ARTICLE

A Proposed Tool for Non-Profit Portfolio Strategy

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ABSTRACT: The growth-share matrix was created by Bruce D. Henderson for the Boston Consulting Group in 1970 to help corporations analyze their business units and inform investment decisions. Strategic planning is generally considered vital to business success, and the BCG matrix is only one of a number of models used by corporations for strategic planning. Non-profit organizations also rely on strategic planning but, by contrast, they have very few portfolio modeling tools to assist them. Christian ministries, in particular, are called to operate diligently and efficiently in Scriptures such as the Parable of the Talents in Matthew 25 but can struggle due to the lack of strategic planning tools available to them. This article attempts a measured step into that space by proposing a model that non-profit organizations might use for strategic planning. Instead of the growth-share axes utilized by the BCG matrix, this article proposes a Profit-Impact (PI) matrix. As an explanatory test for the proposed model, the authors will apply it to the multi-line ministry organization, Mission of Hope. After introducing the ministry and its Haitian context, the authors will use the ministry's multiple ventures to demonstrate the utility of the PI matrix and make recommendations concerning how it could strategically spread its resources among its different ventures to best pursue its goals. The authors will conclude with a review of the model's contribution to non-profit strategy and suggest additional research to further these efforts.

KEYWORDS: strategy, strategic model, non-profit, non-profit strategy

INTRODUCTION

Robin Wensley (1982) argues that strategy requires careful planning and implementation of resources to overcome competition. In a competitive market, organizations that fail in their corporate strategy will eventually underperform organizations that succeed in this area. Corporate strategy is considered sufficiently vital to corporate performance that it is now a required discipline for accredited university business programs (ACBSP, n.d.), and Christian business scholars have long sought to integrate biblical principles into the discipline (Bretsen, 2011; Martinez, 2003; Salgado, 2015). Non-profit organizations, such as ministries, experience a similar need for strategic planning, but it is typically measured on different axes than for-profit businesses. Rather than having to outperform their competition to satisfy owners and other stakeholders, non-profits must maximize their efficiency to increase their impact on clients with the limited resources available. These alternative axes for performance measurement add a further layer of complexity for developing strategic analyses and strategic plans for non-profit organizations. This layer has been ill-explored up to present, and it is an area particularly appropriate for Christian business academicians to develop. Scripture does not provide much of an explicit contribution to strategic modeling, but the entire purpose of the effort is driven by a biblical mandate. Part of the calling to ministry includes a calling to efficiently deploy the resources made available (Matthew 25:14-30). Careful planning is also affirmed in the New Testament for both spiritual and financial matters (Luke 14:28).

While there is a healthy research library of models available for developing successful corporate strategies, such models do not completely capture the desired outcomes and concerns of many non-profit organizations, particularly ministries. The purpose of this article is to take a measured step forward into that need for non-profit strategic planning by proposing a model that may assist multi-line non-profit organizations in developing strategic alternatives. The authors utilize the term, "multi-line, non-profit organizations" to refer to non-profits which engage in more than one line of activities. Just as many for-profit companies have multiple lines of products or services (a famous example being Justin Industries' boots and bricks), some non-profits engage in multiple lines of ministerial activity to pursue their overall mission (Justin Industries Inc., n.d.). The article will begin by exploring some of the differences between for-profit businesses and non-profits to establish the need for alternative strategic models for non-profit organizations. It will then briefly review some of the current literature available for non-profit strategic planning and propose a model for balancing profits (or surpluses) and losses with the ministerial impact of different ventures. As an explanatory test for the proposed model, the authors will then utilize the multi-line non-profit organization, Mission of Hope (MOH). After introducing the ministry and its Haitian context, the authors will review the different lines of activity (ministry, education, nutrition, and coffee) that MOH deploys and use them to demonstrate the utility of their model and make recommendations concerning how MOH could reallocate its resources to further its goals. The authors will conclude with a review of the model's contribution to non-profit strategy and suggest additional research to further these efforts.

FOR-PROFITS AND NON-PROFITS

There are limits to the applicability of for-profit corporate strategy models to non-profit organizations, particularly Christian non-profits. Norwich University (2016) identifies seven key differences between the two structures: their purpose, funding, diversity of audience, leadership, organizational culture, taxation, and staff. Overall, for-profit businesses often identify their main purpose to be the exchange of value between themselves and clients in order to make a profit, are initially funded through startup capital and loans, have the ability to target a niche market (or at least a more defined market than non-profits), have clearly defined positions of leadership, focus more on the financial aspects of the business, are required to pay taxes, and utilize paid employees (Norwich University, 2016). Non-profit organizations, on the other hand, often find their main purpose in their social mission, obtain funding from donors, target a more broad and diverse market, include a board of trustees as a part of leadership, focus on community efforts more than business analytics, are given tax exemptions, and rely on volunteers on top of (or even more than) paid staff (Norwich University, 2016). Ministerial organizations in particular are called to a different model of operation than for-profit businesses. In the Old Testament, priests found guilty of greed were condemned for seeking their own profits ahead of the benefits of the people (Jeremiah 6:11-13; Micah 3:11). The story of Ananias and Sapphira (Acts 5:1-10) and Simon the Sorcerer (Acts 8:9-24) reflect the importance of avoiding avarice in connection with the church.

Despite these differences in purpose, many non-profits function similarly to for-profit organizations. Even though the primary goal of a non-profit is to create some sort of impact, it is often beneficial, or even necessary, to generate a profit in order to ensure their sustainability (Child, 2016; Socias et al, 2020). These "non-profit organizations, referred to as social enterprises or hybrid business management bodies, engage in market-based activities, situating them in the profit-making sector in terms of their management and their need for self-financing" (Socias et al., 2020, p. 5343). In their article, "Nonprofit Organizations Becoming Business-Like," Maier et al. (2016) recognize that nonprofit organizations have become increasingly similar to for-profit businesses. Muhammad Yunus (2007) proposed a new sort of business, termed social business, in his book *Creating a World Without Poverty*. While these businesses still focus on turning a profit, they distinguish themselves from typical for-profit organizations because they pursue social value as an outcome rather than a by-product (Wilson, 2006).

