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This Issue

Sonia Taneja, Scott Sewell, Mildred Golden Pryor

Strategically and tactically, organizational leaders often establish teams to accomplish the missions, visions, goals and objectives of their respective organizations. Teams exist in all types of organizations including financial institutions, factories, healthcare organizations, and educational institutions. Yet executives often struggle to maintain high performance of their own leadership teams. This research seeks to answer several questions, including: (1) What are the characteristics of a high performance executive team? (2) What problems do executive teams face that negatively impact their potential for high performance? And (3) What can executives do to increase their respective teams' potential for high performance?

G. Naadimuthu, S. Waziruddin, E. S. Lee

A multidimensional dynamic manufacturing management system with unknown production and sales functions is considered. This model consisting of seven state variables and three decision variables is optimized by a first variational technique. Convergence rates of advertisement, sales, inventory, and profit are obtained and illustrated through diagrams.

Martie Schrimsher, Cherie Fretwell

The ability to identify and manage HRM problems in small businesses is a key area in which small firms can gain competitive advantage. For this paper, a Small Business (SBO) will refer to those companies with 15 or less employees. The authors present five important legal topics that should assist SBOs in meeting some of the most critical employment law regulations. A brief overview of these areas includes: Fair Labor Standards Act, Title VII of the Civil Rights Act of 1964, Equal Employment Opportunity Commission, Equal Pay Act of 1963, and Americans with Disabilities Act of 1990.

Jeffrey R. Helton, Brenda L. Freshman

Current health reform legislation includes revenue reductions to hospitals not meeting quality standards set by the Centers for Medicare and Medicaid Services. Using publicly available data for hospitals from 2006-2009, the study sought to determine the extent to which services to the poor and uninsured resulted in lower quality of patient care in hospitals in the United States. Multivariate regression indicated a significant relationship between higher levels of volume for poor/uninsured patients and lower performance on quality measures that will impact future payments. Thus, hospitals serving the poor/uninsured may lose future payments, putting these hospitals at financial risk.

Achieving complete transfer of learning when involved with training and development is usually more of a hope than a reality. Recently Virtual Human Resource Development has shown great value as a supplement to traditional employee training methods that support understanding and learning. Among the techniques being employed in VHRD, a three dimensional virtual web platform known as Second Life has achieved significant positive results in a relatively short period of time. This paper is an attempt to determine the extent of the positive results that Second Life has reportedly achieved in various professions such as business, education and health care.

This case is intended for the use in both undergraduate and graduate courses with an international business and/or marketing focus. It explores the challenges faced by Huayi Brothers, a private entertainment company in China. This case is helpful for global business and marketing courses, because it allows students to deal with the complexities of a company operating within the Chinese entertainment industry. Students can learn about the industry and then use course material to analyze the current situation and relevant issues to develop solutions to the challenges faced by this Huayi Brothers.

One of the potent mechanisms of ensuring economic empowerment and equitable distribution of wealth among women in Africa is through entrepreneurship and succession planning. Consequently, this paper reports an empirical analysis of female entrepreneurs in Ghana in relation to their business and succession planning intentions. The study revealed that though respondents would want their businesses to outlive them and possibly transfer the business to their children or family members, only few of such entrepreneurs have a formal written succession plan. The paper therefore discusses the implications of the findings in relation to sustainable women empowerment through succession planning.

The Mini-IPIP is a 20 item measure of the Big Five personality domains, used in business for pre-employment selection. A study was conducted to determine if this short version of the IPIP had a general personality factor as found in longer Big Five measures. A sample of 269 adult males and females was administered the Mini-IPIP. Confirmatory factor analyses examined several models. A single general personality factor (GFP) model fit the data well as did a two factor model (DeYoung, Peterson, & Higgins ,2002; Digman, 1997), and a higher-order general personality factor (GFP) model,(Musek, 2007; Rushton & Irwing, 2008). The current analyses confirmed the general factor. Implications for research and practice are discussed, including a call for investigating the practical application in business and theoretical consistency of the general personality factor.

