advantage of exposure to media and its influence on individuals’ behavior (Banerjee, Ferraga, & Orozco-Olvera, 2019). Bjorvatn, Cappelen, Sekei, Sorensen, and Tungodden (2019) illustrate this in the case of edutainment. They designed a field experiment with around 2,000 secondary school students from Dar es Salaam,

³ Chapter 9, Articles 135–146; Royaume du Maroc, 2011

⁴ The Arab Spring was a desperate cry for help by marginalized groups and regions, suffering from spatial inequality, against highly centralized systems in which all resources (tangible and intangible) were concentrated in a few hands at the center.

Tanzania. The experiment encouraged students and their families to watch an educational television show that portrayed the lives of six young entrepreneurs, men and women, and included themes related to entrepreneurship, business skills, and financial literacy. A total of 21 secondary schools were randomly assigned to watch this entrepreneurship-focused television show, while 22 schools were assigned to a control non-educational movie. They found positive effects on entrepreneurial traits and occupational choice both in the short and long run. In particular, the educational television show increased aspirations, thereby inducing an increase in entrepreneurial traits measured through lab experiments two years after the entrepreneurial-focused educational television show concluded. Treated individuals were 30 percent more likely to have started a business. Interestingly, there was no impact on business knowledge in the short run. This is not surprising, as edutainment is a form of a behavioral nudge to emancipate individuals from their cognitive lock-ins. An unintended effect of the program was the fact that it led to lower investment in education: treated students had higher failure rates in their final school exams, and fewer of them went on to study beyond secondary school. The authors discuss this result in the context of the perceived generally poor quality of secondary education in Tanzania, but also express the caveat that the relative emphasis on work in the television show may have induced incorrect beliefs regarding the importance of education.

Therefore, in resource-scarce contexts, behavioral nudges such as media complemented with decentralization of public resources pose a promising solution to reduce the inequities in social capital endowments (Banerjee et al., 2019; Banerjee & Duflo, 2011; Taleb, 2018) and can help entrepreneurs overcome constraints of low social capital and over-embeddedness. However, in adopting these macro-level solutions to address the pre-existing network issues, we are

implicitly transitioning the entrepreneur to network formation, the next mechanism I discuss in the search stage.

1.3.1.2 Network formation

Once entrepreneurs fully exploit their ties, or when the cost of exploiting ties exceeds expected outcomes, they form new ties by attending public events, advertising, and cold calling, among others. Accordingly, when entrepreneurs and resource holders who have no prior direct or indirect ties initiate a conversation about the venture and its resource needs with each other, this constitutes an act of tie formation (Gulati, 1995; Vissa, 2011) and hence could be considered to constitute a network formation mechanism. In the last decade, online resource mobilization has become the primary manifestation of this phenomenon, where resources are exchanged with little or no interaction between entrepreneurs and resource holders, as is the case on crowdfunding or crowdlending platforms; the latter being the most prominent in resource-constrained environments such as the Kiva platform.⁵ Another emerging phenomenon is the use of institutional intermediaries, such as incubators and accelerators, to form new ties (Armanios, Eesley, & Eisenhardt, 2017).

As suggested in the previous sub-section, network formation is one of the search mechanisms that works for the low endowed entrepreneur and help increase their social capital, once they have overcome the issue of over-embeddedness. While the forms of network formation might look different for low endowed entrepreneurs given their increased focus on public resources compared to the high endowed entrepreneurs who often focus on private resources, the mechanism

⁵ The world's first online lending platform connecting online lenders to entrepreneurs across the globe with a mission "to expand financial access to help underserved communities thrive."

in itself almost always work similarly for both types of entrepreneurs. It strengthens their social capital.

However, given the role of networks as a channel to flow information between resource seekers and resource holders, network formation can disservice the low endowed individual. Namely, while entrepreneurs with high endowments put effort into sending a signal about their capabilities, entrepreneurs who lack them ultimately send a signal about their potential lack of certain capabilities. The difference between the two is that the former's signal will be sent out purposefully to resource holders while the latter's signal is sent out unintentionally by entrepreneurs but received and used by resource holders to determine a denial of resource access. In this case, because of network formation, the unintentional flow information can be broadcasted indirectly to other resource holders and create a bottleneck for the low endowed resource seeker. At this stage, the entrepreneur has completed search and is practically entering the access stage. Therefore, I will discuss this issue of unintentional flow of information in the next section.

Overall, in reviewing the two mechanisms of *search*, three issues arise for low endowed entrepreneurs: in pre-existing networks, I identify lack of useful connections and over-embeddedness as the two main issues. Resolving these issues through decentralization of public resources such as regionalization of entrepreneurial support centers, and macro-level behavioral nudges such as use of media, will help entrepreneurs transition and activate the second mechanism, network formation. In briefly reviewing this mechanism, I highlight the issue of unintentional flow of information in the newly formed network. Such issue, if not resolved early in the process, may constitute the main bottleneck in the *access* stage.

In the following section, discussing the mechanisms of access, I discuss the issue of unintentional flow of information in further details in the *signals* and *symbols* mechanisms and propose narratives as an important mechanism to circumvent such issue.

1.3.2 Access Mechanisms: Signals, Symbols, and Narratives

The literature on resource mobilization has identified three main gateways to accessing more resources and augmenting the stock of resources using the existing endowments of the venture and its founders: signals, symbols, and narratives. In the following subsection, I discuss each of these three gateways as an access mechanism.

1.3.2.1 Signals

The trend of research pertaining to access mechanisms often borrows from signaling theory (Spence, 1973), examining the different signals entrepreneurs and their ventures can send to resource holders to facilitate resource mobilization; yet, signals based on existing resource endowments such as, founders' education and experience levels (e.g., Ko & McKelvie, 2018), or credibility are costly to develop and acquire. Owing to the substantial cost involved in acquiring a stock of endowments pre-entry into entrepreneurship, entrepreneurs with limited resources find it highly costly to send the quality signals that would enable outsiders to distinguish between high- and low-quality entrepreneurs in the economy (Connelly et al., 2011; Kirmani & Rao, 2000).

Extant literature depicts signals both in contexts where entrepreneurs and resource holders are already connected (pre-existing networks) (Huang & Knight, 2017) and not (yet) connected (network formation). An example of the latter lies in crowdfunding (e.g., Oo et al., 2019) or microcredit platforms (Moss, Neubaum, & Meyskens, 2015). This literature implicitly positions

the access mechanism of signals at the interface of the two search mechanisms discussed previously (i.e., network mechanisms).

As discussed in the network formation mechanism, signals can either be sent out intentionally or unintentionally. Entrepreneurs seeking resources generally do not send negative signals to resource holders with a view to reducing information asymmetry, but this is often an unintended consequence of the entrepreneur's action. In the case of entrepreneurs with low resource endowments, their signals are often sent out unintentionally (Connelly et al., 2011). Different from intentional signals, which are purposefully sent out by signalers to change perceptions of an observing audience in a positive and ultimately successful way, unintentional signals are inadvertently delivered by signalers and may be interpreted by receivers in ways the signalers did not expect and appreciate (Krausert, 2016). For example, an entrepreneur's lack of confidence in speaking a business language can function as an unintentional signal that is not explicitly sent out by the entrepreneur. However, resource holders may interpret their lack of education or confidence in speaking French or English as a data point to evaluate the entrepreneur's ability to carry the venture development as they seek any signal that would reduce the information asymmetry.

Two issues arise here, first the entrepreneur is unaware that they have engaged in signaling and had sent out the wrong signal. Second, the resource holder is anchored on standard signals that any deviation might seem like a wrong signal, although it is merely a different signal. In other words, what resource holders would classically consider as a low endowed or disadvantaged entrepreneur is rather a differently endowed or differently advantaged entrepreneur. However, resource holders anchored on standard attributes may miss the different endowments these

entrepreneurs have and similarly the entrepreneurs often fail to showcase their uniqueness and difference in a positive way, resulting in unintentional flow of negative information.

1.3.2.2 Symbols

Like signals, symbols and symbolic actions can also facilitate resource mobilization. Symbols rely on evoked meanings and common interpretations by entrepreneurs and resource holders. They can convey personal credibility and achievements, create identities, and affect emotions (Zott & Huy, 2007). Symbols encompass, for instance, visuals like meeting settings, or actions like deliberate displays of education, venture performance, awards, and stakeholder relationships (Zott & Huy, 2007).

Symbols also rely on existing endowment. For example, Zott and Huy (2007) linked the symbolic actions of entrepreneurs with resource acquisition for ventures in the early stages of development. Through their inductive analysis of seven new ventures, they developed a conceptual model highlighting four categories of symbolic actions: (1) demonstrating personal credibility (e.g., displaying a business school degree from a prestigious university); (2) professional organizing (e.g., emphasizing the company's website, its offices, or its dress code); (3) emphasizing organizational achievement (e.g., using prototypes, product demonstrations, trial sites, and awards); and (4) highlighting stakeholder relationships (e.g., using high-profile names, mentioning relationships with famous people or companies, or involving prestigious outsiders as company representatives in meetings). All four categories of symbolic action rely on the strong endowment stock of an entrepreneur. In practice, symbolic actions conceptually overlap with the use of signals, and thus risk harm to successful resource mobilization if these symbols are conveyed unintentionally in the same way that signals often are by disadvantaged entrepreneurs.

Ultimately, unintentional signaling and unintentional use of symbols are identified as two key issues in the access stage of resource mobilization.

One way to overcome the obstacles of sending unintentional signals and symbols for disadvantaged entrepreneurs is through leveraging narratives, which is the next access mechanism I discuss.

1.3.2.3 Narratives

Beyond leveraging the access mechanism of symbolic actions and signaling existing endowments, entrepreneurs also convey information, influence resource holders, and ultimately facilitate resource mobilization by using narratives. At this early stage of resource mobilization, audience members' evaluation can be based neither on tangible results, nor performance metrics, nor market feedback, so audience evaluation relies significantly on prospective entrepreneurs' oral or written narratives.

Lounsbury and Glynn (2001) incorporated the concept of a new venture identity into their theorizing about the role of stories and narratives in the entrepreneurial process. They argued that stories about the founders and their efforts to create a new venture serve to “identify and legitimate new ventures, thus mediating between extant stocks of entrepreneurial resources and subsequent capital acquisition and wealth creation” (p. 546). Following Lounsbury and Glynn (2001), Martens, Jennings, & Jennings (2007) empirical examination of the link between organizational narratives and resource acquisition for firms at the time of an Initial Public Offering (IPO), show that narratives and storytelling help to construct unambiguous identities, provide information on venture risks and elicit familiarity, which aid in resource mobilization. Their findings suggest that narratives influence resource providers in ways that go above and beyond the effects of more

purely factual information about an entrepreneur's resource endowments. They also found evidence that the authors of entrepreneurial narratives took the liberty to "re-present" the facts as they saw fit, thereby manipulating the messages portrayed about the venture in order to make it appear more attractive. A recent study by Huang, Joshi, Wakslak, and Wu (2021) also shows the impact of narratives on resource access. They found that female founders are more likely to use concrete language when describing their ventures than their male counterparts, who are more likely to utilize vague language. The level of speech abstractness consequently shaped venture capitalists' willingness to invest, favoring vague language to concrete. Overall, entrepreneurs who craft compelling narratives are more likely to mobilize the resources necessary to develop their ventures (Garud, Schildt, & Lant, 2014).

Prior research has identified different entrepreneurial narrative types including *identity*, *opportunity*, *resourcefulness*, *failure*, *projective*, and *pivot narratives*. Identity narratives help entrepreneurs describe "who they are" and "what they do" (Navis & Glynn, 2011). Opportunity narratives describe the factors that give rise to the entrepreneurial opportunity (Garud & Giuliani, 2013). Resourcefulness narratives describe "a discursive, temporal account of past or ongoing entrepreneurial actions, whereby an entrepreneur is presented as using, assembling, or deploying resources in creative ways in order to overcome an impediment" (Fisher, Neubert, & Burnell, 2021). Failure narratives provide attributions for prior failures and leverage learning from the failed experience (Mantere, Aula, Schildt, & Vaara, 2013). Projective narratives depict possible future trajectories of action (Garud et al., 2014). Finally, pivot narratives describe major venture changes (McDonald & Gao, 2019). Another narrative that is sometimes used, especially by low endowed entrepreneurs to sway information about their identity, is the *passing* narrative (Clair, Beatty, & Maclean, 2005). Namely, in their interactions with resource holders, a low

endowed entrepreneur may seek to reduce the negative attitudes and stereotypes directed toward them by attempting to “pass” for a highly endowed entrepreneur.

To explore how these different types of narrative might help the low endowed entrepreneur, let us focus on the relevant narratives. Specifically, opportunity, identity and passing, and resourcefulness. The other narratives are not relevant in this discussion given the boundary conditions of this conceptual review focusing specifically on the low endowed first-time entrepreneur developing a nascent venture. This means that the entrepreneur has never failed before (in an entrepreneurial context) as they are pursuing an opportunity for the first time; and their venture is not developed enough to go through pivots. The projective narratives are relevant for this type of entrepreneur, but they are often used later in the process after an initial relation has been established with the resource holder and as they start seeking further information beyond the founders’ attributes and the opportunity they identified. Thus, I will not focus on projective narratives either.

Starting with the identity and passing narratives, the main issue in this case is that the entrepreneurs are often aware of disadvantage because of their lack of human capital and thus they try hard to conceal their identity and pass for someone with higher human capital. This often results in sending incongruent signals and symbols to the resource holder and thus hindering their process of accessing resources. However, those who embrace their identity can show the resource holder that they are not disadvantaged but rather differently advantaged. To leverage this identity narrative, Fisher and colleagues (2021) developed a theory on resourcefulness narratives. The key attribute that makes such narrative powerful for low-endowed entrepreneurs is that they leverage past and present resourceful actions. Disadvantaged entrepreneurs are hustlers by virtue of their background and have an abundance of experiences that if converted to resourcefulness narratives

can be used to attract resources from external resource providers by appealing to their emotions and cognitions (Fisher et al. 2021). Specifically, Fisher et al. (2021) argue that a specific set of emotions (surprise, interest, and admiration) and cognitive pathways (signaling competence, commitment, and credibility) serve as channels through which resourcefulness narratives can influence resource holders' decisions to provide support. This is especially salient when the resourceful behavior is not the norm within the resource holder context. Thus, for a disadvantaged entrepreneur (e.g., entrepreneurs from rural regions, from favelas or slum areas outside of big cities, or from developing countries) pitching themselves and their idea to investors outside of their contexts, embracing once identity and using resourcefulness narratives can significantly increase their chances of attracting resource holders' attention.

Once seen as a differently endowed entrepreneur instead of a low endowed entrepreneur, they can then use opportunity narratives to their advantage by showcasing that only they can respond to the need of their community. Understanding the culture of a target market is a fundamental prerequisite for opportunity exploitation. This is even more critical in marginalized communities because they are intended to solve a problem in a particular culture. Entrepreneurs in these cases may consider many factors, such as the lack of infrastructure (e.g., electronic products that can survive frequent power outages), or gender norms (e.g., packaging and commercializing sanitary pads for women in a society where menstruation is a social taboo). This will show the resource holder that only a “differently advantaged” entrepreneur can respond to such needs and tap into that market. They are responding to a need of a population only they can understand.

Therefore, avoiding passing narratives, and embracing once identity through resourcefulness and opportunity narratives pose a primary approach to overcoming the obstacle of low human capital that drives unintentional signaling and use of symbols. In other words, low

endowed entrepreneurs who seek to stand out rather than fit in are more likely to succeed in accessing the resources they seek.

1.3.3 Transfer Mechanisms: Formal and Informal Governance

At the transfer stage of the resource mobilization process, the entrepreneur has succeeded in attracting the resource holder's attention and convincing them to provide their venture with resources. The overarching assumption in the literature is that by this stage, the resource mobilization process has been successful and is concluded. However, while the mere act of transferring resources can be the enabling factor of venture development, it can also serve as venture development's major bottleneck: the conditions of transfer, if not aligned with the resource seeker's goals and needs, can be burdensome and hurt the venture's development. This is in line with the literature on the resource-based view that argues the mere possession of resources constitutes an insufficient condition for their effective use (Lippman & Rumelt, 2003; Penrose, 1959; Sirmon, Hitt, & Ireland, 2007). Thus, the governance mechanisms of resource transfer are key to a successful and complete resource mobilization process.

1.3.3.1 Formal governance

Clough et al. (2019) recent review of the literature found that the majority of studies regarding resource mobilization are based on market logics and formal governance mechanisms during the transfer stage. Similarly, in practice, formal governance is a traditional governance mechanism leveraged by resource holders in agreements with disadvantaged entrepreneurs. Formal governance mechanisms are used to counteract frictions that arise due to threats of opportunistic behavior, high uncertainty surrounding the venture and its intangible entrepreneurial resources, and to mitigate issues highly specific to the entrepreneurial opportunity

in question (Alchian & Demsetz, 1972; Alvarez & Barney, 2004; Kaul, 2013). The formal mechanisms used to reduce the risk of such frictions occurring include formal contracts and formal authority. These mechanisms are enacted to align incentives and thus reduce moral hazard by both the resource holder and the resource seeker.

There are different types of formal governance approaches to adopt, all of which can be distilled into two categories: *resource-based governance* which often favors the utilitarian use of resources, and *outcome-based governance* which often favors the instrumental use of resources. In the utilitarian application of resources, the resource is applied directly to the venture's production process or is combined to develop other resources. For instance, physical resources, such as equipment or office space, can be considered utilitarian in producing a product or service. On the other hand, instrumental application of resources is used specifically to provide entrepreneurs with access to other resources for them to leverage at their discretion to achieve venture success. For example, financial resources, especially fungible cash, are considered instrumental because they are flexible and can be used to obtain other resources, such as people, equipment, or even time.

In discussing these two formal governance approaches and how they impact the deployment of resources by disadvantaged entrepreneurs, I use the general case of transferring public resources. Public resources provided by governments, directly or through intermediaries, constitute a substantial part of resources mobilized for disadvantaged entrepreneurs within resource-constrained contexts given the lack of traditional sources of early-stage financing such as venture capital (George & Prabhu, 2000; Armanios et al. 2017). In their provision of public resources, government agencies and their intermediaries often base their governance mechanism on the utilitarian approach. Such approach takes agency from entrepreneurs based on the

assumption that they have low human capital and competing resource needs (personal/household needs versus venture needs). In doing so, they prematurely conclude that the entrepreneurs will act with opportunism if given the cash directly to buy the resources they need from the market - whether that is labor, equipment or any other type of resource. Consequently, such constraining transfer mechanisms spark decoupling where entrepreneurs switch their attention from focusing on building a business that creates value to a business that attracts any resource. Namely, in an effort to adapt and risk losing the resource holder's attention, disadvantaged entrepreneurs decouple their access narratives, especially projective narratives, from their deployment practices (Kim & Lyon, 2015; Marquis & Qian, 2014) to alleviate governance constraints.

The numerous entrepreneurship programs funded by the government are a good example to illustrate this phenomenon. Many of these programs turn their attention to entrepreneurs with low resource endowments to help overcome their search and access obstacles. While these programs serve as great initiatives to bring equity to the entrepreneurial playing field, lack of trust in and the lack of agency given to entrepreneurs, manifested in conditions of formal authority governance makes the process inefficient. For instance, such constraints lead many entrepreneurs to pitch their need for expensive equipment, receive it, then after a few months sell the unnecessary equipment in the market for a lower price to finally receive the fungible cash they needed in the first place. What we see here is that resource-based governance structures burden entrepreneurs, forcing them to regress back to the bricoleur behavior as a dominant resource mobilization mechanism.

Furthermore, while there is some rationale to the worries held by public resource holders about competing resource needs (household versus venture needs), we can still challenge the overarching assumption that utilitarian provision of resources to constrained entrepreneurs will

most likely be used for personal purposes and ultimately harm the venture funded by government monies. In fact, even if hypothetically all or part of the provided financial resources were used for personal needs, it can still result in positive outcomes for the venture. One dominant example in practice and in the literature (Campos & Gassier, 2017), especially for female entrepreneurs who often have to balance between working on their venture and caregiving, is their partial use of the cash they receive to outsource caregiving and focus on the development of their venture. For instance, a female entrepreneur may opt to buy less expensive second-hand equipment and leverage her savings to purchase childcare. In this case, she is indirectly buying time to work on the development of her venture which would ultimately benefit the venture outcomes.

Furthermore, McKenzie (2017) shows that winning a large cash grant in a business plan competition in Nigeria had significant positive impacts on the likelihood of a recipient operating a firm and that these impacts are larger for women than for men. McKenzie (2017) also finds equal and large positive effects for male and female-owned firms of winning these grants on employment creation, profits and sales. These results apply to both new and existing firms. Evidence from Blattman et al. (2014) is also indicative of this conclusion of the impacts of cash grants for new entrepreneurship.

Therefore, in such environments, compared to traditional resource-based governance, outcome-based governance that allows for the instrumental application of resources can be more beneficial to a venture, as it is flexible enough to meet a resource-constrained entrepreneur's logistical needs for success. The resource holder can align their contractual conditions with the entrepreneurs' targeted outcomes while giving equal agency to the resource holder and seeker in the transaction. In summary, while the resource-based approach helps curb human limitations

through vigilance and discipline, the outcome-based governance approach taps into individuals' aspirations via cooperation and empowerment.

1.3.3.2 Informal governance

In addition to outcome-based and instrumental types of formal governance, informal governance can be another tool to align goals and reduce the risk of moral hazard manifested in decoupling behaviors (Bradach & Eccles, 1989). Overarchingly, informal governance is often manifested in trust, the “psychological state comprising the intention to accept vulnerability based on positive expectations of the intentions or behavior of another” (Rousseau, Sitkin, Burt, & Camerer 1998 p. 395). When parties trust each other, they can engage in resource transfers with minimal, or even without, use of formal contracts.

There are three primary motives for the resource holder to trust the disadvantaged resource seeker. First, the resource seeker understands the future benefits that come from prioritizing the venture's success instead of applying resources to irrelevant personal needs that do not serve the venture. Second, resource seekers often anticipate a continuance of their relationship with the resource holder. Third, the exchange of resources within small emerging entrepreneurial ecosystems, which is often a characteristic of resource-constrained environments, has much lower risks of opportunistic behavior due to potential social sanctions from the community to engage in such behavior (Burt & Knez, 1995). Therefore, relying on trust during the transfer of resources may reduce the burdens of formal governance and allow for increased instrumental deployment of resources which would, in turn, increase the value of the resource itself by practically meeting the holistic needs of a venture's success, such as caregiving, as evidenced above.

Overall, in reviewing the transfer stage of resource mobilization, I delve into the issues of formal governance suggesting that resource-based governance can lead to opposite unintended effects. Namely, such approach increases rather than decreases the risk of moral hazard as it leads entrepreneurs to decouple their access narratives from their deployment practices. In contrast, outcome-based governance coupled with informal governance can both curb moral hazard behaviors and help align the goals of resource holders and seekers.

1.4 CONCLUSION

Entrepreneurial resource mobilization has attracted scholarly interest from numerous research disciplines and has grown into a sizeable body of research. After decades of research, however, scholars still have many avenues to explore in this field. This conceptual review's exploration of specific resource mobilization mechanisms, and subsequent discussion of how a resource seeker's endowment before entering entrepreneurship may influence their leveraging of such mechanisms, seeks to shed light on an avenue of entrepreneurial resource mobilization study that is yet to be explored by dominant literature and that holds potential to practically benefit disadvantaged entrepreneurs.

Traditional forms and application of search, access, and transfer mechanisms typically do not favor disadvantaged entrepreneurs with low endowments be that human or social capital. In this paper, I aimed to identify the points in conventional resource mobilization stages where low endowed individuals are met with conditions that rely on resources that are not available given their low endowment. In doing so, I highlight two main issues in using pre-existing networks: lack of useful ties and over-embeddedness. To overcome such issues, I suggest macro-level solutions including decentralization of public resources and large-scale behavioral nudges. The goal here is to help entrepreneurs increase their social capital by leveraging network formation as a search

mechanism. However, leveraging the power of networks can be an issue in itself for the low endowed entrepreneur. This is because networks are channels that facilitate the flow of information from resource seekers to resource holders. Here, I highlight the issue of unintentional flow of negative information through signals and symbols. To circumvent this, I suggest three types of narratives that can help control the flow information and transform it to positive information that can attract the resource holder interest.