Rather than focus on the evolving structural differences between for-profit businesses and non-profits, this article will focus on strategic tensions unique to non-profit organizations. Legal and structural distinctions between for-profit businesses and self-sustaining non-profits are blurring. Wilson (2011) states that social business "is reaching a point where choice of legal form is no longer considered a defining characteristic—with all of the traditional non-profit or for-profit 'values' implicit in each corporate form—but a strategic decision or even a matter of convenience" (p. 727). Scripture also encouraged the authors to focus on function over form. Both the Old and New Testaments reveal God's ability to pursue His purposes through both secular and sacred organizations (see e.g., Ezekiel 32:11; Ezra 1:1-11; Mark 15:1-15).

LITERATURE REVIEW OF STRATEGIC MODELING

Under the broad umbrella of strategic management lies project, program, and portfolio management. The model proposed in this paper is directed at portfolio management, although elements of it may prove adaptable to program management or project management. The Portfolio Management Institute states that portfolio management bridges the gap between strategy and implementation (Portfolio Management Institute, n.d.). Oltmann (2008) explains that portfolio management can have an accretive effect on business valuations through maximizing use of limited resources, identifying those projects most aligned with organizational direction, and identifying potential synergies between projects. Essentially, portfolio management compiles all of an organization's ventures to determine the current and prospective effectiveness of each and, as a result, inform future managerial decisions and investments.

There are a number of portfolio management models currently used in strategic management. Borad (2021) divides portfolio management theories into two categories, traditional and modern. Borad (2021) places the Dow Jones Theory, Random Walk Theory, and Formula theory under traditional portfolio management. He places Harry Markowitz's Modern Portfolio management theory, Sharpe's theory of portfolio management, and the Capital Asset Pricing Model under modern portfolio management (Borad, 2021). Traditional portfolio management models focus on capital and income in comparison to liquidity while modern models tend to focus on risk and return analysis.

The problem with all of these models for non-profit organizations is that each one places more focus on the financial performance of the ventures while non-profits tend to consider missional impact a higher priority. Urs Jäger and Timon Beyes, in their article on non-profit strategizing, argue that these sorts of theory-guided approaches are based on literature that fails to give warranted attention to external factors, such as resources, community, mission, tradition, and opinions of stakeholders (Jäger & Beyes, 2009).

The Strategic Planning Institute developed two approaches to strategic market opportunities, the Profit Impact of Market Strategy (PIMS) and the Boston Consulting Group's Growth/share (BCG) matrix (Wensley, 1982). Since its development in 1970, the BCG matrix has experienced criticism as well as praise. Seeger (1984) argues that while there are faults to be found within the BCG Matrix, it can be improved and adapted. The PIMS model utilizes extensive amounts of data from businesses to strategize future steps within a business venture (Anderson & Paine, 1978). The BCG model utilizes market share and anticipated market growth to determine and predict competitive advantage (Wensley, 1982). Wensley (1982) asserts that the PIMS approach places too much value strictly on the economic outcomes of any business venture and fails to consider that losses are not always a problem. Based on all these considerations, the authors have chosen to use the BCG Matrix as a foundation to build upon and make it a priority to incorporate market, or client, impact as a driving force behind their non-profit strategic management model.

Williamson (1981) argues that the transaction cost approach is most beneficial because it "sensitizes analysts to transaction costs and the crucial importance of organizations for economizing on such costs" (p. 568). However, the problem remains that there are many purposes of non-profit organizations that are difficult to measure transactionally. Additionally, the data on the transaction cost approach precedes even the BCG Matrix, which further proves the necessity of updating and improving strategic management models for non-profit organizations.

In 1980, Michael Porter developed a framework for strategic management that has since been dubbed Porter's five forces (Dobbs, 2012). The main purpose of this framework is to assist an organization in competing well in their market (Dobbs, 2012). Tony Grundy (2006), from Cranfield School of Management in the UK, explains the five forces that impact performance: the bargaining power of the buyers, entry barriers, rivalry, substitutes, and the bargaining power of the suppliers. However, Porter's five forces cannot provide the basic framework with which to conduct strategic analysis for a non-profit that cares more about playing a key role in providing ministerial impact within a market than dominating the market. Non-profits that prioritize impact goals often prefer a cooperative model to a competitive one. The missional entrepreneur, the Apostle Paul, preferred to plant churches in virgin territory rather than risk coming into competition with other church planters (Romans 15:20).

The "law of non-profit complexity" states that non-profit organizations are more complex than for-profit businesses and are often closer to a conglomerate of organizations or at least consist of layers of different organizational components (Anheier, 2000). For non-profits, it is important to apply a strategic management model that can account for each of their organizational components as well as assist in balancing the components. In their closing discussion, Jäger and Beyes (2009) state, "With regard to the challenges of economizing in mission-focussed organizations, it seems that rationality shifts can only be managed indirectly, not by formulating goals and turning strategies into action, but by balancing organizational dynamics" (p. 97). Ultimately, the proposed model will test such an opinion by working towards the development of a strategic management matrix that will seek to identify financial and impact tradeoffs so that the organization can discern courses of action to maintain or improve that balance during periods of growth or other change.

