AN INVESTIGATION OF THE BENEFITS AND CHALLENGES FROM ENTREPRENEURIAL ECONOMIC MODELS FOR HAWAIʻI ʻĀINA-BASED NONPROFITS

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ABSTRACT

‘Āina-based education supports biocultural land restoration efforts in Hawai‘i and involves place-based and spiritual learning. Nonprofits across the state facilitate this effort; however, most do not currently have adequate resources to maintain and expand their mission (Johnson et al., 2020). Nonprofits face difficulties when they are not generating sufficient revenue (Andersson et al., 2012), and while substantial aid has been made available to many organizations during the ongoing COVID-19 pandemic, for many, the pandemic has further exacerbated the difficulties they face in obtaining resources (Johnson et al., 2020). The majority of Hawai‘i nonprofit stewardship groups have recently reported a decrease in volunteer participation and losses in funding in the months following the onset of the pandemic (Dacks et al., 2021).

The objective of this study was to investigate how ‘āina-based nonprofits can begin to use their existing resources to attain and maximize long-term nonmarket and market benefits associated with ‘āina-based food production. A case study was conducted to address the question: “What are the benefits and challenges of entrepreneurial economic models for ‘āina-based nonprofit organizations in Hawai‘i?” A logic model was then constructed to identify the benefits. Strategies for maximizing the net benefits of entrepreneurship were identified to assist ‘āina-based nonprofits with their service-oriented missions.

TABLE OF CONTENTS

Abstract…….……..…….....Page 2

List of Figures……...……...……...…Page 4

List of Tables……...……...……..……...…Page 4

Chapter 1: Introduction and Problem Statement

1.0 Research Motivation and Significance……...……...…Page 5

1.1 Background…….……...……...…Page 8

Chapter 2: Theory and Literature Review

2.0 Objective and Theory……...…….……...……...…Page 13

2.1 Literature Review……...…….……...……..…...…Page 13

2.2 Limitations……...…….……...……...…Page 20

Chapter 3: Methodology

3.0 Goals and Objectives……...…….……..……...…Page 22

3.1 Case Study……...…….……..……...…Page 23

Chapter 4: Results and Discussion

4.0 Evaluation Results and Outcomes……...……..……..…...…Page 35

4.1 Evaluation Discussion……...……..……...……..…...…Page 40

4.2 Logic Model……...…….……...……..…...…Page 45

4.3 Interview……...…….……...……..……...…Page 49

Chapter 5: Conclusion

5.0 Research Summary…….……...……..……...…Page 53

5.1 Policy Significance…….……...……..……....…Page 53

5.2 Future Entrepreneurship Recommendations…….…….....…Page 56

5.3 Conclusion ……..……..…....…Page 58

References……..……..Page 62

LIST OF FIGURES

Figure 1. Entrepreneurial orientation in nonprofit organizations …….....Page 16

Figure 2. STEW-MAP of O‘ahu project area…….…….…….....Page 25

Figure 3. Types of STEW-MAP work sites……..……...….....Page 27

Figure 4. Overlapping attributes ……..……...….....Page 29

Figure 5. Levels of entrepreneurship ……...……..…….…….....Page 37

Figure 6. Expected logic model structure and outcome ……...…Page 47

Figure 7. Fishponds and lo‘i patches at Kuhiawaho……..…..…….……Page 50

LIST OF TABLES

Table 1. Operational definitions of entrepreneurial behavior……..…….....Page 17

Table 2. Nonprofit entrepreneurship measuring scale……...…..….....Page 17

Table 3. Sample selected based off STEW-MAP evaluation……..…...…….....Page 28

Table 4. Four-point Likert scale to evaluate indicators……....Page 31

Table 5. Individual entrepreneurship scoring……...…….Page 36

Table 6. Advantages and disadvantages of policies supporting entrepreneurship……....Page 54

CHAPTER 1: INTRODUCTION AND PROBLEM STATEMENT

1.0 Research Motivation and Significance

This study aims to assist nonprofit organizations, the community, the State of Hawai‘i, and the City and County of Honolulu by providing an outline of proposed actions which ‘āina-based nonprofits can take in order to assume entrepreneurial economic models. A paradigm shift in how entrepreneurialism is perceived in relation to nonprofits can help to further the impact of these organizations and assist the state in meeting their future sustainability and food security goals. Over 85% of the food supply in Hawai‘i is imported, which is a serious food security concern, especially if there is a disruption in the food supply chain (Honolulu City & County Office of Climate Change, Sustainability, and Resiliency, 2021).

Nevertheless, the issue of food insecurity is the responsibility of the state and its counties, not non-governmental organizations, such as ‘āina-based nonprofits (O‘ahu Resilience Strategy, 2019). Although the state and its counties are not necessarily holding back funding and are aware nonprofits and ‘āina-based organizations could use more support, both entities are under-resourced and challenged even when it comes to funding mandated programs (McInnis, 2021). As of 2021, the City and County of Honolulu’s long-term debt rose over $6.22 billion, which rises annually and falls between $200 to $500 per year (McInnis, 2021). On the federal level, there recently has been a greater influx of funding to support the work of nonprofit organizations; however, it will most likely remain challenging for ‘āina-based nonprofits to gain federal funds. This is because the bulk of the work ‘āina-based nonprofits participate in is limited geographically to Hawai‘i and does not ultimately affect the continental United States. Although additional funding on either the federal and/or state level would be extremely

beneficial to ʻāina-based organizations, this funding cannot be guaranteed. It is up to each organization to individually develop strategies to ensure their longevity and overall impact. Most ʻāina-based nonprofits receive the bulk of their funding through competitive grants, which temporarily facilitate singular projects, programs, or infrastructure building (Ibrisevic, 2020). However, due to the inconsistency and unpredictability of such funds, nonprofits often struggle to adopt routine and well-rounded business practices (Johnson et al., 2020). More sustainable and consistent funding could be achieved if organizations received annual funding from the state or county rather than relying on inconsistent and limited grant funding to stay afloat (Ibrisevic, 2020). In turn, a mutually beneficial relationship could be achieved with nonprofits having the capability to make more profound impacts on their community and the state by increasing overall food security and sustainability (Oʻahu Resilience Strategy, 2019). The goal of this study is to investigate how ʻāina-based nonprofits can begin to use their existing resources to attain and maximize long-term nonmarket and market benefits associated with ʻāina-based food production. By adopting an entrepreneurial economic model, nonprofits can increase their revenue to further expand their mission and reach future goals sooner.

For several decades, entrepreneurship has been encouraged and promoted by the United States government, as well as many international administrations. In 1953, the Small Business Administration was created by the U.S. government when the Small Business Act (SBA) was signed into law (Small Business Administration, n.d.). The Act was designed to provide small businesses and entrepreneurs with funding opportunities and benefits, still aiding thousands of organizations annually (Small Business Administration, n.d.). In recent years, entrepreneurship has been encouraged globally by various governments and policymaking entities (Desai, 2017). This is represented in the European Commission's Entrepreneurship 2020 Plan and in the Small

Business Investment Opportunity Act (SBIOA) in the United States. The European Commission's Entrepreneurship 2020 Plan is designed to promote entrepreneurial innovation and culture that enables its economies to recover and create an "entrepreneurial spirit in Europe" (European Economic and Social Committee, 2018). The SBIOA was passed in 2018 by Senate to increase the amount of capital small business investment companies can invest in small businesses (Center for American Entrepreneurship, 2019). With that being said, policymakers are becoming increasingly interested in entrepreneurship and its associated behaviors, financial constructs, and long-term outcomes.

According to Desai (2017), it is crucial for policymakers to understand how entrepreneurship occurs, why it is undertaken, and what activities or outcomes it can yield. More informed policymaking can allow 'āina-based nonprofits to meet long-term goals, achieving increased food security and sustainability statewide. Entrepreneurism and entrepreneurial behaviors are extremely attractive attributes to policymakers when allocating funds to nonprofits. Entrepreneurism shows the ability a particular organization has to generate specific products and services consistently, as well as demonstrates an organization's commitment to growth and longevity. Policymakers rely on entrepreneurial organizations to create jobs, provide incomes, innovate, support public health and well-being, and much more (Desai, 2017). While there is no one-size-fits-all for entrepreneurship, the impacts of entrepreneurial economic models on potential and existing policy remains critically important. Policymakers have the ability to select measures of entrepreneurship that are appropriate to specific problems and goals- in this case food insecurity (the problem) and sustainability (the goal). Insight as to how organizations can become more entrepreneurial provides policymakers with better contextual relevance to design policies that promote stronger management practices and independence (Desai, 2017).

1.1 Background

ʻĀina-based education supports cultural connectivity and biocultural appreciation throughout Hawaiʻi (Maunakea, 2021). *Biocultural,* in the context of Hawaiʻi, refers to work and initiatives that promote and revitalize Native Hawaiian cultural practices and values (Maunakea, 2021). This work has special prominence since it helps ensure the preservation and longevity of Hawaiian knowledge and traditions for future generations (Maunakea, 2021). Such place-based learning is often facilitated by nonprofits rooted in ʻāina-based principles and practices (Maunakea, 2021). However, research on the national level reports that most of these organizations do not currently have adequate resources or infrastructure to maintain and/or expand their footprint (Johnson et al., 2020). In this study, an ʻāina-based nonprofit organization is an organization that is focused on furthering a particular social cause or mission related to land-based knowledge and practices and biocultural (Hawaiian cultural practices/knowledge) restorative growth efforts.

Many ʻāina-based organizations engage in food production with the goal to increase the amount of traditional and culturally significant foods within the local supply chain. Often, organizations give away most of their production to support local communities. However, if they could market a portion of it, organizations could increase their revenue while also contributing to nonmarket reimbursements within their communities, including biocultural restorative growth efforts and reductions in CO_2 and greenhouse gases emissions (Cho, 2020). By marketing their productions, ʻāina-based organizations also have the potential to increase food security and decrease dependance on food imports in Hawaiʻi (Oʻahu Resilience Strategy, 2019). There are over 200 native and culturally significant plants including fruits, nuts, and timber grown throughout the Pacific Islands (Honolulu Civil Beat, 2021). There is potential for such cultural

staples to be grown more widespread, sustainably, and economically if ʻāina-based nonprofits are able to engage in more food production (Honolulu Civil Beat, 2021).

Morris et al. (2011) defines entrepreneurship as opportunities expressed by innovation, risk-taking, and proactiveness. Repetitively engaging in these types of behaviors allows an organization to increase its overall wealth by attaining the monetary and nonmonetary benefits associated with entrepreneurship. In the context of ʻāina-based nonprofits, entrepreneurship is defined as nonmarket wealth building with secondary market benefits. For ʻāina-based nonprofits, an entrepreneurial economic model could include a situation in which a nonprofit assumes risks with the intent to provide significant value to its community over time by using the resulting nonmarket and market benefits to grow the organization and its impact (Oberlo, 2020 & Oxford Languages, 2019). Although all the monetary and nonmonetary benefits associated with entrepreneurial activity are difficult to measure, predetermined indictors can be used as a tool for quantifying expected outcomes (Cox et al., 2006). Therefore, to show and measure these benefits, **sustainable community indicators** were used to evaluate an organization's impact and its potential to engage in entrepreneurship.

Sustainable community indicators assess carrying capacity, the market/nonmarket economic benefits, usable long-term planning, and social and environmental linkages (Cox et al., 2006). In this study, the indicators were used to examine and measure the extent of a particular organization's ability to achieve long-term consistent benefits of entrepreneurial economic models. Thus, the indicators help to identify the potential nonmarket and market benefits associated with generating more entrepreneurial economic models for ʻāina-based nonprofits in Hawaiʻi.

An 11-day supply of food exists in Hawai‘i at any given time (Hawaii State Legislature, 2021). A Bill for an Act- H.B. NO. 8 was introduced in 2021 and calls for improved food security, being that it is vital to public health (Hawaii State Legislature, 2022). The Bill iterates that despite the year-round growing season in Hawai‘i, approximately only 10% of the food supply is grown locally (Hawaii State Legislature, 2022). This results in an estimated three billion dollars in economic loss to the state annually (Hawaii State Legislature, 2022). The Bill establishes the goal of doubling local food production by 2030 though little progress toward this goal has been achieved thus far (Hawaii State Legislature, 2022). However, local ‘āina-based nonprofits involved in food production could potentially help the state meet their future innovation and independence goals by assuming entrepreneurial economic models.

With an entrepreneurial focus, this study hypothesizes that ‘āina-based nonprofits could delegate more resources towards growing and expanding their mission. Additional revenue would allow for more employees to be hired, more educational events and programs to be held, and more supplies and advertisements to be secured while ensuring that biocultural restoration efforts become more widespread and impactful. However, it is worth noting that an entrepreneurial mindset should not compromise the environmental and/or sociocultural goals motivating the nonprofit. Sandberg (2016) suggests that “a more strategic, more entrepreneurial nonprofit field is one in which the sustenance of the nonprofit organization does indeed become of paramount importance, so much so that the beneficiaries of the nonprofit become increasingly marginalized from it.”