In the third section of this article, I focus on the transfer stage where the relationship between entrepreneurs and resource holders materializes as they engage in an exchange of resources. Here, I propose that in the transferring of resources, resource-based governance structures are largely incompatible with how and what disadvantaged individuals need to successfully navigate their ventures. In contrast, outcome-based along with informal governance constitute an appropriate approach for the two actors (seekers and holders) to align their goals and successfully conclude the resource mobilization process.

Overall, this review highlights a set of promising paths for future research that would help diversify the contexts it investigates, contributing to a greater depth of understanding of the multifaceted nature of entrepreneurial resource mobilization. Enhancing contextual and international considerations in theory building on entrepreneurial resource mobilization will require deep study of and engagement with diverse research settings, beyond the high and upper middle-income countries observed most often in extant work. Limited data access should no longer serve as a viable excuse for scholars not to investigate challenging settings. If entrepreneurs can create and grow ventures within such contexts and overcome limitations to mobilize resources, then we can do the same as entrepreneurship scholars. Such deeper understanding of resource mobilization mechanisms in diverse contexts is important given its direct implications on

organizational outcomes like survival and growth (e.g., Nason & Wiklund, 2015). However, as seen in this review, the resource-outcome relationship can also be mediated or moderated by resource endowments. Thus, increased transparency on the relationship between resource mobilization mechanisms, resource endowments, and outcome variables would help to illuminate not only what resource mobilization yields, but how and why.

CHAPTER 2

When Does Selection Matter Less? Equalizing Access to Entrepreneurial Resources and Its Effects on Entrepreneurial Outcomes.

2.1 INTRODUCTION

Inequalities in access to entrepreneurial resources is an established issue in organizational research (Younkin & Kuppaswamy, 2018; Assenova, 2020; Dimitriadis & Koning, 2022). While we might all agree on the inequities and biases in access to entrepreneurial resources, resource holders cannot support every aspiring entrepreneur and must take steps to invest only in those with high probability of yielding positive outcomes. In other words, they must “do more with less.”

To tackle this dilemma, resource holders focus their efforts on selection as a way to exercise stewardship over the limited resources. They provide resources to those who are most likely to convert the provided support into tangible positive outcomes. However, as in any selection process, the evaluators responsible for selection encounter incomplete information evaluating prospective founders, thus seeking signals as a basis for their selection decision. Naturally, entrepreneurs with higher endowments – the stock of resources they already have such as elite education, connections, awards, and past professional career – have a higher likelihood of being granted sufficient support.

Yet not all founders have access to such endowment of initial resources and thus to the privilege of sending signals to resource holders. Therefore, the ones who need entrepreneurial resources the most are often the ones constrained from getting them. This creates a tension between

the limitation and the fair provision of resources. On the one hand, resources, although limited, are a key means to enhance entrepreneurial outcomes. Yet on the other hand, those most in need of resources are often overlooked or rejected by resource holders as they do not readily have the resource endowment necessary to garner their attention. At the core of this tension is an untested assumption. That is, while the outcome might perpetuate inequities, the process is “fair”. Namely, resource holders “pick winners” because they are most likely to convert the support into tangible and positive entrepreneurial outcomes. Discouragingly, however, this is not always true, leading us to a question that should be on the top of mind of resource holders: when does selection matter less? To investigate this question, we need to challenge the underlying untested premise that resources merely help the ones perceived as worthy of these resources. If we believe resources help individuals with entrepreneurial ideas regardless of their endowments, then resource holders should not engage in selection looking for the ones with higher levels of endowments and leaving the rest behind. This paper’s core premise is that equalizing access to resources by removing selection barriers can help enhance certain entrepreneurial outcomes.

Theoretically, I surmise two key entrepreneurial outcomes will always benefit from access to resources, regardless of the founder’s initial endowment, and thus can benefit from a lower focus on selection: (i) entrepreneurial action – the “purposeful and consequential human activity in which entrepreneurs engage to introduce something new to the world (Herbert & Link, 1988, Schumpeter, 1934)” (Wood, Baker, & Fisher, 2021: 148); and (ii) entrepreneurial persistence – the factor that sets the entrepreneurs to keep trying amidst the struggles and obstacles they might face (Zuzul & Tripsas, 2020, McDonald & Eisenhardt, 2020). Entrepreneurial action can stem from several sources, including prior employers that provide knowledge and industry expertise (Raffiee & Feng, 2014), educational programs that offer training on venture development (Clingingsmith

& Shane 2018; Cohen, Bingham, & Hallen, 2019; Camuffo, Cordova, Gambardella, & Spina, 2020; Hallen, Cohen, & Bingham, 2020a), and network ties that offer advice and encouragement (Chatterji, Delecourt, Hasan, & Koning, 2019). Yet, disadvantaged entrepreneurs who lack access to such privileged credentials may nonetheless be overlooked by resource holders leaving their ideas as unexploited opportunities. Critically, when endowments are low, entrepreneurial action becomes specifically sensitive to selection as it can induce limiting beliefs (in the case of rejection) or self-efficacy (in the case of selection) (Solesvik, 2017); thereby it is paramount to investigate whether selection matters for such outcome.

Similarly, early-stage entrepreneurial persistence is sensitive to selection as it relies on the acquired resources. To enable entrepreneurs to continue trying, they need knowledge resources to engage in learning and reduce their bounded rationality (Cohen et al. 2019), and financial means to engage in experimentation and change the pathway, when necessary (Kirtely & O'Mahoney, 2020). At best, disadvantaged entrepreneurs lacking such resources, will hold-off their ideas until they acquire the necessary resources. At worst, they will over-correct and opt-out completely of entrepreneurship thinking that being rejected by resource holders is a judgement on their ability. Given that entrepreneurial persistence relies on access and entrepreneurs are provided access based on selection, it is then another important outcome to investigate.

Empirically, I test the underlying assumption of selection through a randomized controlled field experiment where I randomize access to training, mentoring, and financial resources to a group of 195 nascent entrepreneurs who aspire to exploit an opportunity across the 12 regions of Morocco. Such randomization allows me to not only remove the selection barriers but also to depict the gaps in resource endowment in contrast to the classical homogenous cohorts where only the highly endowed entrepreneurs can enter such programs. To my knowledge, this study is the

first field experiment randomizing all resources to provide access without selection, including financial resources.

The results suggest, that removing selection barriers can emancipate resource mobilization from its dependency on endowments. First, removing selection barriers in the provision of knowledge resources significantly increases the likelihood of entrepreneurial action regardless of the entrepreneurs' initial endowment. Second, removing selection barriers in the provision of knowledge and financial resources combined, significantly increases the likelihood of entrepreneurial persistence at the early stages of idea development.

In investigating when selection matters less in the provision of entrepreneurial resources, I contribute to the literatures on resource mobilization (Clough et al. 2019), by de-emphasizing the role of endowments and selection and emphasizing the role of inclusion. This also contributes to the growing scholarship on disadvantaged entrepreneurs and the related inequities they suffer from (Assenova, 2020; Dimitriadis, 2019). Specifically, I show that when faced with such inequities, it is important to step back and ask whether the process creating these gaps (i.e., selection) is necessary in the first place, and if so when does it matter less.

2.2 THEORITICAL BACKGROUND

The literature on resource mobilization and its effects on entrepreneurial outcomes has predominantly focused on selection-based resource provision that gives privilege to entrepreneurs with high endowments – “*stocks of resources that entrepreneurs contribute to their new ventures at the time of founding*” (Shane & Stuart, 2002). Individuals who start in privileged positions—wealthy families, elite education, high-status jobs—have higher chances to access resources (Hallen, 2008). Conversely, individuals born into a resource-scarce environment are likely to have

a lower likelihood of access as nascent entrepreneurs. Thus, resources are provided either based on (a) non-biased selection channels including signals underlying abilities, information flows in social networks, or narratives and storytelling (Clough, Fang, Vissa, & Wu, 2019) or (b) biased selection channels such as homophily and demographic biases (Clough et al. 2019).

The two streams of research, whether biased or unbiased, anchor resource mobilization on the entrepreneur's resource endowment. From the entrepreneur perspective, existing literature broadly supports the importance of pre-existing social ties and human capital for resource mobilization, meaning ventures' access to resources is constrained by their founders' personal background (Ruef, Aldrich, & Carter, 2003). Even the research examining the extent to which entrepreneurs can break out of the constraints of social structure through agentic action, still anchors on endowments such as educational credentials, ability to engage in persuasive narratives, and symbolic management behaviors to successfully cultivate new ties (Zott & Huy, 2007; Hallen & Eisenhardt, 2012). From the resource holder perspective, research on homophily and demographic biases finds that the decision to provide resources is often based on community, professional, or family logics which are often biased toward the endowed individual (e.g., Bengtsson & Hsu, 2015; Claes & Vissa, 2017; Hegde & Tumlinson, 2014). For instance, several studies of venture capital investments find that similarity of ethnicity between venture capital partners and founders raises the likelihood of an investment relationship forming (Bengtsson & Hsu, 2015; Claes & Vissa, 2017).

Therefore, if mobilization is predicated on endowment and the population of entrepreneurs who need such resources are also the most constrained from leveraging endowed resources, then we are perpetuating the inequity issues in entrepreneurship. To resolve such tension, I investigate whether equalizing access to resources by reducing selection barriers would help enhance relevant

early-stage entrepreneurial outcomes. Specifically, I focus on two outcomes, action and persistence. The former pushes the entrepreneurs to act on their ideas and explore their market potential amidst high levels of uncertainty (Wood et al., 2021). The latter sets the entrepreneurs to keep trying amidst the struggles and obstacles they might face (Zuzul & Tripsas, 2020, McDonald & Eisenhardt, 2020). Together, they form the backbones of entrepreneurial activity.

Critically, believing that one has recognized a market opportunity does not necessarily mean one believes they possess the resources and motivation necessary to act on it and pursue its exploitation (McMullen & Shepherd, 2006). Moreover, even when entrepreneurs act on their ideas, at the early stages of venture development, there is much higher likelihood to not persist because of the low switching costs (effort and time expended). Given this, one would naturally ask what makes a disadvantaged entrepreneur who often lacks the necessary resources, act on, and pursue the development of their idea?

One compelling answer to this question, arises from development economics theories (McKenzie 2020; McKenzie et al., 2021) and recent organizational research by Assenova (2020) and Dimitriadis and Koning (2021). Together, they suggest that access to different forms of resources, including human, social, and financial capital, can enhance entrepreneurial outcomes for disadvantaged entrepreneurs who lack initial endowments. This research further validates the importance of challenging the untested assumption about the role of selection in resource allocation.

Furthermore, investigating the question of when selection matters less has important theoretical implications given the underlying and implicit focus of the literature on selection. Whether it is quality signals or homophily biases, I seek to make theoretical contributions that emancipate early-stage resource mobilization from its dependency on endowment driven selection,

in hopes of promoting inclusion and broadening access to those who can acquire and benefit from resources.

2.3 THEORY AND HYPOTHESES

My theoretical starting point is whether providing resources without relying on selection can also enhance entrepreneurial action and persistence. To explore the benefits of reduced selection barriers, I argue that learning is the key mechanism to aid these outcomes (Cohen et al. 2019, Hallen et al 2020a, Camuffo et al, 2020). In two pioneer studies examining the role of access to resources through accelerators by Cohen, Bingham and Hallen, (2018) and Hallen et al. (2020), learning manifests as the dominant mechanism. Cohen et al. (2018) show that resources acquired through accelerators helped ventures reduce bounded rationality by learning where to focus information gathering and search. Similarly, Hallen et al. (2020a) show that learning is likely to be a primary mechanism of accelerator impact on venture development even among founders with substantial human capital. More importantly, they show that learning is independent or complementary to the founder's endowment (Hallen et al. 2020a). Thus, regardless of their past experiences, acquiring resources to engage in learning will set entrepreneurs to act on their ideas and persist longer.

Entrepreneurs, however, vary with respect to the intensity of their learning depending on the level of their access to resources. To situate this discussion, I anticipate two forms of learning, direct and secondary. For instance, entrepreneurs, in their early stages of venture development, consult with mentors and peers about their products (secondary learning) then they engage in experimentation with customers to test the different alternatives they identified (direct learning). The first stems mainly from knowledge-based resources (Hallen et al. 2020a). Secondary learning, through trainings, mentorship, and peer advice helps entrepreneurs decide what experiments to

run, which alternatives to consider, and how to interpret the results of experiments. The second (i.e., direct learning) stems from experimentation which often necessitates access to financial resources on top of the knowledge resources acquired. It is important to highlight that there are parts of direct learning that entrepreneurs can engage in, at little or no cost, such as customer development interviews. However, to test out the different alternatives identified through the different cycles of secondary learning and initial direct learning from customers, financial resources become a necessary component to complete the learning process.

Overall, each form of learning is enabled based on the type of acquired resources and when entrepreneurs get the chance to accumulate different forms of resources regardless of their initial endowment, they will have higher chances to engage in such learning and thus to act and persist in their opportunity exploitation journey. In the following sub-sections, I explain how each outcome relates to a specific form of learning and thus how it is influenced by removing selection barriers to access different types of resources.

To preview the different relationships between the entrepreneurial outcomes and access to resources, I illustrate these relations in figure 1.1.

2.3.1 Entrepreneurial action

I surmise that access to knowledge resources, without selection, will lead to entrepreneurial action. This means that even when the entrepreneur lacks the necessary endowments, they will still benefit from the resource as they engage in secondary learning. There are two facets to this argument. The first is that access to resources is not anchored on endowment. Critically, removing the endowment-based selection criteria widens the scope of entrepreneurs, and consequently ideas, that can benefit from resources. Those previously disadvantaged who did not fit the prior

(endowment-based) criteria can now develop their capabilities through training and mentoring to develop their venture. The second, is that entrepreneurial action requires a catalyst to push individuals to act on their ideas amidst inherent uncertainty (Wood et al. 2021). I argue that providing knowledge resources to potential entrepreneurs without accounting for their initial endowment, will push individuals to act on their ideas.

In building this argument, I borrow from the literatures on entrepreneurial action, resource mobilization, and organizational behavior. From the entrepreneurial action literature perspective, entrepreneurial action is often triggered by the individual's past experiences. For instance, prior employers provide industry expertise on which entrepreneurs can build their ventures (Phillips, 2002; Raffiee & Feng, 2014). Educational programs offer training on venture development allowing ventures to engage in learning and improve their potential strategies (Clingsmith & Shane 2018; Cohen et al., 2019; Camuffo et al., 2020; Hallen et al., 2020a). Network ties and peers offer advice and access to key early stakeholders (Chatterji et al., 2019; Hallen, Davis, & Murray, 2020b). These are all examples of past experiences that play the catalyst role in increasing the entrepreneurs' beliefs in their agency to act on their envisaged ideas. However, access to these catalysts is not available to all individuals with entrepreneurial ideas (Assenova, 2020), thus limiting the ability of disadvantaged entrepreneurs to act on their ideas.

Furthermore, McMullen and Shepherd (2006) distilled the various elements of action that must be considered when determining whether one will act entrepreneurially into two key constructs: knowledge (as it relates to the amount of uncertainty perceived), and motivation (as it relates to the willingness to bear uncertainty). They then proposed a two-stage conceptual model of entrepreneurial action built on these two constructs. Their model consists of an attention stage focused on the assessment of a possible opportunity for someone (referred to as third-person

opportunity), and an evaluation stage focused on the assessment of the possible opportunity for the entrepreneur themselves (referred to as first-person opportunity). In other words, believing that one has recognized a market opportunity does not necessarily mean one believes one possesses the knowledge and motivation necessary to exploit it. My argument focuses specifically on the transition from an attention stage to an evaluation stage. In this transition phase, being selected and getting the attention of the resource holder increases the entrepreneur's beliefs in their abilities to accomplish the important roles and tasks associated with the entrepreneurship processes, such as identifying and commercializing new products and/or services (McGee, Peterson, Mueller, & Sequeira, 2009); and thereby can see the possible opportunity for themselves. Using McMullen and Shepherd's terms, such access will help the disadvantaged entrepreneur move from the attention stage to the evaluation stage or help move the opportunity from third person to first person.

This also aligns with the organizational behavior literature perspective, contending that access to resources increases the individual's self-efficacy (Gist, 1987; Solesvik, 2017). When disadvantaged entrepreneurs are given the chance to access resources, they feel included and part of the entrepreneurial community. The fact that they can attract the resource holder attention increases their belief in their agency to act (Solesvik, 2017; Wood et al., 2021). In fact, beliefs about one's agency are just as important as agency itself.

Moving forward, as the entrepreneur transitions to the evaluation stage, they need to acquire the knowledge and motivation to reduce their levels of uncertainty and increase their willingness to bear the remaining uncertainty. The literature on knowledge resource mobilization tells us that accumulating knowledge resources such as trainings, advice, peer interactions, and mentorship promotes secondary learning (Assenova, 2020), to reduce uncertainty (Cohen et al.,

2019), and help entrepreneurs decide whether and how they should act on their entrepreneurial ideas (Leatherbee & Katila, 2020). Entrepreneurial training, for example, helps entrepreneurs accumulate knowledge through vicarious observations of experiences and stories borrowed from benchmarks of other ventures. Exposure to these benchmarks allow entrepreneurs to observe the consequences of other ventures' actions and formulate an idea about whether and how they should act based on their perceived successes and failures. Entrepreneurs can also learn from peers who are or might be potential competitors. In this case, entrepreneurs engage in what McDonald and Eisenhardt (2020) coined as “parallel play” where observing the experience of rivals and making inference from their experiences becomes another source of knowledge to reduce uncertainty. Entrepreneurs may also accumulate knowledge through advice from their peers and mentors to gain insights and formulate action plans based on their recommendations (Kuhn & Galloway, 2015; Vissa & Chacar, 2009). Having venture founders learn from one another offers the promise of providing a way for sharing locally relevant information. Hallen et al. (2020a) and Chatterji et al. (2019) highlight the role of advice as an important channel through which knowledge flows. Thus, acquiring knowledge resources is paramount to reduce uncertainty during the evaluation stage.

Applying this argument, I observe that non-endowment-based resource provision is an unbiased catalyst for entrepreneurial action that broadens the scope of entrepreneurs who benefit from these resources. Through access to resources without selection, entrepreneurs will gain self-efficacy and thus the belief in their agency to exploit the dormant (third person) ideas in their heads. Overall, being selected and included will increase the entrepreneur’s self-efficacy; acquiring knowledge resources will promote secondary learning to reduce the amount of uncertainty perceived and increase the willingness to bear the remaining uncertainty. Together,

they will increase the entrepreneur's likelihood to act on their ideas and explore their potential in the market.

H1a: Removing endowment-based selection barriers to access knowledge resources will increase the likelihood of entrepreneurial action.

Because resources are limited, and resource holders seek to do more with less and optimize allocation, the next question that arises naturally, is whether access to financial resources in addition to knowledge resources would also increase the likelihood of entrepreneurial action and if so, how different it is from accessing knowledge resources alone. It is important to investigate this question for theoretical and economic reasons. Theoretically, it is established that access to resources promotes learning and thus increases the likelihood of action, but it is not clear which form of learning is necessary for action compared to other outcomes such as persistence and growth. Based on the argument leading to the first hypothesis, my contention is that action only requires secondary learning which is enabled through knowledge resources. Therefore, accessing financial resources, on top of the acquired knowledge resources would result in a comparable level of entrepreneurial action as the one resulted from knowledge resources alone.

H1b: Removing endowment-based selection barriers to knowledge and financial resources together will also increase the likelihood of entrepreneurial action but with no significant difference compared to knowledge resources alone.

2.3.2 Entrepreneurial persistence

Successful entrepreneurial activity hinges on persistence. The fundamental question then is how to set these entrepreneurs to keep trying. Does access to resources also aid to increase persistence? And if it does, does the type of resource matter? While I have argued that financial

resources do not matter for entrepreneurial action, access to knowledge and financial resources together will set entrepreneurs to persist longer. Two reasons underlie this argument.

First, from the perspective of resource mobilization, financial capital especially during the nascent venture stage, is critical to survivability and success (Cooper, Gimeno-Gascon, & Woo, 1994). The financial resources necessary to start a new business can vary depending on the type of the venture. For example, an e-commerce venture that sources inexpensive goods and sells them at higher prices requires a fairly low startup budget (Daniel, Domenico, & Sharma, 2015). On the other hand, development of new equipment, machinery, or technology can be capital intensive, even at the prototyping stage. However, in both cases, access to financial resources sets entrepreneurs to feel equipped to overcome future challenges and persist in their idea development.

Second, from the perspective of learning, the intensity of learning increases if the source of knowledge is both direct and secondary. Namely, as entrepreneurs experiment with different alternatives, they engage in a deeper processing of the information they acquired through secondary learning from mentors and peers (Camuffo et al., 2019; Contigiani & Levinthal, 2019; Felin, Gambardella, Stern, Zenger, 2019; Murray & Tripsas, 2004). If their tests are validated, ventures can build out a more robust and scalable version of the tested alternative. Alternatively, when their tests are invalidated, ventures can move on from the said alternative, adjust their strategy, and repeat testing. Such direct processing of market information sets the entrepreneur to keep trying and not opt-out or satisfy prematurely, thereby increasing their persistence.

In contrast, I argue that secondary learning alone is insufficient for venture development, thereby not affecting entrepreneurial persistence. Here, knowledge resources help entrepreneurs acquire information from mentors and peers on how to test their idea in the market, but they are not sufficient to provide the venture with the ability to act on mentor and peer advice. Such delay

or inability to engage in direct learning by testing out the market at such early stages is particularly striking given that experimentation is a central tenant of the lean startup methodology that they were initially taught during their secondary learning cycles. The underlying challenge here is that even when entrepreneurs identify a dimension of their business model or strategy they wish to improve, they often lack the resources to test it and then satisfy prematurely or opt-out early. Focusing on knowledge resources alone will force them to learn about multiple potential solutions (i.e., alternative competitive positions or pricing strategies) without having the resources to test some of them.

Practically, secondary learning through consultation with mentors and peers typically consists of one-on-one meetings in which founders share their current thinking about their business model, often by delivering a short pitch. Mentors then provide critical feedback and information deemed potentially helpful. While this is good to reduce bounded rationality and optimize the use of resources, ventures that lack the financial resources will not have the opportunity to act on what they have learned and thereby have a much lower likelihood to persist. At best, they will try few alternatives through their own resources by engaging in bricolage leading to a high chance of satisficing prematurely or holding-off their ideas until they acquire the necessary resources in the future. At worst, they might try few alternatives and fail or just completely opt-out of entrepreneurship. In either case, secondary learning alone will not affect their persistence.

Overall, secondary learning through knowledge resources improves their understanding of the market and direct learning through financial resources helps them test out the different alternatives identified through knowledge resources. Together, they increase the likelihood of persistence.

H2a: Removing endowment-based selection barriers to access knowledge resources alone will not affect the likelihood of entrepreneurial persistence.

H2b: Removing endowment-based selection barriers to access knowledge and financial resources combined will increase the likelihood of entrepreneurial persistence.

I would note, however, that my argument is agnostic to entrepreneurial performance and growth. In fact, performance and growth might not be affected at all for two reasons. First, for entrepreneurs who lack the human and social capital, a short period of accelerated training might not be sufficient to increase the performance of their ventures especially for disadvantaged entrepreneurs. In this case, they might need to accumulate the non-financial capital over time to catch up to the endowed entrepreneur and increase their competitiveness and performance. In fact, performance is often the result of complementarity in resource acquisition (Hallen et al. 2020a). Second, at such early stage, it is almost impossible to measure venture performance and growth and thus following such outcome might lead to misleading conclusions about the effect of access to early-stage resources. Thus, I do not theorize on performance as an entrepreneurial outcome.