PROPOSED PROFIT-IMPACT MODEL

Wilson and Post (2013) argue that, based on their research, "clear intentionality around social purpose drives the design of these ventures and their associated missions and business models such that they can creatively synthesize competing paradigms (economic and social purpose) within one venture" (p. 715). Strategic planning for non-profit organizations, therefore, requires a hybrid model that can capture the competing tensions of non-profits to help them in achieving their strategic goals (Socias et al., 2020). Wilson and Post (2013) developed a model to describe where social businesses fall as a structural organization based on whether they are categorized as more or less for income (y axis) or more or less for purpose (x axis). It is a fact that the economic value of an organization directly impacts the social impact it can have, either by helping or hindering. Thus, "social businesses move into a new efficient frontier, finding ways to make investments in social impact that realize financial returns on investment, and financial investments that achieve social returns on investment" (Wilson & Post, 2013, p. 728).

However, there are limits to this model. The x-axis denominates both the degree of benefit to the owners, or shareholders, of a company, and also the degree of benefit to society as a whole. This distinction may even be a false dichotomy as Scripture indicates that business can be a societal blessing even when it is performed for profit motive (Proverbs 31:10-31). Traditional non-profits which have no equity holders (or at least none with a pecuniary interest in the organization) lack this axis of concerns. Business as mission proponents would also argue, though, that these two returns should not be contingent on one another. They would argue that the company rids client's ability to make a social impact when they try to do it on their own. Rather, companies should continue to focus more on the benefit they are providing clients, who are then able to make a social impact by their own initiative. When the company makes a social impact, it must typically choose one or a select few ventures. When the clients make their own social impact, they expand the opportunities for social impact simply

Figure 1: Form of PI Matrix

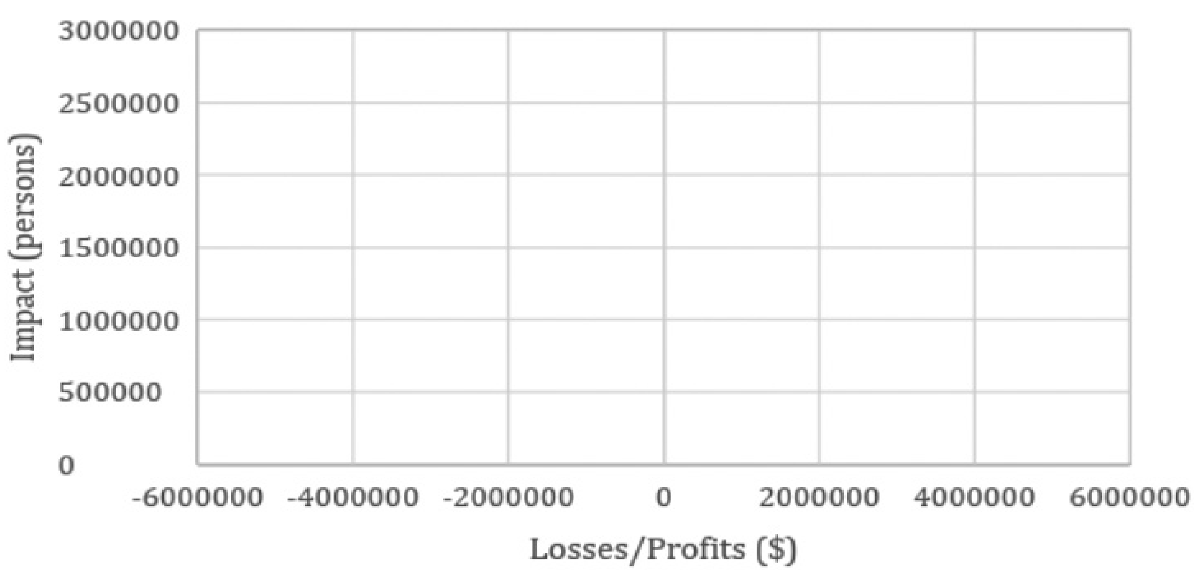


Figure 2

Ministry	Nutrition	Education	Coffee
Church Advancement Projects	School Nutrition Program	Teachers and Administration Training	Haiti Coffee Bags
Pastoral Training	Farm School	Technical School	DR Coffee Bags
Women's Empowerment	Seeds Program	New Business Development	Guatemala Coffee Bags
Building Homes	Clean Water Stations	Haiti Sports Complex	Subscription Boxes
Clinic of Hope	Farm-to-table Program		
Mobile Clinics			
Medical Outreach Program			
Community Health Initiatives			
Prosthetics Lab			
Disaster Response			

because there are more clients than there are companies with a broader range of interests and opportunities. Thus, this model can be adapted to develop the Profit-Impact (PI) Matrix.

After analyzing past models that have been used for strategic portfolio management, the PI matrix (Figure 1) was developed by crossing profits and losses on the x-axis with ministerial or social impact on the y-axis. The two most notable models that were considered were the BCG matrix and the organization landscape matrix created by Wilson and Post (2013). Unlike the organizational landscape matrix, however, the PI matrix incorporates the impact element that many non-profits value at least as much as financial success. Unlike the BCG matrix, the PI matrix only includes the positive side of the y axis because there is no way to impact a negative number of people. While non-profit organizations may technically earn surpluses rather than "profits," the authors are using that term in the accounting sense of revenues minus expenses.

Developing a strategic model for non-profits solely in the abstract would sacrifice an opportunity to enrich and apply its analysis. The authors have undertaken to apply their model to an organization with which they are familiar, Mission of Hope (MOH). In the next two sections, the authors will introduce the different ventures which MOH is conducting in furtherance of its mission and briefly review the conditions in Haiti.

MISSION OF HOPE

Mission of Hope was founded in 1998 by Brad and Vanessa Johnson with the goal of serving and sharing the Gospel with the people of Haiti. Since then, the organization has scaled to also serve the Dominican Republic and Key West, Florida. MOH clearly conveys through its vision statement that it is a Christian organization that seeks "to bring life transformation to every man, woman, and child" (Mission of Hope, 2022). GuideStar granted Mission of Hope its platinum seal of transparency in 2020, and also lists the organization's sustainable development goals as no poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, and decent work and economic growth (Mission of Hope, 2022). MOH works to accomplish these goals through a number of lines of activity, which include ministry, nutrition, education, and coffee distribution. Each of these lines of activity include multiple programs. (See figure 2.)