With that being said, the objectives of this study are to identify the benefits and challenges of entrepreneurial economic models for ‘āina-based nonprofit organizations and to propose strategies for maximizing the net benefits of entrepreneurship. While many nonprofit

organizations have recently begun generating revenues by offering activities such as guided tours or payments to plant crops, this study focuses on the potential market and nonmarket benefits that could occur with extended efforts in the ʻāina-based practice of land-based food production. In addition, to ensure the legitimacy of each organization, the sample only includes nonprofit organizations classified as either 501(c)(3) or 501(c)(4).

The methodology for this study consists of two major activities- development of a case study and the construction of a logic model. The case study involves the examination of the Oʻahu Stewardship Mapping and Assessment Project (STEW-MAP)- a database map created by the Hawaiʻi Department of Land and Natural Resources' Division of Forestry and Wildlife, the United States Forest Service, and the University of Hawaiʻi at Mānoa. A nonprofit organization identified as being "ʻāina-based" is one that is recognized by the STEW-MAP as a steward of an agricultural land or system focused on terrestrial-based projects. Using the STEW-MAP, an ʻāina-based sample was identified based on an organization's land use and ʻāina-based stewardship practices. The STEW-MAP sample participants self-selected and identified their three main areas of stewardship activity. Using that data, I identified the organizations that elected ʻāina-based land use and practices as a part of their top three activities. The categories from the STEW-MAP sample that qualified as ʻāina-based land use and practice are: Botanical Garden/Arboretum; Farm; Loʻi kalo/Irrigated Taro Terrace; Māla/Community Garden; Ranch; Ululāʻau/Forest/Woodland; and Food system.

In this study, ʻāina-based nonprofits are the individual unit; the nonmarket and market benefits are the developmental factors; and an entrepreneurial economic model is the environmental component. Once the evaluation sample was identified, a logic model was constructed to identify and evaluate the potential socioeconomic and biocultural benefits of

entrepreneurial economic models for ʻāina-based nonprofit organizations in Hawaiʻi. A logic model is defined as "a map showing how a program influences its participants to achieve outcomes or specific changes" (Capacity Institute, 2019). The model includes a concise description of participants, inputs, activities, outputs, and outcomes (Capacity Institute, 2019). The sustainable community indicators, defined by Cox et al. (2006), were also used to build the logic model. The indicators that appeared the most often and were the highest scoring from the case study formed the various behaviors and actions suggested in the logic model structure. The indicators highlighted in the logic model suggest that if an organization follows each step in a similar fashion, they can achieve sustainable carrying capacities, market and nonmarket economic benefits, usable long-term planning, and social and environmental benefits.

CHAPTER 2: THEORY AND LITERATURE REVIEW

2.0 Objective and Theory

Several pieces of literature were investigated and compared to determine the potential socioeconomic and biocultural impacts associated with entrepreneurial economic models for ʻāina-based nonprofits. The literature review serves as the foundation for the case study which was used to collect data regarding the benefits and challenges of defining a nonprofit as entrepreneurial. The information collected in the literature review was then used to develop the indicators that were used to evaluate the various organizations [listed on the STEW-MAP] for their level of engagement in entrepreneurial behavior.

2.1 Literature Review

Berners-Lee et al. (2018) determined that since a significant proportion (83%) of the world's CO_2 emissions come from food production, emissions can be significantly reduced when food is sourced locally. Although the distance food must travel to Hawai‘i contributes only to a small amount of the total carbon emissions associated with the food system, local food still can result in higher levels of sustainability with lower carbon emissions (Berners-Lee et al., 2018). Food storage consumes large amounts of electricity, adding to the emissions of the transport process; and growing food out of season may require a greenhouse, creating emissions from the power required. In addition, growing food that is native to warmer areas in cooler climates requires significant amounts of fertilizer, which can generate greenhouse gases and pollute water supplies (Berners-Lee et al., 2018). Thus, locally grown foods have a lower carbon footprint, yet land allocation and higher production costs remain barriers.

According to the Honolulu City & County Office of Climate Change, Sustainability, and Resiliency (2021), 85-90% of the food purchased and consumed in the county is currently

imported, presenting a serious food security concern in the event there is a disruption in the food supply chain. Although the cost of food production is higher in Hawai‘i than on the U.S. mainland, the nonmarket benefits associated with biocultural restoration and reductions in greenhouse gas emissions and food spoilage are significant (Office of Climate Change, Sustainability, and Resiliency, 2021). Even a small increase in local food production can significantly reduce CO_2 and other greenhouse gas emissions. The O‘ahu Climate Action Plan Report suggests reliance on partnerships and collaborations with nonprofits as a part of the plan to meet greenhouse gas reduction goals in Hawai‘i (Office of Climate Change, Sustainability, and Resiliency, 2021).

Johnson et al. (2020) have concluded that the need for entrepreneurship within the nonprofit sector is more apparent than ever. With ongoing pandemic-related supply chain interruptions and associated inflation of food and other basic necessities, nonprofits have become even more critical in providing for those in need. However, the funding that supports these activities has declined since the onset of the pandemic in March 2020 (Johnson et al., 2020). Recent studies indicate that the ability of nonprofits to expand and diversify their missions depends significantly on the organizations’ ability to marginalize traditional anti-profiting models and practices (Johnson et al., 2020). Therefore, going forward, nonprofits should consider becoming more entrepreneurial as a means of growing and maintaining their impact. A 2020 survey of nonprofits revealed that 83% lost revenue and 71% reduced programming since the pandemic began (Johnson et al., 2020). These findings suggest that if more organizations had self-generated revenue, they would have been better equipped to deal with a major funding setback (Johnson et al., 2020).

Cox (2002) emphasizes that a clear understanding of entrepreneurship is needed before an organization can become more entrepreneurial. To be entrepreneurial, an organization must first determine and then obtain the resources that are needed to act and turn risk-taking opportunities into rewards (Cox, 2002). While entrepreneurship is often thought about in the sense of large and fast-growing businesses started by one or few people, entrepreneurship can also take shape in community-based environments like nonprofits (Cox, 2002). In this case, wealth is not defined with a focus on the financial aspects that come with entrepreneurial behaviors, but rather by increased cultural, social and/or environmental well-being. With this expanded notion of well-being, entrepreneurship is not a singular set of traits (Cox, 2002). An organization must first determine what risks they should take based on the rewards they value the most.

Morris et al. (2011) concluded that entrepreneurship has played a role in the significant growth of various nonprofits, allowing them to expand the scope and scale of their work. As climate change persists and presents a looming threat to society, environmental changes introduce opportunities and the potential to serve broader social needs and create new forms of value. Research suggests that the mission of a nonprofit will not face "radical" changes when shifting to an entrepreneurial economic model. Morris et al. (2011) determined that changes in orientation of three main entrepreneurial attributes are needed, which includes innovativeness, proactiveness, and risk-taking, each with their own set of sub-activities (see Figure 1).

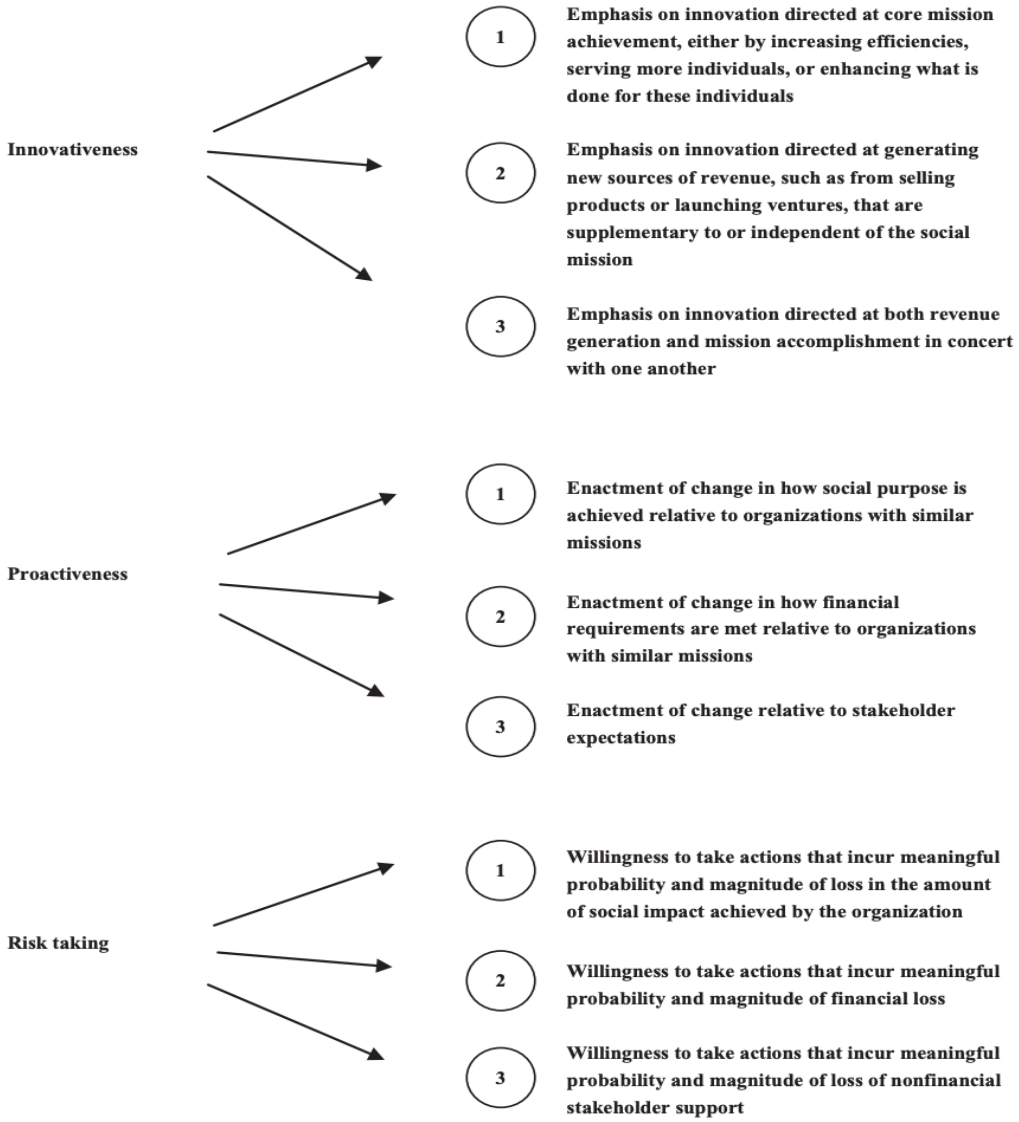

Image Credit: Morris, M. H., Webb, J. W., & Franklin, R. J. (2011). Understanding the manifestation of entrepreneurial orientation in the nonprofit context. Entrepreneurship Theory and Practice, 35(5), 947-971. https://doi.org/10.1111/j.1540-6520.2011.00

Figure 1. Entrepreneurial orientation in nonprofit organizations

Helm et al. (2010) define innovativeness, proactiveness, and risk-taking similarly and use an original evaluation scale to measure entrepreneurship in nonprofit organizations. The scale consists of three subscales that measure each attribute based on entrepreneurial orientation methods (see Table 1). Upon development, the scale was reviewed by five experts in the field of nonprofit management and entrepreneurship in order to evaluate its validity. Based on the

review, a 20-question assessment was finalized, and nonprofits were evaluated using the multidimensional scale (see Table 2).

Table 1. Operational definitions of entrepreneurial behavior

Innovation	The internal creation and use of new programs, services, processes, policies, or any other organizational output—from the original combination of existing inputs or the application of an existing activity to a new area.
Proactiveness	The implementation of a program, service, policy, or process before other organizations in the industry, sector, or community, in response to opportunities that cannot be proved in the present but are expected to influence change in the future.
Risk taking	The willingness to engage in behavior that disrupts internal or external operating norms. The behavior can, but need not be, financial; in fact, financial risk is often borne by a third-party financier such as a foundation.