2.4 EMPIRICAL CONTEXT AND DESIGN

One of the significant challenges in researching the impact of access to resources is establishing meaningful counterfactuals: what would have happened to entrepreneurs absent the program to access resources? This challenge is common to all impact evaluations, but it is particularly poignant in entrepreneurial resource mobilization research, given the emphasis of these programs on selecting participants. For instance, venture capital funded programs typically are highly selective—that is, they aim to take only the startups with the highest performance potential which is often correlated with high endowments of human and social capital. As a result, cohorts are often highly homogenous in terms of their resource endowment, and we would expect

participants to have higher performance than other ventures whether the access to resources itself contributes to this success or not. Even programs that target less endowed entrepreneurs to help improve their chances of access to resources have similar issues of homogeneity, as the highly endowed often get rejected from such programs.

A further complication results from the possibility that if the ventures with the highest expected performance decide they do not require support and thus do not apply to programs, then self-selection may bias findings in the opposite direction. Research that does not take these selection biases into account risks coming to the wrong conclusions about the effects of resource mobilization. Finally, the simultaneity of provision of resources creates an over abstraction and makes it challenging to disentangle the impact of each type of resource. That is, the bundle of resources provided together are often treated as a “black box” without distinguishing which type of resources benefit entrepreneurs the most.

To address these empirical challenges, I created my own acceleration program to run a randomized control field experiment. An experiment that allows randomizing the provision of different types of resources – regardless of the entrepreneurs’ resource endowment (i.e., no selection) – and observing how ventures engage in entrepreneurial action and persistence among other outcomes. I chose to run this experiment within an accelerator because accelerators are an ideal setting for studying the relationship between resource mobilization and entrepreneurial outcomes. They are learning oriented, fixed-length programs that provide cohorts of ventures with training, mentorship, peer-interactions, and in most cases seed financing (Cohen et al., 2019; Hallen et al., 2020a). Moreover, a primary focus of accelerators is helping participating ventures get early access to resources and exposing them to additional resource providers as they graduate their program. In other words, they play the role of an institutional intermediary between the early-

stage entrepreneur and the resource gatekeepers (Armanios, Eesley, & Eisenhardt, 2017). More importantly, the “acceleration” aspect forces ventures to take action, test, and persevere in a timebound setting, making it a useful setting to observe these entrepreneurial outcomes – compared to more open-ended programs or training modules.

I also specifically chose to run this experiment in a low resource environment. In essence, such environment is a clean empirical context to test the role of resources given the gaps in initial resource endowments. Moreover, such context also allows me to examine the causal effect of each resource knowing that the confounding effects of access to extra resources outside of the acceleration program are minimal. Entrepreneurs in resource constrained environments are often challenged with access to training and employment opportunities limiting their access to human capital resources (Anderson & Miller, 2003; McKenzie & Woodruff, 2016). Their social network is often affected by corruption rather than the classic theories of social networks, and they operate in an underdeveloped financial infrastructure to access capital (Assenova, 2020; Dimitriadis & Koning, 2020). Taken together, these factors aid the intensity of my treatments.

2.4.1 Empirical setting

Morocco is an ideal setting for a low resource environment with a rich entrepreneurial environment. The entrepreneurial ecosystem in Morocco is still very young. The global economy trend in the past few years coupled with high unemployment rates and the impact of the pandemic has meant that many young Moroccans have taken up entrepreneurship as a career choice. However, many young entrepreneurs struggle with a lack of mentors and capital investments, in addition to the initial asymmetries in resource endowments. A very important contributor to inequalities in resource endowment in Morocco is the uneven access to the labor market. Most worrisome from the standpoint of equity and stability, access to human capital is a major challenge

facing the Moroccan economy. Nearly 28 percent (1.5 million) of the youth population (15-35) in Morocco is currently NEET (not in education, employment, or training).⁶ Gender inequality is another crucial dimension of the disparities in Morocco. The very low participation of women in the Moroccan labor market is striking and remains one of the lowest in the world. To overcome these inequalities, several national and international organizations have taken an interest in investing in the promising entrepreneurship landscape in Morocco through local incubators and accelerators. Thus, the subjects in this experiment are future founders in Morocco. In contrast to developed market where ventures seek resources sequentially or simultaneously from different public and private sources, this unique geographic context offers an opportunity to study nascent entrepreneurs seeking resources for the first time within a constrained market where most resources concentrate within the incubating organization.

2.4.2 Empirical Design

To test experimentally the effects of resource provision on entrepreneurial outcomes, I implemented two treatments. In addition to having a control group (“T0: Control Group”), I implement: (1) access to knowledge resources (“T1: Training, mentorship, and peer interactions”), and (2) access to both knowledge and financial resources (“T2: seed-funding, training, mentoring, and peer interactions”). I stratify the randomization according to venture and founder characteristics (industry, gender, initial quality, and previous access to resources) to ensure creating groups with similar observable characteristics. Randomization ensures that, on average, the only difference between ventures is the greater ease of access to resources for those in the treatment groups.⁷

⁶ [World Bank Document](#)

⁷ For more information on the randomization, I submitted the log file as well as the stratification method to the AEA pre-registration registry. The pre-registration ID for this experiment is RCT ID AEARCTR-0005305.

2.4.3 Experimental Procedure

Ventures participating to the program applied to an acceleration program either online or in person at the acceleration center if they needed help filling out the application. There was also a hotline number for interested participants who needed help to register and apply to the program. To ensure that the initial gaps in endowments (especially in education) would not affect the effectiveness of the human capital treatment, I instructed all the trainers and mentors to provide training and advice in the local Moroccan Arabic (Darija) instead of French to overcome the key issue of language barriers.

Before the intervention, participating ventures were invited to an initial pitch training session. This initial phase was important to inform participants that the purpose of the training is to allow all applicants to participate to the final demo day competition regardless of their supposedly selection outcome, if they submit their final pitch presentation for evaluation. Other announcements included the date of the competition, the final prizes for the winners, and the investing institutions that will be present on Demo Day. This was a key incentive to reduce attrition from the control group and motivate all entrepreneurs to work on their venture ideas regardless of their access to resources.

We then informed the participants based on their assigned treatment or control. The programs of the two treatments started on the same day and lasted for 12 weeks of training and mentoring. Each participant in T1 and T2 had access to three training bootcamps of 2.5 days each and a weekly mentoring session. In addition to training and mentoring, participants in T2 received a total of \$800 in initial funding in two parts after the first and second bootcamp. The program ended with the demo day pitch submissions that was open to all treatment and control groups. These submissions were evaluated by independent judges who did not know whether the

participant had access to resources. Each submission received a final score and based on the score ranking, the top 20 participants to Demo Day were announced. Interestingly, 8 were from the knowledge and financial resources group, 5 were from the knowledge resources alone group, and 7 from the control group. The winner of the first cash prize \$2200 was a female entrepreneur from the control group. The second and third place went to two male entrepreneurs from the group that has access to all resources including funding.

2.4.4 Data Collection

The data was collected as follows. The initial application to the acceleration program was used to collect demographic data about the entrepreneurs as well as data about the venture characteristics. The founder data included age, gender, education (i.e., level), occupation, prior entrepreneurial experience, years of expertise in the sector, prior incubation, prior access to resources (training, mentoring, and funding), how long they had the idea, their motivation for entrepreneurship, and their five personality traits. The venture data included venture development stage, sector, size, location, customer type (consumer, business, or both), and offer type (service, product, or both). This baseline data was used as a basis for stratification (Banerjee, Duflo, Glennerster, & Kinnan, 2015). After the baseline survey, but prior to randomization, I asked independent judges to rank all the applicant ventures based on the quality of their application using the usual selection criteria that the accelerator uses.⁸ Each venture received a quality rank of high, medium, or low. This information was collected to ensure a balanced stratification and make sure each treatment group has a mix of high, medium and low-quality ventures based on the mainstream

⁸ The pool of independent judges consisted of the usual pool of evaluators that the host organization uses in their acceleration program including industry experts (e.g., consultants), employees of regional investment centers, alumni of past acceleration programs, and other past successful entrepreneurs.

endowment-based selection criteria. In doing so, I am ensuring that the ventures that would have been rejected based on selection can now access resources after removing selection barriers.

Table 2.1 uses the baseline sample to show that treatment and comparison ventures did not differ in their baseline levels of founder and venture characteristics. This is not surprising, since the sample was randomized with stratification according to founder and venture characteristics. The baseline data also provides a snapshot of founder and venture characteristics prior to joining the acceleration program, which I discuss in the following paragraphs.

Following the intervention (i.e., the first training bootcamp and mentoring sessions), I started collecting data on the activities conducted by entrepreneurs every three weeks during the twelve weeks acceleration program. I did this, with the help of four research assistants, through email and WhatsApp where we sent the link and daily reminders for follow-up surveys. For the ones who did not respond to the survey through the link, the research assistants and I conducted telephone interviews to collect the responses to survey data.⁹ While we were not able to collect all responses through our calls, we made sure to collect data on action and persistence specifically to reach a 100 percent response rate for these outcomes. The missing data due to attrition for the other outcomes is not relevant for this study.

2.4.5 Descriptive statistics of the sample at baseline

⁹ I continue to collect data 3 months, 6 months, and a year following the experiment. This is necessary since many outcomes including entrepreneurial performance may be only expected to surface over the medium run (Banerjee et al., 2015).

Table 2.1 shows a snapshot of the 195 ventures sampled from the 289 applicants.¹⁰ Eligibility was based on completion and accuracy of the information in the application as well as previous access to resources. Only ventures that completed the full application process and were eligible were recruited to be part of the program. Eligibility was also based on previous access to resources. Ventures that have previously benefited from all types of resources (funding, training, and mentoring) were rejected. The goal was to ensure that all ventures were seeking such resources for the first time.

Founder characteristics – In a sample of 289 entrepreneurs who applied to the acceleration program, 195 entrepreneurs were eligible to participate to the program with a 35 percent participation rate of female entrepreneurs and a dominant population of young entrepreneurs who sought resources for the first time. At baseline, only 15 percent had a prior incubation experience and less than 6 percent have ever benefited from some type of funding, although none of these entrepreneurs has ever benefited from access to all types of resources in their prior incubation programs. In terms of prior entrepreneurial experience, almost half of the sample have some experience with an entrepreneurial project. Moreover, applicants had an average of 3.6 years of experience within the sector of their venture, although about 30 percent of the sample are students and about half of them are self-employed with a very small percentage operating or working within an informal business.

In terms of education, which is an important indicator of knowledge resources about 70 percent have a university level education, while the other 30 percent either have a vocational degree or a high school degree with a small percentage who have only received some level of

¹⁰ Each venture is represented by its founder.

elementary education. Finally, in order to rule out the necessity entrepreneurship argument for the outcomes I follow, I asked the entrepreneurs about their motivation to engage in entrepreneurial activity. About 70 percent mentioned lifestyle as their main motive to choose this path over employment, 30 percent prefer employment, but they wanted to explore the opportunity because they think it has a high potential of success, and only about 6 percent are following this path out of necessity and lack of opportunities in the labor market.

Given that I follow entrepreneurial action as a dependent variable, I asked the applicants at baseline, how long did they have the entrepreneurial idea before they started searching for resources. I find that most of the sample have thought about the entrepreneurial opportunity in question for over 6 months. Specifically, 40 percent have had the idea for 2 years or longer, 25 percent had the idea for a year, and about 10 percent had the idea between 6 months and a year. This is an initial indicator showing the importance of access to resources for these individuals to act on their ideas and take them out of their heads to the market.

Venture features – I also collected data on the venture at baseline. In terms of venture stage, almost half of the sample are on the concept stage where the founding team does not even have a prototype yet. Within the remaining half, 30 percent have a prototype and about 20 percent have received promises for sales. This aligns with the theoretical argument and the boundary condition focusing our hypotheses mainly on early-stage ventures. Given that the majority are very early in the development process, the average size of venture teams is about 2 members.

Another important feature that I follow is geographic location, given that Morocco has concentrated wealth and does not ensure fair territorial distribution of resources. Specifically, the kingdom has 12 regions, where 3 northern regions account for 58.2 percent of the GDP, 4 regions account for 30 percent and then the rest of the regions account for the remaining 12 percent. About

half of my sample came from the top three regions and about 22 percent from regions that are extremely resource constrained.¹¹

2.5 EMPIRICAL ANALYSIS AND RESULTS

The experiment was designed to compare two experimental treatments to a shared control arm. I follow Banerjee et al. (2015) and investigate the intent to treat (ITT) comparisons between the treatment and control groups. In principle, the analysis of the results of a field experiment is straightforward, because the randomization allows a simple comparison of means between the control group and the treatment groups based on Eq.2.1.

$$(2.1) Y_{it} = \beta_1 T1_i + \beta_2 T2_i + \gamma X_i + \delta Y_{i0} + \varepsilon_i$$

Y_{it} is the entrepreneurial outcome for venture i at time t (t for follow-up, 0 for baseline). The vector X_i contains the stratification variables (industry, gender, quality, and prior access). The term ε_i is a mean-zero error with standard errors clustered at the venture level which is the unit of randomization. The coefficient β_1 measures the impact of acquiring knowledge resources, the coefficient β_2 measures the impact of financial and knowledge resources together.

While the two dependent variables are binary, I use a linear probability model (LPM) to analyze the effects of each type of resources. This is based on Gomila (2020) who recommends the use of linear regression to estimate the average treatment effects on binary outcomes. However, for robustness purposes, I also report the estimates of the non-linear logit model.

I measure entrepreneurial action by recording the ventures that continue working on their venture throughout the acceleration program as they report the activities, they are engaged in.

¹¹ <https://northafricapost.com/25206-three-moroccan-regions-account-for-58-of-gdp.html>

Action in this sense is not merely a momentum response to access to resources but rather an engagement in venture development. On the other hand, I measure entrepreneurial persistence by recording the ventures that submitted their final pitch presentations for evaluation to be selected for demo day. This was the last phase of the program after completing all the training and mentoring sessions.

2.5.1 Results

Table 2.2 presents the LPM and logit models where the dependent variable takes the value 1 when the subject decides to act on their idea, and 0 otherwise. The models test the effect on entrepreneurial action of being in one of the two treatment groups. I find that individuals provided with resources without selection barriers, whether knowledge resources alone or combined with cash, are more likely to act on their ideas than those who were rejected access to resources, regardless of the previous stock of endowment they came with. Specifically, based on the LPM model coefficients and the marginal effects after the logit model (Models 1 to 4), accessing knowledge resources has a differential effect of approximately 30 percent higher likelihood of entrepreneurial action compared to the control group that did not access any resources. Similarly, based on the logistic models (Models 5 & 6), the odds ratios show that entrepreneurs with access to knowledge resources are almost 4 times more likely to act on their ideas compared to entrepreneurs in the control group. This lends support for H1a.

For entrepreneurs who had access to knowledge and financial resources combined, the LPM and logit models show a differential effect of 35 percent higher likelihood of entrepreneurial action compared to the control group. Similarly, the odd ratios show that entrepreneurs with access to knowledge and financial resources combined are over 5 times more likely to act on their ideas compared to the control group. This lends partial support for H1b. To investigate the second part

of H1b. That is, whether adding financial resources to the treatments increases the likelihood of entrepreneurial action, I stratified the sample to only those who received any resource and compared the two treatment groups. I find that adding financial resources, on top of knowledge resources, does not significantly increase the likelihood of engaging in entrepreneurial action (Table 2.3). This lends full support for H1b stating that *removing selection barriers to knowledge and financial resources together will also increase the likelihood of entrepreneurial action but with no significant difference compared to knowledge resources alone*. Figure 2.2 further illustrates the summary of results in Tables 2.2 and 2.3.

Table 2.4 presents the LPM and logit models where the dependent variable takes the value of 1 when the subject decide to submit their final pitch deck for evaluation. The models test the effect on entrepreneurial persistence of being in one of the two treatment groups. All models (logit and LMP) show that removing selection barriers for knowledge resources only has no significant effect on entrepreneurial persistence. However, removing selection barriers to knowledge and financial resources combined has a differential effect of 36 percent higher likelihood of persisting according to the LPM and logit models (Models 1 to 4); meaning that entrepreneurs are 6 times more likely to persist compared to the control group, according to the logistic regression models (Models 3 & 4). These results partially support H2a and fully support H2b: individuals provided with the combination of financial and knowledge resources, are more likely to persist than those who were rejected access to resources or access knowledge resources alone. These results are also independent of the stock of endowment the subjects entered with. Figure 2.3 further illustrates the summary of these results.

2.6 DISCUSSION

Through this study I sought to challenge a dominant assumption in the resource mobilization practice and literature: that entrepreneurs endowment determines whether the entrepreneur will benefit from support or not. In testing this assumption, I answered a key question that should be in the mind of every resource holder, especially public resources holders who are responsible for allocating taxpayer resources fairly and efficiently. While inherited knowledge would suggest that selection, often based on previous endowments, matters to increase the likelihood of positive entrepreneurial outcomes, the particular case of entrepreneurs with low resource endowments, poses a conundrum. Those who need resources the most are the ones rejected from receiving access to it.

Thus, to expand the scope of entrepreneurs that can access resources and prevent the perpetuation of inequities, this study considers the possibility of removing selection barriers at the early stages of resource mobilization. Meaning for entrepreneurs seeking resources for the first time. In this way, entrepreneurs who may have been previously overlooked because of their lack of endowment will have a chance to attract the resource holder attention.

In illuminating how removing selection barriers might aid entrepreneurs to succeed in their opportunity exploitation journey, I focused on two outcomes: action and persistence. While action is a natural outcome of any early stage venturing journey, persistence is needed throughout the process even during the growth stages of the ventures. However, given the boundary conditions of this study, I specifically focus on persistence during the early stages of idea development, given that at this stage specifically, quitting is much easier and affordable giving the low switching costs.

The results suggest, that removing selection barriers can emancipate resource mobilization from its dependency on endowments. First, removing selection barriers in the provision of knowledge resources significantly increases the likelihood of entrepreneurial action regardless of

the entrepreneurs' initial endowment. Second, removing selection barriers in the provision of knowledge and financial resources combined, significantly increases the likelihood of entrepreneurial persistence at the early stages of idea development.

3.1.1 Resource mobilization theory

I expand the literature on resource mobilization and the emerging literature on accelerators in two ways. First, I de-emphasize the role of endowments in affecting entrepreneurial outcomes for early-stage ventures. Consequently, this also de-emphasizes the role of selection based on endowments.

De-emphasizing the role of resource endowment

Past research illuminates how prior resource endowments, being an indicator of an individual's capabilities, affect different entrepreneurial outcomes (Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012; Krieger, Williams, & Moss, 1997; Lynch & Kaplan, 2000, Anderson & Miller, 2003). In this study, I show that this does not apply to early-stage entrepreneurial outcomes. In de-emphasizing the role of endowments, this study helps expand the scope of entrepreneurs who can benefit from access to resources.

Theoretically, this has important implications on the resource mobilization literature. Specifically, the research on bias suggesting a number of biases that might be affecting resource holders' decisions (see Clough et al. 2019 for a review on this). In this study, I suggest that for relevant outcomes, we can simply avoid these biases by not engaging in selection in the first place.

Beyond the theoretical implications, de-emphasizing the role of endowments also has practical implications, especially in the case of public resource allocation. For instance, the U.S. Small Business Research Innovation Research (SBIR) program has been criticized for assigning

too much weight to the entrepreneurs' prior experience. By doing so, the SBIR makes it more difficult for first-time entrepreneurs to receive funding, even if their new ventures are highly deserving of support (e.g., Audretsch, Weigand, & Weigand, 2002).

Furthermore, in many societies, the low endowed entrepreneur facing difficulties to access resources may engage in behaviors such as bribery, hoping that bribes will help lower the barriers they face. Baron, Tang, Tang, and Zhang (2018) discussed this phenomenon in their recent study investigating the underdog entrepreneur. They show that, underdog entrepreneurs may conclude that there is only one feasible way for them to overcome the high endowment barriers – offering bribes to the people responsible for allocating public resources. Thus, removing selection barriers for these underdog entrepreneurs may circumvent corruption issues and promote transparency in the process of resource exchange.

Therefore, in de-emphasizing the role of endowments, resource holders can widen the scope of their support, promote fairness in allocating resources, and increase transparency in resource transfer.

De-emphasizing the role of selection

Selecting promising candidates is an essential aspect of accelerators among other entrepreneurial support programs. However, this mechanism of selection is not documented in the emerging literature on accelerators except for a recent study by Lall, Chen, and Roberts (2020) where they compare two mechanisms of selection: selection on observables (i.e., generic selection) and actual selection to participate in the program.

The dominant belief is that accelerators can play a crucial role in cleaving the bottom of the distribution of entrepreneurs. However, multiple recent studies have made this belief come

under scrutiny. Using data from several social impact accelerators, Yang, Kher, and Newbert (2020) show evidence of cognitive factors affecting selection processes, namely biases associated with judges' expectations about female-led and male-led businesses. The authors show that selection probabilities increase for both men and women who send congruent signals with their gender—i.e., men who send economic signals and women who send social signals. Similarly, Huang and Lee (2018) find evidence of lessened gender penalties for female-led ventures that are presented using a social impact frame, which is stereotypically considered feminine. However, such frames only helped female-led ventures, as it shows a fit between the frame and venture leadership. Other biases include specific preferences of evaluators and investors. For example, Ewens and Townsend (2020) shows that male and female angel investors appear to have gendered preferences in terms of the companies they back, with male investors more likely to select male founders, and likewise female investors more likely to invest in female-led businesses.

In addition to cognitive biases, contextual factors can also play an important role in selection. In a study using data from several European accelerators, Dushnitsky and Sarkar (2022) show that for a given start-up graduating on a given Demo Day, the sunnier the Demo Day, the greater the likelihood of raising a Demo Day round. Even more concerning, the sunnier effect is more robust under intense uncertainty and for younger companies with less-educated founders. Similarly, Clingensmith and Shane (2018) show the role of order as another contextual factor. In their study, entrepreneurs participating in elevator pitch competitions were randomly assigned the position in which they pitched. The authors find evidence of a calibration effect, whereby investor-judges express substantially lesser interest in pursuing investment in the first and second ventures pitched to them.

Overall, selection within accelerator programs is heavily biased and judges are often bad at “picking winners”. Recent evidence from McKenzie and Sansone (2019) using data from the business plan competition YouWin! in Kenya shows that baseline survey data outperformed expert panels, neither predicting growth with much accuracy. That said, I am not claiming that we should not engage in selection at all. However, understanding when selection does not matter is crucial. Also crucial is designing strategies to mitigate potential selection mistakes arising from the issues highlighted above.

3.1.2 Practical implications

I have already discussed two important practical implications above when discussing the role of endowments: fairness and transparency. Here, I add one other important practical implication: representation. Entrepreneurs often represent their communities by innovating and making products that respond to their needs. Thus, inequities in access to resources will spill over to the product-market, resulting in lack of technologies and products that respond to the needs of marginalized groups. If the needs of unprivileged individuals cannot be understood by the privileged and the unprivileged cannot access resources, then many entrepreneurial opportunities go unexploited because of the resource gap. The most prominent example for this phenomenon is the gender gap in medical solutions. In a recent study by Koning, Samila, and Ferguson (2021), they found a robust and sizable connection between inventor gender and the sex focus of inventions suggesting that the inventor gender gap is partially responsible for thousands of missing female-focused inventions.

Therefore, reducing the inequities of who gets the resource to exploit an opportunity may reduce the inequities of who gets to benefit from the product of the opportunity. Such low barriers to access may then help attract ideas that were previously unexploited opportunities.

CHAPTER 3

Would you give me your phone number? The effect of tacit knowledge on experimental learning. Evidence from a randomized field experiment in Morocco.

3.1 INTRODUCTION

A fundamental and persistent question in the study of organizations is how new organizations develop strategy under uncertainty. In studying strategy formation in new ventures, scholars have emphasized the importance of *experimentation* as an organizational learning process to resolve uncertainties and limit bounded rationality in early-stage ventures (Cohen, Bingham, & Hallen, 2019; Contigiani & Young-Hyman, 2021, Hallen, Bingham, & Cohen, 2020). For instance, Cohen et al. (2019) document how ventures interact and learn to experiment within a business accelerator to reduce their bounded rationality and the risk of satisficing prematurely. Hallen et al. (2020) argue that acquiring information and knowledge through consultation enables organizational learning including experimentation. Similarly, Camuffo, Cordova, Gambardella, & Spina (2020) argue that training entrepreneurs on the scientific method will enable them to engage in experimentation and explore more alternatives. Chatterji, Delecourt, Hasan, and Koning (2019) show how advice helps inexperienced founders prioritize which experiments to run by uncovering critical assumptions to be tested and make better strategic choices by running less biased experiments (Agrawal, Gans, & Stern, 2021). These studies show that different forms of knowledge resources such as training, advice, and mentoring enhance learning through experimentation.