Mission of Hope believes wholeheartedly that the impact it wishes to bring to all people only comes through Jesus Christ (Romans 3:25-28). With such a stance, it strives to incorporate the Gospel into every aspect of its ministry. Additionally, MOH seeks to make disciples as the next step to life transformation after sharing the Gospel (Matthew 28:16-20). This involves practical training and teaching to raise people up to serve well in the faith of Christianity. Outside of these two purposes, the organization seeks to advance the church through a number of more practical means.

It is worth noting the gravity of the medical care that Mission of Hope provides. In Haiti specifically, the Clinic of Hope includes dental, vision, prosthetic, and other outpatient services. MOH also holds mobile clinics, which partner with medical care givers from other countries, to bring care to people who do not have access on their own. There was also a medical outreach program that was developed to meet the needs of those who could not receive the necessary care in a one-time visit. The organization's tracking of its Key Performance Indicators show that MOH served 1,330 people through their specialized care services, 4,800 people through medical clinics, and 896 through the outreach program for the fiscal year 2020-2021 (Mission of Hope, 2021).

MOH also places a large emphasis on education. In the same way that church advancement is centered around sharing the Gospel, the education programs are developed to incorporate the Gospel into a quality learning environment. Not only does MOH have a school on its property in Haiti for both orphaned children and children of the surrounding communities, but it also has a technical school to train graduates and other members of the community in the most applicable trade skills for their country. The overarching goal of the organization, in terms of education, is to raise up local leaders who can make an impact and transform the lives of their own community rather than be dependent on expatriates and the ministry organization in the long term. Over time, MOH has also broadened its education activities to include business development for workers in the surrounding communities, equipping and teaching them how to conduct business effectively to take care of themselves, their families, and the community.

Additionally, MOH is also heavily involved in providing nutrition as a means of physical ministry to open doors to spiritual conversations that center on sharing the Gospel. MOH now has a longstanding partnership with Convoy of Hope that allows MOH to provide 91,000 meals to children and orphans each day (Nutrition, 2019). Overall, the nutrition ministry is one of the most important ones that the organization takes part in as it works to meet both the physical and spiritual needs of people. It is a beautiful analogy of feeding and nourishing people in two different, yet both crucial, ways (Matthew 4:4).

Finally, MOH began selling coffee from Haiti, the Dominican Republic, and Guatemala that is both single origin and direct trade. This branch of the organization was developed to assist in providing care for the over four million people in Haiti that face food insecurity (Coffee by Team Hope, 2022). For the year 2021, MOH made a gross profit of $8,298.60 that was put back into the organization to help provide meals for people in Haiti (Mission of Hope, 2021). It also uses the packaging of its products to tell the ministry's story and engage purchasers in prayer and other support.

HAITI

The World Bank currently lists Haiti as the poorest country in the LAC region with a $2,925 GDP per capita (World Bank Group, 2021). Education is not universally available to residents of Haiti. Its literacy rate is 52% (Kore, n.d.). Poverty is widespread and 59% of the population lives on under $2 each day. The dominant religions in Haiti are Catholic and Protestant, 54% and 28% of the population, respectively. However, the devotion of Haitians to animistic religious views and voodoo practices is limiting both the Christian identity of Haitians and the impact of the global church seeking to minister in Haiti (Kore, n.d.).

Haiti has been hit hard economically in recent years, first by a two-year recession beginning in 2019 and then by the COVID-19 pandemic in 2020 (Coface, 2022). COVID-19 has specifically hurt the fiscal stability of Haiti due to higher health expenditures and lower tax revenues and inflation rose 23.8% in 2021 (World Bank Group, 2021). There have also been fuel shortages that have impacted industry productivity and thus the economy as a whole (Kelly et al., 2021).

Not only has Haiti struggled with a poor economy, it also has experienced an unstable political environment. Corruption has been a chronic problem in the leadership of Haiti, and protests have become increasingly dangerous. In 2020, the President of the Port-au-Prince Bar Association, Monferrier Dorval, was murdered (Sanon, 2020). Then, in the summer of 2021, Président Jovenel Moïse was murdered, leaving Haiti largely in the hands of dangerous criminal gangs.

As if the economic and political state of Haiti were not problems enough, the country is also susceptible to natural disasters, namely hurricanes and earthquakes. In 2010, a devastating earthquake hit Haiti both physically and financially, producing losses equivalent to 120% of the country's GDP (World Bank Group, 2021). Then, in 2016, Hurricane Matthew struck Haiti and produced losses equivalent to 32% of GDP. It was followed by an earthquake in August of 2021, which produced losses equivalent to 7.8% of the country's GDP (World Bank Group, 2021).

Health and hunger remain a crisis in Haiti. The latest hunger statistics show that 48.20% of the population live with less than what is required to meet general dietary energy requirements, putting them in a slightly worse position than North Korea at 47.60% (Macrotrends LLC, 2022).

APPLICATION OF PI MATRIX TO MISSION OF HOPE

The profits and losses of each venture within MOH as an organization were determined by subtracting expenses from revenues. This data was collected from the organization's latest Form 990 that reported the year 2019-2020. The impact was measured by the number of persons impacted in each venture. While much of that decision was based on the data available, measuring the impact of a ministry by the number of people transformed by it is also a biblical concept. Acts 2:41 and 4:4 both record the impact of the Apostles' ministry by the number of people added to the community of believers. The feeding of the 5,000 that Christ performed in Matthew 14 is miraculous in part because of the outsized number of people fed with such a small amount of provisions. In Jonah 4:11, God justifies His concern for Nineveh in part by how many people live within the city. Clearly there is a qualitative difference in the impact of feeding a person one meal versus saving them from destruction. Scripture, nonetheless, often recounts impact on the basis of the number of people involved. Non-profit organizations seeking to utilize this model or some derivative of it may want to begin with measuring impact by the number of people touched, at whatever level, and then consider qualitative distinctions between one kind of impact and another.