Image Credit: Helm, S. T., & Andersson, F. O. (2010). Beyond taxonomy. Nonprofit Management and Leadership, 20(3), 259-276. https://doi.org/10.1002/nml.253

Table 2. Nonprofit entrepreneurship measuring scale

Presently and during the last five years my organization has:			
Innovation			
1.	Placed a strong emphasis on the maintenance of tried-and-true products or services.	1 2 3 4 5 6 7 8	Placed a strong emphasis on the development of new products or services.
2.	Placed a strong emphasis on the maintenance of established organizational processes.	1 2 3 4 5 6 7 8	Placed a strong emphasis on the development of new organizational processes.
3.	Introduced no new processes, policies, products, or services.	1 2 3 4 5 6 7 8	Introduced many new processes, policies, products, and services.
4.	Made only minor changes in processes, policies, products, or services.	1 2 3 4 5 6 7 8	Made major changes in processes, policies, products, or services.
Proactiveness			
5.	Is very seldom the first organization to introduce new products/services, administrative techniques, operating technologies, etc.	1 2 3 4 5 6 7 8	Is very often the first organization to introduce new products/ services, administrative techniques, operating technologies, etc.
6.	Been reticent to exploit changes in the field.	1 2 3 4 5 6 7 8	Exploited changes in the field.
7.	Followed the lead of similar service providers.	1 2 3 4 5 6 7 8	Provided the lead for similar service providers.
Risk Taking			
8.	Conducted itself consistently with the behavioral norms of the operating environment, industry, or sector.	1 2 3 4 5 6 7 8	Conducted itself in conflict with the behavioral norms of the operating environment, industry, or sector.
9.	Selected projects that support the organization's public image.	1 2 3 4 5 6 7 8	Selected projects that may alter the organization's public image.
10.	Made decisions that maintain staff stability.	1 2 3 4 5 6 7 8	Made decisions that created changes in staff stability.

Note: The social entrepreneurship scale measures nonprofit organizational behavior along a continuum. Two statements are set at opposite ends of the line. Respondents were instructed to circle the number that best characterized their organization. A rating of 1 would indicate that the statement to the left precisely characterizes their organization, while a rating of 8 would indicate that the statement to the right precisely characterizes their organization.

Image Credit: Helm, S. T., & Andersson, F. O. (2010). Beyond taxonomy. Nonprofit Management and Leadership, 20(3), 259-276. https://doi.org/10.1002/nml.253

Andersson et al. (2012) compare and contrast the performance of entrepreneurial nonprofits with less entrepreneurial organizations. Their findings demonstrate that nonprofits with higher levels of entrepreneurial behavior have higher levels of financial outputs and positively related total revenues (Andersson et al., 2012). Therefore, engaging in entrepreneurial behaviors could help ʻāina-based nonprofits facing reduced funding levels boost their financial security.

ʻĀina-based education and biocultural initiatives are not only expanding throughout community-based organizations and nonprofits, but they are also becoming a prevalent part of curriculum in academic institutions of both lower and higher education in Hawaiʻi. According to Maunakea (2021), the term *ʻāina-based education* has only recently emerged in academia and educational research despite its values and practices being exercised by countless generations. ʻĀina-based learning and biocultural education involves a dynamic and interdisciplinary processes of learning how to care for oneself and the land (Maunakea, 2021). This interconnected relationship depends on spurring and maintaining intergenerational knowledge, systems, language, and traditional practices to serve as a foundation for learning and connecting with traditional Hawaiian cultural practices and principals (Maunakea, 2021).

Community-based nonprofits often host environmental stewardship activities that provide individuals with access to natural areas and meaningful opportunities, allowing community members to participate in biocultural restorative activities (Dacks et al., 2021). By engaging in biocultural stewardship, many nonprofits are able to integrate diverse knowledge systems into their practices to care not only for their land, but also their community (Chang et al., 2019). Many ʻāina-based stewardship groups grow traditional food crops for local communities. In Hawaiʻi, kalo or taro is a staple of Hawaiian culture and sustenance. Kalo was once the

economic, political, and spiritual center of Hawaiian agricultural society (Hawaii History, n.d.). It is a versatile crop that can be cooked and pounded to make poi (taro paste) and several other types of culinary delicacies (Hawaii History, n.d.). Loʻi kalo (kalo grown in terraced water patches) is grown and produced by several nonprofits (Hawaii History, n.d.). Such a practice not only increases biocultural appreciation, but also has several environmental and socioeconomic benefits. For example, an ʻāina-based nonprofits engaging in loʻi restoration is not only helping to provide an essential habitat to many native and endangered waterbirds, but they can also provide sustenance within their local community by cultivating the kalo they produce (Dacks et al., 2021). Thus, biocultural restoration expands beyond restoring just a physical environment. A biocultural approach allows nonprofits to steward an area more meaningfully, viewing the surrounding environment as a dynamic social-ecological system rather than simply a plot of land (Dacks et al., 2021).

Although many nonprofits have begun producing kalo or loʻi, few organizations go the extra step and neither sell nor package any type of product. Kalo was once grown on approximately 35,000 acres of land throughout Hawaiʻi, but, as of 2018, kalo was grown on less than 350 acres across the Hawaiian Islands (Hawaii Ocean Project, 2019). The 350 acres yield 4.5 million pounds of harvest, however, 6.5 million pounds of kalo are consumed annually in Hawaiʻi (Hawaii Ocean Project, 2019). As a result, the additional 2 million pounds per year is imported to the state. This represents an opportunity for ʻāina-based nonprofits to support local food production and sustainability while expanding their biocultural growth efforts. An entrepreneurial economic model may help ʻāina-based nonprofits take advantage of this opportunity and support more organizations downstream in the processing and sale of traditional foods.

2.2 Limitations

While it is not considered a limitation since the objective of this study is to examine the effects of entrepreneurship in the context of Hawai‘i ‘āina-based nonprofits, it is important to point out that the applicability of this study is geographically limited to and only focused on systems and models that can be established in Hawai‘i. Thus, the socioeconomic and biocultural significance of entrepreneurial economic models are reflected only in a small fraction of space in which there is the potential for these systems and may have limited applicability outside of Hawai‘i. Nevertheless, similar parallels related to funding relationships and models could be applicable to nonprofits outside of Hawai‘i.

On the other hand, one the of more concrete limiting factors is that the nonprofits considered in the preliminary sample are only those identified on the STEW-MAP, representing only a marginal sample from the densely populated Kona and Ko‘olaupoko sections of O‘ahu. While the STEW-MAP data is still being expanded to include additional areas of O‘ahu, the Kona and Ko‘olaupoko sections were the primary focus of the data collection, since many stewardship organizations are located in those particular geographical areas. Furthermore, STEW-MAP data is also available for Hawai‘i Island, but this study only examines data pertaining to the island of O‘ahu.

Innovativeness, proactiveness, and risk-taking, as described by Morris et al. (2011), are the three main attributes defining entrepreneurial behavior in this study; however, there is subjectivity in the evaluation of such behaviors. Although the case study has specific indicators defining each behavior, these attributes may not all be represented or may be difficult to pinpoint when evaluating information on an organization’s website. Information available on each nonprofit’s website and any publicly available data or reports may also be biased. Since the

scope of this evaluation is limited only to publicly available information and published data, the evaluation does not account for information that is not provided on an organization's website. Furthermore, the evaluation does not include nonprofits that do not have a website; therefore, some of the STEW-MAP sample population was not included. To compensate for such limitations and to test the validity of the results found using the selected sample, an organization that was not included in the STEW-MAP project area but engages in local food production was interviewed.

CHAPTER 3: METHODOLOGY

3.0 Goals and Objectives

The objective of this research is to investigate how Hawai‘i ‘āina-based nonprofits can benefit from assuming entrepreneurial economic models by taking advantage of the associated biocultural, environmental, and economic benefits. By conducting a case study, I aim to address the question: “What are the benefits and challenges of entrepreneurial economic models for ‘āina-based nonprofit organizations in Hawai‘i?” Three sub-questions related to this topic were also investigated. (1) What are the components of an entrepreneurial nonprofit economic model? (2) Are ‘āina-based nonprofit organizations that support local food production employing any components of entrepreneurial economic models? and (3) How are nonprofits and policymakers throughout Hawai‘i striving to increase local food production and encourage the adoption of entrepreneurial economic models? These questions were addressed using both a case study and a logic model. The case study first reveals the extent to which each organization engages in entrepreneurial behavior. The evaluation results were then used to build the logic model, which highlights specific actions ‘āina-based nonprofits can take in order to attain both short-term and long-term benefits of entrepreneurship.

In this study, nonmarket benefits are the focus while market benefits are considered secondary since they are not traditionally the goal of nonprofits. Both benefits were assessed during the case study by conducting an evaluation of the nonprofits’ website and evaluating the publicly available data and reports produced by each organization. A nonprofit was still considered “entrepreneurial” if nonmarket benefits are visibly being attained, meaning that an organization does not necessarily have to make monetary gains to be considered entrepreneurial (Seaman et al., 2018). Nonmarket benefits include and are not limited to increased food

production, more external collaboration, biocultural restoration, reduced emissions, increased sustainability, increased land security, and additional labor security; whereas market benefits were defined by income or any excess revenue that an organization generated.

Seaman et al. (2018) suggest that nonprofits can avoid future losses of land and labor by becoming more entrepreneurial. If nonprofits can generate more revenue, they can use more of their traditional sources of funding, such as grants and donations to promote nonmarket benefits and their outcomes. From an entrepreneurial economic point-of-view, if a nonprofit is generating revenue, their resources are not being allocated to merely keeping the organization afloat. When revenue is generated, an organization is able to grow and expand their mission, yielding more sustainable and entrepreneurial economic models (Seaman et al., 2018). In terms of the Hawai‘i ‘āina-based nonprofit sector, such growth could be enough to aid in statewide food production efforts. This is partly due to the nonmarket returns and benefits of engaging in ‘āina-based food production. Such systems not only produce food but also sequester carbon, reduce runoff, increase habitat for native species, and much more (Berners-Lee et al., 2018). Becoming more entrepreneurial will facilitate nonprofits’ efforts to make significant impacts and allow them to have a hand in forging a more sustainable future (Seaman et al., 2018). Nevertheless, it will not be feasible for nonprofits solely to maximize food production efforts or solve the state’s food security issues. The goal of this study is to determine how ‘āina-based nonprofits can begin to use their existing resources to attain and maximize long-term nonmarket and market benefits associated with ‘āina-based food production.

3.1 Case Study

A case study was first conducted to identify and evaluate the potential socioeconomic and biocultural benefits of ‘āina-based nonprofit organizations assuming entrepreneurial

economic models. The case study consists of an evaluation of organizations listed on the STEW-MAP (see Figure 2) that are identified as stewards of lands used for agriculture. The organizations listed on the STEW-MAP are those that "conserve, restore, manage, monitor, transform, advocate for, engage with, and/or educate about the local environment" (Division of Forestry and Wildlife, 2018). As of July 2022, 128 organizations participated in the assessment process for STEW-MAP recognition and have been officially listed as project participants. For the purpose of this study, I evaluated the mission statement of the organizations officially recognized by the STEW-MAP for their ʻāina-based stewardship of an agricultural land or system. Their stewardship includes, though is not limited to, a focus on food production (i.e. agricultural land use), the facilitation of community events (including virtual engagement), and the incorporation of biocultural and traditional knowledge and practices into their work (i.e. growing traditional crops or the use of traditional agricultural systems and practices). The STEW-MAP is also used to provide details as to how ʻāina-based nonprofits engage in local food production and go about their activities. Secondary data from the organizations' websites is used to provide a picture of how they are engaging in entrepreneurship. The goal of the case study is to collect data regarding the benefits and challenges of defining a nonprofit as entrepreneurial. The information from the case study evaluation and the indicators for a sustainable community were then used to construct the logic model. The purpose of the model is to help organizations maximize the net benefits of entrepreneurship and to assist ʻāina-based nonprofits in expanding their impact in terms of socioeconomics and biocultural restoration. The model provides organizations with suggested actions to take in order to become more entrepreneurial.