Yet, experimental learning, as any other form of organizational learning takes place in two parts: thought and action (Crossan, Lane, & White, 1999). The former, *perceived experimentation*, involves engaging in hypothesizing and generating alternatives. The latter, *behavioral experimentation*, involves the decision-making process about the said alternatives. Thus, for knowledge resources to enhance experimental learning, ventures must also act on their experimentation plans in their decision-making processes. However, the current literature on experimentation ignores the nuances of behavior versus perception in this form of entrepreneurial learning. One compelling answer to why the literature stops short of considering these nuances is the fact that in all existing studies the perceived inputs of experimentation are translated automatically into corresponding behavioral outputs. However, this express way between thought and action, is not available in certain institutional environments with factors that may hinder the action part of the learning process. Two questions arise from this argument. First, *what makes certain entrepreneurs not act on their experimentation plans?* And second, *how can we help them transform their thoughts into action during their experimental learning?*

One compelling answer to the first question arises from the common denominator in existing studies. That is, most of this research has examined experimentation as a learning mechanism in contexts defined by relatively developed institutional environments. In contrast, little is known about experimentation in contexts with higher uncertainties stemming from infrastructural, regulatory, and/or cultural institutional voids (Khanna & Palepu, 1997). Thus, one potential reason that might hinder the transition from perceived to behavioral experimentation is *incompatibility in logics* when the knowledge resources offered within weak institutional contexts are highly inspired from the developed context. The knowledge provided in this case is incompatible with the local market conditions and need to be modified and adapted for a successful

incorporation. Failing to appreciate the role of the institutional context may seriously bias our understanding of what enables new ventures to engage in certain forms of learning (Ahuja, Capron, Lenox, & Yao, 2018). Moreover, in a world increasingly questioning whether management theories are serving the elite and not society as a whole (Leana, Mittal, & Stiehl, 2012), I see this focus on developed institutional contexts as hindering our understanding of strategy formation in early-stage entrepreneurial settings.

To address the second question, *how can we help entrepreneurs, within weak institutional contexts, transform their thoughts into action during their experimental learning?* I surmise two types of knowledge resources might influence experimentation: (i) explicit knowledge and (ii) tacit knowledge. The former represents the codifiable knowledge that is easily articulated and transferred through training programs, advice, and formal mentorship sessions (Kale, Singh, & Perlmutter, 2000). The latter, however, cannot be understood through direct articulation due to its tacit nature, but it must be inferred from actions and statements (Polanyi, 1974). The fundamental premise of my argument is based on a contingent view of experimentation; that is, learning through experimentation within certain institutional environment, will thrive under tacit knowledge, and might not change much under explicit knowledge. Namely, experimental learning is incorporated in the decision making when entrepreneurs can access localized and contextualized tacit knowledge to help them resolve the logic inconsistencies between the acquired knowledge and the local context. Such tacit knowledge is often provided by mentors within the same field and geography through informal interactions and actions. Complementary to the explicit standardized knowledge, tacit knowledge can help ventures navigate the local market and adapt their novel and often imported ideas to a market dominated by institutional voids.

I investigate this contingency view of experimentation through a randomized control trial within an accelerator where two treatment groups of entrepreneurs acquire knowledge resources, and a control group does not access any resource. Among the groups that accesses knowledge resources, some entrepreneurs were able to access tacit knowledge while others were limited to explicit knowledge from mentorship and training. Namely, the group of entrepreneurs that were able to access tacit knowledge were randomly matched to an expert operating within the same sector of the venture and geographically close to their region (either in the same region or a neighboring region). In contrast, the other group of entrepreneurs, although also accessed expert mentors, did not have the chance to be paired with a mentor within their field and geography. Here, ventures are merely acquiring explicit knowledge through their formal trainings and mentorship sessions.

By studying what enables entrepreneurs to engage in experimental learning within weak institutional environments, I provide three main contributions. First, this study contributes to the emerging research on organizational learning within early-stage ventures. I conceptualize how experimentation takes place in the presence of institutional voids. Second, I also contribute to the literature on knowledge as an organizational resource. I identify tacit knowledge as the key antecedent that drives behavioral experimental learning within early-stage ventures in less developed contexts. This does not only confirm the importance of mentorship for disadvantaged entrepreneurs as shown by Assenova (2020) and Anderson et al. (2020) in their respective studies of entrepreneurs in South Africa and Uganda, but it adds to it the importance of matching the mentor to the venture in terms of sector and geography and leaving room for their interactions to naturally evolve and become informal outside of the standard one-to-one sessions. Finally, this paper makes an important contribution to the literature on strategy formation and entrepreneurship

by responding to recent calls to address how does strategy evolve in less developed institutional environments (George, Howard-Grenville, Joshi, & Tihanyi, 2016; Foss & Saebi, 2017). Specifically, I show how aligning the strategy formation process to the institutional context may serve as a means for entrepreneurs to behaviorally engage in experimentation and optimize their use of the limited resources they have by avoiding expensive premature commitments.

3.2 THEORY BACKGROUND AND DEVELOPMENT

Recent research in organizational learning theorizes that experimentation is a central approach for entrepreneurial strategy formation (Levinthal, 2017, Agrawal et al., 2019, Camuffo et al., 2020). In this work and in line with the definition of organizational learning, – the process of change in thought and action (Crossan et al., 1999) – learning through experimentation takes place in two parts: perceived experimentation and behavioral experimentation. The former involves engaging in hypothesizing and generating alternatives while the latter involves the decision-making process about the said alternatives. Entrepreneurs can either make a one-way irreversible decision committing to one of the generated alternatives based on non-experimental learning or multiple reversible decisions as they test these alternatives by engaging in experimental learning. Such approach helps entrepreneurs avoid premature and costly commitments (Contigiani & Young-Hyman, 2021). In other words, it makes them maximizers rather than satisficers (Shiner, 2015).

Experimental learning has historically been less accessible and thus less advertised compared to other forms of learning, such as planning and acquiring insights from experience or benchmarks (Koning et al., 2020). In recent years, however, the proliferation of different forms of support provided to entrepreneurs through different institutional intermediaries such as accelerators has made this form of learning more accessible (Hochberg, Cohen & Fehder, 2017;

Hallen et al., 2020) and has promoted the adoption of experimentation as a central strategizing approach. One key driver of the increase of adoption of experimentation is the knowledge provided to entrepreneurs through training and mentorship. For instance, this approach is at the heart of the Lean Startup trainings (Eisenmann, Ries, & Dillard, 2012; Ries, 2011; Ries, 2017) and the recent scientific method training where entrepreneurs are advised to adopt experimentation in their strategy formation (Camuffo et al., 2020).

Whereas many of these studies are rooted in already vibrant entrepreneurial hubs within developed institutional context, a push to areas previously underserved and overlooked by resource holders is now behind much of the exponential growth of entrepreneurial training and mentorship programs to adopt the experimental approach. However, although the knowledge resources provided through these training programs have undoubtedly helped promote experimental learning within early-stage ventures in such areas, it is an open question whether ventures in these environments are able to incorporate this form of learning in their behavioral decision-making processes or whether they simply change their thought process without truly acting on it.

A recent literature on strategy and the institutional envelop conceptualizes the interplay between the venture strategy and its environment, and the importance of fit between the two (Ahuja et al., 2018; Peng, 2003; Gaur, Kumar & Singh, 2014). Namely, strategies are strongly affected by the venture's institutional environment; thereby developing a successful strategy within weak institutional environments depends on the venture's ability to understand the voids in its institutional context and turn them into opportunities (e.g., Meyer et al., 2009; Peng et al., 2009; Ahuja & Yayavaram, 2011).

To illustrate how a venture can turn institutional voids into opportunities and adapt its learning to the local market conditions, I highlight the famous case study of the African online retailing firm Jumia (Peprah, Giachetti, Larsen, & Rajwani, 2021). Jumia, born in Nigeria in 2012, had the goal of adapting Amazon business model to the peculiar African environment. They had to overcome infrastructural voids, cultural obstacles and lack of regulations that characterized the African background (Peprah et al., 2021). For example, countries where Jumia wanted to operate including Kenya and Morocco, had very low levels of trust in online shopping platforms among consumers. However, they managed to go beyond these inconsistencies of logics between their imported business model and their local market conditions through several strategies. They set up pick-up sites close to customers and adopted motorbikes to deliver products in order to solve transportation problems. They also used phone communications and landmarks to track houses without an address, hiring local people as delivery associates to guarantee the right know-how about delivery areas. Finally, to face low inclination of African consumers towards digital channels, Jumia introduced the cash-on-delivery as a payment method (Peprah et al., 2021).

In adapting their business model and trying to turn the voids into opportunities, the founders of Jumia often consulted with local experts in each of the countries where they introduced the platform. Accordingly, promoting and incorporating experimental learning within areas with less developed institutions might require more than just the transfer of explicit knowledge through training and advising programs. Recall that strategy formation through organizational learning requires thought and action. Thus, even if the knowledge provided promotes the experimental thought process (perceived experimentation), most entrepreneurs might not act on it in their decisions; thereby limiting their strategizing approach to perceived experimentation rather than behavioral experimentation.

Therefore, departing from the null hypothesis in the current literature, contending that acquiring knowledge resources enhances experimentation, I posit that his hypothesis is only partially true within weak institutional environments resulting in the following two hypotheses.

H1a: Similar to developed institutional environments, acquiring knowledge resources will enhance perceived experimentation for entrepreneurs within weak institutional environments.

H1b: In contrast to developed institutional environments, acquiring knowledge resources will not affect behavioral experimentation for entrepreneurs within weak institutional environments.

3.2.1 Incompatibility in logics and the role of tacit knowledge

Developed institutions effectively intermediate market relations to reduce uncertainty and limit information asymmetries (e.g., Khanna & Palepu, 1997; George et al., 2016; Gao et al., 2017). Developing countries, by contrast, are, to a larger extent, defined by absent or deficient institutions (Mair et al., 2012; Doh et al., 2017) leaving room for institutional voids to prevail and informality to dominate the market (Khanna & Palepu, 1997). Between the two contexts, we find emerging markets, where the country's institutions formalize and fill the infrastructural and regulatory voids, but the cultural habits and norms do not follow this change at least, not in the short or medium terms.

In promoting experimental learning for entrepreneurs operating within developing or emerging contexts, the logic of the transferred knowledge is often inspired from developed contexts; thereby creating an incompatibility between the logic of the transferred knowledge to generate alternatives and the logic of the market to test those alternatives. Such incompatibility often hinders the action process, as it becomes less clear for entrepreneurs how to incorporate their learning within their local context.

To overcome the challenges associated with this incompatibility in logics, I argue that tacit knowledge, that is “procedural rather than declarative in structure” (Sternberg & Horvath, 1999) is what helps entrepreneurs blend the incompatible logics and turn the voids into opportunities (Peprah et al., 2021). Namely, tacit knowledge helps localize and contextualize their learning. Such knowledge is embedded within specific contexts and, therefore, cannot be abstracted without losing its contextual nuances (Almond, 2011; Hong, 2012; Lei et al., 1996; Cowan, David, & Foray, 2000). As Michael Polanyi puts it in his classic work, “The tacit Dimension”, “we can know more than we can tell” (1966, p. 4). In contrast to explicit or codifiable knowledge, such knowledge is difficult to capture because it is hard to formalize and not easily visible. Moreover, it is difficult to share with others because it is highly context dependent.

One way for entrepreneurs to acquire tacit knowledge is through repeated informal interactions with their mentors (Fey & Furu, 2008). Mentors, being the repositories of the tacit knowledge, serve as a bridge to consolidate and align the thought and action processes. They become a reliable reference for the venture to consult and even mimic when making strategic decisions within their uncertain environment. They can provide valuable inputs to improve entrepreneurs’ ability to absorb, process, and incorporate the explicit knowledge (Argote & Miron-Spektor, 2011; Argote & Fahrenkopf, 2016; Cohen et al., 2019). These inputs can then help blend different logics by reframing and adapting the generated alternatives to the context where these alternatives will be tested.

Mentors can, therefore, affect how much entrepreneurs learn by influencing both the types of knowledge they access and how they apply this knowledge. Anderson *et al.* (2020) illustrate the importance of this resource in their field experiment with 930 small business owners in Uganda. The treatment group was linked to mentors around the world via biweekly Skype meetings for up

to six months. The mentors were typically management professionals in advanced markets, who tailored the activities towards the specific context and challenges facing each firm. They find that firms assigned a mentor were more likely to pivot their marketing strategy, for example, by shifting the production of sale from one product line to another. The customized knowledge that these small businesses acquired from their mentors helped them formulate specific hypotheses about their marketing strategy to experiment with their products and gain market feedback. Similarly, Assenova (2020) shows that mentoring catalyzes entrepreneurial learning among disadvantaged entrepreneurs and thereby increases entrepreneurs' capacity to found and manage more successful businesses. She highlights that mentoring was especially beneficial for entrepreneurs with less pre-entry knowledge and experience coming into an incubator, suggesting that mentoring supplemented gaps in formal education and experience.

However, not all mentors hold the tacit knowledge needed by the venture to thrive in their strategy formation. Tacit knowledge, especially within developing and emerging markets, requires that the mentor operates within the same field and geography of the venture. Theories from the literature on agglomeration economies (e.g., Feldman, 1999; Rosenthal & Strange, 2004) and economic geography (Florida, 1995; Asheim, 1996; Morgan, 1997; Cooke & Morgan, 1998; Masked & Malmberg, 1999; Lundvall & Masked, 2000) have established that tacit knowledge does not travel easily, in emphasizing, for example, the role of clusters. This is also depicted in practice by the perpetuation and deepening of geographical and industry concentration in a world of expanding markets, weakening borders, and ever cheaper and more pervasive communication technologies.

Tacit knowledge, because it defies easy articulation and is best acquired experientially, is difficult to exchange over long distances. Furthermore, its context-specific nature makes it

spatially sticky, since two parties can only exchange such knowledge effectively if they share a common social context, and important elements of this social context are defined locally. Thus, sharing field and geography are two important factors in effectively transferring tacit knowledge from mentor to entrepreneur. As the two already share basic similarities, their commonalities can enable mutual understanding and even build trust which in turn facilitates the local flow of tacit knowledge.

Therefore, in addressing the second question investigating how we might help entrepreneurs, within weak institutional environments, overcome the dissonance they experience due to the inconsistencies in logics and bridge the gap between thought and action, I develop the following hypothesis:

H2: Acquiring tacit knowledge will enhance behavioral experimentation for entrepreneurs within weak institutional environments

3.3 EMPIRICAL CONTEXT

This study is based on a large study examining the impact of resource mobilization on different entrepreneurial outcomes in early-stage ventures within resource constrained environments. Specifically, the study builds on a field experiment where different types of resources (knowledge and financial resources) were provided randomly to entrepreneurs in order to evaluate the marginal effect of each type of resource on the venture's entrepreneurial outcomes including action, persistence, and experimentation. In this study, I focus specifically on the latter.

Setting – The setting of this field experiment is an acceleration program for nascent ventures where founders from all regions of Morocco were invited to apply to this program. I

developed this acceleration program specifically for this experiment, within an existing accelerator.

As highlighted in the Jumia example, in settings such as Morocco, the incompatibility in logics when navigating the market is a central issue to most nascent ventures for two reasons: either formal institutions are not structured to facilitate market transactions (Khanna and Palepu 2010) or they have been structured only recently but the cultural structures did not follow such institutionalization yet.

Furthermore, access to knowledge resources is a major challenge facing the Moroccan youth. Nearly 28 percent (1.5 million) of the youth population (15-35) in Morocco is currently NEET (not in education, employment, or training).¹² Morocco was therefore a promising field site to study the impact of access to knowledge resources, especially tacit knowledge, on experimental learning because entrepreneurs were likely to place value on this knowledge to navigate the market in their experimentation process, but do not necessarily have access to such knowledge outside of the acceleration program.

To better understand the context of how entrepreneurs acquire such knowledge from training and mentoring sessions, four research assistants attended the training bootcamps and a number of mentoring sessions. They took detailed notes on the trainer-entrepreneur and mentor-entrepreneur interactions. Given the focus of this paper on tacit knowledge derived from mentoring, Table 3.1 shows the illustrative evolution of the mentor-entrepreneur exchange throughout the program and shows the key differences in these interactions observed between the matched pair versus a non-matched pair. After the first few mentorship sessions a pattern emerged

¹² [World Bank Document](#)

that those who are matched are more likely to start exchanging tacit knowledge. For example, few entrepreneurs who were paired with a matched mentor said:

“My mentor has put me in contact with entrepreneurs that have faced similar challenges, people who can help me with these hassles.” (DI 93, quote from week 3)

When trying to develop plans to test their alternatives, entrepreneur often sought help from their mentors to understand where they should prioritize their efforts and resources. One entrepreneur expressed it like this:

“I got some important data on the customers through the platform where I posted my prototype. I will use this feedback to improve my project. I also spoke to prospects directly through a contact list provided by the mentor. I also learned how to adapt the platform to the Moroccan context and culture.” (DI 218, quote from week 3)

”I have had help from my mentor; I've called him whenever I was in need of his help.” (DI 203, quote from week 8)

“I used the mentor’s knowledge to develop an effective penetration strategy.” (DI 206, quote from week 5)

“I’ve learned a lot about the local market from my mentor.” (DI 283, quote from week 3)

These observations revealed that entrepreneurs who had the chance to be paired with a mentor within their field and geography have largely benefited from the mentor’s guidance and experience compared to those who did not have the chance to be paired with a matched mentor.¹³

¹³ Of note, mentoring sessions were not always one-to-one, and sometimes included more than one entrepreneur with a max of four entrepreneurs per session.

3.4 RESEARCH DESIGN

To investigate the first hypotheses H1a and H1b, whether access to knowledge resources leads to experimental learning in perception and behavior (thought and action), I take advantage of the randomization of access to knowledge resources for the two treatment groups.¹⁴ Specifically, I randomly assigned cohorts of entrepreneurs who applied and were eligible for the acceleration program into three conditions, a “knowledge resource only” treatment condition (T1), a “knowledge and financial resources” condition (T2), and a control condition. I stratified the randomization according to venture and founder characteristics (industry, gender, initial quality, and previous access to resources) to ensure creating groups with similar observable characteristics.

Participants in the two treatment conditions both had access to training and mentoring following the same standards. The only difference between the two treatment groups was access to seed-funding. Prior field experimental research has used such training sessions and lectures as treatments to provide knowledge resources to entrepreneurs and train them to become experimenters (e.g., Camuffo et al. 2020; Anderson et al., 2020). The trainings were delivered in three bootcamps. Each bootcamp lasted two and half days. The curriculum was based on the lean startup methodologies and used successful examples from developed institutional environments such as Airbnb and Uber. The control group, however, did not access any training or mentoring. Instead, they were motivated to stay involved in the program by responding to data collection requests because they had the incentive to submit their final pitch deck like the other two treatment groups. All submitted pitch decks were evaluated and scored by independent judges who did not know the venture’s condition assignment. The top 20 selected participants were part of Demo Day.

¹⁴ The two treatment groups had access to knowledge resources. One of the two groups had also access to financial resources. The results will show the differences between the two treatments groups.

This way, even participants who were in the control group had a chance to be part of Demo Day and pitch their venture to resource holders.

To test H2, I focus on one specific knowledge resource, mentoring. This was one of the resources randomly provided in this experiment to the two treatment groups. It provided valuable knowledge to fill the gaps in entrepreneurs' education and experience (Assenova, 2020). Such knowledge can be either explicit or tacit. The type of knowledge provided depends on the mentor's match with the entrepreneur in terms of field of expertise and geography. If the match occurs, then mentorship could be even more valuable affecting the value that entrepreneurs derive from the mentorship process. Thereby, mentorship assignment was the source of the main variation in participants' acquisition of tacit knowledge resources.

Accordingly, I take advantage of the central feature in the allocation of mentorship. That is, the accelerator's staff assign mentors to participants depending on the mentor's schedule and availabilities and independent of participants' and their businesses' characteristics. Thus, while I did not implement a randomization condition in pairing mentors and entrepreneurs, whether an entrepreneur was paired with a mentor within their field and geography was independent of the entrepreneur and venture characteristics. This feature enables the identification of how access to tacit knowledge affected participants' engagement in experimental learning during the acceleration period. Following Assenova (2020), participants' mentor assignment serves as an instrument for tacit knowledge if the participant is assigned to the mentor within their sector and geography.

3.4.1 Data

The data for this study come from three sources: (1) pre-treatment survey; (2) four surveys throughout the 12 weeks of the program; and (3) mentoring sessions observation notes. The pre-

treatment survey collected information from all participant entrepreneurs, at the application phase, about their demographics and venture characteristics. The four mid-treatment surveys conducted during the acceleration program were collected through email and WhatsApp with the help of four research assistants. We first sent the link and daily reminders for follow-up surveys. For the ones who did not respond to the survey through the link, the research assistants and I conducted telephone interviews to collect the responses to survey data. The surveys contained questions on detailed activities that the entrepreneurs were engaged in as they developed their strategy, whether they were in control or treatment conditions. The data on these activities were used to measure perceived and behavioral experimental learning in thought and in action.

Attrition – A total of 289 entrepreneurs applied to participate in the program. 195 entrepreneurs were eligible to participate to the program. Eligibility was based on completion and accuracy of the information in the application as well as previous access to resources. Only ventures that completed the full application process and were eligible were recruited to be part of the program. Moreover, ventures that have previously benefited from all types of resources (funding, training, and mentoring) were rejected. The goal was to ensure that all ventures were seeking such resources for the first time. I have complete data on experimental learning outcomes – perceived experimentation, behavioral experimentation, experimentation activities – for 122 participants. Across the four waves of surveys, there were two cases where participants missed one of the surveys, thereby the samples in the results will show a total of observations of 122 or 124 depending on whether the outcome was measured across all four surveys or only in one of the four surveys where the responses were missing. For example, perceived experimentation was collected in the third survey only. The other outcomes were collected across all four waves.

The attrition level between baseline and the first survey was highest among the control group given that they were not benefiting from any resource and their only incentive to stay committed was the chance to be part of demo day. The attrition level by treatment condition is as follows: I collected 46 out of 90 complete responses in the control group (51 percent); 45 out of 58 in the knowledge resources only group (77.6 percent); and 33 out of 40 in the knowledge and financial resources group (82.5 percent). This suggests that attrition, especially for the control group, is most likely not random and is correlated to their treatment status. However, throughout the four survey waves, there was almost no attrition as those who committed to develop their ventures and stay in the program to try their chance for demo day stayed engaged throughout the 12 weeks. Given that the outcomes in this study are only based on the four follow-up surveys, the attrition from baseline to the first survey should not be a concern.

3.4.2 Measures

3.4.2.1 Dependent Variables – Experimentation

The main outcome I follow is experimentation or experimental learning as I use the two constructs interchangeably. I measure two dimensions of this construct, the perceptual and the behavioral parts. The perceptual or the thought part of experimentation is a binary variable that is equal to 1 if the entrepreneur identifies with the statement “I commit resources incrementally to explore multiple emergent directions and opportunities” and 0 if they identify with the statement “I adopt a Big bet strategy and commit resources to create and enact a new market order” (Rindova and Courtney, 2020; Zuzul and Tripsas, 2020).

The behavioral or action part of experimentation is also a binary variable constructed as follows. Throughout the four waves of surveys, I followed entrepreneurs’ decisions about the different alternatives they developed and asked them whether they made one-way irreversible

decisions about these alternatives, two-way reversible decisions, or they did not make any decisions yet. Irreversible decisions involved commitment to the said alternative and pausing experimentation until they hit a roadblock. Reversible decisions, on the other hand, involved collecting data and feedback about the said alternative without committing to it yet (Shiner, 2015).