Notably for MOH, the impact measures were by far the more ambiguous numbers to determine. The organization keeps account of various Key Performance Indicators (KPIs) on excel spreadsheets for each year. The first step was to match the KPIs for each venture with the same tax year as the Form 990. After the correct KPI documents were obtained from the ministry, the challenge was to determine which KPI measured impact most accurately within each venture. The authors determined that the best measure for education was the number of children in the educational program, which also corresponded to the number of children who heard the Gospel. The best measure for nutrition was the total number of children served through the nutrition program. The best available measure for coffee was the total units sold for the year 2021. There were too many subcategories under the "ministry" venture for an accurate measure to be determined. The measurements under ministry were also collected by village or church rather than by individuals receiving ministry. Thus, the impact measurement for ministry activities was taken from MOH's Form 990 Statement of Program Service Accomplishments page, where it expressed that the ministry activities were able to serve over 2 million people. Another notable challenge was that the KPIs were recorded by month, and it was often the case that the same individuals were served each month, so the final impact measurement that was collected for this research was the greatest number recorded in any one of the months from the year corresponding to the Form 990. A general takeaway from this description is that, even with an organization as sophisticated as MOH, there is substantial managerial interpretation required to populate the strategic model. This kind of interpretive flexibility, however, is not unique to non-profits.

Table 1: Cost per Impact

	Ministry	Education	Nutrition	Coffee
Revenue	585,653	62,059	12,590,092	55,277
Expenses	2,460,899	3,209,811	13,259,686	46,978
Profits/Losses = revenue-expenses (x-value)	-1,875,246	-3,147,752	-669,594	8,298
Impact Measure (y-value)	2,000,000	55,167	114,260	1723
Cost (x/y)	0.94	57.06	5.86	-4.82

Graph 1: Revenue, Expenses and Loss (or Profit) of each Venture

For-profit businesses seeking to calculate future industry growth and market share face corresponding challenges.

After the authors identified the various measurements of impact and financial results, they were first put into separate graphs to show the varying financial and impact results that each venture within MOH was contributing to the organization. Then the collected measurements were put together to form plot points for each venture and were placed on the PI matrix. The points were also variably sized according to relative loss incurred per person impacted. This meant the relative size of each of the plot points represented the net cost of one person impacted. (For most of its ventures, a smaller plot point indicates a more efficient venture. For coffee, the only venture that generates a profit, a larger plot point would mean a more efficient venture.) This number was determined by dividing the losses generated by each venture by its corresponding impact measurement, or dividing the x-value by the y-value. After each venture was placed on the matrix, both the combined and average impact of the organization as a whole were calculated.

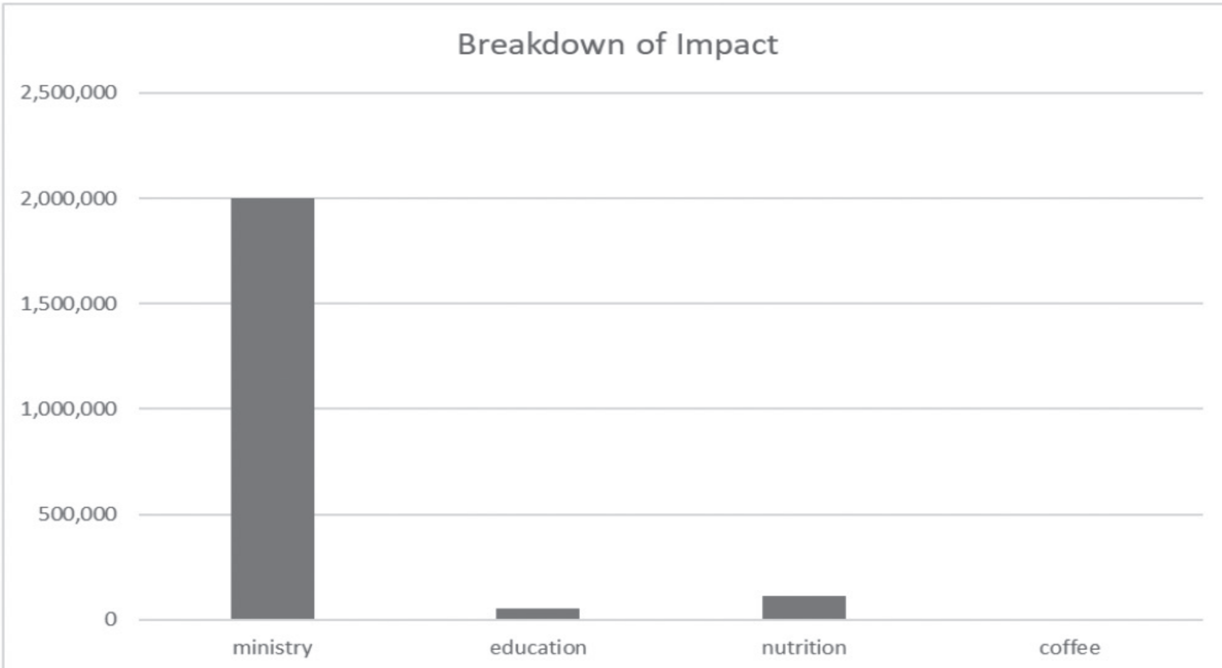
Once each of MOH's ventures—ministry, nutrition, education, and coffee—were plotted on the matrix, it was evident how effective each line of activity was compared to the funds MOH expended in the venture. This measure of relative efficiency allowed the authors to project the benefit of each category should management reallocate the percentages of funds deployed.