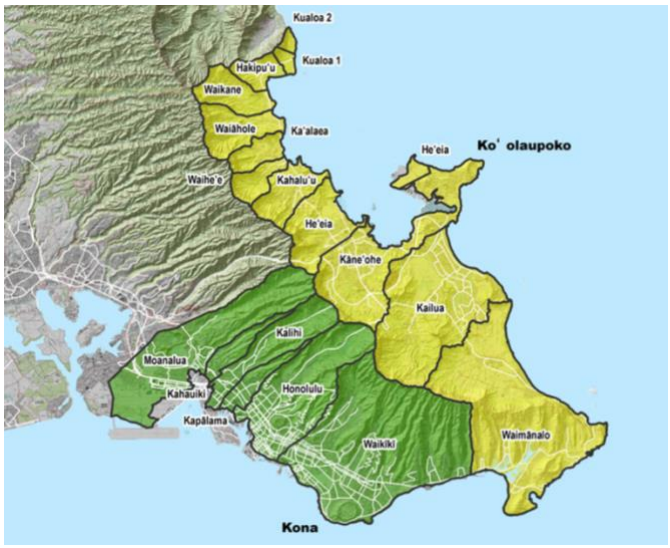

Image Credit: https://greenmagazinehawaii.com/wp-content/uploads/2018/11/Moku_Ahupuaa.jpg

Figure 2. STEW-MAP of Oʻahu project area

To identify the evaluation sample using the STEW-MAP, all the organizations not identifying as either 501(c)(3) or 501(c)(4) nonprofit organizations were eliminated to ensure the legitimacy of each organization and its ability to obtain grants. While there may be some organizations that are an exception, obtaining a 501(c)(3) or 501(c)(4) title is not a major undertaking and identifies that an organization is serious about their mission and goals. Private non-501(c)(3) or 501(c)(4) organizations still have the ability to apply and receive grants; however, due to the competitive nature of obtaining a grant, organizations identifying as 501(c)(3) or 501(c)(4) may be preferred by funders. Out of the 100 organizations listed as STEW-MAP project participants, 63 organizations met this criterion. Next, the STEW-MAP was evaluated using the sites each of the 63 organizations identified as an area of focus. Out of 78 listed worksites (see Figure 3), participants were able to select as many or as few as they deemed fit; however, each organization did select their top three most important stewardship worksites. Of the 78 worksites, the following seven categories were considered ʻāina-based stewardship sites and relevant to the scope of this study: Botanical Garden/Arboretum; Farm; Loʻi Kalo/Irrigated Taro Terrace; Māla/Community Garden; Ranch; Ululāʻau/Forest/Woodland; and

Food System. The nonprofits identifying at least one of the seven as in their top three most important stewardship sites comprise the evaluation sample. As their top worksites, two organizations identified a Botanical Garden/Arboretum, four organizations identified a Farm; two organizations identified a Loʻi Kalo/Irrigated Taro Terrace; three organizations identified a Māla/Community Garden; zero organizations identified a Ranch; 13 organizations identified a Ululāʻau/Forest/Woodland; and 10 organizations identified a Food System. This totals 34 organizations; however, only 24 qualified to be considered a part of the sample groups of this study, since three of the organizations did not currently have a website and seven of the organizations had two overlapping top worksites and were consequently double counted. The three organizations without websites were eliminated from the sample, due to the lack of evidence that they are actively building nonmarket wealth and growing food. While this does not mean that an organization is not entrepreneurial or adequately established, the criteria established for this study requires documented evidence of such behavior. Therefore, the three organizations were eliminated not based upon their extent of entrepreneurial behavior but based on the lack of evidence that such behaviors are occurring.

SECTION 5: SITES YOUR GROUP'S WORK FOCUSES ON

In the last year, what kind of sites has your group's stewardship work focused on?
Remember that stewardship includes conservation, restoration, responding to disturbance, place-based or traditional hunting/fishing/gathering, monitoring, transformation, education, and advocacy about the local environment. (Select all that apply)

'Āina (Land) & Built Environment Related

- ☐ Ala hele / Bike, Hiking, Beach access trail
- ☐ Athletic field
- ☐ Bird sanctuary
- ☐ Botanical garden / Arboretum
- ☐ Building courtyard (e.g. privately owned public spaces)
- ☐ Community gathering space (need not be a physical building structure)
- ☐ Designated hunting areas
- ☐ Dog park
- ☐ Farm
- ☐ Green buildings
- ☐ Grounds of public building other than school (e.g. city hall, library, hospital, rec center)
- ☐ Lo'i kalo/ Irrigated taro terrace
- ☐ Māla/ Community garden
- ☐ Pāka/ Park (county, state, or national)/ Beach park /Recreation area
- ☐ Playground
- ☐ Public right of way (sidewalk, street ends, traffic island, public area)
- ☐ Ranch
- ☐ Residential building grounds (apartment courtyard, backyard, etc.)
- ☐ Rooftop
- ☐ School yard / outdoor classroom
- ☐ Street tree
- ☐ Ululā'au / Forest / Woodland
- ☐ Vacant land / vacant lot
- ☐ Wildlife preserve

Wai and Kai (Fresh Water & Marine) Related

- ☐ Ana wai / Cave water
- ☐ Awa / Canoe landing / Boat harbor
- ☐ Kahakai / Beach / Shoreline
- ☐ Kahawai / Stream / River
- ☐ Kai kohala / Kai Kua'au / Nearshore marine/ Reef
- ☐ Ko'a / Fishing grounds
- ☐ Loko i'a / Fish ponds
- ☐ Muliwai / Estuary / Freshwater wetland
- ☐ Pūnāwai / Freshwater spring / Reservoir
- ☐ Wai 'ōpae / Anchialine ponds

Systems Related

- ☐ Cultural / sacred sites including living sites in use and preserved archeological sites
- ☐ Energy system (examples - solar, wind, geothermal)
- ☐ Food system (examples - grocery stores, community supported agriculture, food bank, farm, ranch, fish pond, fishing grounds, compost site)
- ☐ Stormwater management system (examples - rain barrels, permeable paver, bioswales, water tanks)
- ☐ Waste system (examples - e-waste drop off location)

Other

- ☐ None of the above
- ☐ Other - please specify:

Figure 3. Types of STEW-MAP work sites

Table 3. Sample selected based off STEW-MAP evaluation

	Organization	Worksite(s)
1	The Outdoor Circle	Botanical Garden/Arboretum
2	Mānoa Heritage Center	Botanical Garden/Arboretum
3	Kākoʻo ʻŌiwi	Farm, Food system
4	Marimed Foundation	Farm
5	Partners in Development Foundation	Farm, Food system
6	Keiki and Plow	Farm, Food system
7	Hoʻokuaʻāina	Loʻi kalo/Irrigated Taro Terrace, Food system
8	Hui Mālama O Ke Kai	Māla/Community Garden
9	Pacific Resources for Education and Learning	Māla/Community Garden, Food system
10	Surfrider Foundation Oʻahu Chapter	Māla/Community Garden
11	ʻAhahui Mālama i ka Lōkahi	Ululāʻau/Forest/Woodland
12	Ala Wai Watershed Association, Inc.	Ululāʻau/Forest/Woodland
13	Hawaiʻi Audubon Society	Ululāʻau/Forest/Woodland
14	Hawaiʻi Wildfire Management Organization	Ululāʻau/Forest/Woodland
15	Healthy Climate Communities	Ululāʻau/Forest/Woodland
16	Livable Hawaiʻi Kai Hui	Ululāʻau/Forest/Woodland
17	Mālama Maunalua	Ululāʻau/Forest/Woodland
18	Moanalua Gardens Foundation	Ululāʻau/Forest/Woodland
19	Puakea Foundation of Hawaiʻi, Inc	Ululāʻau/Forest/Woodland
20	Travel2change	Ululāʻau/Forest/Woodland
21	The Trust for Public Land	Ululāʻau/Forest/Woodland, Food system
22	Hawaiʻi Community Foundation	Ululāʻau/Forest/Woodland, Food system
23	Kanu Hawaiʻi	Food system
24	Pig Hunters Association of Oʻahu	Food system

Once each organization was evaluated using the STEW-MAP information, the 24 organizations (see Table 3) were examined more closely to identify the extent of their entrepreneurial attributes and potential. Each organization's website was assessed to determine the extent to which they engage in entrepreneurial behavior. As described by Morris et al. (2011), the three main attributes defining entrepreneurial behavior are innovativeness, proactiveness, and risk-taking. While each trait has its own characteristics, they can also overlap (see Figure 4). For instance, being innovative has similar traits to being proactive and vice versa.

Figure 4. Overlapping attributes

Risk-taking involves an organization's willingness to commit significant resources to uncertain projects where outcomes are unknown and there is a potential for meaningful loss (Morris et al., 2011). Such behavior can be identified by efforts to diversify products, services, stakeholders, clients, board members, and volunteers (Cox, 2002). If an organization sells and packages any type of product it produces, this demonstrates an organization's willingness to take risks. In this study, risk-taking was also identified by behaviors including employing an extensive labor force, growing more than one crop, and controlling over at least a half of an acre of land (Cox, 2002). The behavior was predominantly reflected in the diversity of stakeholders, activities, and funding while innovation and proactiveness require more long-term planning and adaptation over time (Cox, 2002).

Proactiveness is defined by an organization's ability to anticipate future wants and needs to anticipate future challenges (Morris et al., 2011). In this study, proactiveness was identified by an organization's ability to pursue change ahead of anticipated future challenges or their efforts

to initiate extended cooperation with outside organizations. In addition, actions such as strategic planning and the production of annual or quarterly reports involves an organization regularly updating their business plan and was evidence that an organization is proactive (Cox, 2002). For example, a complete board of directors and secured funding relationships was evidence that an organization engages in proactive behaviors (Cox, 2002). This includes but is not limited to federal, state, city and county, or private sources of funding. An interactive and well-informed website with up-to-date information was also considered a component of proactive behavior.

Innovation is about being change ready and adaptable to account for management of supply (Morris et al., 2011). Major indicators of such behavior involve expanding beyond offering singular signature products or services and openness to new ideas and collaborations (Morris et al., 2011). Innovation is reflected in an organization's tendency to experiment, generate novel ideas, and participate in activities with the intent to create new products, processes, and services (Morris et al., 2011). Thus, for an organization to be considered innovative, it must physically demonstrate that it promotes its products and/or services using multiple media channels and face-to-face exchanges (Cox, 2002). In this study, a major indicator of innovation was selling more product than is given away along with selling products to commercial stores with original names and branding.

Publicly available information and data on each organization served as the primary means of evaluation for each organization. I evaluated all 24 organizations using a four-point Likert scale in which "0" represents no score; "1" represents a low score; "2" represents a medium score; and "3" represents a high score (see Table 4). The evaluation contains three sections- each for gauging an organization's tendency to exhibit risk-taking, innovativeness, and proactiveness. All three sections contain seven sub-behavior evaluation indicators which were scored using the

Likert scale. The evaluation was designed based on the method and rating system used by Andersson et al. (2012), and the sub-behavior evaluation indicators were selected from the literature (Morris et al., 2011 and Cox, 2002) used to define the three main attributes of entrepreneurial behavior. The three organizations that scored the highest were analyzed in the most depth to assist in building the logic model.

Table 4. Four-point Likert scale to evaluate entrepreneurial attributes and their indicators

Risk-taking	**NO SCORE - 0**	**LOW - 1**	**MED - 2**	**HIGH - 3**
Offers diverse services and products	Offers no services or products	Offers only one service or product	Offers two to three services or products	Offers more than three services or products
Commits significant resources to uncertain projects where outcomes are unknown and there is a potential for meaningful loss	No evidence of any novel projects or ideas that require significant funding and labor efforts	Minimal evidence of any novel projects or ideas that require significant funding and labor efforts	Evidence of engaging in two to three novel projects or ideas that require significant funding and labor efforts	Evidence of engaging in more than three novel projects or ideas that require significant funding and labor efforts
Evidence of efforts to diversify their product/service, stakeholder/clients, board members, and volunteers	Collaborates with no other organizations and has no permanent staff/board members or volunteers	Collaborates with at least one other organization OR has permanent staff/board members and hosts volunteers regularly	Collaborates with at least one other organization AND has permanent staff/board members and hosts volunteers regularly	Collaborates with two or more outside organizations AND has permanent staff/board members and hosts volunteers regularly
Sells and packages a product	Sells and packages no products	Sells and packages at least one product	Sells and packages two to three products	Sells and packages more than three products
Control over at least a half of an acre of land	No control over any acreage of land	Control over at least a half of an acre of land	Control over one to two acres of land	Control over two acres of land
Employs a labor force	Employs no labor force	Employs at least three permanent staff members	Employs five to eight permanent staff members	Employs more than eight permanent staff members
Grows more than one crop	Grows no crops	Grows at least one crop	Grows two to three crops	Grows more than three crops
Proactiveness	**NO SCORE - 0**	**LOW - 1**	**MED - 2**	**HIGH - 3**

Ability to anticipate future wants and needs to pursue change ahead of future challenges and shows effort to initiate extended cooperation with other organizations	Does not demonstrate the ability to anticipate future wants and needs to pursue change ahead of future challenges or show effort to initiate extended cooperation with other organizations	Demonstrates the ability to anticipate future wants and needs to pursue change ahead of future challenges OR shows effort to initiate extended cooperation with other organizations	Demonstrates the ability to anticipate future wants and needs to pursue change ahead of future challenges AND shows effort to initiate extended cooperation with another organization	Demonstrates the ability to anticipate future wants and needs to pursue change ahead of future challenges AND shows effort to initiate extended cooperation with more than one organization
Evidence of strategic planning and marketing efforts	No evidence of strategic planning and marketing efforts	Inconsistent evidence of strategic planning and marketing efforts	Evidence of strategic planning and marketing efforts over at least one medium and social media platform	Evidence of strategic planning and marketing efforts over multiple mediums and social media platforms
Website is interactive and well-informed with up to date (with the past year) information	Website is not interactive or well-informed nor has up-to-date information	Website is interactive and well-informed but does not have up-to-date information OR website is not interactive and well-informed but does have up-to-date information	Interactive and well-informed website with up-to-date information	Website is interactive and well-informed with information updated within the past six months
Production of annual or quarterly reports	Produces no annual or quarterly reports	Produces annual reports	Produces biannual reports	Produces quarterly reports
Evidence of a regularly updated business plan	Produces no annual or quarterly reports/newsletters related to business plan	Produces an annual report/newsletters related to business plan	Produces a biannual report/newsletters related to business plan	Produces quarterly reports/newsletters related to business plan
Evidence of consistent funding relationships or grants	No evidence of consistent funding relationships or grants	Evidence of at least one consistent funding relationship or grant in the past year	Evidence of two to three consistent funding relationships or grants in the past year	Evidence of more than three consistent funding relationships or grants in the past year