I then constructed a binary variable based on the dominating decision pattern throughout the four waves. Namely, the variable is equal to 1 if the dominating decision pattern are reversible decisions and 0 otherwise. There were two cases where the participant made an equal amount of reversible and irreversible decisions. In this case, I considered the timing of the decision, in the sense that if the reversible decisions were made in the first weeks of the program, then they are experimenting.

To further validate the analysis below, I will also use an alternative outcome variable to measure behavioral experimentation. Another key outcome I follow throughout the four waves of surveys is the type of experimentation activities the entrepreneurs are engaged in, including zoom in, zoom-out, additions, exits, customer segment, and customer need. Specifically, I track every activity they engage in the weeks leading to the survey. Table 3.2 shows the explanation of each of these activities. The six activities were adapted from Ries's (2011) ten different types of experimentation activities that can happen in a startup and Kirtley and O'Mahoney (2020) classification of experimentation activities. Given the early stage of the ventures and their institutional context, I did not ask entrepreneur about activities such as business architecture, engine of growth, and value capture, which were also suggested by Ries (2011). Finally, to construct this alternative outcome, I count the total number of experimentation activities the participants have engaged in during the program. Figure 3.1 shows the distribution of the total number of experimentation activities.

3.4.2.2 Independent variables

I have three independent variables. The first two test H1a and H1b and are based on the initial randomization to test the effect of access to knowledge resources only or knowledge and financial resources combined. The two variables measure access to knowledge in general (explicit and maybe tacit). The third independent variable, to test H2, is constructed based on the mentor-entrepreneur pairing. It is equal to 1 if they match in terms of geography and field and 0 otherwise. This is a proxy to measure the access to tacit knowledge.

3.4.2.3 Control Variables

Control variables included entrepreneurs' age, gender (male or female), education, prior entrepreneurial experience, years of expertise within the sector, prior incubation, and occupation. Furthermore, additional controls included ventures' characteristics including venture stage, sector, initial quality of the venture, and region to control for the effects of location.

3.4.3 Descriptive stats

Table 3.3 shows a snapshot of the 124 ventures that responded to some, or all of the follow-up surveys post the intervention.

Founder characteristics – In a sample of 195 entrepreneurs who participated to the experiment, I have complete data for 122 ventures and partial data for 2 ventures as they missed one of the four follow-up surveys. Among the 124 participants, 32 percent were female entrepreneurs and a dominant population of young entrepreneurs who sought resources for the first time. At baseline, only 17 percent had a prior incubation experience and less than 13 percent have ever benefited from mentoring. About 22 percent of the sample are students and about half of them

are self-employed with a very small percentage operating or working within in an informal business.

Social capital is a key knowledge resource, namely the number of sources of information that entrepreneurs use for advice before entering the program such as friends, family, professors, and experts in the field. Thus, I also measure this feature at baseline. I find that each entrepreneur had an average of two sources of information and advice. Another important knowledge resource that entrepreneurs use prior to the acceleration program is their education. In this sample, about 67 percent had a university level education, while the other 33 percent either had a vocational degree or a high school degree with a small percentage who had only received some level of elementary education.

Venture features – I also collected data on the venture at baseline. In terms of venture stage, almost half of the sample are at the concept stage where the founding team does not have a prototype yet. Within the remaining half, 30 percent have a prototype and about 20 percent have received promises for sales. This aligns with the theoretical argument and the boundary condition focusing my hypotheses mainly on early-stage ventures. Given that the majority are very early in the development process, the average size of venture teams is about 2 members.

3.5 EMPIRICAL ANALYSIS AND RESULTS

3.5.1 Estimation strategy

To test all hypotheses, I use a linear probability model (LPM) which is the appropriate model for binary outcomes (Gomila 2020). For H1a and H1b, I follow Banerjee et al. (2015) and investigate the intent to treat (ITT) comparisons between the two treatments and control groups following Eq.3.1.

$$(3.1) Y_i = \beta_1 T1_i + \beta_2 T2_i + \gamma X_i + \delta Y_{i0} + \varepsilon_i$$

Y_i is the entrepreneurial outcome for venture i . The vector X_i contains the stratification variables (gender, industry, quality, and prior access to resources). The term ε_i is a mean-zero error with standard errors clustered at the venture level which is the unit of randomization. The coefficient β_1 measures the impact of acquiring knowledge resources alone, the coefficient β_2 measures the impact of financial and knowledge resources together.

Further, to validate the results based on the decision-making dependent variable, I estimate an alternative dependent variable. That is, the total number of experimentation activities which is a count variable. Here, I use a negative binomial model, which is appropriate for models where the dependent variable is a count with nonnegative values (Cameron & Trivedi, 2009).

3.5.2 Results

3.5.2.1 The effect of knowledge resources

H1a posits that, similar to developed contexts, acquiring knowledge resources will enhance perceived experimentation for entrepreneurs within weak institutional environments. Models 1 and 2 of Table 3.4 present results of the linear probability model that test this hypothesis. Model 1 estimates the effects of access to knowledge resources alone and combined with funding without any control variables, while Model 2 estimates it with control variables. The coefficient estimate for the effect of knowledge resources alone is negative and not statistically significant at the 5 percent level. However, the coefficient estimate for the effect of knowledge and financial resources combined is positive and statistically significant in the second model with control variables. Specifically, acquiring knowledge and financial resources combined increases the entrepreneur's probability of engaging in perceived experimentation by 17 percent. This lends partial support for

H1a. That is, knowledge resources increase perceived experimentation within weak institutional environments only when such resources are combined with financial resources. While I did not theorize about the importance of access to financial resources on top of knowledge resources, such results are not surprising. In fact, this aligns with the existing findings in the literature examining the effects of knowledge resources on experimentation as most of these studies combine knowledge and financial resources together (Camuffo et al., 2020; Assenova, 2020; Chatterji et al., 2019).

Models 3 and 4 in Table 3.4, test the behavioral dependent variable, whether entrepreneurs in the treatment conditions acted on their experimentation plans by making reversible decisions and avoiding early commitments. In both models and for both treatments, I do not find a significant effect on behavioral experimentation as a result of receiving treatment. While this result does not convey statistical certainty, it is likely that a Type II error occurred, meaning that H1b is true. This lends partial support for H1b positing that acquiring knowledge resources will not affect behavioral experimentation for entrepreneurs within weak institutional environments. Overall, these results lend partial support for the first hypotheses stating that within weak institutional environments, acquiring training and mentoring to encourage entrepreneurs to experiment with or without cash does not significantly influence entrepreneurs' engagement in behavioral experimentation.

To further validate the results of H1b estimating the effect of resources on behavioral experimentation, I estimated the same models (3 and 4 in Table 3.4) using an alternative outcome variable. Specifically, I measure the total number of experimentation activities that each entrepreneur engaged in throughout the 12 weeks. As the dependent variable here is a count variable, I used a negative binomial regression model. Table 3.5 models 1 and 2 show similar results (non-significant) confirming that acquiring resources has no significant effect on behavioral

experimentation. This helps verify that the original binary outcome measure was accurately capturing the behavioral experimentation through the entrepreneur's decision-making behavior.

Figure 3.2 plots of the kernel density function for the number of experimentation activities that each participant engaged in during the 12 weeks of the intervention for the three conditions. The dashed line is the distribution for participants in the control condition, while the thick solid black line represents those who acquired knowledge and funding resources, and the thin solid black line represents the other treatment condition for those who only received knowledge resources. Figure 3.2 shows that the distributions for the two treatment groups did not shift significantly from the distribution of the control group.

3.5.2.2 The effect of tacit knowledge

In H2, I further hypothesize about the role of tacit knowledge in helping entrepreneurs within weak institutional environments transform their thoughts into corresponding behavioral actions. Specifically, I posit that what makes a difference in behavioral experimentation is not merely acquiring knowledge resources, but it requires that the knowledge comes from a mentor within the same field and geography. The estimates of the linear probability model in Table 3.6 show that the mentor match has a positive and significant differential effect on behavioral experimentation measured based on the decision patterns of the entrepreneur. Specifically, models 1 and 2 Table 3.6 show the results of such effect for the full sample comparing those who had the chance to be assigned a matched mentor to those who either did not have the chance to be paired with a matched mentor or did not have a mentor at all (initial control group). Model 1 shows the coefficient estimate without controls and model 2 shows the estimate of the same specification with control variables. Overall, getting paired with a matched mentor increases the probability to engage in behavioral experimentation by 20 percent.

Models 3 and 4 Table 3.6 show similar results with similar specification but looking within the two treatment groups. That is, among those who received knowledge resources, I estimate the effect of receiving tacit knowledge specifically. Both models, with and without control variables show that acquiring tacit knowledge, measured as being paired with a mentor within the same field and geography, increases the entrepreneur's probability to engage in behavioral experimentation by 38 percent.

Similar to H1b, I further validate these results by testing the hypothesis using the total number of experimentation activities as an alternative outcome. While I use the negative binomial estimation in Table 3.7, I replicate the analysis on all the models as in Table 3.6 and find that these results confirm the previous findings using the decision pattern as the measure for behavioral experimentation.

In an ideal world, I would stratify the sample of those who received resources based on whether they received tacit knowledge resources only or tacit knowledge resources combined with cash. However, given the small sample size, such stratification would further reduce the sample size and thus the results of the analysis might be biased and inaccurate. That said, it is important to highlight that the results for H2 are likely confounded by allocation of financial resources to certain entrepreneurs. However, this does not undermine the effect and importance of tacit knowledge in enhancing behavioral experimentation.

To illustrate these findings, Figures 3.3 and 3.4 plot the kernel density functions for the number of experimentation activities that each participant engaged in during the 12 weeks of the intervention for the two conditions (i.e., the entrepreneur-mentor matched pair and control). Specifically, Figure 3.3 plots the control group as anyone that did not access tacit knowledge, including those who did not access any resources. Figure 3.4, on the other hand, plots the control

group as anyone who did not access tacit knowledge but had access to explicit knowledge through trainings and non-matched mentors. In both figures, the dashed line is the distribution for participants in the control condition, while the solid black line represents those who were in the treatment. In line with the results in Tables 3.6 and 3.7, the two figures show that the distribution for the treatment group shifted significantly from the distributions of the two control groups.

3.6 DISCUSSION

How do startups form strategy under uncertainty? Recent work in organizational research and strategy identifies experimentation as the optimal approach to develop strategy under uncertainty in early-stage ventures (Levinthal, 2017; Camuffo et al., 2019; Gans, Stern and Wu, 2019, Koning et al. 2020). I exploit a randomized field experiment within a developing country where a group of entrepreneurs received training on several aspects of entrepreneurship including experimentation adapted from the lean startup approach. In doing so, I evaluate whether providing knowledge on such approach is sufficient to engage entrepreneurs in experimentation with its two parts: thought and action. Interestingly, as my theoretical argument predicted, I find partial support that accessing knowledge resources enables experimentation. Namely, knowledge resources combined with cash enable perceived experimentation in thought but did not necessarily translate it to action; thereby lending support to the idea that tacit knowledge is a key driver to enable behavioral experimentation.

Specifically, this article informs two research agendas at the intersection of entrepreneurial strategy and organizational learning. First, while our field has recently generated many insights about strategy in early-stage ventures, it is only recently that we have sought to turn our attention to the less privileged areas of the world where over 80 percent of entrepreneurship takes place. The findings in this study provide empirical evidence that providing knowledge resources as

suggested by Assenova (2020) and Anderson et al. (2020) is positively associated with experimental learning. More importantly, I delve into the underlying mechanism of these knowledge resources to demonstrate that the key driver is the tacit knowledge provided on top of the explicit knowledge to help entrepreneurs better incorporate this knowledge in their decision-making approach. Borrowing from the literature on organizational learning I offer novel insight that highlights an important distinction between engaging in experimentation in thought versus action. Teaching entrepreneurs within weak institutional environments how to engage in experimentation without holding their hands during the process of experimenting will not translate into the behavioral experimentation suggested by Ries (2011), Levinthal (2017); Gans, Stern and Wu (2019); and Camuffo et al. (2019) that is positively associated with better performance. Instead, it might translate to frustration and costly early commitments that can easily be avoided if the explicit knowledge is contextualized and localized through tacit knowledge.

Second, this study also contributes to research on business and entrepreneurship training (McKenzie, 2021). This research investigates multiple aspects of knowledge resources including management consulting (Bloom et al. 2013), general aspects of incubation and acceleration (Cohen et al., 2020; Hallen et al., 2020; Yu, 2020), specific aspects of trainings such as the scientific approach to early-stage entrepreneurship (Camuffo et al. 2020), as well as different aspects of mentoring (Assenova, 2020; Anderson et al., 2020). Although these studies help explain the efficacy of different training and mentoring programs and incubator structures, they have largely overlooked the distinction between the standardized codifiable knowledge and the implicit knowledge and how the two differ in their effects on entrepreneur's behavioral strategy formation. This study shows that distinction matters in structuring such programs, especially within weak institutional environments. Put differently, this study raises the possibility that much of the value

created by these programs may be less in the materials and frameworks they teach, and more in the implicit and tacit routines that they transfer during the trainer- or mentor-entrepreneur interactions demonstrating the strategic value for these programs to focus on the mentor-entrepreneur assignment.

Moving forward, the continued proliferation and widespread adoption of teaching experimentation as a key framework to develop strategy will raise important questions for scholars and practitioners. How should accelerators, in weak institutional environments, adapt their training and mentoring to allow entrepreneurs to benefit from such approach? How should we teach the scientific approach suggested by Camuffo et al. (2020) within such environments? Addressing these questions, among others, will guide future research and practice.

3.6.1 Limitations and boundary conditions

This study is not without limitations. While I utilize the gold standard (i.e., randomization) in providing knowledge resources and a quasi-randomization in providing the tacit knowledge specifically, I recognize that other factors might drive experimental learning that might also be correlated with the chance of having access to knowledge resources. However, the rich suite of controls included in all specifications potentially reduces the risk of these factors driving the estimates. Future research can validate and delve deeper into these findings by testing tacit knowledge specifically as the key randomized resource among a larger sample of entrepreneurs. They can then identify what moderates the tacit knowledge and whether there are specific approaches to deliver such knowledge within acceleration and incubation programs.

Furthermore, the high attrition in the control group from baseline to the first wave of a series of surveys is a concern that might bias the estimates in this article. However, since the

dependent variables were not measured at baseline and are not compared to baseline metrics, I do not consider this attrition a serious concern. In fact, my main sample concerns specifically entrepreneurs who acted on their ideas after the program started which are the same entrepreneurs who did not attrit from the study. Namely, attrition from baseline to the first survey means the entrepreneur decided to give up on their idea or they went to seek resources somewhere else in order to act on their idea. This is not merely a speculation as the four research assistants and I called every entrepreneur from the 71 who attrited from all three conditions and the two responses from those who responded to our calls were either, I am not pursuing that idea anymore, or I was not given the resources I need and thus I cannot develop the idea on my own.

Finally, in the context of strategy and entrepreneurship research the most salient boundary condition is the larger context: Morocco. I selected Morocco because there remains a dearth of development-focused research in strategy and because it was a setting where I believed entrepreneurs would be receptive to acquiring knowledge resources (Assenova & Sorenson, 2017; Dimitriadis, 2021, George et al., 2016). The qualitative data suggests Morocco is a context in which many entrepreneurs recognize the value of tacit knowledge depicted through their emphasis on getting the mentor's phone number and developing an informal relation with them. Research suggests the demand for such knowledge extends to other developing economies whenever there are gaps between the venture's strategy and its institutional envelope. When organizations are faced with such issues, they have two options, either tailoring the institutional envelope to suit them or tailoring themselves to suit the institutional envelope (Ahuja et al., 2018). While some large organizations can adopt the former option through lobbying among other approaches, early-stage ventures cannot afford it and are left to the latter option where they should tailor their strategy to the institutional envelop. Thus, this study suggests that tacit knowledge is likely a universal

driver whenever a venture is faced with conflicts between its strategy and its institutional envelop beyond Morocco and similar economies. That said, more evidence is needed before we can comfortably conclude that providing explicit knowledge alone is not always beneficial in terms of experimental learning and that assigning a matched mentor is always the key driver to make such knowledge beneficial.

DISCUSSION AND CONCLUDING REMARKS

Through this dissertation, I sought to shed light on the various means by which entrepreneurs mobilize resources in immediate contexts of resource scarcity, especially for disadvantaged entrepreneurs with low initial endowments. Entrepreneurial resource mobilization has received ample scholarly attention in recent decades, but the research body is highly fragmented. It also offers few insights for entrepreneurs starting out in resource-scarce local contexts, often with low initial resource endowments, on how they can and should mobilize resources in order to fuel their endeavors effectively.

At the highest level, this thesis provides a sense of the breadth of resource mobilization mechanisms that entrepreneurs can potentially deploy and the ways they can adapt these mechanisms to leverage their context and their attributes. From the resource holder perspective, this dissertation provides a sense of how resources shall be allocated within such environments. Moreover, it turns their attention to consider the low endowed entrepreneur in their processes of resource allocation by considering when does selection matter and how to leverage the role of knowledge resources, especially tacit knowledge.

Furthermore, the centrality of resource mobilization within the entrepreneurial process (Shane & Venkataraman, 2000) means that this dissertation's findings have strong potential practical implications for entrepreneurs, entrepreneurial support organizations, and educators alike. Following the "moral imperative...to guide business leaders, employees, and stakeholders with systematic, unbiased, and empirically robust evidence on mechanisms with which to tackle the...global problems confounding us" (George, Howard-Grenville, et al., 2016, p. 1893), this

dissertation aims to extend the toolkit available to entrepreneurs and resource holders in their journey of resource exchange.

In summary, this article is an attempt to contribute to the emerging literature theorizing about issues of the so-called disadvantaged entrepreneurs (Mair, Marti, & Ventresca, 2012; Mair, Wolf, & Seelos, 2016; Reypens et al. 2022; Dimitriadis, 2019; Assenova 2020). My aim is to highlight and complement these efforts. I hope that this trend in the scholarship, along with the articles in this dissertation, can direct attention towards how management research can help disadvantaged entrepreneurs in struggling contexts around the world. The rich theoretical potential for scholars, along with its high practical relevance for entrepreneurs, make it worth exploring these contexts.

APPENDIX – FIGURES AND TABLES

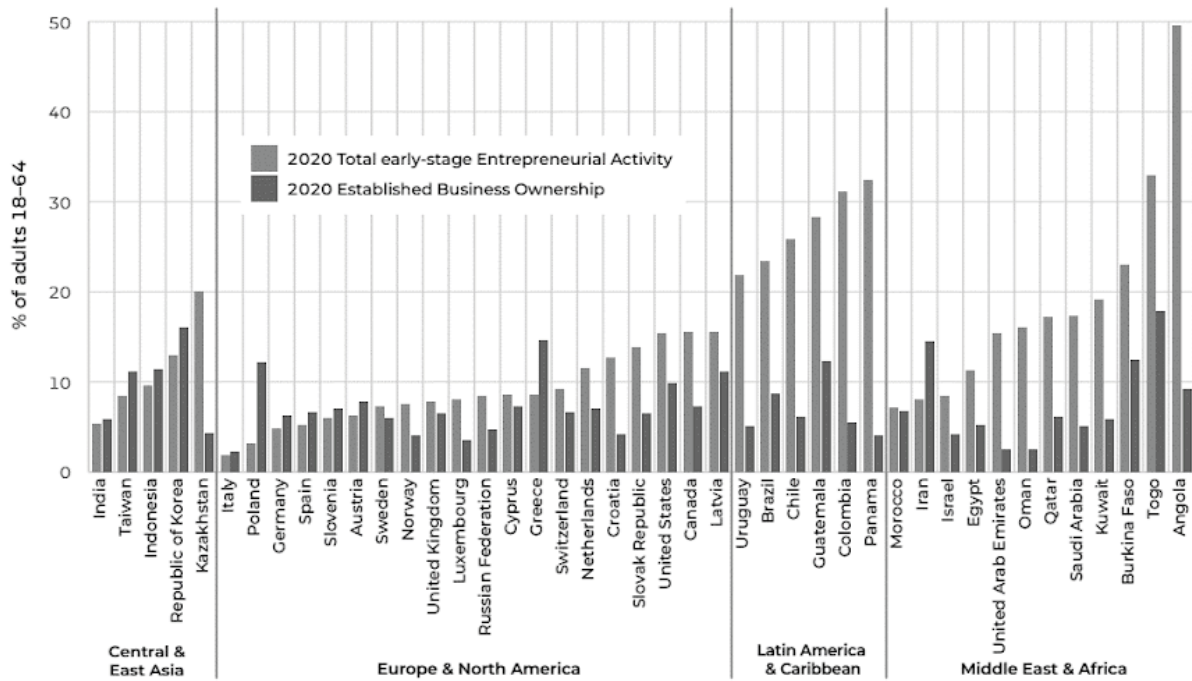


Figure 1 Total early-stage Entrepreneurial Activity (TEA) and Established Business Ownership (EBO) (both % of adults aged 18–64, 2020)¹⁵

¹⁵ Source: The 2020/2021 Global Report by the Global Entrepreneurship Monitor

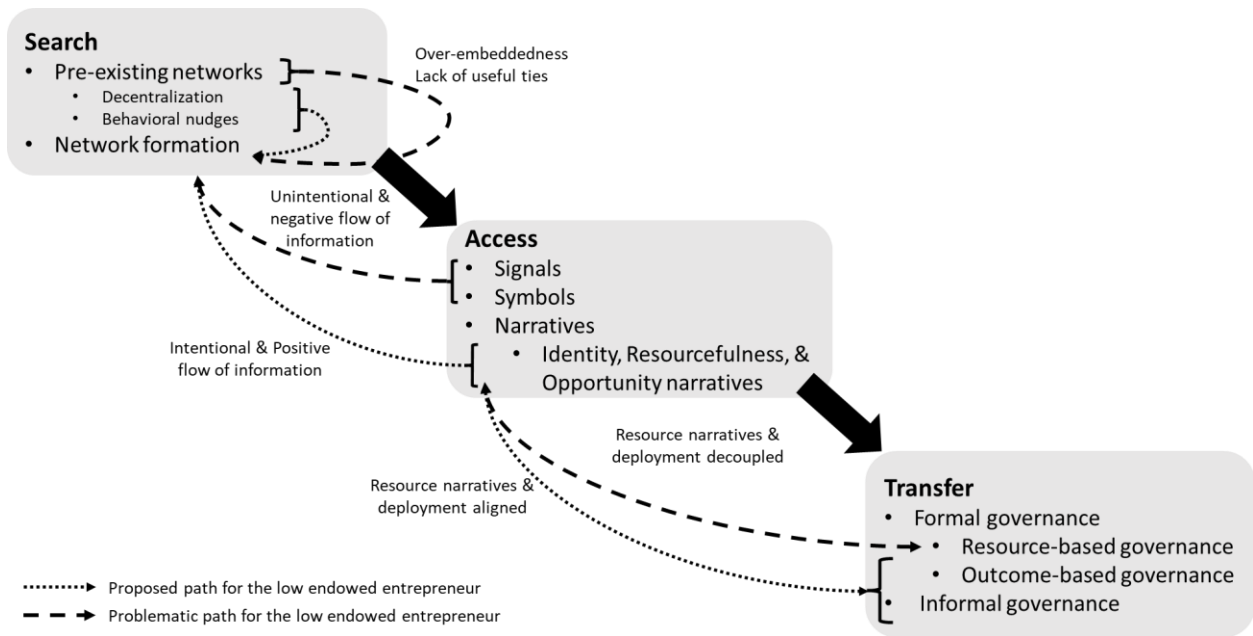


Figure 1.1 The resource mobilization path for low endowed entrepreneurs. Identified issues and proposed adaptations.