Business incubation is an economic development tool that is widely used to stimulate the growth of small-to-medium sized enterprises (SMEs). The Malaysian government in line with the country's aspirations to become a developed nation by the year 2020, has established its own incubation programs to catalyze the growth of ICT SMEs. This paper examines four constructs of the business incubation process: Selection Performance, Monitoring and Business Assistance Intensity, Resource Allocation and Professional Management Services. A total of 118 incubatees from ICT incubators in Malaysia responded to an online survey questionnaire. Principal component analysis and multinomial logistic regression analysis were used to determine the components of business incubation process and test their relationships with Business Incubation Performance. Results show that all four constructs and their respective components are significant predictors of Business Incubation Performance. The findings provide valuable information for policy-makers, business incubator managers, and potential incubatees regarding better incubation management practices thus driving incubator development towards best-practice, third-generation

In the Asian belt, India along with Thailand, Malaysia, Singapore, Hong Kong, Indonesia and the Philippines are the popular medical travel destinations. India has a 'health tourism' business with a line of varied treatments and therapies. It is a global product having medical tourists from the US, UK, Mauritius, south-east Asia, Mauritius, Fiji, Bangladesh, Afghanistan, and Singapore besides having more than a billion domestic customers. This research paper focuses on an integrated branding strategy by understanding the various value drivers of the brand image of a medical tourism product. It builds the PPP model for promoting medical tourism in India.

The need to understand and integrate the theoretical development of organization development (OD) and social entrepreneurship literature is becoming important because of the parallel practices and principles that exist in both fields: humanistic/social values, whole systemic change, and effective sustainable strategy. Thus, this paper explores the relationship between social entrepreneurship and OD. It suggests that the Do Well By Doing Good principle can be used as a guide for integrating the studies of both fields and moving the theoretical development of both fields forward.

GUIDELINES FOR SUBMISSION

American Journal of Management
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High Performance Executive Teams

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Strategically and tactically, organizational leaders often establish teams to accomplish the missions, visions, goals and objectives of their respective organizations. Teams exist in all types of organizations including financial institutions, factories, healthcare organizations, and educational institutions. Yet executives often struggle to maintain high performance of their own leadership teams. This research seeks to answer several questions, including: (1) What are the characteristics of a high performance executive team? (2) What problems do executive teams face that negatively impact their potential for high performance? And (3) What can executives do to increase their respective teams' potential for high performance?

INTRODUCTION

Holmes (2012) recognized that organizations are changing from traditional hierarchical work structures to team-based approaches to work. He noted that high-performance teams must "develop goals and plans, enhance communication among members, develop and maintain positive relationships among members, solve problems and make decisions on a timely basis, successfully manage conflict, facilitate productive meetings, clarify roles for team members, operate in a productive manner, exhibit effective team leadership, provide development opportunities for team members" (Holmes, 2012, p.180). These ten actions are critical in order to form a successful team. Authors of other publications in the area of effective, high performance teams (Rico, Sanchez-Manzanares, Gil, and Gibson, 2008; Harrison and Tarter, 2007; Adobor, 2004; Munro and Laiken, 2003; Ammeter and Dukerich, 2002; Pryor, 1993, 1998, 2007; and Pryor, Singleton, Taneja, and Toombs, 2009) also emphasized that it is important to establish missions, visions, goals, and strategies because they act as catalyst for the success of teams and are building blocks for the development and long term survival of an organization.

CHARACTERISTICS OF HIGH PERFORMANCE TEAMS

Teams cannot be effectively measured as a success or failure unless it is united together for a common purpose or a common goal (Robbins, 2005). In fact, a group without a common goal is really not functioning as a team and would be more likely to fail because it has no unified direction.

Teams that have demonstrated that performance excellence is their "way of life" are high performance teams. Along that line, Kur (1996) defines high performance teams as teams that "consistently satisfy the needs of customers, employees, investors and others in their respective areas of influence . . . and frequently outperform other teams that produce similar products and services under similar conditions and constraints" (p. 34). High performance teams must be created (Richardson and Denton, 2005), and there are specific strategies, tactics, and actions that can increase the probability that teams will be high performance (Leholm and Vlasin, 2006; Harris, 2003). While all types of teams should strive to become high performances teams, it is especially critical that natural work teams (including executive leadership teams) make long-term commitments to excellence and high performance. Yet as noted by Caska, et al (2001) and suggested earlier by Katzenbach and Smith (1993) "high performance teams are a rarity." Perhaps one explanation is that a high performance culture must exist in high performance teams are to be the norm in an organization (Kaliprasad, 2006).

McKnight (2009) noted, "Top teams exist to support the organization, to grow its assets by enabling it to produce value. In the most successful companies, the top team does this not only by creating the organization's business strategy but also by collaboratively executing that plan i.e., marshaling the resources required to achieve those goals. This means building or maintaining the organizational capabilities (needed for executing) the strategy" (p. 31). These teams are responsible for taking actions that will help the organization to achieve its goals. These top level high performance teams which consist of executives, CEO's, vice presidents, and others achieve success by developing contact with people (inside & outside the organization) to achieve the target, exert influence to get tasks accomplished, and finally direct and empower employees to work toward a common goal.