Evidence of a complete (3 member minimum) and relevant board of directors	No/incomplete board of directors	Board of directors is complete, and SOME members have diverse yet related experience	Board of directors is complete, and ALL members have diverse yet related experience	Board of directors has more than three members and ALL members have diverse yet related experience
Innovation	**NO SCORE - 0**	**LOW - 1**	**MED - 2**	**HIGH - 3**
Demonstrates change ready and adaptable behaviors	Demonstrates no change ready or adaptable behaviors	Demonstrates change ready OR adaptable behaviors	Demonstrates both change ready and adaptable behaviors	Demonstrates significant change ready and adaptable behaviors
Expansion beyond offering singular signature products or services	Does not offer more than a singular products or services	Offers a singular signature products or service	Offers two to three signature products or services	Offers more than three signature products or services
Tendency to experiment and generate novel ideas while open to new ideas and collaborations	No evidence of experimentation, generation of novel ideas, or collaborations	Demonstrates tendency to experiment and generate novel ideas OR is open to new ideas and collaborations	Demonstrates tendency to experiment and generate novel ideas AND is open to new ideas and collaborations	Demonstrates tendency to experiment and generate novel ideas AND is open to new ideas and collaborations
Participates in activities with the intent to create new products, processes, and services	Does not participate in activities with the intent to create new products, processes, and services	Participate in activities with the intent to create either a new product, process, or services	Participate in activities with the intent to create some new products, processes, and services	Participate in activities with the intent to create several new products, processes, and services
Promotes products or services using multiple media channels and face-to-face exchanges	Promotes no products or services using multiple media channels or face-to-face exchanges	Promotes products or services using multiple media channels or face-to-face exchanges irregularly	Promotes products or services using multiple media channels or face-to-face exchanges monthly	Promotes products or services using multiple media channels or face-to-face exchanges more than once per month
Sells more than given away and sells products to commercial stores	Sells no products	Sells some products but not more than is given away	Sells more products than are given away	Sells more products than are given away AND sells products to commercial stores

Products have original names and branding	No products have original names or branding	Produces products, but none have original names or branding	Produces one product with an original names or branding	Produces more than one product with original names or brandings

Next, the benefits of entrepreneurial activity for each organization were measured and quantified using the sustainable community indicators (sustainable carrying capacities, market and nonmarket economic benefits, usable long-term planning, and social and environmental benefits), since entrepreneurial attributes and their indicators are linked to an organization's goals. Based on this evaluation, I then determined which indicators the highest scoring organizations had in common and what attributes sets them apart from the lower scoring organizations. This also indicates how the organizational structure of the lower scoring organizations can be tailored to become more entrepreneurial. The associated impacts of entrepreneurial behavior were identified using the previously constructed case study. The sustainable community indicators highlight and help to evaluate the extent of community impact, as well as the biocultural and socioeconomic significance catalyzed by entrepreneurial economic models. The indicators were then used to construct the logic model and to ensure that long-term outcomes are possible. The logic model helps to identify the inputs, activities, and outputs associated with establishing entrepreneurial economic models for nonprofits. It also provides organizations with a plan to engage in more entrepreneurial-based behaviors. Together, the case study findings and the logic model reveal the potential nonmarket and market benefits associated with generating more entrepreneurial economic models for ʻāina-based nonprofits in Hawaiʻi.

CHAPTER 4: RESULTS AND DISCUSSION

4.0 Evaluation Results and Outcomes

Among the 24 organizations evaluated to determine their level of engagement in entrepreneurial behaviors, the three organizations that scored the highest entrepreneurship ratings were *Kākoʻo ʻŌiwi*, *Hoʻokuaʻāina*, and *Hawaiʻi Community Foundation* (see Table 5). The lowest possible score was zero while the highest possible score was 63. *Kākoʻo ʻŌiwi* scored a 51, which is rated as **significantly above average**; *Hoʻokuaʻāina* scored a 41, which is rated as **above average**; and *Hawaiʻi Community Foundation* scored a 32, which is rated as **average**. The lowest scoring organizations were *Ala Wai Watershed Association, Inc.* and *Livable Hawai*ʻ*i Kai Hui*, which both scored a six. The highest scoring organizations outside of the top three were *Mānoa Heritage Center* and *The Trust for Public Land*, scoring a 31 and 30 respectively.

Table 5. Individual entrepreneurship scoring, highlighting the three highest scoring organizations

Organization	Worksite(s)	Score
The Outdoor Circle	Botanical Garden/Arboretum	27
Mānoa Heritage Center	Botanical Garden/Arboretum	31
Kākoʻo ʻŌiwi	Farm; Food system	51
Marimed Foundation	Farm	9
Partners in Development Foundation	Farm; Food system	24
Keiki and Plow	Farm; Food system	28
Hoʻokuaʻāina	Loʻi kalo/Irrigated Taro Terrace; Food system	41
Hui Mālama O Ke Kai	Māla/Community Garden	12
Pacific Resources for Education and Learning	Māla/Community Garden; Food system	24
Surfrider Foundation Oʻahu Chapter	Māla/Community Garden	26
ʻAhahui Mālama i ka Lōkahi	Ululāʻau/Forest/Woodland	8
Ala Wai Watershed Association, Inc.	Ululāʻau/Forest/Woodland	6
Hawaiʻi Audubon Society	Ululāʻau/Forest/Woodland	28
Hawaiʻi Wildfire Management Organization	Ululāʻau/Forest/Woodland	25
Healthy Climate Communities	Ululāʻau/Forest/Woodland	26
Livable Hawaiʻi Kai Hui	Ululāʻau/Forest/Woodland	6
Mālama Maunalua	Ululāʻau/Forest/Woodland	28
Moanalua Gardens Foundation	Ululāʻau/Forest/Woodland	15
Puakea Foundation of Hawaiʻi, Inc	Ululāʻau/Forest/Woodland	19
Travel2change	Ululāʻau/Forest/Woodland	12
The Trust for Public Land	Ululāʻau/Forest/Woodland; Food system	30
Hawaiʻi Community Foundation	Ululāʻau/Forest/Woodland; Food system	32
Kanu Hawaiʻi	Food system	20
Pig Hunters Association of Oʻahu	Food system	7

The normal distribution across the 24 organizations evaluated was graphed (see Figure 5) in order to show which level of entrepreneurship the most and least number of organizations fell under. Most of the 24 organizations fell under the **below average** category and **none** of the organizations met the criteria of being considered extremely above average. Five (5) organizations fell in the **extremely below average** category (0-9 points); four (4) fell in the **significantly below average** category (10-19 points); ten (10) fell in the **below average** category (20-29 points); three (3) fell in the **average** category (30-39 points); one (1) fell in the **above**

average category (40-49 points); one (1) fell in the **significantly above average** category (50-59 points); and zero (0) fell in the **extremely above average** category (60+ points).

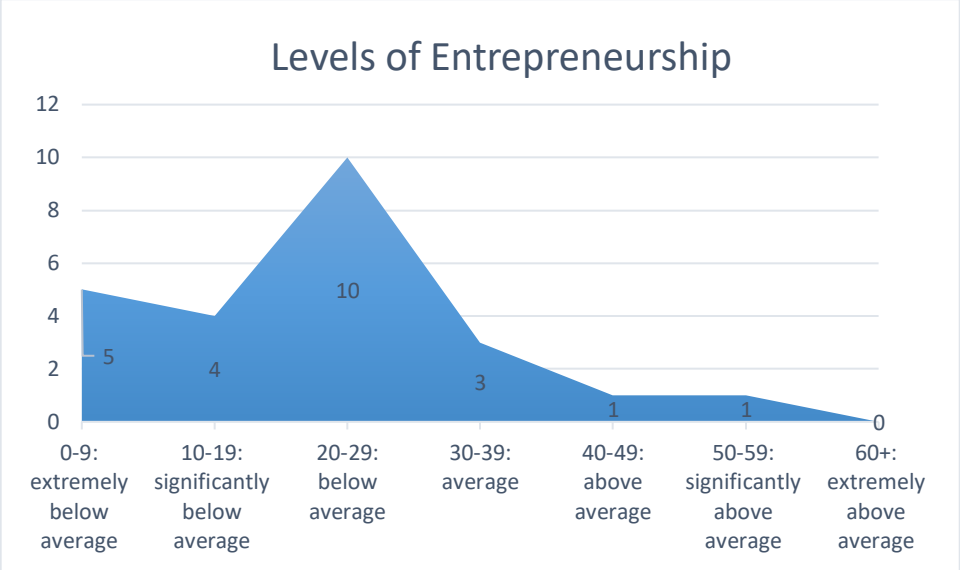

Figure 5. Levels of entrepreneurship, showing the normal distribution amongst the 24 organizations evaluated

The three organizations that scored the highest entrepreneurship rating- *Kākoʻo ʻŌiwi*, *Hoʻokuaʻāina*, and *Hawaiʻi Community Foundation* were the primary focus and analyzed in the most depth to build the logic model. The mission of *Kākoʻo ʻŌiwi* is to perpetuate Native Hawaiian culture and practices. Since it was founded, in 2006, *Kākoʻo ʻŌiwi* has produced over 50,000 pounds of kalo, selling a portion of what they produce to the community and various restaurants on Oʻahu. *Hoʻokuaʻāina* has 23 kalo patches and works to empower youth by helping them to develop food production skills through the cultivation of kalo and Hawaiian values. *Hoʻokuaʻāina* also sells a portion of what they produce. Lastly, *Hawaiʻi Community Foundation* serves as a resource, partner, and funder to nonprofit agencies, helping them to form best management practices and design grants and programs that can achieve maximum benefits. Although *Hawaiʻi Community Foundation* does not produce food, they scored the third highest

evaluation because they demonstrated strong entrepreneurship in their economic practices unrelated to food production.

From the evaluation results, an analysis was conducted to build the logic model. The analysis process involved determining which attributes and indicators appear the most common amongst the top three organizations, setting them apart from the lower scoring (below average to extremely below average) organizations. The indicators that the top three organizations scored the lowest on were also identified to suggest ways in which their business models and practices can be improved.

The following indicators were the **highest scoring** amongst the top three organizations. In terms of **risk-taking**, **(1)** offers diverse services and products (all organizations scored a 3); **(2)** evidence of efforts to diversify their product/service, stakeholder/clients, board members, and volunteers (*Hoʻokuaʻāina* and *Kākoʻo ʻŌiwi* scored a 3 and *Hawaiʻi Community Foundation* scored a 2); and **(3)** employs a labor force (*Kākoʻo ʻŌiwi* and *Hawaiʻi Community Foundation* scored a 3 and *Hoʻokuaʻāina* scored a 2). In terms of **proactiveness**, **(1)** ability to anticipate future wants and needs to pursue change ahead of future challenges and shows effort to initiate extended cooperation with other organizations (*Kākoʻo ʻŌiwi* scored a 3 and *Hoʻokuaʻāina* and *Hawaiʻi Community Foundation* scored a 2); **(2)** evidence of strategic planning and marketing efforts (*Hawaiʻi Community Foundation* and *Kākoʻo ʻŌiwi* scored a 3 and *Hoʻokuaʻāina* scored a 2); **(3)** website is interactive and well-informed with up-to-date (within the past year) information (*Kākoʻo ʻŌiwi* scored a 3 and *Hoʻokuaʻāina* and *Hawaiʻi Community Foundation* scored a 2); and **(4)** evidence of a complete (3 member minimum) and relevant board of directors (*Hoʻokuaʻāina* and *Hawaiʻi Community Foundation* scored a 3 and *Kākoʻo ʻŌiwi* scored a 1). In terms of **innovation**, **(1)** expansion beyond offering singular signature products or services

(*Kākoʻo ʻŌiwi* scored a 3 and *Hoʻokuaʻāina* and *Hawaiʻi Community Foundation* scored a 2); **(2)** tendency to experiment and generate novel ideas while open to new ideas and collaborations (*Kākoʻo ʻŌiwi* scored a 3 and *Hoʻokuaʻāina* and *Hawaiʻi Community Foundation* scored a 2); and **(3)** promotes products or services using multiple media channels and face-to-face exchanges (*Hoʻokuaʻāina* scored a 3 and *Kākoʻo ʻŌiwi* and *Hawaiʻi Community Foundation* scored a 2).