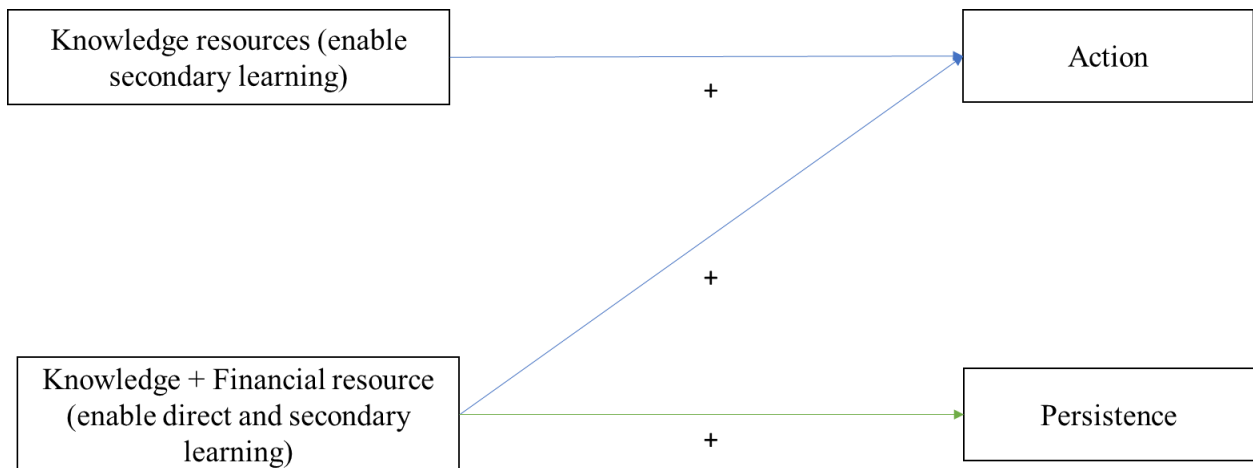


Figure 2.1 The relationship between randomized access to resources and entrepreneurial outcomes

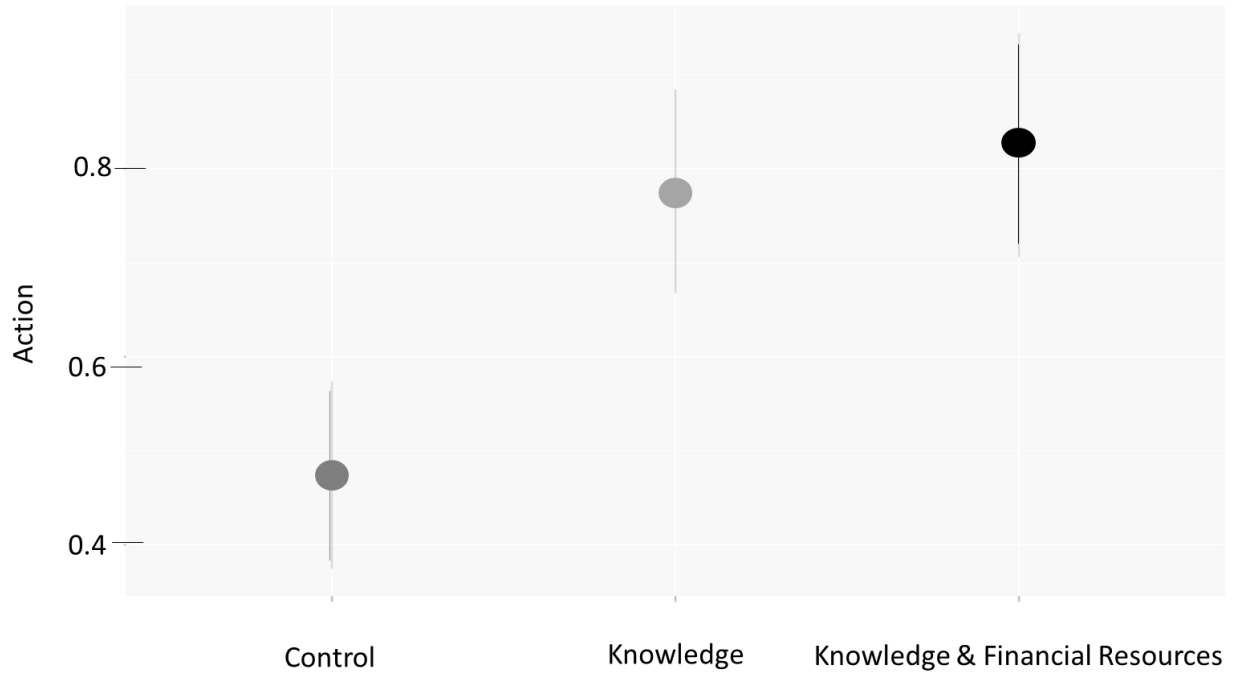


Figure 2.2 Average Marginal Effects with 95 percent confidence intervals, on entrepreneurial action.

Notes: The average marginal effects plotted above compare the effects of the two treatment groups (Knowledge resources alone and knowledge combined with financial resources) on entrepreneurial action, compared to the control group. By comparison, the means of the treatment groups are significantly higher than the control group, although the difference between the two treatment groups is not significant.

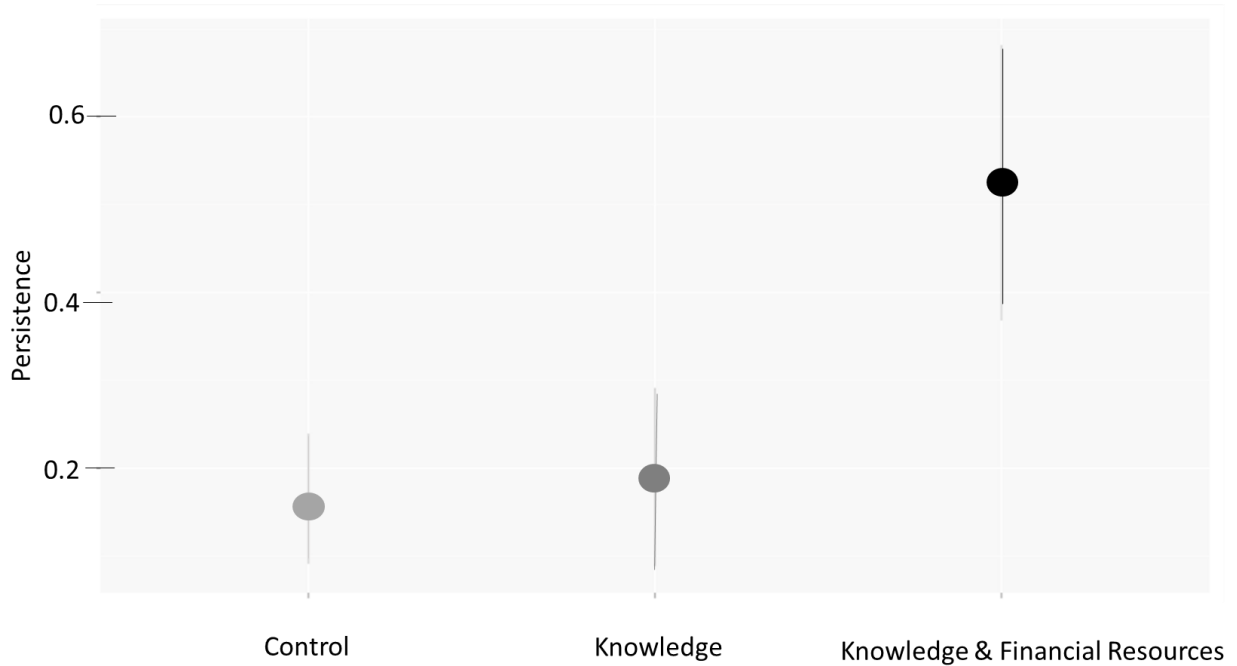


Figure 2.3 Average Marginal Effects with 95 percent confidence intervals, on entrepreneurial persistence.

Notes: The average marginal effects plotted above compare the effects of the two treatment groups (Knowledge resources alone and knowledge combined with financial resources) on entrepreneurial persistence, compared to the control group. By comparison, the mean of the knowledge and financial resources treatment group is significantly higher than the control group and the knowledge only treatment group. The difference between the knowledge only treatment and the control group is not significant.

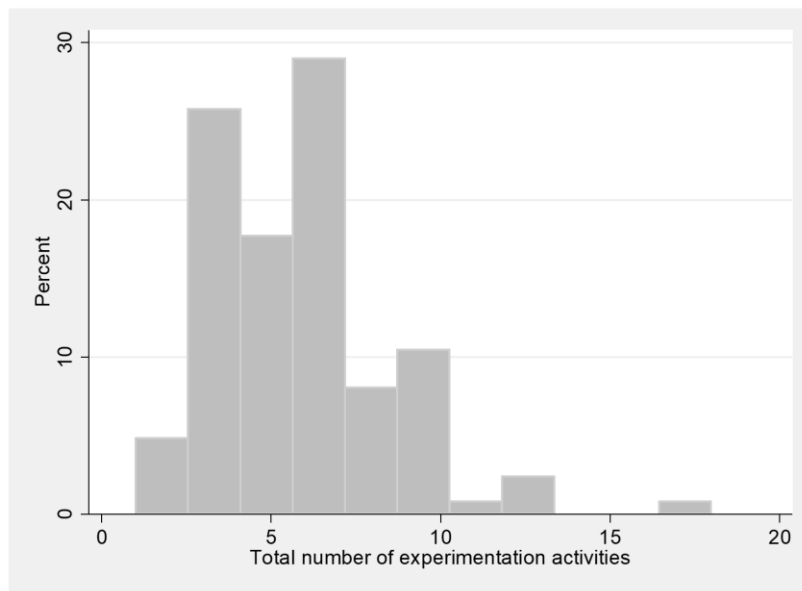


Figure 3.1 Histogram of the total number of experimentation activities

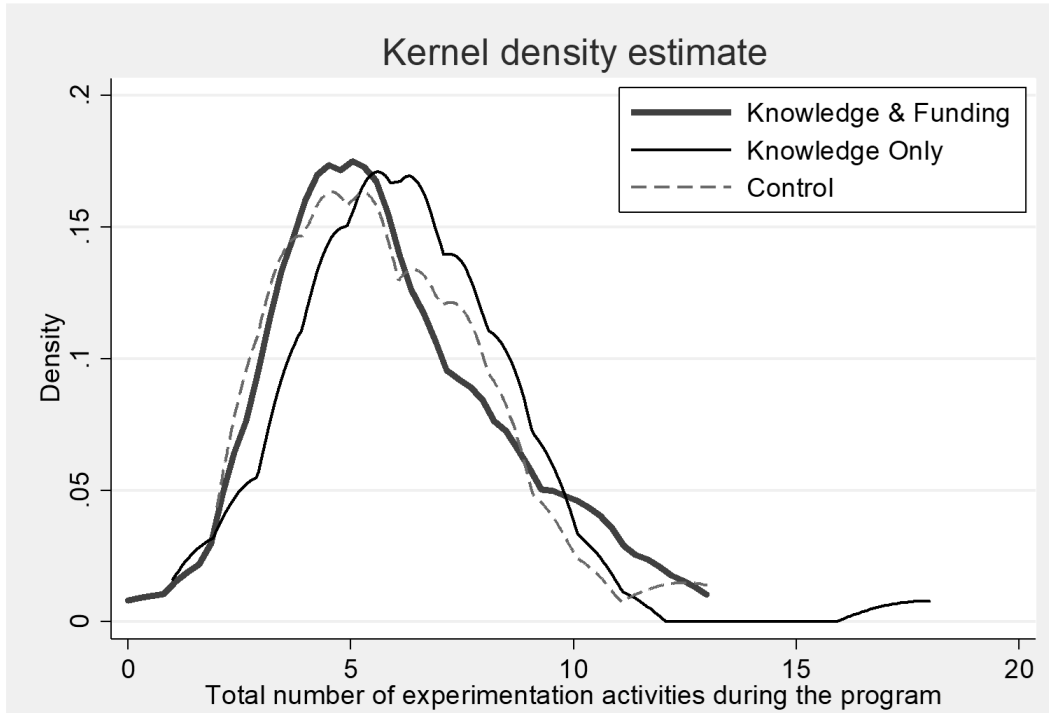


Figure 3.2 Acquiring knowledge resources does not affect experimentation activities

Notes: The kernel density plots above compare the total number of experimentation activities in the control group and treatment groups. Experimentation activities were collected at each survey wave throughout the 12 weeks of the program. The three plots follow the same pattern indicating that the treatment does not influence experimentation activities.

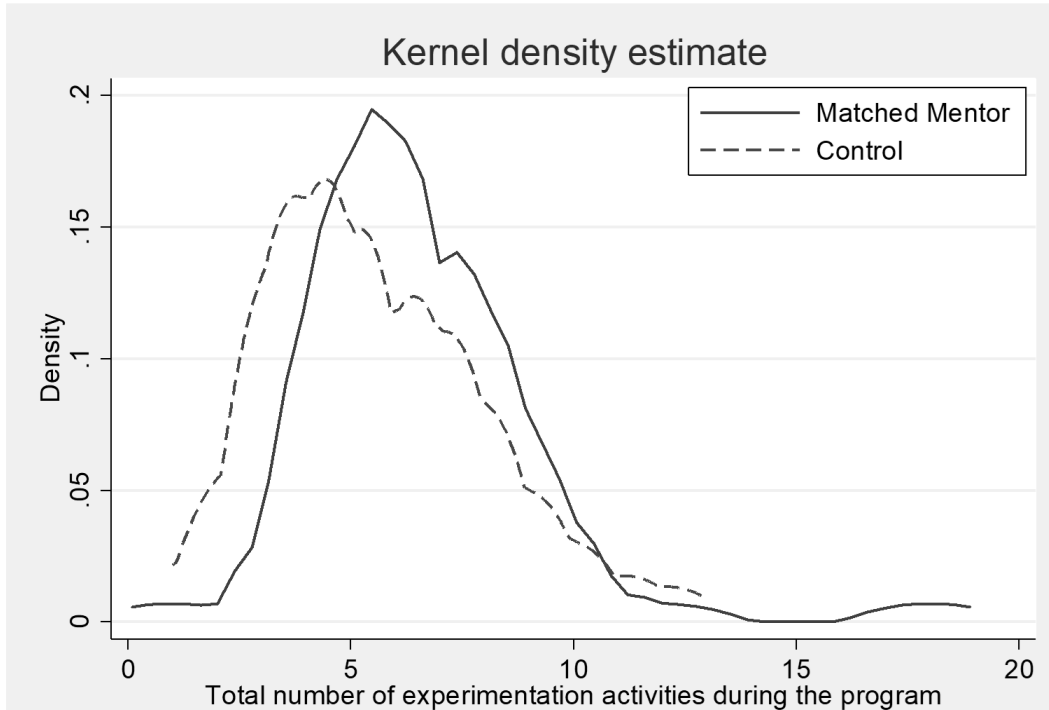


Figure 3.3 Acquiring tacit knowledge resources increases experimentation activities

Notes: The kernel density plots above compare the total number of experimentation activities in the control group (either without a mentor or with a non-matched mentor) and treatment group (group with matched mentors). Experimentation activities were collected at each survey wave throughout the 12 weeks of the program. By comparison, the density plot for entrepreneurs in the treatment group (solid line) is shifted to the right, with a median near 7 activities, indicating that in general these entrepreneurs engaged in more experimentation activities after their mentoring sessions.

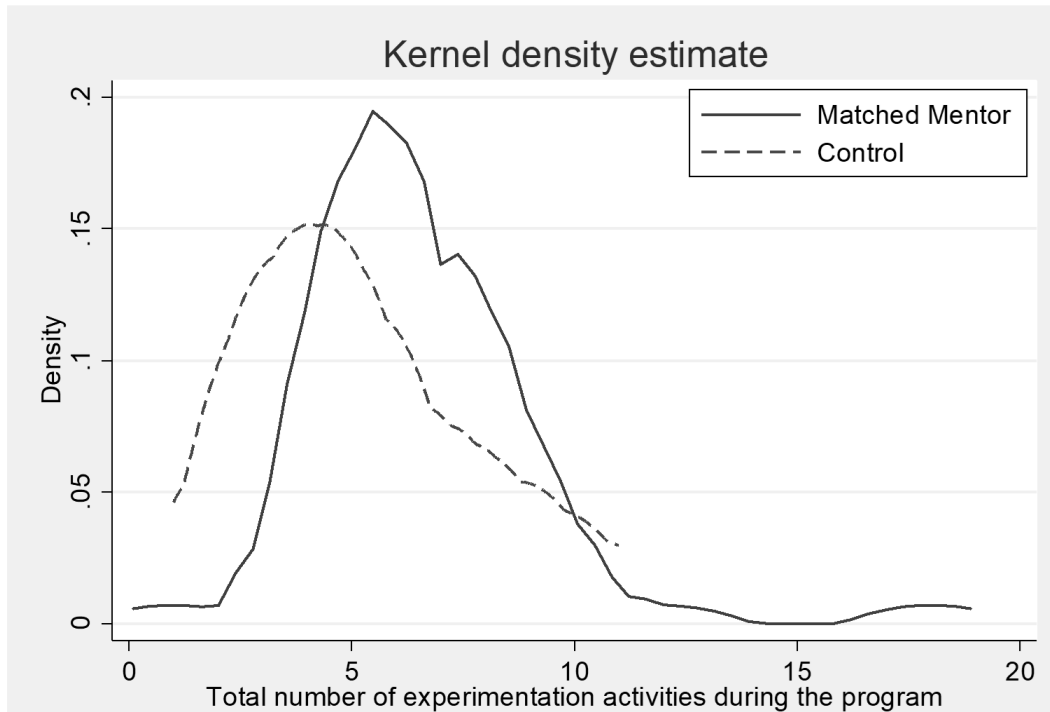


Figure 3.4 Among those who acquired knowledge, acquiring tacit knowledge resources increases experimentation activities

Notes: The kernel density plots above compare the total number of experimentation activities in the control group (group with a non-matched mentor) and treatment group (group with matched mentors). The sample here is restricted to those who received mentoring (excluding the control group who did not receive any resource). Experimentation activities were collected at each survey wave throughout the 12 weeks of the program. By comparison, the density plot for entrepreneurs in the treatment group (solid line) is shifted to the right, with a median near 7 activities, indicating that these entrepreneurs engaged in more experimentation activities after their mentoring sessions.

Table 2.1 Descriptive Statistics

<i>Panel A: Founder Baseline Characteristics</i>	Control		T1. Knowledge		T2. Knowledge & Cash		C & T1	C&T2
	Mean	S.D.	Mean	S.D.	Mean	S.D.	t-test	
Age								
18-25	0.46	0.50	0.46	0.52	0.45	0.50	-0.7	0.2
26-30	0.22	0.42	0.29	0.46	0.30	0.46	-0.6	-0.6
31-40	0.26	0.44	0.17	0.38	0.15	0.36	1	1.2
40+	0.04	0.19	0.07	0.25	0.10	0.30	-0.3	-0.9
Gender - Female	0.35	0.48	0.36	0.48	0.35	0.48	-.2	0
Occupation								
Student	0.35	0.48	0.21	0.41	0.25	0.44	1.7	0.6
Self-employed	0.38	0.49	0.51	0.50	0.45	0.50	-1.4	-0.2
Informal	0.06	0.24	0.10	0.30	0.15	0.36	-0.3	-1.2
Industry / government	0.21	0.40	0.17	0.38	0.15	0.36	0.3	0.7
Education								
Elementary School	0.03	0.14	0.02	0.13	0.10	0.30	1.1	-1.6
High school	0.10	0.30	0.06	0.25	0.08	0.26	0.6	0.3
Vocational degree	0.17	0.37	0.22	0.40	0.15	0.36	-0.7	0.5
University level	0.70	0.45	0.70	0.45	0.67	0.47	-0.1	0.4
Entrepreneurial experience	0.49	0.50	0.44	0.50	0.55	0.50	0.8	-0.8
Prior Incubation (Binary)	0.15	0.36	0.17	0.38	0.15	0.36	-0.3	0.2
Prior Training (Binary)	0.13	0.34	0.15	0.36	0.12	0.33	-0.4	0.3
Prior Networking (Binary)	0.05	0.22	0.07	0.26	0.02	0.14	0.7	1
Prior Mentoring (Binary)	0.15	0.36	0.13	0.34	0.10	0.30	0	0.9
Prior Funding (Binary)	0.07	0.26	0.03	0.18	0.02	0.15	0.7	1
Years of experience within sector	3.61	3.51	3.96	3.61	4.50	4.94	0.2	-0.9
Personality Traits								
Extroversion	1.73	0.46	1.77	0.43	1.73	0.50	-0.6	0.3
Agreeableness	1.91	0.44	1.93	0.42	1.91	0.42	-0.2	0.1
Openness	1.71	0.43	1.76	0.43	1.73	0.35	-0.7	0
Neuroticism	2.09	0.46	2.05	0.49	2.09	0.46	0.5	0.1
Conscientious	1.84	0.39	1.75	0.43	1.90	0.34	1.6	-1.4
Motivation for entrepreneurship								
Lifestyle	0.65	0.48	0.72	0.45	0.72	0.45	-0.7	-0.6
Opportunity/idea	0.31	0.46	0.19	0.39	0.23	0.42	1.4	0.5
Necessity	0.04	0.20	0.09	0.28	0.05	0.22	-1	0.2
<i>Observations</i>	90		58		40			

* Table 2.1 continues to next page.

<i>Panel B: Venture Baseline Features</i>	Control		T1. Knowledge		T2. Knowledge & Cash		C & T1	C & T2
	Mean	S.D.	Mean	S.D.	Mean	S.D.	t-test	
Venture Stage								
Concept	0.46	0.50	0.40	0.49	0.55	0.50	1.2	-1.2
Prototype	0.29	0.45	0.29	0.45	0.25	0.43	-0.2	0.5
Pre-sales	0.19	0.39	0.21	0.40	0.18	0.38	-0.3	0.3
Early-revenues	0.05	0.22	0.10	0.30	0.02	0.15	-1.4	1.4
Offer type								
Service	0.42	0.49	0.36	0.49	0.40	0.49	0.7	0
Product	0.44	0.49	0.46	0.50	0.42	0.50	-0.4	0.3
Customer type								
B2B	0.12	0.33	0.06	0.25	0.08	0.26	0.9	0.6
B2C	0.41	0.49	0.36	0.48	0.38	0.49	0.5	0.2
Sector								
Agriculture	0.15	0.36	0.10	0.31	0.18	0.38	1.1	-0.6
Handicraft	0.11	0.31	0.19	0.39	0.15	0.36	-1.1	-0.1
Education	0.06	0.24	0.12	0.32	0.18	0.38	-0.5	-1.4
Size	2.12	1.46	2.12	1.36	1.85	1.52	-0.3	1
Pre-action: Time to application								
Over 2 years	0.24	0.43	0.28	0.45	0.23	0.43	-0.6	0.3
2 years	0.15	0.36	0.16	0.36	0.15	0.36	0	0.1
1 year	0.23	0.42	0.27	0.45	0.20	0.41	-0.8	0.6
6 to 12 months	0.11	0.31	0.07	0.25	0.17	0.38	1.4	-1.2
GDP based location								
Top 58 percent (3 regions)	0.47	0.50	0.46	0.50	0.50	0.50	0.2	-0.3
Mid 30 percent (4 regions)	0.37	0.48	0.33	0.47	0.25	0.44	0.1	1.3
Bottom 12 percent (5 regions)	0.16	0.36	0.21	0.40	0.25	0.44	-0.4	-1
Quality (1-3, High-Low)	2.45	0.84	2.45	0.86	2.47	0.85	0.1	-0.2
<i>Observations</i>	90		58		40			

Notes: Columns 1 – 6 report descriptive statistics. Columns 7 and 8 report comparison of means of the two treatment groups with the control group. Panel A reports characteristics of founder at baseline (before intervention). Panel B reports ventures features at baseline. The t test results validate the hypothesis that the means of the treatment and control groups are equal ensuring that the stratification created a balanced sample of all three groups.