The important role of the high performance executive team is to establish and maintain positive relationships with other team members in the organization because "the effectiveness of relationships…can have a direct impact on the overall success of an organization" (The CV Centre, 2011, pg.1). These "positive relationships help to build trust within a team and can ensure that people feel comfortable with airing their concerns or issues" (The CV Centre, 2011). Forming trust within a team will encourage team members to assist each other in working toward team goals instead of focusing only on their respective individual agenda. Positive relationships instill a sense of community within the team, encourage open and honest dialogue, encourage a more overall positive experience, and usually enhance the team's capability for success.

In order for team members to make critical decisions, it is imperative for them to have enhanced communication. In a recent study conducted in the medical field it was found that "communication failures are the leading causes of inadvertent patient harm" resulting in the death of 75% of the patients harmed from miscommunication (Leonard, Graham & Bonacum, 2004, pg. 1). Looking at groups of people in the medical field as teams with a goal of keeping patients alive and healthy, it is obvious that even if team members have clear goals, effective communication is needed from the formation of the goals until they are achieved. Otherwise, there could be drastic consequences. Unclear communication can be just as dangerous to the attainment of a goal as any other threat. It is important to recognize that "many factors contribute to communication failures" (Leonard, Graham & Bonacum, 2004, pg. 1). In the example from the medical field, it was noted that "doctors and nurses are trained to communicate quite differently" (example of ineffective communication), "hierarchy, or power distance, frequently inhibits people from speaking up", a present "cultural barrier" made communication more challenging, and other "human factors" contributed to ineffective communication that created inadvertent patient harm (Leonard, Graham& Bonacum, 2004, pg. 2). The establishment of productive, consistent communication would help avoid many of these problems.

Conflict is another important component for teams, especially the high performance executive teams, to address because it has the potential to positively or negatively impact the team and team results. "If (dysfunctional) conflict is left unresolved it creates a hostile work environment, leads to frustration, hampers productivity, lowers morale, creates poor unity, causes inappropriate behaviors and can cause more conflicts in the future" (Poetmel, 2010, p.1). In other words, resolving dysfunctional conflict is essential because "unresolved conflict is a breeding ground for problems that prevent a team from productivity" (Poetmel, 2010, p.1).

Effective communication is essential to accomplishing team objectives. However, if there is poor unity, individuals may not share ideas and it may trigger low morale and negatively impact team member motivation. Also, a hostile work environment leads to individuals looking out only for themselves and not the team as a whole. Resolving conflict not only eliminates the current issues and teaches members how to communicate better in the future, it also helps bring out leadership traits in team members who help mediate conflict and reform team unity.

Meetings are one of the most common official forums for an executive team to communicate, but they are frequently regarded as major time wasters. Of course, meetings can be productively facilitated. First of all, the executive team should "schedule meetings only when necessary, not by habit" (Are your meetings, 2011, p. 4). This prevents redundant conversations and lets team members know the meetings require action, not just attendance. In addition, when meetings are called for a specific purpose, only "people who need to attend" should be invited, and an agenda with subjects and allotted time should be developed (Are your meetings, 2011). Meeting attendees should stay focused on agenda subjects, and decisions and accountabilities should be agreed upon during the meeting and reviewed before the meeting adjourns (Are your meetings, 2011). When team members recognize the significance of meetings and show other members that they respect their time, this leads to greater team unity.

In meetings, executive team members decide what they wish to accomplish. However, unless actions with a specific timeline for accomplishment are assigned to accountable people, the actions will not be achieved. Dvorak (2007) discusses how IBM's employees work around the world on various projects and teams. The key "to smooth teamwork is dividing projects into small pieces" and further dividing them into smaller chunks where each "chunk is further split into tasks designed to take one programmer a day or two to complete. It handles mistakes or miscommunications and they are identified, and there is little waiting for others to finish work" (Dvorak, 2007, p. 4). Clearly assigning specific work to team members is extremely practical as they understand each other's responsibility which increases the accountabilities of the team. Further, clarification of members' roles, duties and responsibilities leads to increased efficiency and effectiveness.