The following indicators were the **lowest scoring** amongst the top three organizations. In terms of **risk-taking**, **(1)** sells and packages a product (*Hoʻokuaʻāina* and *Kākoʻo ʻŌiwi* scored a 3 and *Hawaiʻi Community Foundation* scored a 0); **(2)** control over at least a half of an acre of land (*Hoʻokuaʻāina* and *Kākoʻo ʻŌiwi* scored a 3 and *Hawaiʻi Community Foundation* scored a 0); and **(3)** grows more than one crop (*Kākoʻo ʻŌiwi* scored a 3, *Hoʻokuaʻāina* scored a 1, and *Hawaiʻi Community Foundation* scored a 0). In terms of **proactiveness**, **(1)** production of annual or quarterly reports (*Kākoʻo ʻŌiwi* and *Hawaiʻi Community Foundation* scored a 1 and *Hoʻokuaʻāina* scored a 0); **(2)** evidence of a regularly updated business plan (all organizations scored a 1); and **(3)** evidence of consistent funding relationships or grants (*Kākoʻo ʻŌiwi* and *Hawaiʻi Community Foundation* scored a 2 and *Hoʻokuaʻāina* scored a 1). In terms of **innovation**, **(1)** participates in activities with the intent to create new products, processes, and services (*Kākoʻo ʻŌiwi* scored a 2 and *Hoʻokuaʻāina* and *Hawaiʻi Community Foundation* scored a 1); **(2)** sells more than given away and sells products to commercial stores (*Hoʻokuaʻāina* and *Kākoʻo ʻŌiwi* scored a 2 and *Hawaiʻi Community Foundation* scored a 0); and **(3)** products have original names and branding (*Hoʻokuaʻāina* and *Kākoʻo ʻŌiwi* scored a 1 and *Hawaiʻi Community Foundation* scored a 0).

4.1 Evaluation Discussion

The case study evaluation revealed the three organizations that scored the highest entrepreneurship rating- *Kākoʻo ʻŌiwi*, *Hoʻokuaʻāina*, and *Hawaiʻi Community Foundation*. While *Kākoʻo ʻŌiwi* and *Hoʻokuaʻāina* both produce and sell food, the *Hawaiʻi Community Foundation* does not. Although *Hawaiʻi Community Foundation* identified its primary worksites as a Ululāʻau/Forest/Woodland and its primary stewardship actives occurring in a food system, examination of their website reveled that they do not produce food firsthand. The organization's primary focus is to act as a "resource, partner, funder, and advocate to nonprofit agencies to help them form best management practice strategies, connect them with community leaders, and design grants and programs that will achieve maximum benefits (Hawaiʻi Community Foundation, 2022). The organization also tracks industry trends, commissions studies, organizes workshops and conferences, and disseminates information to the community (Hawaiʻi Community Foundation, 2022). With that being said, *Hawaiʻi Community Foundation* does engage in entrepreneurship and was the third highest scoring organization out the 24 organizations evaluated because of its high-scoring indicators surrounding risk-taking, innovation, and proactiveness not related to food production. Even though *Hawaiʻi Community Foundation*, scored a "0" in all aspects of the evaluation related to food production ("sells and packages a product"; "control over at least a half of an acre of land"; "grows more than one crop"; "sells more than given away and sells products to commercial stores"; and "products have original names and branding"), because the organization scored highly on other entrepreneurial indicators, it surpassed other food producing ʻāina-based organizations. The indicators that *Hawaiʻi Community Foundation* scored highly on, setting the organization apart from food producing ʻāina-based organizations, were indicators such as "evidence of strategic planning and

marketing efforts"; "evidence of a complete (3 member minimum) and relevant board of directors"; and "employs a labor force". The organization scored the maximum number of points for those indicators and demonstrated strong entrepreneurial practices related to such behaviors.

Of the top three highest scoring organizations, *Hoʻokuaʻāina* scored the second highest based on the evidence that the organization not only produces food but also packages and sells it. While *Hoʻokuaʻāina* demonstrated abilities to produce and sell products, it did not score as highly as *Kākoʻo ʻŌiwi* due to a few logistical short comings in terms of the organization's business practices and entrepreneurial attributes. Although it has strong potential, *Hoʻokuaʻāina* did not exhibit as strong risk-taking, innovative, and proactive behaviors as did other organizations. As of May 2022, *Hoʻokuaʻāina* did not have any updated annual reports published on its website since 2016, and the organization did not publish any new newsletters or program updates since October 2021. Therefore, the organization only scored a "1" on the following indicators: "evidence of a regularly updated business plan"; "evidence of consistent funding relationships or grants"; "demonstrates change ready and adaptable behaviors"; and "participates in activities with the intent to create new products, processes, and services". In terms of the indicators involving food production, the organization scored a "2" for "sells more than given away and sells products to commercial stores", and a "3" for "sells and packages a product" and "control over at least a half of an acre of land". However, the organization could have scored higher on the food production scale if there was evidence of multiple crops being grown and if its products had original names and branding. The only crop that *Hoʻokuaʻāina* shows as being for sale on their website is raw kalo. Even though their website shows that kalo is also sold in the form of poi, this is evidence of only one type of crop being marketed. Therefore, *Hoʻokuaʻāina* scored a "1" for the "grows more than one crop" indicator. In terms of original names or

branding, there does not seem to be either a name or branding associated with the raw kalo or poi the organization sells. However, it is worth noting that products such as T-shirts, hoodies, and greeting cards are sold on their website with a distinct logo. Thus, the organization did receive a score of "1" for the "products have original names and branding" indicator even though the branding is not related to food production.

Kākoʻo ʻŌiwi was the top scoring organization and the most entrepreneurial in terms of food production out of the 24 organizations evaluated. Not only did *Kākoʻo ʻŌiwi* excel in terms of its behaviors related to food production, but the organization also scored highly in terms of the indicators more closely related to organizational structure and business practices. *Kākoʻo ʻŌiwi* was the only organization to receive a perfect score across any attribute, scoring a "3" on all indicators associated with the risk-taking attribute. Another major reason why *Kākoʻo ʻŌiwi* scored much higher than the other organizations is because it is one of two organizations that showed evidence that it grows more than one crop. *Keiki and Plow* and the *Mānoa Heritage Center* were the only other organizations that demonstrated food production as a part of their business model. *Kākoʻo ʻŌiwi* was the only organization out of the entire sample that did not score a "0" for any of the 21 indicators. The organization also excelled in terms of demonstrating proactive and innovative behaviors, but it fell short of a "3" regarding 8 of the 14 remaining indicators. Most notably, *Kākoʻo ʻŌiwi* scored a "1" in relation to the following indicators: "production of annual or quarterly reports"; "evidence of a regularly updated business plan"; "evidence of a complete (3 member minimum) and relevant board of directors"; and "products have original names and branding". Therefore, while the organization did score highly in other aspects related to organizational structure and business practices, those are the areas in which the organization is weakest in terms of engagement in entrepreneurship. While it is possible that

indicators such as a complete board of directors and annual reports exist, there was no evidence that would surpass the score of a "1" found on the organization's website. With that being said, despite *Kākoʻo ʻŌiwi* scoring highly in terms of food production, its organizational structure and business practices may not be as strong.

As mentioned above, *Keiki and Plow* and the *Mānoa Heritage Center* were the only other organizations apart from *Kākoʻo ʻŌiwi* and *Hoʻokuaʻāina* that showed any evidence on their websites of growing one or more crops. This means that, although all 24 organizations evaluated self-identified as being involved in food production or ʻāina-based stewardship to some extent, not all organizations are actively participating in such work. This could be due to self-selection bias occurring during the process of the initial STEW-MAP assessment. Going forward, while it is much more conducive to time and resource availability for organizations to preform self-assessments, self-selection bias can be limited when a third party preforms the evaluation.

While *Keiki and Plow* and the *Mānoa Heritage Center* both produce food, neither organization scored highly enough to be in the top three high scoring bracket. The *Mānoa Heritage Center* fell in the average category in terms of its level of entrepreneurship and was only one point behind the *Hawaiʻi Community Foundation* for being the third highest scoring organization; however, the organization fell short of the top three in terms of its evidence regarding the risk-taking and innovation attributes. The *Mānoa Heritage Center* scored a "3" in terms of the evidence it showed of controlling over two acres of land, having a website that is interactive and well-informed with up-to-date information, and having a complete board of directors; but, the organization scored a "1" or below in terms of growing more than one crop, selling and packaging a product, producing annual or quarterly reports, maintaining consistent funding relationships or grants, and more. These results demonstrate that the *Mānoa Heritage*

Center could gain equal benefits on both the organizational/business structure level and the ʻāina-based food production level by adopting a stronger entrepreneurial economic model. Nevertheless, the current mission of the *Mānoa Heritage Center* is focused on growing food for demonstration purposes rather than for production or supply. The organization's mission may have to be altered or expanded upon in order to an adopt a more entrepreneurial economic model in the future.

On the other hand, five organizations scored higher than *Keiki and Plow* and two other organizations scored the same- a 28, putting *Keiki and Plow* in the upper end of the below average category for its level of entrepreneurship. *Keiki and Plow* earned 12 and 10 of its 28 points respectively in the risk-taking and innovation attribute categories but fell short in terms of demonstrating proactive behavior. While the organization's website did show evidence that they engage in growing more than one crop, controlling at least two acres of land, and employing a labor force, there was little to no evidence of consistent funding relationships or grants, a complete board of directors, or any production of annual or quarterly reports. Therefore, although it is a food producing organization, *Keiki and Plow* was unable to score as high as the top three organizations due to the lack of evidence regarding entrepreneurship within the organization's business structure and economic model. In terms of ability to produce food, *Keiki and Plow* is entrepreneurial in the sense that they grow multiple crops and control multiple acres of land; however, the organization falls short in terms of evidence that the food being produced is packaged and/or sold. Hence, *Keiki and Plow* has the potential to become more entrepreneurial primarily by strengthening its behaviors on the organizational/business level and secondarily on the ʻāina-based food production level by beginning to package and sell the food they produce.

The results of this evaluation demonstrate just how challenging entrepreneurial economic models can be for ʻāina-based nonprofit organizations. Although all 24 organizations showed evidence that entrepreneurship is occurring within their group to some extent, there were not any organizations found to be well-rounded in all attributes related to entrepreneurship and its indicators. Therefore, it is important for organizations to consider participating in training programs and courses involving entrepreneurship to learn how it can be implemented and maintained within the nonprofit sector. With stronger entrepreneurial economic models, nonprofits can achieve more long-term benefits rather than focusing more on the short-term benefits.

4.2 Logic Model

A logic model (see Figure 6) was constructed based on the information gathered from the case study and the sustainable community indicators defined by Cox et al. (2006). The model is used to identify the inputs, activities, and outputs associated with establishing an entrepreneurial economic model for nonprofits. The short-term and long-term outcomes are identified, as well as the overall impacts that are expected. The model helps to provide nonprofits with a plan to engage in more entrepreneurial-based behaviors. Furthermore, the model can be used on the state level and by cities and counties to test an organization's level of participation in each individual indicator listed as evaluation indicators. The purpose would be not only to test how various organizations measure up against one another but also to produce evidence for which organizations are engaging in entrepreneurship and to what extent impact is being created.

From the evaluation portion of the case study, the indicators that appeared the most often and were the highest scoring were used to build the model and propose suggested behaviors and actions. The indicators that are highlighted in the logic model suggest that if an organization

follows each step in a similar fashion, they can achieve sustainable carrying capacities, market/nonmarket economic benefits, usable long-term planning, and social and environmental benefits. These are all indicators of a sustainable community. The model also helps to identify and evaluate the potential socioeconomic and biocultural benefits of entrepreneurial-based economic models for ʻāina-based nonprofit organizations in Hawaiʻi.

For ʻāina-based nonprofits interested in increasing and sustaining entrepreneurship, the logic model serves as a guide to work towards nonmarket wealth building in both the short-term and long-term sense. Individually, ʻāina-based nonprofits can use the model as a guide in implementing and supporting entrepreneurship within their organizations. The model is also designed to help educate and guide in allocating proper funds to sustain entrepreneurial behaviors and activities within nonprofit organizations. With reliable and consistent funding, ʻāina-based nonprofits can help the State of Hawaiʻi meet their future food security and sustainability goals outlined in legislature.

Based on findings revealed in the case study, the major activities that are needed to ignite entrepreneurial thinking and behaviors within more nonprofit organizations are: training programs and classes pertaining to entrepreneurship; a plan and an economic model for producing more food; collaboration with external partners; and engagement in multiple community services. The model is designed not only for those who could provide the appropriate training in entrepreneurial behaviors, but also for the nonprofits that would benefit from it. Both government agencies and external nonprofits can provide or facilitate such training and programs. For example, *Hawaiʻi Community Foundation* could potentially adopt programs that could assist ʻāina-based nonprofits with increasing their engagement in entrepreneurship.