Table 2.2 Linear and Non-linear Regression Results for Entrepreneurial Action

Dependent variable: Action (binary)	(1)	(2)	(3)	(4)	(5)	(6)
	LPM	LPM	Marginal Effects after Logit		Odds Ratio	Odds Ratio
Knowledge resources	0.302*** (0.076)	0.292*** (0.079)	0.270*** (0.064)	0.272*** (0.064)	3.83*** (1.44)	3.92*** (1.51)
Knowledge & Financial resources	0.351*** (0.086)	0.320*** (0.088)	0.301*** (0.063)	0.313*** (0.062)	5.22*** (2.42)	5.78*** (2.86)
Controls (Founders characteristics)		Yes		Yes		Yes
Controls (Venture features)		Yes		Yes		Yes
Constant	0.474*** (0.046)	0.284 (0.275)				
Observations	195	195	195	195	195	195
R-squared	0.113	0.132				
Log likelihood			-116.517	-114.858	-116.517	114.858

Notes: Columns 1 and 2 report the estimated effect size of the treatment based on Linear Probability Model (LPM). Columns 3 and 4 report the marginal effects of the logistic regression on dummy variables indicating whether the individual was in one of the treatment groups. Columns 4 and 6 report the coefficients in odds ratio indicating the probability of action equal to 1 over the probability of action equal to 0. The second and fourth columns show the estimated coefficients or odds ratio after controlling for baseline variables measured prior to the intervention. Standard errors are reported in parentheses and are clustered by venture. *** p<0.01, ** p<0.05, * p<0.1; two-tailed tests for all variables.

Table 2.3 Linear and Non-linear Regression Results for Entrepreneurial Action. T1 & T2 Comparison

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable: Action (binary)	LPM	LPM	Marginal Effects after Logit		Odds Ratio	Odds Ratio
Knowledge & Financial resources	0.049 (0.082)	0.055 (0.085)	0.049 (0.081)	0.058 (0.077)	1.362 (0.714)	1.530 (0.887)
Controls (Founders characteristics)		Yes		Yes		Yes
Controls (Venture features)		Yes		Yes		Yes
Constant	0.776*** (0.055)	0.318 (0.297)			3.462*** (1.096)	0.203 (0.392)
Observations	98	98	98	98	98	98
R-squared	0.004	0.121				
Log likelihood			-49.410	-43.578	-49.410	-43.578

Notes: Columns 1 and 2 report the estimated effect size of the treatment based on a Linear Probability Model (LPM). Columns 3 and 4 report the marginal effects of the logistic regression on dummy variables indicating whether the individual was in the knowledge and financial resources treatment group. Columns 4 and 6 report the coefficients in odds ratio indicating the probability of action equal to 1 over the probability of action equal to 0. The second and fourth columns show the estimated coefficients or odds ratio after controlling for baseline variables measured prior to the intervention. Standard errors are reported in parentheses and are clustered by venture. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; two-tailed tests for all variables.

Table 2.4 Linear and Non-linear Regression Results for Entrepreneurial Persistence

Dependent variable: Persistence (binary)	(1) LPM	(2) LPM	(3) Marginal Effects after Logit	(4) Marginal Effects after Logit	(5) Odds Ratio	(6) Odds Ratio
Knowledge resources	0.025 (0.06)	0.002 (0.07)	0.025 (0.06)	0.049 (0.06)	1.18 (0.51)	1.08 (0.49)
Knowledge & Financial resources	0.36*** (0.09)	0.35*** (0.09)	0.36*** (0.09)	0.36*** (0.09)	5.60*** (2.34)	6.52*** (3.04)
Controls (Founders characteristics)		Yes		Yes		Yes
Controls (Venture features)		Yes		Yes		Yes
Constant	0.16*** (0.04)	-0.25 (0.23)			0.19*** (0.05)	0.01*** (0.02)
Observations	195	195	195	195	195	195
R-squared	0.108	0.175				
Log likelihood			-99.282	-91.559	-99.282	-91.559

Notes: Columns 1 and 2 report the estimated effect size of the treatment based on an LPM model. Columns 3 and 4 report results of the logistic regression on dummy variables indicating whether the subject was in one of the treatment groups. These coefficients estimate the probability of entrepreneurs to persist. The results in odds ratio indicate the probability of persistence achieved over the probability of persistence not achieved. The second and fourth show the estimated coefficients or odds ratio after controlling for baseline variables measured prior to the intervention. Standard errors are reported in parentheses and are clustered by venture. *** p<0.01, ** p<0.05, * p<0.1; two-tailed tests for all variables.

Table 3.1 Illustration of the key difference in mentor-entrepreneur interactions between a matched and a non-matched pair.

Phase	Matched Pair	Control Pair
Initiation (Sessions 1 & 2)	The entrepreneur pitches her venture and gets feedback from mentor on the pitch before starting to get deeper into the details of each part of the pitch. By the end of the session, the mentor is most likely to exchange her phone number to continue the conversation.	The entrepreneur pitches her venture and gets feedback from mentor on the pitch before starting to get deeper into the details of each part of the pitch. The sessions end on time without further exchanges.
Development (Sessions 3-5)	The entrepreneur discusses her activities during the week and some of the challenges she needed guidance on. She also discusses the different alternatives she has, to either develop or test her prototype depending on the phase of the venture. The mentor asks challenging and detailed questions to better understand the alternatives and related issues. She pushes the entrepreneur to rethink their alternatives and adapt them. The mentor is most likely to ask the entrepreneur to meet or do another call to dig deeper into the business plan. The session takes longer than the scheduled time and potentially continues outside of the scheduled session. The mentor and entrepreneur are most likely to inform the staff that they do not need to schedule the upcoming sessions for them as they will start meeting informally on a need based.	The entrepreneur discusses her activities during the week and some of the challenges she needed guidance on. She also discusses the different alternatives she has, to either develop or test her prototype depending on the phase of the venture. The mentor gives broad advice and suggestions on the presented issues. The mentor tries to project the presented alternatives and issues to their own field of expertise. The entrepreneur might seem challenged to understand what the mentor is trying to convey through the broad advice. The session finishes on time and formal scheduling of next session continues through the accelerator staff.
Closing (Sessions 6-10)	The session is often canceled because the mentor and the entrepreneur are in contact through the phone and on a need-based service.	The entrepreneur and the mentor continue the formal exchange of information and advice. At best, the mentor will be able to connect the entrepreneur to a network of peers or other mentors that can give them the tacit knowledge they need. At worst, they will continue the formal exchange of general feedback and broad advice.

Table 3.2 Explanation of Experimentation Activities

Zoom-in	A single feature of a product becomes the whole product itself.
Zoom-out	The whole product becomes a single feature of a much larger product, mainly because the original product is insufficient to address customer needs.
Additions	Add new elements to your products/services, activities, or markets
Exits	Eliminate elements from your products/services, activities, or markets
Customer segment	While trying to solve the right problem, you discover a different segment of customers than originally anticipated.
Customer need	You realize the problem you are trying to solve is not very important for the customers and discover other related problems that are more important.

Table 3.3 Descriptive Statistics

<i>Panel A: Founder Baseline Characteristics</i>	Control		T1. Knowledge		T2. Knowledge & Cash		C & T1	C&T2
	Mean	S.D.	Mean	S.D.	Mean	S.D.	t-test	
Age								
18-25	0.43	0.50	0.44	0.50	0.36	0.48	-0.42	0.76
26-30	0.31	0.46	0.33	0.47	0.33	0.48	-0.19	-0.15
31-40	0.22	0.41	0.18	0.38	0.18	0.39	0.33	0.18
40+	0.04	0.21	0.04	0.20	0.12	0.33	0.73	0.19
Gender - Female	0.35	0.48	0.29	0.46	0.36	0.49	0.75	-1.25
Occupation								
Student	0.26	0.44	0.18	0.38	0.21	0.41	0.83	0.09
Self-employed	0.50	0.50	0.53	0.50	0.43	0.50	-0.69	0.90
Informal	0.04	0.20	0.13	0.34	0.18	0.39	-0.52	-1.26
Industry / government	0.20	0.40	0.16	0.36	0.18	0.39	0.48	-0.75
Education								
Elementary School	0	0	0.02	0.15	0.09	0.29	0.50	-1.53
High school	0.13	0.34	0.09	0.29	0.09	0.29	0.44	0.31
Vocational degree	0.20	0.40	0.18	0.38	0.19	0.39	0.16	0.06
University level	0.67	0.47	0.71	0.45	0.63	0.49	-0.60	0.57
Entrepreneurial experience (binary)	0.47	0.50	0.46	0.50	0.57	0.50	0.55	-1.01
Prior Incubation (binary)	0.24	0.43	0.11	0.31	0.15	0.36	1.39	0.30
Prior Training (binary)	0.22	0.42	0.11	0.32	0.12	0.32	1.03	0.62
Prior Networking (binary)	0.06	0.25	0.08	0.28	0.03	0.17	-0.77	1.12
Prior Mentoring (binary)	0.24	0.43	0.08	0.28	0.09	0.29	1.45	1.15
Prior Funding (binary)	0.11	0.31	0.02	0.15	0	0	1.16	2.52*
Total sources of information /advice	2.15	1.42	2.48	1.57	2.09	1.35	-1.28	-1.19
Years of experience within sector	3.65	3.79	3.71	2.88	4.81	5.09	0.65	0.8-
Personality Traits (1-3, Low-High)								
Extroversion	1.71	0.49	1.78	0.40	1.71	0.51	-0.89	0.40
Agreeableness	1.91	0.46	1.90	0.43	1.90	0.46	0.13	-0.02
Openness	1.73	0.47	1.77	0.46	1.71	0.35	-0.67	0.51
Neuroticism	2.03	0.45	2.10	0.48	2.03	0.48	-0.76	0.36
Conscientious	1.87	0.41	1.71	0.44	1.87	0.35	2.04*	-1.14
Motivation for entrepreneurship								
Lifestyle	0.58	0.49	0.76	0.43	0.76	0.43	-1.15	-0.96
Opportunity/idea	0.40	0.49	0.13	0.34	0.18	0.39	2.33*	0.99
Necessity	0.02	0.14	0.11	0.31	0.06	0.24	-1.40	0.10
<i>Observations</i>	46		45		33			

* Table 3.3 continues to next page.

<i>Panel B: Venture Baseline Features</i>	Control		T1. Knowledge		T2. Knowledge & Cash		C & T1	C & T2
	Mean	S.D.	Mean	S.D.	Mean	S.D.	t-test	
Venture Stage								
Concept	0.45	0.50	0.37	0.49	0.52	0.51	1.11	-0.95
Prototype	0.24	0.43	0.29	0.45	0.27	0.45	-0.42	-0.09
Pre-sales	0.28	0.45	0.22	0.42	0.18	0.39	0.23	0.86
Early-revenues	0.02	1.48	0.11	0.32	0.03	0.17	-1.69	0.89
Offer type (Service, product, or both)								
Service	0.32	0.47	0.40	0.49	0.36	0.48	-0.63	-0.10
Product	0.56	0.50	0.44	0.50	0.42	0.50	0.65	0.79
Customer type (B2B, B2C, or both)								
B2B	0.15	0.36	0.09	0.28	0.06	0.24	0.44	1.10
B2C	0.36	0.48	0.33	0.47	0.33	0.47	0.23	0.18
Sector								
Agriculture	0.15	0.36	0.09	0.28	0.15	0.36	1.06	-0.42
Handicraft	0.13	0.34	0.13	0.34	0.15	0.36	0.09	-0.27
Education	0.06	0.24	0.13	0.34	0.15	0.36	-0.52	-0.74
Size	2.13	1.61	2.17	1.37	1.91	1.64	-0.51	0.75
<i>Observations</i>	46		45		33			

Notes: Columns 1 – 6 report descriptive statistics. Columns 7 and 8 report comparison of means of the two treatment groups with the control group. Panel A reports characteristics of founder at baseline (before intervention). Panel B reports ventures features at baseline. The t test results validate the hypothesis that the means of the treatment and control groups are equal (except for prior funding between control and T2) ensuring that the stratification created a balanced sample of all three groups.

Table 3.4 Linear Probability Model (LPM) Estimation for Perceived and Behavioral Experimentation

Dependent Variable:	(1) Perceived experimentation	(2) Perceived experimentation	(3) Behavioral experimentation	(4) Behavioral experimentation
Knowledge resources	-0.023 (0.095)	-0.026 (0.101)	0.019 (0.076)	0.019 (0.078)
Knowledge & Financial resources	0.129 (0.088)	0.170* (0.088)	-0.087 (0.093)	-0.093 (0.099)
Controls (Founders characteristics)		Y		Y
Controls (Venture features)		Y		Y
Constant	0.750*** (0.066)	0.654** (0.303)	0.844*** (0.055)	0.694** (0.297)
Observations	122	122	122	122
R-squared	0.023	0.121	0.013	0.117

Notes: Columns 1 and 2 report the estimated effect size of the treatment on perceived experimentation based on a LPM model. Columns 3 and 4 report the estimated effect size of the treatment on behavioral experimentation based on a LPM model. These coefficients estimate the probability of entrepreneurs to engage in experimentation. The second and fourth columns show the estimated coefficients after controlling for baseline variables measured prior to the intervention. Standard errors are reported in parentheses and are clustered by venture. *** p<0.01, ** p<0.05, * p<0.1; two-tailed tests for all variables.

Table 3.5 Negative Binomial Model Estimation for Behavioral Experimentation

Dependent Variable	(1) Number of experimentation activities	(2) Number of experimentation activities
Knowledge resources	0.080 (0.089)	0.111 (0.090)
Knowledge & Financial resources	0.022 (0.094)	0.047 (0.089)
Controls (Founders characteristics)		Y
Controls (Venture features)		Y
Constant	1.755*** (0.061)	1.732*** (0.273)
Observations	124	124

Notes: Models 1 and 2 are estimated using negative binomial regressions. The outcome variable in both models is the number of experimentation activities that each entrepreneur engages in during the 12 weeks of the acceleration program. Model 1 is estimated without control variables and Model 2 includes control variables. Robust standard errors, clustered at the venture level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 3.6 Linear Probability Model Estimation for Behavioral Experimentation

	(1)	(2)	(3)	(4)
Dependent Variable: behavioral experimentation	Full Sample		Among those who were treated	
Mentor match	0.199*** (0.062)	0.205*** (0.062)	0.382*** (0.106)	0.385*** (0.098)
Controls (Founders characteristics)		Y		Y
Controls (Venture features)		Y		Y
Constant	0.743*** (0.053)	0.523* (0.269)	0.560*** (0.101)	0.478* (0.283)
Observations	122	122	77	77
R-squared	0.068	0.172	0.215	0.321

Notes: All models report the estimated effect size of the treatment on behavioral experimentation based on a LPM model. Models 1 and 2 report these effects for the full sample where the control group includes those who received mentoring but were not matched with their mentor and those who did not received mentoring at all. Models 3 and 4 report the effects for those within the two treatments groups. The control group in this case includes only those who received mentoring but were not matched with their mentor. These coefficients estimate the probability of entrepreneurs to engage in experimentation. The second and fourth columns show the estimated coefficients after controlling for baseline variables measured prior to the intervention. Standard errors are reported in parentheses and are clustered by venture. *** p<0.01, ** p<0.05, * p<0.1; two-tailed tests for all variables.

Table 3.7 Negative Binomial Model Estimation of Mentor Match Effect on Behavioral Experimentation

Alternative Dependent Variable:	Full sample		Among those who got resources	
	(1)	(2)	(3)	(4)
	Number of experimentation activities			
Mentor expertise match	0.155** (0.074)	0.163** (0.074)	0.220** (0.112)	0.204* (0.106)
Controls (Founders characteristics)		Y		Y
Controls (Venture features)		Y		Y
Constant	1.721*** (0.053)	1.705*** (0.263)	1.656*** (0.099)	1.856*** (0.305)
Observations	124	124	78	78

Notes: All models report the estimated effect size of the treatment on behavioral experimentation measured as the number of experimentation activities based on a negative binomial model. Models 1 and 2 report these effects for the full sample where the control group includes those who received mentoring but were not matched with their mentor and those who did not receive mentoring at all. Models 3 and 4 report the effects for those within the two treatments groups. The control group in this case includes only those who received mentoring but were not matched with their mentor. These coefficients estimate the probability of entrepreneurs to engage in experimentation. The second and fourth columns show the estimated coefficients after controlling for baseline variables measured prior to the intervention. Standard errors are reported in parentheses and are clustered by venture. *** p<0.01, ** p<0.05, * p<0.1.

REFERENCES

- Agrawal, A., Gans, J. S., & Stern, S. (2021). Enabling entrepreneurial choice. *Management Science*, 67(9), 5510-5524.
- Ahuja, G., & Yayavaram, S. (2011). Perspective—Explaining influence rents: The case for an institutions-based view of strategy. *Organization Science*, 22(6), 1631-1652.
- Ahuja, G., Capron, L., Lenox, M., & Yao, D. A. (2018). Strategy and the institutional envelope. *Strategy Science*, 3(2), ii-x.
- Alchian, A. A., & Demsetz, H. (1972). Production, information costs, and economic organization. *The American economic review*, 62(5), 777-795.
- Aldrich, Howard and Martin Ruef. 2006. *Organizations Evolving* (2nd Edition). London: Sage.
- Almond, P. (2011). The sub-national embeddedness of international HRM. *human relations*, 64(4), 531-551.
- Alvarez, S. A., & Barney, J. B. (2004). Organizing rent generation and appropriation: Toward a theory of the entrepreneurial firm. *Journal of Business Venturing*, 19(5), 621-635.
- Alvarez, S. A., Barney, J. B., McBride, R., & Wuebker, R. (2014). Realism in the study of entrepreneurship. *Academy of management review*, 39(2), 227-231.
- Amit, R., Brander, J., & Zott, C. (1998). Why do venture capital firms exist? Theory and Canadian evidence. *Journal of business Venturing*, 13(6), 441-466.
- Anderson, A. R., & Miller, C. J. (2003). “Class matters”: Human and social capital in the entrepreneurial process. *The journal of socio-economics*, 32(1), 17-36.
- Anderson, S. J., Chintagunta, P., Germann, F., & Vilcassim, N. (2021). Do marketers matter for entrepreneurs? Evidence from a field experiment in Uganda. *Journal of Marketing*, 85(3), 78-96.
- Argote, L., & Fahrenkopf, E. (2016). Knowledge transfer in organizations: The roles of members, tasks, tools, and networks. *Organizational Behavior and Human Decision Processes*, 136, 146-159.
- Argote, L., & Miron-Spektor, E. (2011). Organizational learning: From experience to knowledge. *Organization science*, 22(5), 1123-1137.
- Armanios, D. E., Eesley, C. E., Li, J., & Eisenhardt, K. M. (2017). How entrepreneurs leverage institutional intermediaries in emerging economies to acquire public resources. *Strategic Management Journal*, 38(7), 1373-1390.
- Assenova, V. A. (2020). Early-stage venture incubation and mentoring promote learning, scaling, and profitability among disadvantaged entrepreneurs. *Organization Science*, 31(6), 1560-1578.

- Assenova, V. A., & Sorenson, O. (2017). Legitimacy and the benefits of firm formalization. *Organization Science*, 28(5), 804-818.
- Audretsch, D. B., Weigand, J., & Weigand, C. (2002). The impact of the SBIR on creating entrepreneurial behavior. *Economic Development Quarterly*, 16(1), 32-38.
- Baker, T., & Nelson, R. E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative science quarterly*, 50(3), 329-366.
- Banerjee, A., Duflo, E., Glennerster, R., & Kinnan, C. (2015). The miracle of microfinance? Evidence from a randomized evaluation. *American economic journal: Applied economics*, 7(1), 22-53.
- Banerjee, A., La Ferrara, E., & Orozco-Olvera, V. H. (2019). The entertaining way to behavioral change.
- Baron, R. A., Tang, J., Tang, Z., & Zhang, Y. (2018). Bribes as entrepreneurial actions: Why underdog entrepreneurs feel compelled to use them. *Journal of Business Venturing*, 33(6), 679-690.
- Becker-Blease, J. R., & Sohl, J. E. (2007). Do women-owned businesses have equal access to angel capital?. *Journal of business Venturing*, 22(4), 503-521.
- Bengtsson, O., & Hsu, D. H. (2015). Ethnic matching in the US venture capital market. *Journal of Business Venturing*, 30(2), 338-354.
- Bergh, S. I. (2021). Democratic decentralization and local development: insights from Morocco's advanced regionalization process. In *Research handbook on democracy and development*. Edward Elgar Publishing.
- Bhide, A. (2000). The origin and evolution of new ventures.
- Bjorvatn, K., Cappelen, A. W., Sekei, L. H., Sørensen, E. Ø., & Tungodden, B. (2020). Teaching through television: Experimental evidence on entrepreneurship education in Tanzania. *Management Science*, 66(6), 2308-2325.
- Blattman, C., Fiala, N., & Martinez, S. (2014). Generating skilled self-employment in developing countries: Experimental evidence from Uganda. *The Quarterly Journal of Economics*, 129(2), 697-752.
- Bloom, N., Eifert, B., Mahajan, A., McKenzie, D., & Roberts, J. (2013). Does management matter? Evidence from India. *The Quarterly journal of economics*, 128(1), 1-51.
- Boyd, B. (1990). Corporate linkages and organizational environment: A test of the resource dependence model. *Strategic management journal*, 11(6), 419-430.
- Bradach, J. L., & Eccles, R. G. (1989). Price, authority, and trust: From ideal types to plural forms. *Annual review of sociology*, 15(1), 97-118.
- Brush, C. G., Greene, P. G., & Hart, M. M. (2001). From initial idea to unique advantage: The entrepreneurial challenge of constructing a resource base. *Academy of Management Perspectives*, 15(1), 64-78.

- Bruton, G. D., Ketchen Jr, D. J., & Ireland, R. D. (2013). Entrepreneurship as a solution to poverty. *Journal of business venturing*, 28(6), 683-689.
- Burt, R. S., & Knez, M. (1995). Kinds of third-party effects on trust. *Rationality and society*, 7(3), 255-292.
- Busch, C., & Barkema, H. (2020). Planned luck: How incubators can facilitate serendipity for nascent entrepreneurs through fostering network embeddedness. *Entrepreneurship Theory and Practice*.
- Cameron, A. C., & Trivedi, P. K. (2009). Microeconometrics with STATA. *College Station, TX: StataCorp LP*.
- Campos, F., & Gassier, M. (2017). Gender and enterprise development in Sub-Saharan Africa: a review of constraints and effective interventions. *World Bank Policy Research Working Paper*, (8239).
- Camuffo, A., Cordova, A., Gambardella, A., & Spina, C. (2020). A scientific approach to entrepreneurial decision making: Evidence from a randomized control trial. *Management Science*, 66(2), 564-586.
- Castrogiovanni, G. J. (1991). Environmental munificence; a theoretical assessment. *Academy of management review*, 16(3), 542-565.
- Chatterji, A., Delecourt, S., Hasan, S., & Koning, R. (2019). When does advice impact startup performance?. *Strategic Management Journal*, 40(3), 331-356.
- Claes, K., & Vissa, B. (2017). Is homophily always beneficial? Task-relevant homophily and VCs' valuations and returns. In *Academy of Management Proceedings* (Vol. 2017, No. 1, p. 16269). Briarcliff Manor, NY 10510: Academy of Management.
- Clair, J. A., Beatty, J. E., & Maclean, T. L. (2005). Out of sight but not out of mind: Managing invisible social identities in the workplace. *Academy of Management Review*, 30(1), 78-95.
- Clingingsmith, D., & Shane, S. (2018). Training aspiring entrepreneurs to pitch experienced investors: Evidence from a field experiment in the United States. *Management Science*, 64(11), 5164-5179.
- Clough, D. R., Fang, T. P., Vissa, B., & Wu, A. (2019). Turning lead into gold: How do entrepreneurs mobilize resources to exploit opportunities?. *Academy of Management Annals*, 13(1), 240-271.
- Cohen, S. L., Bingham, C. B., & Hallen, B. L. (2019). The role of accelerator designs in mitigating bounded rationality in new ventures. *Administrative Science Quarterly*, 64(4), 810-854.
- Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of management*, 37(1), 39-67.