Pearce (2008) suggested that "teams could be much more effective" than their typical current model if there's a shared leadership (p.1). It implies that in the executive teams, different individuals lead different sub-objectives or tasks, and they are responsible for the progress and accomplishment of the final goals. This leadership style is extremely beneficial for the high performance team because (especially in large organizations) of the size of the organization. Distributing responsibility helps develops a system of checks and balances and helps prevent a large difference in power between team members. High performance executive teams are focused on achieving organizational goals and also, on achieving executive team goals.

CHALLENGE FACED BY HIGH PERFORMANCE EXECUTIVES TEAMS

High performance executive teams face many challenges that can negatively impact their respective organizations' potential for high performance, including stagnancy, de-motivation, competition, lack of a skilled workforce, transition issues, globalization, and political dynamics.

Stagnancy or Complacency

Drucker (2006) emphasized that complacency is one of the top causes of organizational failure. A stagnant organization does not grow, and one does that does not grow for some time has to die or has to be replaced. When the stagnation is coupled by innovation and growth by the competition, it speeds up the entire process. Numerous examples exist and include Research-in-Motion, Yahoo, Nokia, and Dell where organizational leaders learned that strategies can be duplicated easily and in many cases is bettered by intelligent competitors.

De-motivated Employees

According to Dunn (2009) employee motivation is a major function that contributes to company's success. Employees often feel neglected when the management team is unable (or unwilling) to provide essential tools and resources. Most work can become repetitive and monotonous after it is done for a long time, and it is the responsibility of the executive team to determine how to make work challenging and rewarding.

Competition

One of the factors over which executive leadership teams have no direct control is competition. They may try to influence factors that fall within their sphere of influence (Maxwell, 2001), but the impact is very limited. Typically organizational leaders who are very entrepreneurial and ready to invest time and resources in developing bigger and better products that offer more value are able to succeed and take over the markets (Gilmartin, 1999). A very recent example is the situation of RIM Blackberry phones and Apple iPhones. RIM had very innovative technology, but it did not take long for Apple to develop better ones that had features that were of more value to customers (Kharif, 2012).

Lack of skilled workforce

This is another human resources issue that needs to be addressed by executive teams. Drucker (2006) and Cohen (2004) highlight the importance of management information systems as applied to the businesses around the world. Bigger and better information system, software, tools are required by employees followed by appropriate training. If the employees are not skilled to perform the job, organizations can lose their competitive advantage very fast.

Transition issues

Transition of executives or handling the responsibilities needed for the next generation is a key factor of highly successful teams and companies. Opportunities need to exist for leadership development in terms of mentoring and training as well as a variety of work experiences throughout the organization. Major problems exist when a member of the executive team leaves whether it is to accept another position or because of death or some unethical or illegal activity of the team member. Whatever be the reason for it, (Drucker, 2006; Cohen, 2004; Cohen, 2008) identify transition as a very critical point in determining the short and long term future of the organization. It can make or break the company very quickly.

Globalization

Executive leadership team members now have to worry about not just the local issues but the global issues like competition, weather, political scenarios and dynamics, and terrorism. As a result of the globalization, there is a diverse workforce. It becomes challenging to manage the team culturally and geographically. The difference in dialect often makes it challenging to communicate because of language barriers. Cultural differences and variations in dialect may create unforeseen challenges when trying to exchange information (Taneja, Pryor, Humphreys, & Singleton, 2012).

Political Dynamics

Executives have to be aware of the political impact of the decisions they make and the actions they take. They also have to be cognizant of impact that certain election results, political uprisings, strikes, curfews, and other situations related to political dynamics. They may face challenges from economic or financial issues to finding a market place to sell the product or equipment (Drucker, 2006; Elenkov, Judge, & Wright, 2005).

These challenges create new opportunities for executive team members as they gain more experience in communication. Table I depicts the challenges and possible solutions or responses to them by high performance executive teams. In addition to identifying and addressing challenging facing their organization, executive team members need to understand how to routinely function as a high performance team. The challengers also help executive teams continuously strive to achieve solutions for them and perform at their full potential by following high performance team practices.

PRACTICES OF HIGH PERFORMANCE EXECUTIVE TEAMS

Peter Drucker was one of the earliest people to identify the solutions to tackle most of the challenges mentioned above. He identified eight practices for highly effective executives as follows (Drucker, 2006, p. 2):

1. Ask "What needs to be done?"
2. Ask "What is right for the company?"
3. Develop an action plan.
4. Be responsible for the decisions.
5. Be responsible for communicating.
6. Focus on opportunities rather than problems.
7. Have productive meetings.
8. Focus on teamwork rather than individual effort.