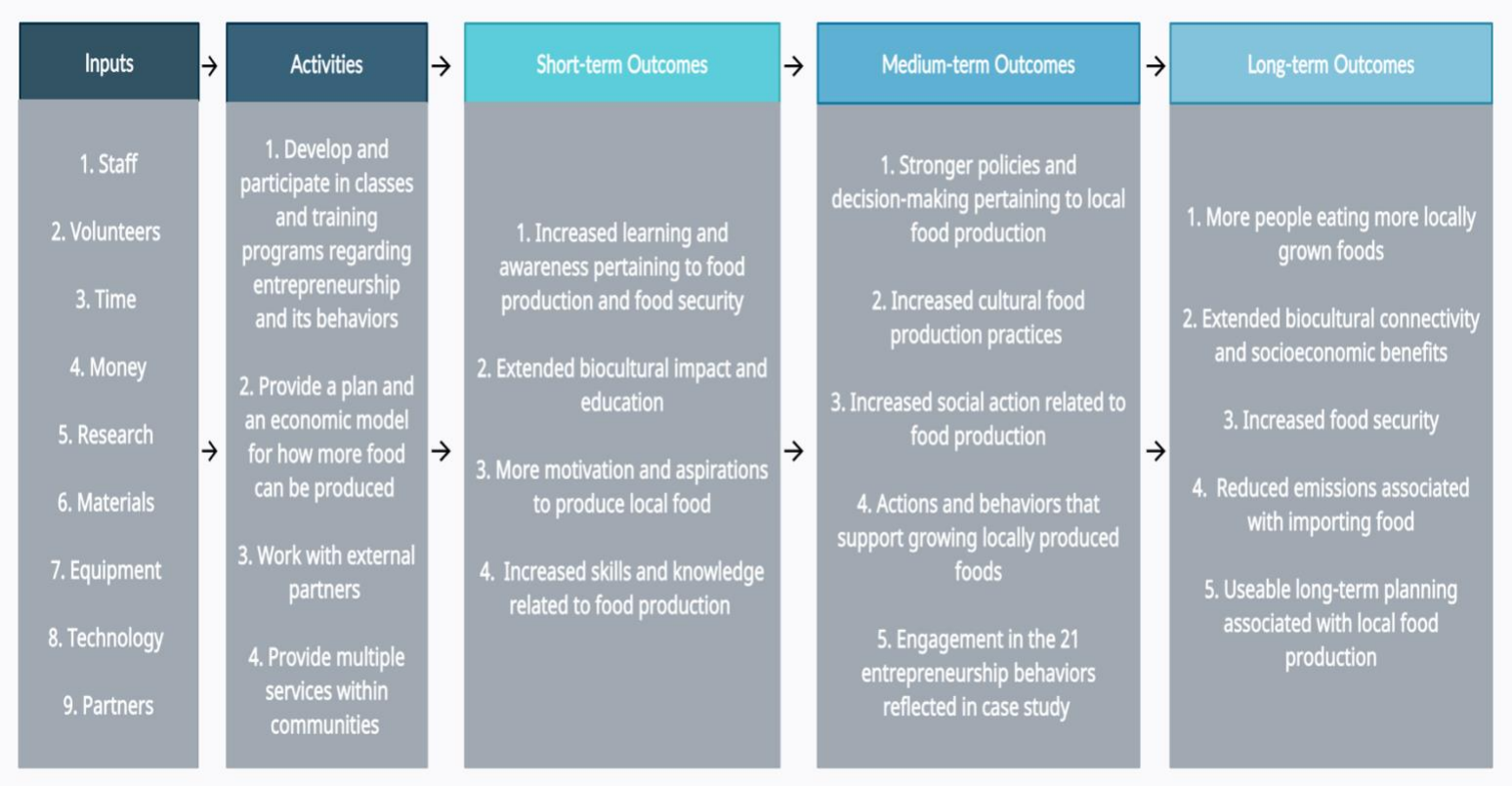

Figure 6. Expected logic model structure and eventual outcome

While an in-depth analysis was not conducted to build the logic model, it contains the expected findings based on the literature review and the case study. In the future, it can be more closely fine-tuned to support the most feasible and practical long-term outcomes. The actions described in the model can be followed starting with "inputs", followed by "activities", "outputs", and "outcomes" (short-term, medium-term, and long-term). First, nonprofits considered ʻāina-based for their stewardship of an agriculture land or system were input into the model. For this study, the 24 organizations recognized by the STEW-MAP would be the input. For future models, organizations can either self-select, as they were for the STEW-MAP assessment, or a more in-depth assessment evaluation could be conducted. In the case of an assessment evaluation, organizations must meet specific pre-determined criteria and guidelines to be considered ʻāina-based for their stewardship of an agriculture land or system. The next step

in the model is activities, which are to (1) develop and participate in classes and training programs regarding entrepreneurship and its behaviors; (2) provide a plan and an economic model for how more food can be produced; (3) work with external partners; and (4) provide multiple services within communities. All the steps involve overlapping actions from both ʻāina-based nonprofits and governmental entities. It is the responsibility of governmental agencies to develop the plan, classes, and economic model. Then, it is the responsibility of the ʻāina-based nonprofits to implement the strategies that are provided. Organizations, like *Hawai'i Community Foundation,* that are already entrepreneurial yet do not produce food directly could potentially assist ʻāina-based nonprofits in growing food and managing their natural and cultural resources. Partnerships and collaborations amongst organizations are crucial to the success of entrepreneurial economic models and reaching long-term goals.

The next steps on the logic model are the outcome steps, which consist of potential short-term, medium-term, and long-term outcomes. Based on the findings from the literature review and the case study, the following activities were identified as the short-term outcomes. (1) Increased learning and awareness pertaining to food production and food security; (2) extended biocultural impact and education; (3) more motivation and aspirations to produce local food; and (4) increased skills and knowledge related to food production. Next, the following activities were identified as the medium-term outcomes. (1) Stronger policies and decision-making pertaining to local food production; (2) increased cultural food production practices; (3) increased social action related to food production; (4) actions and behaviors that support growing locally produced foods; and (5) engagement in the 21 entrepreneurship behaviors reflected in the case study. Lastly, the following activities were identified as the long-term outcomes. (1) More people eating more locally grown foods; (2) extended biocultural connectivity and socioeconomic

benefits; (3) increased food security; (4) reduced emissions associated with importing food; and (5) useable long-term planning associated with local food production.

The short-term outcomes involve ʻāina-based nonprofits implementing entrepreneurial economic models to begin working towards medium-term and long-term benefits. Medium-term outcomes would involve nonprofits achieving some nonmarket or market benefits associated with increased food production. In the long-term sense, both nonmarket and market benefits would be consistently achieved resulting in increases in local food production. These outcomes then yield the overall impact of following the logic model, which is to provide ʻāina-based nonprofits with a plan for implementing entrepreneurial behaviors regarding food production, as well as to provide policymakers with guidelines and recommendations for funding such organizations. Thus, with adequate funding and planning delivered by federal and/or state policies, ʻāina-based nonprofits can begin to produce and package more local food. As a result, statewide food security could be increased while emissions associated with importing food could be decreased.

4.3 Interview

In order to account for the study sample being limited to organizations listed on the STEW-MAP, an organization that did not participate in the STEW-MAP assessment but engages in local food production was presented with the logic model and informally interviewed regarding their current economic state and practices. I spoke with Laʻakea Ai, who is the primary stewardship leader at *Kuhiawaho*- an ʻāina-based 501(c)(3) nonprofit organization established in 2012 (Kuhiawaho, 2020). *Kuhiawaho* is located outside of the STEW-MAP assessment area in the ahupuaʻa (a Native Hawaiian land division system defined by geographic boundaries) of Waiawa in the moku (district) of ʻEwa or what is known today as Pearl City in central Oʻahu.

Kuhiawaho was rebirthed by Uncle Ron Fitzgerald and Aunty Samantha Ai with the intent of connecting their ʻohana (family) and community with ʻāina (the land) and traditional Hawaiian agricultural practices taught and developed by kūpuna (elders) (Kuhiawaho, 2020). Over the last decade, *Kuhiawaho* has become a gathering place of abundance for the ʻEwa community to reconnect with ʻāina and engage in biocultural restoration efforts (Kuhiawaho, 2020).

At their stewardship site, *Kuhiawaho* has two inland fishponds with ʻanae (Hawaiian mullet fish), as well as several loʻi patches (see Figure 7). Such systems set *Kuhiawaho* apart from other organizations, in the sense that while saltwater fishponds built out into the ocean have made a resurgence in recent decades, inland fishponds have not been as prevalent along with the knowledge regarding how to best cultivate them. Thus, *Kuhiawaho* is unique and innovative in the sense that they currently have the only operating inland fishpond on Oʻahu, serving as a model to other organizations looking to deepen their cultural roots and extend their biocultural restorative growth efforts.

Figure 7. Fishponds and loʻi patches at Kuhiawaho

During the informal interview with Laʻakea, we discussed the current organizational structure at *Kuhiawaho*, their vision for the future, and how engaging in entrepreneurship may

affect the organization. I first asked La‘akea how *Kuhiawaho* currently obtains funding and what she believes they could achieve, in the long-term, if *Kuhiawaho* could rely on more consistent funding. She noted that most of their funding is secured through grants pertaining to Hawaiian education and leadership, as opposed to food production. However, if *Kuhiawaho* is able to acquire more consistent funding, La‘akea expressed interest in opening a general store that would allow kalo, ‘anae, and any other food harvested at *Kuhiawaho* to be sold to the public. As of June 2022, any food that is harvested at *Kuhiawaho* is given out to friends, family, and the community on a first-come, first-served basis or used in cultural/professional exchanges. Prior to the COVID-19 pandemic, workdays at *Kuhiawaho* were open to the public and volunteers were invited to join in eating kalo that was cooked prior to their arrival and engage in biocultural educational activities, such as learning how to properly pound kalo to make poi. After the meal and workshop, volunteers had the opportunity to donate to the organization.

Currently, *Kuhiawaho* does not have any specific strategies in relation to their marketing or business plan. Although those involved in the organization frequently discusses five and even 10 year plans, La‘akea explained that it is difficult to put plans in concrete detail, since the organization’s mission is constantly changing over time to best serve their community where they see the most need. Based on this strategy, most of the work being done at *Kuhiawaho* focuses on education related to food production rather than the food production itself. La‘akea explains that she has been able to educate and share the practice of harvesting kalo with Native Hawaiians who come to *Kuhiawaho* and, in some cases, are getting the opportunity to work in a lo‘i patch for the first time. La‘akea feels it is her kuleana (responsibility) to bring back cultural abundance within her community. For the time being, *Kuhiawaho* will remain focused primarily on educational programming associated with food production rather than the economic benefits

associated with selling the food they produce. Nevertheless, La‘akea noted that a more entrepreneurial economic model could be useful to the organization in terms of operationalizing their business plan. La‘akea expressed interest in exhibiting more proactive behavior in terms of tracking the growth cycles of the kalo they harvest. She believes that a spreadsheet or tracking system that is aligned with cultural signifiers, such as the moon cycle, could allow *Kuhiawaho* to increase their productivity and growth efficiency and help the organization to further their biocultural connectivity.

Lastly, La‘akea and I discussed how engaging in entrepreneurship may affect the organization in the future. Some of the major benefits that La‘akea believes would result from an entrepreneurial economic model is increased manpower, more resources to expand their food production, and an enhanced administrative structure. Currently, La‘akea, her ‘ohana, and a few interns, who are funded through grant money that is not always guaranteed to the organization, are the sole labor force at *Kuhiawaho*. However, with more consistent and governmental funding, La‘akea would prioritize hiring full-time staff members, and she would direct specific roles to each employee rather than continuing to balance most of the tasks that come with running a nonprofit by herself. La‘akea also expressed interest in classes and training programs associated with entrepreneurial economic models, such as “Hawai‘i Investment Ready”- a program designed to help social enterprises better scale their business models and impact, assisting organizations in accessing resources to implement growth (Hawaii Investment Ready, 2022). Therefore, with the proper resources and training, *Kuhiawaho* would be able to operationalize the logic model and work towards becoming more entrepreneurial. This would support *Kuhiawaho* and similar organizations in their aspirations to grow and produce more food within their local communities.

CHAPTER 5: CONCLUSION

5.0 Research Summary

The purpose of this final chapter is to elaborate on the various impacts of entrepreneurial economic models for ʻāina-based nonprofits in Hawaiʻi. A comprehensive review of this system is examined to gain insight into how socioeconomic dynamics and biocultural restoration within a specific ahupuaʻa or community could respectively be altered and achieved (ʻIole Stewardship Center, 2015). The significance of policymaking both on the federal and state level, as well as the importance of allocating adequate funding for ʻāina-based nonprofits will be highlighted. The main objective of the final section of the study is to evaluate how entrepreneurial economic models can potentially benefit ʻāina-based nonprofit organizations by beginning to restore socioeconomic and biocultural security in Hawaiʻi. Thus, ways in which nonprofits can potentially contribute to a more sustainable and secure future going forward will be discussed.