Finally, this analysis proved susceptible to linear programming to assist MOH, and other non-profits that might benefit from this model, in maximizing impact.[1] The program takes the relevant constraints of MOH, its budget for example, and finds the highest achievable point under those constraints. Regarding the measurements collected for MOH, the cost of each person impacted can be multiplied by the number of impacts made within each venture. The linear program could assist MOH in determining both the money it would take to impact a desired number of people within each venture of its organization or how many people would be impacted should it dedicate a certain amount of money in each venture.

Limitations of the Proposed Model

Impact is a difficult thing to measure. However, if impact is crucial to the mission of the organization, which is often the case with non-profit organizations, the strategic model must include it. In an effort to do so, the application of the model to MOH has measured impact based on "people touched" through each venture within the organization. What is missing in this measurement is the weight of the impact. As the authors have applied it to MOH, the model assumes all impacts are of equal

Graph 2: MOH Impact by Venture



weight or value. It would require managerial interpretation to weigh the comparative impacts made by the different ventures. For example, the impact made within the education venture might be a long-term impact while a nutritional impact may be merely a one-time impact. The linear program assumes that each venture could deliver an equivalent level of efficiency at any scale. The reality is more likely that some minimum level of activity is necessary to reach MOH's current level of efficiency and that, at some point, increasing investment in a venture will begin to deliver diminishing returns. Additionally, it is important to note that coffee is the newest venture of MOH, beginning to operate in 2020. Thus, it makes sense that coffee has yet to make a substantial impact, and it is worth considering what impact could result from allocating more of the organization's resources into the coffee sales venture. Furthermore, because the coffee venture is so new, the data was collected from 2021, different from the latest Form 990, fiscal year 2019-2020.

RESULTS

Table 1 represents the calculation of cost per impact in U.S. dollars for each of MOH's four ventures. (It is important to note that the data presented below is drawn from the 2019-2020 Form 990, except for Coffee data, which is from 2021.)

Graph 1 represents the revenue, expense, and losses (or profits) generated by each venture in US$. Results are for 2019-2020 for Ministry, Education, and Nutrition, and 2021 for Coffee.

Graph 2 represents the number of people impacted by MOH in each of its ventures.

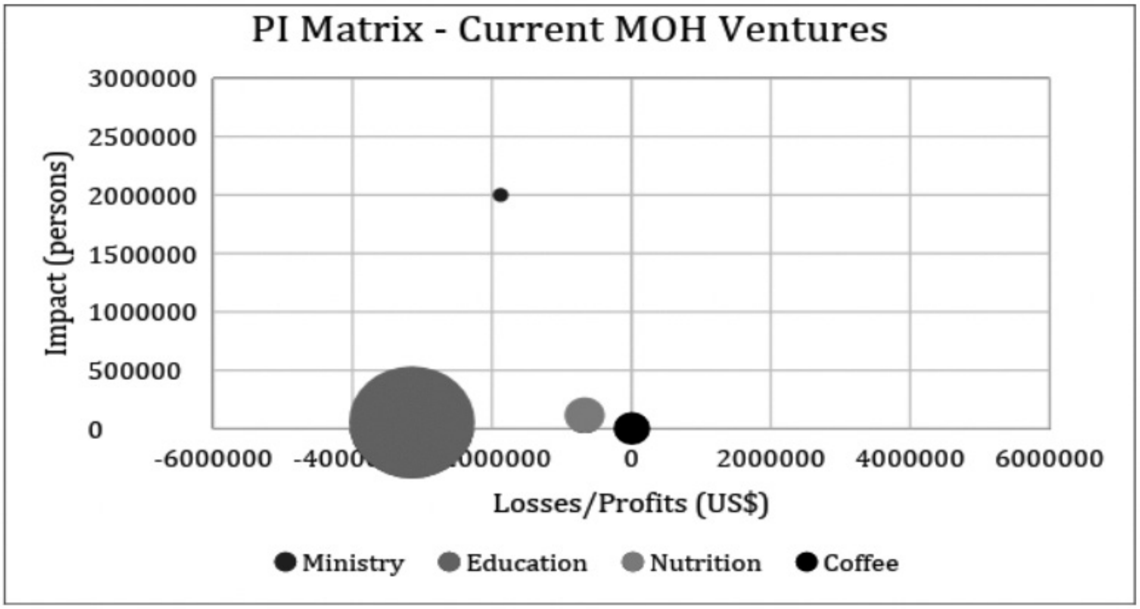
Graph 3 then combines the results of Graphs 1 and 2 to present the relationship between impact and losses on the PI Matrix. The combination of financial losses and impact caused by each venture allows a comparison across ventures on multiple bases such as efficiency and sustainability.

Finally, Graph 4 presents the overall operations of MOH on the PI Matrix in both its current operations (combined) and its pro forma operations if all four ventures were equally funded. This graph captures the effect of combining the four ventures of the non-profit and invites a comparison of what that combination would look like after reallocating resources across all four ventures.