- Contigiani, A., & Levinthal, D. A. (2019). Situating the construct of lean start-up: adjacent conversations and possible future directions. *Industrial and Corporate Change*, 28(3), 551-564.
- Contigiani, A., & Young-Hyman, T. (2020). Experimentation, Planning, and Structure in Early-Stage Ventures: Evidence from Venture Pitches. *Strategic Entrepreneurship Journal*.
- Cooper, A. C., Gimeno-Gascon, F. J., & Woo, C. Y. (1994). Initial human and financial capital as predictors of new venture performance. *Journal of business venturing*, 9(5), 371-395.
- Cowan, R., David, P. A., & Foray, D. (2000). The explicit economics of knowledge codification and tacitness. *Industrial and corporate change*, 9(2), 211-253.
- Crossan, M. M., Lane, H. W., & White, R. E. (1999). An organizational learning framework: From intuition to institution. *Academy of management review*, 24(3), 522-537.
- Daniel, E. M., Domenico, M. D., & Sharma, S. (2015). Effectuation and home-based online business entrepreneurs. *International Small Business Journal*, 33(8), 799-823.
- Desa, G., & Basu, S. (2013). Optimization or bricolage? Overcoming resource constraints in global social entrepreneurship. *Strategic entrepreneurship journal*, 7(1), 26-49.
- Dimitriadis, S. (2019). *Entrepreneurship in developing markets: Three studies about relational, political, and institutional factors that shape entrepreneurial performance in Togo* (Doctoral dissertation, Harvard University).
- Dimitriadis, S. (2021). Social capital and entrepreneur resilience: Entrepreneur performance during violent protests in Togo. *Strategic Management Journal*, 42(11), 1993-2019.
- Dimitriadis, S., & Koning, R. (2022). Social skills improve business performance: evidence from a randomized control trial with entrepreneurs in Togo. *Management Science*.
- Doh, J., Rodrigues, S., Saka-Helmhout, A., & Makhija, M. (2017). International business responses to institutional voids. *Journal of International Business Studies*, 48(3), 293-307.
- Duflo, E., & Banerjee, A. (2011). *Poor economics* (Vol. 619). PublicAffairs.
- Dushnitsky, G., & Sarkar, S. (2020). Here comes the sun: the impact of incidental contextual factors on entrepreneurial resource acquisition. *Academy of Management Journal*, (ja).
- Eisenmann, T. R., Ries, E., & Dillard, S. (2012). Hypothesis-driven entrepreneurship: The lean startup. *Harvard Business School Entrepreneurial Management Case*, (812-095).
- Ewens, M., & Townsend, R. R. (2020). Are early stage investors biased against women?. *Journal of Financial Economics*, 135(3), 653-677.
- Feldman, M. P. (1999). The new economics of innovation, spillovers and agglomeration: A review of empirical studies. *Economics of innovation and new technology*, 8(1-2), 5-25.

- Felin, T., Gambardella, A., Stern, S., & Zenger, T. (2019). Lean startup and the business model: Experimentation revisited. *Forthcoming in Long Range Planning (Open Access)*.
- Fey, C. F., & Furu, P. (2008). Top management incentive compensation and knowledge sharing in multinational corporations. *Strategic Management Journal*, 29(12), 1301-1323.
- Fisher, G., Neubert, E., & Burnell, D. (2021). Resourcefulness narratives: Transforming actions into stories to mobilize support. *Journal of Business Venturing*, 36(4), 106122.
- Foss, N. J., & Saebi, T. (2017). Fifteen years of research on business model innovation: How far have we come, and where should we go?. *Journal of management*, 43(1), 200-227.
- Gans, J. S., Stern, S., & Wu, J. (2019). Foundations of entrepreneurial strategy. *Strategic Management Journal*, 40(5), 736-756.
- Gao, C., Zuzul, T., Jones, G., & Khanna, T. (2017). Overcoming institutional voids: A reputation-based view of long-run survival. *Strategic Management Journal*, 38(11), 2147-2167.
- Gartner, W. B., Frid, C. J., & Alexander, J. C. (2012). Financing the emerging firm. *Small business economics*, 39(3), 745-761.
- Garud, R., & Giuliani, A. P. (2013). A narrative perspective on entrepreneurial opportunities. *Academy of Management Review*, 38(1), 157-160.
- Garud, R., Schildt, H. A., & Lant, T. K. (2014). Entrepreneurial storytelling, future expectations, and the paradox of legitimacy. *Organization Science*, 25(5), 1479-1492.
- Gaur, A. S., Kumar, V., & Singh, D. (2014). Institutions, resources, and internationalization of emerging economy firms. *Journal of World Business*, 49(1), 12-20.
- George, G., & Prabhu, G. N. (2000). Developmental financial institutions as catalysts of entrepreneurship in emerging economies. *Academy of Management Review*, 25(3), 620-629.
- George, G., Howard-Grenville, J., Joshi, A., & Tihanyi, L. (2016). Understanding and tackling societal grand challenges through management research. *Academy of management journal*, 59(6), 1880-1895.
- George, G., McGahan, A. M., & Prabhu, J. (2012). Innovation for inclusive growth: Towards a theoretical framework and a research agenda. *Journal of management studies*, 49(4), 661-683.
- Gimmon, E., & Levie, J. (2010). Founder's human capital, external investment, and the survival of new high-technology ventures. *Research Policy*, 39(9), 1214-1226.
- Gist, M. E. (1987). Self-efficacy: Implications for organizational behavior and human resource management. *Academy of management review*, 12(3), 472-485.

- Gomila, R. (2021). Logistic or linear? Estimating causal effects of experimental treatments on binary outcomes using regression analysis. *Journal of Experimental Psychology: General*, 150(4), 700.
- Gonzalez-Uribe J. & Hmaddi O. (2022) The impact of accelerators on the economy: What does research tell us?. *Working paper*
- Granovetter, M. S. (1973). The strength of weak ties. *American journal of sociology*, 78(6), 1360-1380.
- Grichnik, D., Brinckmann, J., Singh, L., & Manigart, S. (2014). Beyond environmental scarcity: Human and social capital as driving forces of bootstrapping activities. *Journal of Business Venturing*, 29(2), 310-326.
- Grossman, E. B., Yli-Renko, H., & Janakiraman, R. (2012). Resource search, interpersonal similarity, and network tie valuation in nascent entrepreneurs' emerging networks. *Journal of Management*, 38(6), 1760-1787.
- Gulati, R. (1995). Social structure and alliance formation patterns: A longitudinal analysis. *Administrative science quarterly*, 619-652.
- Hallen, B. L. (2008). The causes and consequences of the initial network positions of new organizations: From whom do entrepreneurs receive investments?. *Administrative Science Quarterly*, 53(4), 685-718.
- Hallen, B. L., & Eisenhardt, K. M. (2012). Catalyzing strategies and efficient tie formation: How entrepreneurial firms obtain investment ties. *Academy of Management Journal*, 55(1), 35-70.
- Hallen, B. L., Cohen, S. L., & Bingham, C. B. (2020). Do accelerators work? If so, how?. *Organization Science*, 31(2), 378-414.
- Hallen, B. L., Davis, J. P., & Murray, A. (2020). Entrepreneurial network evolution: Explicating the structural localism and agentic network change distinction. *Academy of Management Annals*, 14(2), 1067-1102.
- Hanlon, D., & Saunders, C. (2007). Marshaling resources to form small new ventures: Toward a more holistic understanding of entrepreneurial support. *Entrepreneurship Theory and Practice*, 31(4), 619-641.
- Hegde, D., & Tumlinson, J. (2014). Does social proximity enhance business partnerships? Theory and evidence from ethnicity's role in US venture capital. *Management Science*, 60(9), 2355-2380.
- Herbert, R., & Link, A. N. (1988). *The Entrepreneur: Mainstream Views and Radical Critiques*. Praeger. New York.
- Hillman, A. J., Withers, M. C., & Collins, B. J. (2009). Resource dependence theory: A review. *Journal of management*, 35(6), 1404-1427.

- Hobfoll, S. E. (2011). Conservation of resource caravans and engaged settings. *Journal of occupational and organizational psychology*, 84(1), 116-122.
- Hochberg, Y., Cohen, S., & Fehder, D. (2017). 2017 Accelerator Rankings. *Seed Accelerator Rankings Project*.
- Hong, J. F. (2012). Glocalizing Nonaka's knowledge creation model: Issues and challenges. *Management Learning*, 43(2), 199-215.
- Hsu, D. H., & Ziedonis, R. H. (2008, August). Patents as quality signals for entrepreneurial ventures. In *Academy of Management Proceedings* (Vol. 2008, No. 1, pp. 1-6). Briarcliff Manor, NY 10510: Academy of Management.
- Huang, L., & Knight, A. P. (2017). Resources and relationships in entrepreneurship: An exchange theory of the development and effects of the entrepreneur-investor relationship. *Academy of Management Review*, 42(1), 80-102.
- Huang, L., Joshi, P., Wakslak, C., & Wu, A. (2021). Sizing up entrepreneurial potential: Gender differences in communication and investor perceptions of long-term growth and scalability. *Academy of Management Journal*, 64(3), 716-740.
- Kale, P., Singh, H., & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances: Building relational capital. *Strategic management journal*, 21(3), 217-237.
- Kaul, A. (2013). Entrepreneurial action, unique assets, and appropriation risk: Firms as a means of appropriating profit from capability creation. *Organization Science*, 24(6), 1765-1781.
- Khanna, T., & Palepu, K. (1997). Why focused strategies. *Harvard business review*, 75(4), 41-51.
- Khayesi, J. N., & George, G. (2011). When does the socio-cultural context matter? Communal orientation and entrepreneurs' resource accumulation efforts in Africa. *Journal of Occupational and Organizational Psychology*, 84(3), 471-492.
- Kim, E. H., & Lyon, T. P. (2015). Greenwash vs. brownwash: Exaggeration and undue modesty in corporate sustainability disclosure. *Organization Science*, 26(3), 705-723.
- Kirmani, A., & Rao, A. R. (2000). No pain, no gain: A critical review of the literature on signaling unobservable product quality. *Journal of marketing*, 64(2), 66-79.
- Kirtley, J., & O'Mahony, S. (2020). What is a pivot? Explaining when and how entrepreneurial firms decide to make strategic change and pivot. *Strategic Management Journal*.
- Ko, E. J., & McKelvie, A. (2018). Signaling for more money: The roles of founders' human capital and investor prominence in resource acquisition across different stages of firm development. *Journal of Business Venturing*, 33(4), 438-454.
- Koning, R., Hasan, S., & Chatterji, A. (2020). Digital Experimentation and Startup Performance: Evidence from A/B Testing.

- Kraus, M. W., Piff, P. K., Mendoza-Denton, R., Rheinschmidt, M. L., & Keltner, D. (2012). Social class, solipsism, and contextualism: how the rich are different from the poor. *Psychological review*, *119*(3), 546.
- Krausert, A. (2016). HRM signals for the capital market. *Human Resource Management*, *55*(6), 1025-1040.
- Krieger, N., Williams, D. R., & Moss, N. E. (1997). Measuring social class in US public health research: concepts, methodologies, and guidelines. *Annual review of public health*, *18*(1), 341-378.
- Kuhn, K. M., & Galloway, T. L. (2015). With a little help from my competitors: Peer networking among artisan entrepreneurs. *Entrepreneurship Theory and Practice*, *39*(3), 571-600.
- Lall, S. A., Chen, L. W., & Roberts, P. W. (2020). Are we accelerating equity investment into impact-oriented ventures?. *World Development*, *131*, 104952.
- Lanahan, L., & Armanios, D. (2018). Does more certification always benefit a venture?. *Organization Science*, *29*(5), 931-947.
- Leana, C. R., Mittal, V., & Stiehl, E. (2012). PERSPECTIVE—Organizational behavior and the working poor. *Organization Science*, *23*(3), 888-906.
- Leatherbee, M., & Katila, R. (2020). The lean startup method: Early-stage teams and hypothesis-based probing of business ideas. *Strategic Entrepreneurship Journal*, *14*(4), 570-593.
- Leatherbee, M., González-Uribe, J., & Kausel, E. (2021). Better Flee From Freedom? The Effects of Structured Accountability on New Venture Performance.
- Lee, M., & Huang, L. (2018). Gender bias, social impact framing, and evaluation of entrepreneurial ventures. *Organization Science*, *29*(1), 1-16.
- Lei, D., Hitt, M. A., & Bettis, R. (1996). Dynamic core competences through meta-learning and strategic context. *Journal of management*, *22*(4), 549-569.
- Levinthal, D. A. (2017). Mendel in the C-Suite: Design and the Evolution of Strategies. *Strategy Science*, *2*(4), 282-287.
- Lippman, S. A., & Rumelt, R. P. (2003). A bargaining perspective on resource advantage. *Strategic management journal*, *24*(11), 1069-1086.
- Lounsbury, M., & Glynn, M. A. (2001). Cultural entrepreneurship: Stories, legitimacy, and the acquisition of resources. *Strategic management journal*, *22*(6-7), 545-564.
- Lynch, J., & Kaplan, G. (2000). *Socioeconomic position* (Vol. 2000, pp. 13-35). Social epidemiology. New York: Oxford University Press.
- Mair, J., & Marti, I. (2009). Entrepreneurship in and around institutional voids: A case study from Bangladesh. *Journal of business venturing*, *24*(5), 419-435.

- Mair, J., Marti, I., & Ventresca, M. J. (2012). Building inclusive markets in rural Bangladesh: How intermediaries work institutional voids. *Academy of Management Journal*, 55(4), 819-850.
- Mair, J., Wolf, M., & Seelos, C. (2016). Scaffolding: A process of transforming patterns of inequality in small-scale societies. *Academy of Management Journal*, 59(6), 2021-2044.
- Mantere, S., Aula, P., Schildt, H., & Vaara, E. (2013). Narrative attributions of entrepreneurial failure. *Journal of Business Venturing*, 28(4), 459-473.
- Marquis, C., & Qian, C. (2014). Corporate social responsibility reporting in China: Symbol or substance?. *Organization science*, 25(1), 127-148.
- Martens, M. L., Jennings, J. E., & Jennings, P. D. (2007). Do the stories they tell get them the money they need? The role of entrepreneurial narratives in resource acquisition. *Academy of management journal*, 50(5), 1107-1132.
- Maurer, I., & Ebers, M. (2006). Dynamics of social capital and their performance implications: Lessons from biotechnology start-ups. *Administrative Science Quarterly*, 51(2), 262-292.
- McDonald, R. M., & Eisenhardt, K. M. (2020). Parallel play: Startups, nascent markets, and effective business-model design. *Administrative Science Quarterly*, 65(2), 483-523.
- McDonald, R., & Gao, C. (2019). Pivoting isn't enough? Managing strategic reorientation in new ventures. *Organization Science*, 30(6), 1289-1318.
- McDougall, P. P., & Oviatt, B. M. (2000). International entrepreneurship: the intersection of two research paths. *Academy of management Journal*, 43(5), 902-906.
- McGee, J. E., Peterson, M., Mueller, S. L., & Sequeira, J. M. (2009). Entrepreneurial self-efficacy: Refining the measure. *Entrepreneurship theory and Practice*, 33(4), 965-988.
- McKenzie, D. (2017). Identifying and spurring high-growth entrepreneurship: Experimental evidence from a business plan competition. *American Economic Review*, 107(8), 2278-2307.
- McKenzie, D. (2021). Small business training to improve management practices in developing countries: re-assessing the evidence for 'training doesn't work'. *Oxford Review of Economic Policy*, 37(2), 276-301.
- McKenzie, D., & Sansone, D. (2019). Predicting entrepreneurial success is hard: Evidence from a business plan competition in Nigeria. *Journal of Development Economics*, 141, 102369.
- McKenzie, D., & Woodruff, C. (2017). Business practices in small firms in developing countries. *Management Science*, 63(9), 2967-2981.
- McKenzie, D., Woodruff, C., Bjorvatn, K., Bruhn, M., Cai, J., Gonzalez-Uribe, J., ... & Valdivia, M. (2020). Training entrepreneurs. *VoxDevLit*, 1(1), 3.
- McMullen, J. S., & Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management review*, 31(1), 132-152.

- Moss, T. W., Neubaum, D. O., & Meyskens, M. (2015). The effect of virtuous and entrepreneurial orientations on microfinance lending and repayment: A signaling theory perspective. *Entrepreneurship theory and practice*, 39(1), 27-52.
- Murray, F., & Tripsas, M. (2004). The exploratory processes of entrepreneurial firms: The role of purposeful experimentation. In *Business strategy over the industry lifecycle*. Emerald Group Publishing Limited.
- Nason, R. S., Wiklund, J., & McKelvie, A. (2015). Managing Resources and Boundaries: The Effect of Boundary Permeability on New Venture Growth. In *Academy of Management Proceedings* (Vol. 2015, No. 1, p. 14460). Briarcliff Manor, NY 10510: Academy of Management.
- Oo, P. P., Allison, T. H., Sahaym, A., & Juasrikul, S. (2019). User entrepreneurs' multiple identities and crowdfunding performance: Effects through product innovativeness, perceived passion, and need similarity. *Journal of Business Venturing*, 34(5), 105895.
- Ozdemir, S. Z., Moran, P., Zhong, X., & Bliemel, M. J. (2016). Reaching and acquiring valuable resources: The entrepreneur's use of brokerage, cohesion, and embeddedness. *Entrepreneurship Theory and Practice*, 40(1), 49-79.
- Peng, M. W. (2003). Institutional transitions and strategic choices. *Academy of management review*, 28(2), 275-296. Meyer et al. 2009,
- Peng, M. W., Sun, S. L., Pinkham, B., & Chen, H. (2009). The institution-based view as a third leg for a strategy tripod. *Academy of management perspectives*, 23(3), 63-81.,
- Penrose, E. T. (1959). *The Theory of the Growth of the Firm*. New York: John Wiley & Sons Inc. *Penrose, E. T, 1*, 1-23.
- Peprah, A. A., Giachetti, C., Larsen, M. M., & Rajwani, T. S. (2021). How Business Models Evolve in Weak Institutional Environments: The Case of Jumia, the Amazon. Com of Africa. *Organization Science*.
- Petkova, A. P., Rindova, V. P., & Gupta, A. K. (2013). No news is bad news: Sensegiving activities, media attention, and venture capital funding of new technology organizations. *Organization Science*, 24(3), 865-888.
- Phillips, N., & Hardy, C. (2002). *Discourse analysis: Investigating processes of social construction*. Sage Publications.
- Polanyi, M. (1974). *Scientific thought and social reality: Essays by Michael Polanyi. Psychological issues*.
- Raffiee, J., & Feng, J. (2014). Should I quit my day job?: A hybrid path to entrepreneurship. *Academy of management journal*, 57(4), 936-963.
- Reypens, L., Bacq, S., & Milanov, H. (2021). Beyond bricolage: Early-stage technology venture resource mobilization in resource-scarce contexts. *Journal of Business Venturing*, 36(4), 106110.

- Ries, E. (2011). *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses*. Currency.
- Rindova, V., & Courtney, H. (2020). To shape or adapt: Knowledge problems, epistemologies, and strategic postures under Knightian uncertainty. *Academy of Management Review*, 45(4), 787-807.
- Rindova, V., Barry, D., & Ketchen Jr, D. J. (2009). Entrepreneurship as emancipation. *Academy of management review*, 34(3), 477-491.
- Rosenthal, S. S., & Strange, W. C. (2004). Evidence on the nature and sources of agglomeration economies. In *Handbook of regional and urban economics* (Vol. 4, pp. 2119-2171). Elsevier.
- Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of management review*, 23(3), 393-404.
- Schoonhoven, C. B., & Romanelli, E. (2001). *The entrepreneurship dynamic: Origins of entrepreneurship and the evolution of industries*. Stanford University Press.
- Schumpeter, J. A., & Nichol, A. J. (1934). Robinson's economics of imperfect competition. *Journal of political economy*, 42(2), 249-259.
- Shane, S. A. (2003). *A general theory of entrepreneurship: The individual-opportunity nexus*. Edward Elgar Publishing.
- Shane, S., & Cable, D. (2002). Network ties, reputation, and the financing of new ventures. *Management science*, 48(3), 364-381.
- Shane, S., & Stuart, T. (2002). Organizational endowments and the performance of university start-ups. *Management science*, 48(1), 154-170.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of management review*, 25(1), 217-226.
- Shiner, R. L. (2015). Maximizers, satisficers, and their satisfaction with and preferences for reversible versus irreversible decisions. *Social Psychological and Personality Science*, 6(8), 896-903.
- Sirmon, D. G., Hitt, M. A., & Ireland, R. D. (2007). Managing firm resources in dynamic environments to create value: Looking inside the black box. *Academy of management review*, 32(1), 273-292.
- Solesvik, M. Z. (2017). Hybrid entrepreneurship: how and why entrepreneurs combine employment with self-employment. *Technology Innovation Management Review*, 7(3).
- Spence, M. (1973). Job market signaling. In *Uncertainty in economics* (pp. 281-306). Academic Press.
- Sproul, C., Cox, K., & Ross, A. (2019). Entrepreneurial actions: implications for firm performance. *Journal of Small Business and Enterprise Development*.

- Starr, J. A., & MacMillan, I. C. (1990). Resource cooptation via social contracting: Resource acquisition strategies for new ventures. *Strategic Management Journal*, 79-92.
- Stenholm, P., & Renko, M. (2016). Passionate bricoleurs and new venture survival. *Journal of Business Venturing*, 31(5), 595-611.
- Sternberg, R. J., & Horvath, J. A. (Eds.). (1999). *Tacit knowledge in professional practice: Researcher and practitioner perspectives*. Psychology Press.
- Stinchcombe, A. L. (1965). Organizations and social structure. *Handbook of organizations*, 44(2), 142-193.
- Stuart, T. E., & Sorenson, O. (2007). Strategic networks and entrepreneurial ventures. *Strategic Entrepreneurship Journal*, 1(3-4), 211-227.
- Stuart, T. E., Hoang, H., & Hybels, R. C. (1999). Interorganizational endorsements and the performance of entrepreneurial ventures. *Administrative science quarterly*, 44(2), 315-349.
- Sutter, C., Bruton, G. D., & Chen, J. (2019). Entrepreneurship as a solution to extreme poverty: A review and future research directions. *Journal of business venturing*, 34(1), 197-214.
- Taleb, N. N. (2018). *Skin in the game: Hidden asymmetries in daily life*. Random House.
- Villanueva, J., Van de Ven, A. H., & Sapienza, H. J. (2012). Resource mobilization in entrepreneurial firms. *Journal of Business Venturing*, 27(1), 19-30.
- Vissa, B. (2011). A matching theory of entrepreneurs' tie formation intentions and initiation of economic exchange. *Academy of Management Journal*, 54(1), 137-158.
- Vissa, B., & Chacar, A. S. (2009). Leveraging ties: the contingent value of entrepreneurial teams' external advice networks on Indian software venture performance. *Strategic Management Journal*, 30(11), 1179-1191.
- Waleczek, P., Zehren, T., & Flatten, T. C. (2018). Start-up financing: How founders finance their ventures' early stage. *Managerial and Decision Economics*, 39(5), 535-549.
- Walthoff-Born, X., Schwenbacher, A., & Vanacker, T. (2018). Equity crowdfunding: First resort or last resort?. *Journal of Business Venturing*, 33(4), 513-533.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, 5(2), 171-180.
- Wierenga, M. (2020). Uncovering the scaling of innovations developed by grassroots entrepreneurs in low-income settings. *Entrepreneurship & Regional Development*, 32(1-2), 63-90.
- Wood, M. S., Bakker, R. M., & Fisher, G. (2021). Back to the future: A time-calibrated theory of entrepreneurial action. *Academy of management review*, 46(1), 147-171.
- Yang, Shu, Romi Kher, and Scott L. Newbert. "What signals matter for social startups? It depends: The influence of gender role congruity on social impact accelerator selection decisions." *Journal of Business Venturing* 35, no. 2 (2020): 105932.

Younkin, P., & Kuppuswamy, V. (2018). The colorblind crowd? Founder race and performance in crowdfunding. *Management Science*, 64(7), 3269-3287.

Yu, S. (2020). How do accelerators impact the performance of high-technology ventures?. *Management Science*, 66(2), 530-552.

Zott, C., & Huy, Q. N. (2007). How entrepreneurs use symbolic management to acquire resources. *Administrative science quarterly*, 52(1), 70-105.

Zuzul, T., & Tripsas, M. (2020). Start-up inertia versus flexibility: The role of founder identity in a nascent industry. *Administrative Science Quarterly*, 65(2), 395-433.