5.1 Policy Significance

Many advantages exist for policies supporting entrepreneurship, however, all policies come with drawbacks. Table 6 shows several advantages and disadvantages associated with various scenarios in which policy can be introduced and amended to reflect more entrepreneurship focused business practices. While the financial benefits in Table 6 relate to for-profit businesses, many of the benefits are relevant to nonprofits. According to the Congressional Budget Office (2020), financial, demographic, and regulatory trends can all have negative impacts on both the government and individual organizations. Nevertheless, the Congressional Budget Office's analysis is primarily directed towards organizations focused on market benefits associated with entrepreneurship; therefore, in terms of ʻāina-based nonprofits focused primarily on nonmarket benefits, most of the pros likely outweigh the cons of such political renderings.

For example, some of the advantages of such policies for ‘āina-based nonprofits could potentially involve increased and more reliable financing to continue their current work and promote new programs and projects; additional funding to promote labor security and hire new employees; and a more organized and streamlined business structure. Whereas some disadvantages of such policies could potentially involve increased competition for funding allocation; less independence and control over state funded programs and projects; and less collaboration amongst similar organizations and partners.

Table 6. Advantages and disadvantages of policies supporting entrepreneurship

	Policy Approaches	Advantages	Disadvantages
Financial	1. Provide a credit program specifically for new firms	Would provide more targeted assistance to new firms	Would entail greater costs to the federal government and could run the risk of prominent failures
	2. Increase funding for SBA's 7(a) or SBIC credit assistance programs	Could increase new firms' access to financing	Most small firms are older firms
	3. Increase set-asides for SBIR and STTR programs	Some studies show these programs help firms start and grow	Could result in less-efficient allocation of federal funds
	4. Provide financial support for markets with innovative products	Could be particularly useful for products with social benefits	Could be difficult to identify promising technologies that would remain underdeveloped without government support
	5. Increase tax preferences such as those for capital gains, R&D investment, or depreciation allowances for capital spending	Would increase the after-tax return of starting a business	Would reduce tax revenues and accrue to many other firms in addition to new firms
Demographic	1. Allow for more immigration of skilled workers	Could increase the supply of qualified workers available to new firms—especially in the high-tech sector	Could depress the employment and wages of similarly skilled native-born workers
	2. Allow for more immigration of entrepreneurs	Could increase the number of people who start a firm in the United States	Could be difficult to identify foreign entrepreneurs and verify their activity in the United States
Regulatory	1. Reduce the regulatory burden for small or new firms	Could lower costs of regulatory compliance for new firms	Could limit the effectiveness of the regulations in question
	2. Expand the scope of antitrust enforcement	Could make it easier for start-ups in some markets to compete with larger, established firms	Could preclude some innovation- and productivity-enhancing mergers of new firms and incumbent firms
	3. Restrict the use of noncompete contracts	Could make it easier for workers to leave their employer and establish or join a new firm	Could weaken incentives for firms to invest in worker training or other types of intangible capital

Image Credit: Helm, S. T., & Andersson, F. O. (2010). Beyond taxonomy. Nonprofit Management and Leadership, 20(3), 259-276. https://doi.org/10.1002/nml.253

The results of this study are also relevant to the general public, because they have the power to elect the policymakers that make decisions regarding the funding of nonprofits. Indicators can demonstrate whether an elected official's agenda is rooted in long-term and sustainable decision-making. Many policies are not successful because their focus is on the short-term rather than on the long-term outcomes (Congressional Budget Office, 2020). Electing officials that have political agendas that reflect the relevant indicators and attributes that have long-term and sustainable outcomes has the potential to put more locally grown food on tables in Hawai‘i. Therefore, the entrepreneurial attributes (innovation, proactiveness, and risk-taking) and their indicators, such as "tendency to experiment and generate novel ideas while open to new ideas and collaborations" and "demonstrates change ready and adaptable behaviors", could apply both to ‘āina-based organizations and policymakers themselves.

The logic model shown in Figure 6 provides policymakers with the insight that is necessary to design policies that can target entrepreneurship and its outcomes. Understanding how such policies can be curated helps policymakers to make more well-informed and practical decisions. Identifying the pros and cons of entrepreneurship when considering potential policy options, enables policymakers to design more appropriate policies to target specific entrepreneurship types and outcomes. Therefore, understanding entrepreneurship and how it can be applied in the context of ‘āina-based nonprofits is a necessary and productive investment for policymakers to keep the State of Hawai‘i on track to meet their future food security goals outlined in legislature. Stronger policies have the ability to fund nonprofits and aid them in becoming more entrepreneurial. In turn, individual organizations can contribute more directly to local food production and community sustainability, which is outlined as a statewide goal in Bill for an Act- H.B. NO. 8.

5.2 Future Entrepreneurship Recommendations

As the logic model suggests, the more entrepreneurial an organization becomes the more long-term benefits can be achieved. By adopting more behaviors and attributes associated with entrepreneurship, nonprofits can begin to transcend more stagnant economic models. In order to implement such models, an organization must be willing to engage in risk-taking, proactive, and innovative behaviors as defined by Morris et al. (2011) and Cox (2002). Such behaviors challenge nonprofits to grow and expand their organizations using techniques and methods that are not traditionally applied within the nonprofit sector.

According to Andersson et al. (2012), "empirical findings support the theoretical conception of nonprofit entrepreneurship as innovative, proactive, and risk-taking." This means that the attributes and behaviors used to describe entrepreneurship in this study are backed by additional scientific evidence. Moreover, to an extent, a consensus has been reached within the economist community when it comes to defining entrepreneurial behaviors. This allows for nonprofit entrepreneurship to be differentiated when it comes to determining if an organization is entrepreneurial or nonentrepreneurial and the extent to which such models are being used. While the scales used to measure such behaviors can vary based on which types of nonprofits are being evaluated, as long as the same scale is applied to the same set of organizations, entrepreneurship can be measured.

In the future, more extensive evaluations could be performed using a modified Likert scale or by conducting semi-structured or structured interviews to evaluate and measure an organization's level of engagement in entrepreneurship. More detailed interviewing could also be helpful in identifying the exact needs of each organization and where improvements in their economic models could be made. In this study, because food production efforts were the primary

focus, evaluation via website was adequate in terms of holding a nonprofit accountable for their progress towards the targeted medium-term and long-term outcomes. Thus, progress could be evaluated immediately without needing any human subject clearance or research exemptions. An in-depth study could be worthwhile to facilitate better progress tracking related to biocultural and socioeconomic impact. The development of entrepreneurial training programs and activities could benefit greatly from more in-depth studies. For example, such programs and activities could potentially be developed collaboratively with nonprofits, so that the programs meet their individual needs and have a greater chance of adoption or adaptation. In addition, working closely with individual nonprofits would help them better manage and track their entrepreneurial behaviors. Nevertheless, tracking production, input use, and other various revenue generating activities will potentially involve training and recruiting volunteers and mentors with specific backgrounds and experience to help nonprofits integrate entrepreneurial behaviors into their work.

On the state level, an effort to further develop the theoretical logic model will be needed to eventually allow for nonprofits to track and measure their progress, as well as adapt custom models for their organization to follow. This would allow for nonprofit entrepreneurial economic models to be streamlined across the state. For example, nonprofits focused on food production could develop a statewide counting system and evaluation method to track the amount of food they are producing. One suggestion would be to count food by the pound and categorize the food by its nutritional value or type (i.e. starch, vegetable, protein, etc). The nonprofits could then display this information on their websites to increase awareness surrounding the value of their food production efforts and increase transparency. Displaying this type of information would

also assist the state in measuring and tracking their goals related to food production and security over time.

5.3 Conclusion

While increasing the amount of locally produced food will likely remain challenging for decades to come, it is important that solutions to this problem are examined now. By becoming more entrepreneurial in food production efforts, ʻāina-based nonprofits could increase revenue to put back into their organization and the local economy rather than overseas. Increases in state and/or federal funding for nonprofit organizations can contribute to ʻāina-based food production in Hawaiʻi. Additional funding would allow for ʻāina-based organizations to become more entrepreneurial to help meet future food security and sustainability goals throughout Hawaiʻi. A higher amount of local foods could be produced in Hawaiʻi, which would lessen dependency on imports. When locally grown food is sold and revenue is generated from a sale, the ʻāina-based nonprofit that produced the product could make a profit to put back into their organization.

This study establishes a way to measure entrepreneurship, track and share progress, and determine growth capacity. In terms of ʻāina-based nonprofits, which were the focus of this study, entrepreneurship is defined as nonmarket wealth building with secondary market benefits. Furthermore, to become entrepreneurial, an organization must assume risks with the intent to provide significant value to its community over time. In order to determine the benefits and challenges of entrepreneurial economic models, a case study was conducted. An assessment method was designed, using a four-point Likert scale, to evaluate 24 organizations identified by the STEW-MAP for their ʻāina-based stewardship of an agricultural land or system. The scale was designed based on the method and rating system used by Andersson et al. (2012), and the sub-behavior evaluation indicators were selected from the literature (Morris et al. (2011) and

Cox (2002)) used to define the three main attributes of entrepreneurial behavior. The evaluation contains three sections, each for evaluating an organization's tendency to exhibit risk-taking, innovative, and proactive behaviors. All three sections contain seven sub-behavior evaluation indicators, which were scored using the Likert scale. The evaluation aimed to address the question: "What are the benefits and challenges of entrepreneurial economic models for ʻāina-based nonprofit organizations in Hawaiʻi?" The case study then revealed the potential socioeconomic and biocultural benefits of entrepreneurial economic models, and it was also used to ensure that long-term outcomes are possible.

The case study evaluation revealed the three organizations that scored the highest entrepreneurship rating- *Kākoʻo ʻŌiwi*, *Hoʻokuaʻāina*, and *Hawaiʻi Community Foundation*. While *Kākoʻo ʻŌiwi* and *Hoʻokuaʻāina* both produce and sell food, the *Hawaiʻi Community Foundation* does not; however, they scored highly in terms of the indicators more closely related to organizational structure and business practices. *Kākoʻo ʻŌiwi* surpassed all 24 organizations because it excelled both on the food production and organizational/business structure scales of entrepreneurial behavior. Nevertheless, only four out of the 24 organizations evaluated exhibited any evidence via website evaluation that they produce food and grow any crops. *Kākoʻo ʻŌiwi*, *Hoʻokuaʻāina*, *Keiki and Plow*, and the *Mānoa Heritage Center* were the only organizations that demonstrated food production occurs as a part of their business model. Of the remaining organizations evaluated, 10 fell under the below average category and none of the organizations met the criteria of being considered extremely above average in terms of their entrepreneurship ratings. These results demonstrate that entrepreneurial economic models can be challenging for ʻāina-based nonprofit organizations to implement regardless of their potential benefits. Therefore, organizations should consider participating in training programs and courses

involving entrepreneurship to understand how its long-term benefits can be achieved within the nonprofit sector.

A logic model was then constructed to identify the potential socioeconomic and biocultural benefits of entrepreneurial economic models for ʻāina-based nonprofit organizations in Hawaiʻi. The strategies for maximizing the benefits of entrepreneurship were identified using methods developed by Morris et al. (2011) and Cox (2002) to assist ʻāina-based nonprofits with their service-oriented missions. The primary methods for building the logic model involved evaluating the sample of the 24 organizations listed on the STEW-MAP and using the sustainable community indicators developed by Cox et al. (2006). The sustainable community indicators helped to measure an organization's impact and its potential to engage in entrepreneurship. The logic model shows that in order to achieve long-term benefits of entrepreneurial economic models, an organization must implement plans and strategies associated with entrepreneurial attributes and their indicators. The model can also be used as a tool for organizations and the state to measure and track progress in terms of expanding an organization's mission and increasing statewide food security. However, in order for significant changes in statistics to occur regarding local food production, many ʻāina-based nonprofit organizations would need to participate in the implementation of entrepreneurial economic models.

While several challenges are associated with implementing entrepreneurial economic models for ʻāina-based nonprofits, nonprofits can overcome challenges such as lack of training in entrepreneurial behaviors and lack of land and labor security. This could lead to benefits, such as increased food production and food security, extended biocultural impact and education, increased socioeconomic benefits (both market and nonmarket), reduced emissions associated

with importing food, and more useable long-term planning. An entrepreneurial economic model could be significant in the ʻāina-based nonprofit sector in order to help the State of Hawaiʻi meet their future food security and sustainability goals. Many ʻāina-based nonprofits would benefit from entrepreneurial economic models, since they would have an increased and more consistent influx of funding to put back into furthering their organizational goals and mission.

In conclusion, it is possible for less than 90% of food to be imported to Hawaiʻi if changes in policy and funding are made within the next few years. While decreasing this number will no doubt be challenging, the state should begin to consider solutions and strategies now. If ʻāina-based nonprofits focus on food production and begin to transition to entrepreneurial economic models, the potential exists for residents and visitors to eat more locally produced foods. Such a transition can be achieved with increased funding, more external collaborations, and the development of entrepreneurial training programs and classes.

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