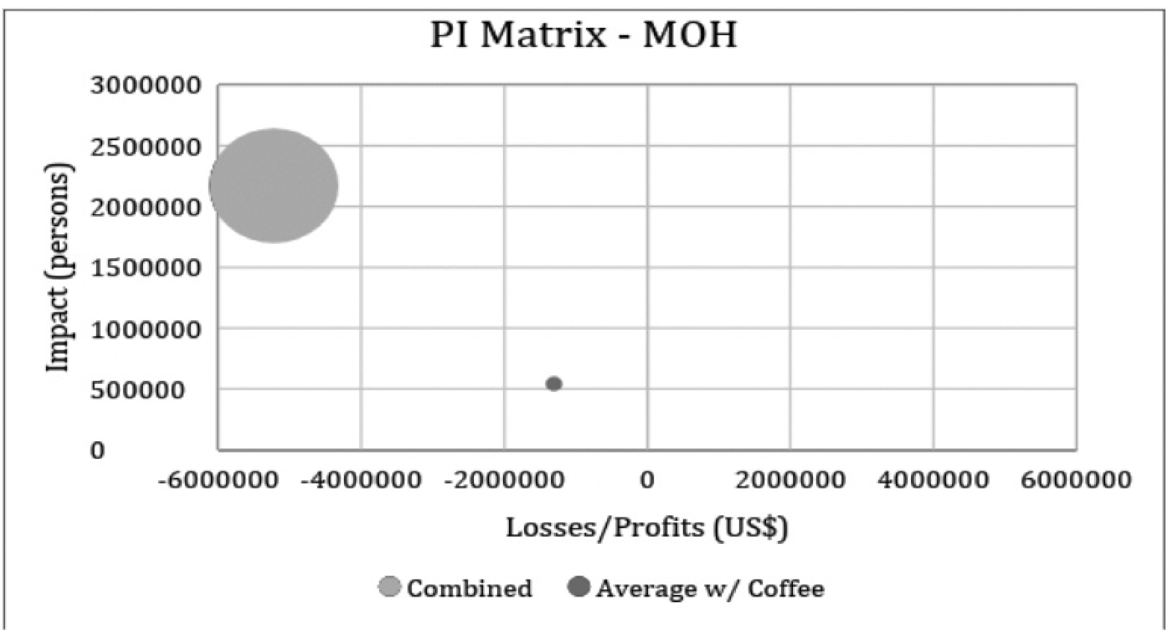
Screenshot 1 presents the current operations of MOH as the results of the authors' linear program.

Finally, Screenshot 2 presents the results of the authors' linear program based on a reallocation of MOH resources aimed at increasing impact.

Graph 3: Mission of Hope Ministry, Education, Nutrition and Coffee Ventures Profit-Impact Matrix



Graph 4: Mission of Hope Combined and Pro Forma Profit-Impact Matrix



DISCUSSION

Table 1 and Graph 1 demonstrate that the organization receives the most revenue from nutrition, ministry, education, and then coffee. They also show that the organization carries the most expenses from nutrition, education, ministry, and then coffee. However, when you subtract expenses from revenue, the education venture generates the greatest losses, followed by ministry and then nutrition. There is an unsurprising correlation between revenue and loss minimization. While Graph 1 does not depict education's revenue or any of coffee's measures because they are too small to appear on the scale, Table 1 also shows that coffee actually generates a profit, unlike any of the other ventures. Finally, Table 1 shows the cost per impact of each venture. This number is also

Screenshot 1: MOH Current Operations

Maximizing Ministerial Impact using Linear Programming

Constraints Name	Constraint Direction	Constraint Value (CV)	Constraint Formula	Equations in Excel	
Total Budget	Spend no more than -->	$5,700,891	MC*MI + NC*NI + EC*EI + CC*CI	$5,700,891	<-- Amount of available budget to spend
Min Ministry Expenses	Spend at least ->	$1,875,246	MC*MI	$1,875,246	<-- Amount to spend on Ministry
Max Nutrition Expenses	Spend no more than -->	$669,594	NC*NI	$686,192	<-- Amount to spend on Nutrition
Max Education Expenses	Spend no more than -->	$3,147,752	EC*EI	$3,147,752	<-- Amount to spend on Education
Min Coffee Expenses	Make at least -->	$8,299	CC*CI	-$8,299	<-- Amount to make on Coffee
Next Constraint...					
		Maximize Impacts	MI + NI + EI + CI	**2,168,927**	**<-- Maximized total # Impacts**
Variables	**# Impacts**				
MI - Ministry Impact	1,994,943				
NI - Nutrition Impact	117,098				
EI - Education Impact	55,166				
CI - Coffee Impact	1,722				
Cost per Impact ($)					
MC - Ministry	$0.94				
NC - Nutrition	$5.86				
EC - Education	$57.06				
CC - Coffee	-$4.82				

Screenshot 2: Linear Program Results From Resource Reallocation

Maximizing Ministerial Impact using Linear Programming

Constraints Name	Constraint Direction	Constraint Value (CV)	Constraint Formula	Equations in Excel	
Total Budget	Spend no more than -->	$5,700,891	MC*MI + NC*NI + EC*EI + CC*CI	$5,700,891	<-- Amount of available budget to spend
Min Ministry Expenses	Spend at least ->	$2,875,246	MC*MI	$2,875,246	<-- Amount to spend on Ministry
Max Nutrition Expenses	Spend no more than -->	$669,594	NC*NI	$973,397	<-- Amount to spend on Nutrition
Max Education Expenses	Spend no more than -->	$2,000,000	EC*EI	$2,000,000	<-- Amount to spend on Education
Min Coffee Expenses	Make at least -->	$147,752	CC*CI	-$147,752	<-- Amount to make on Coffee
Next Constraint...					
		Maximize Impacts	MI + NI + EI + CI	**3,290,586**	**<-- Maximized total # Impacts**
Variables	**# Impacts**				
MI - Ministry Impact	3,058,772				
NI - Nutrition Impact	166,109				
EI - Education Impact	35,051				
CI - Coffee Impact	30,654				
Cost per Impact ($)					
MC - Ministry	$0.94				
NC - Nutrition	$5.86				
EC - Education	$57.06				
CC - Coffee	-$4.82				

represented by the size of the plot points in the graphs. Education costs the most at $57.06 per impact, nearly 10 times nutrition, which comes in second at $5.86. Ministry costs just $0.94 per impact, and coffee generates a profit of $4.82. Graph 4 shows the overall combined and average PI matrix for the organization.

The results indicate that the organization, as currently structured, is not readily scalable. For the year 2020-2021, MOH invested $26,000,000 into the organization. Thus, in order to double the ministry at this same level of efficiency and relative allocation, MOH would presumably have to fundraise $52,000,000. If MOH wants to continue to grow, it might consider generating more revenue in order to leverage its donations. Currently, many scholars would not classify MOH as a business as mission because its main ventures are not generating any profits (Lausanne Movement, n.d.). The coffee venture is the only business as mission venture within the company, but the model suggests that reallocating resources into this venture could prove beneficial to the growth of the organization.

The model results for MOH suggest it is facing some strategic decisions. MOH may want to decide whether to grow or cancel the coffee venture, and also whether education is worth the investment. Currently, education is costing the most money but not making the greatest impact. Unless the relative weight of the educational venture makes this inefficiency tolerable, MOH may want to consider directing funds to more efficient ventures.

At a generic level, the proposed model can inform strategic plans to reach desired results. If an organization faced a shortfall in funds, the model might inform the decision of how to minimize its loss of impact. Conversely, the model might inform non-profits on how to most efficiently deploy increased revenues from donations or operations. From a scaling perspective, the proposed model could help a non-profit organization estimate how much it would have to spend to make a desired impact.

On a purely spiritual level, the PI Matrix may be one tool that enables ministry leaders to remain faithful to their stewardship obligations (1 Peter 4:10). Modern ministries would generally consider failing to take advantage of the tax-free status offered by IRC Section 501 (c)(3) to be wasteful. The authors suggest that ministry leaders who fail to maximize their efficiency by ignoring strategic management may be guilty of the same malfeasance.

The results of the linear program depicted in Screenshot 1 corroborate the data collected from the KPIs that were used to determine the impact measures for the graphs. According to the data drawn from the KPIs, the total impact that MOH made in all of its combined ventures was 2,171,150 people. The linear program, when placed under restrictions that led the organization to spend an amount equivalent to its respective losses, calculated an output of 2,168,927 people impacted. As currently constructed, the program fixes the cost per impact for each venture and would need to be adjusted if this were to change, particularly at a different scale. At these fixed costs per impact, however, the program allows the management to alter the constraints in order to change the resulting impact numbers. The values of the impact and cost can be used to re-determine the profits and losses of each venture of the organization, and new plot points can be made to see how the ventures, or the organization as a whole, would shift on the plane of impact to profits and losses.

Screenshot 2 reflects the impact that MOH could make if it were to make a dramatic reallocation of its resources under the same budget from the year 2019-2020. The minimum expense allowed for ministry was increased from $2,000,000 to $2,875,246. The nutrition expense was kept at its previous investment. Education was capped at $2,000,000, and coffee profit was raised to $147,725. This produced a total impact of 3,290,586 people. The reason education was more heavily targeted was because education seems to be the venture that MOH should most re-evaluate based on the PI Matrix results. This screenshot also explores how much of an impact coffee could make if more resources were given to the venture. These results indicate that MOH could benefit from reallocating some of its resources from education to coffee sales. MOH might consider putting greater investment into the coffee venture to see where the plot point ends up. MOH could model this change by adjusting its constraints by specifically increasing its spending on coffee and adjusting the other three ventures accordingly to project how great of an impact it would make overall. For the year 2019-2020, MOH's total revenue was $26,527,400. However, $25,650,349 of that came from contributions and grants (Form 990). This means that 96.7% of the organization's total revenue came from donations. If MOH were to increase product and service revenue, donations would be able to extend the effectiveness of the ministry.

CONCLUSION

Overall, the utility for non-profit organizations, such as MOH, to employ a strategic management model that accommodates both desires for financial sustainability and impact is evidenced by the application of the proposed model to MOH. In the past, non-profit organizations have generally relied on for-profit models that ignored the ministerial, or social, impact nature of the organization. While these portfolio management strategies can be of some use, there are sufficient differing motivational factors that contribute to non-profits to render these strategies incomplete. Thus, this research sought to take a step toward developing a more effective portfolio management model that could provide a potential resource for non-profits. While this study was conducted with the assumption that a perfect model for all non-profits would be elusive, it was able to explore the application of the proposed model to Mission of Hope.

The opportunity for the organization to improve its sustainability by increasing its investment in the business as mission coffee venture has exemplified a common tension among non-profits that require surpluses to scale and increase impact. This is a concept some non-profit organizations may neglect. While the main purpose of these organizations is not to make a profit, it is important for them to understand that a profit (or surplus) may be useful to help them achieve their greater goal of social or ministerial impact. This opportunity may be considered analogous to individual bi-vocational ministers who follow Paul's example of tentmaking (Acts 18:3) to fund their missional work.

While no model fits all non-profits, the PI Matrix proposed herein does well to show the breakdown of the multiple ventures that make up many non-profit organizations as well as how they all impact the overall success of the organization. The proposed model highlights the tension between ministry organizations' effectiveness and sustainability and demonstrates the impact different activities of the organization have on that tension. While the PI Matrix can show non-profits their current strategic mix, the linear program is able to help nonprofits predict a future strategic mix by considering new or different constraint values. The authors thereby hope to have furthered the research both by developing a tool that can be used to identify the causes of the resulting success of non-profit organizations as well as assisting them in scaling their success without compromising their goals. Additional research may extend the PI Matrix by capturing the relative weights of various kinds of impact. It might also extend the y axis into negative territory to capture the possibility of ministerial activity negatively impacting some individuals (Acts 15:1-5). Additional research may also further explore the biblical mandate for ministerial efficiency and the tension it holds with other biblical values such as generosity (Psalm 37:26; Proverbs 11:25).

One of the lasting benefits of the BCG matrix was in its labeling of different quadrants according to the attractiveness of the market and the firm's position in it, cash cows, dogs, stars, and question marks. The PI Matrix provides a relative measure of ministerial efficiency rather than market opportunity. Nonetheless, identifying different quarters of the PI Matrix may likewise provide a useful strategic shorthand for non-profit leaders to balance or re-shape their portfolios. Further research applying this or similar models to multiple organizations and facts may help produce similarly memorable identifiers of strategic positions.

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FOOTNOTE

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