According to Drucker (2006), following these eight practices lead to the most benefits for an organization. Zenger, Folkman & Edenger (2009) also noted that the most important step for the organization is for leaders to create clear vision & direction. Further, this is followed by developing (and communicating to all employees) core values and guiding principles, goals, strategies and tactics and a plan for risk mitigation. An organization that follows these steps boldly and sustains competitive advantage succeeds in the long run. Executives are an important catalyst in increasing team and organizational performance.

HOW EXECUTIVES INCREASE TEAMS' POTENTIAL FOR HIGH PERFORMANCE

Formulating a high performance executive team that is adaptable to new situations and problems is difficult to accomplish, and it takes continuous effort to maintain. Figure 1 depicts a model that assists in developing and maintaining a high performance executive team.

FIGURE 1: DEVELOPING A HIGH PERFORMANCE EXECUTIVE TEAM

Review the products & services offered, available market and competition	Develop strategy that can deliver results in for long run	Develop vision, mission & core values that are consistent with strategy
Monitor progress and do not hesitate to make tough decisions when required	Establish clear definition of expectations & duties	Communicate the same with all employees
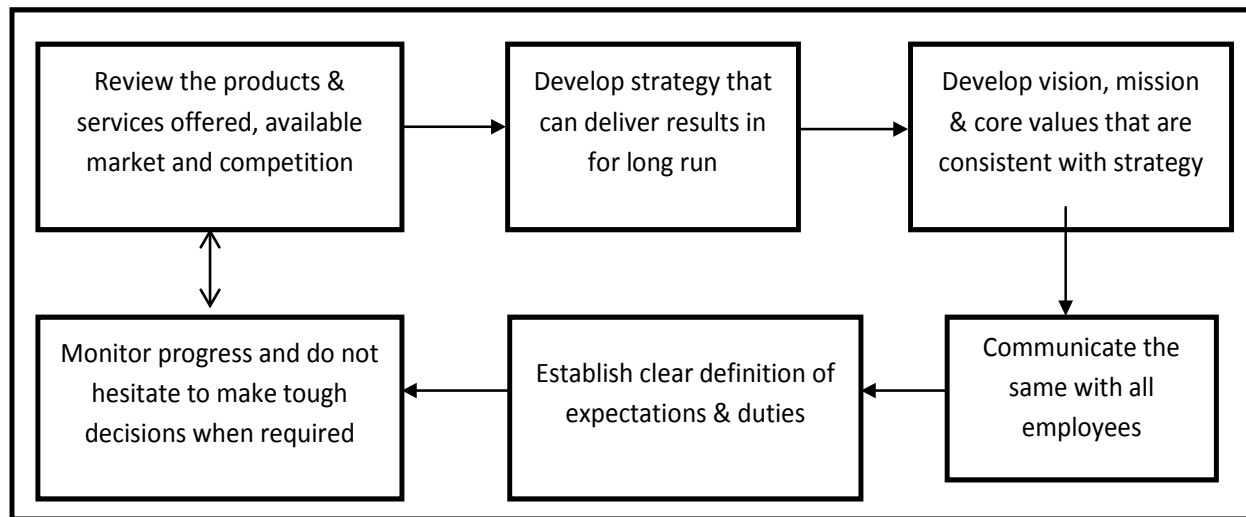
The following steps will be helpful in developing high performance executive teams and high performance organizations:

1. Review the product/service offering, market position and scope, as well as the competition. A complete knowledge of own organization, its position in market and competition is required in order to develop sound strategy.

2. Develop vision, mission, core values and goals. Ensure that they are consistent with strategies. In order to establish a high performance executive team to accomplish any task, it needs to first establish the vision, mission, core values, goals, and strategies.

3. Develop strategies that can deliver in long run. It may take time to develop such strategies, but this has to be done diligently to avoid or minimize any pitfalls.

4. Communicate strategic and tactical plans to all the employees. The vision, mission and core values make the roadmap clearer for the employees, thereby making it easier for the company to achieve its targets.

5. Establish clear definitions of expectations and duties. Responsibilities and accountabilities should be very clear. All employees have to be accountable and responsible for the duties assigned and expected of them.

6. Monitor the progress. Continuous monitoring is required to check compliance with the tasks and to make sure the project is on track. It can be achieved by setting milestones and making sure they are achieved within the time period they are planned. Any slippages will result either in modifying the course of action or changing the project delivery date.

If adopted by executive teams, a methodical approach as discussed above will definitely help executive teams continue to be high performing irrespective of the type of environment they operate in, kind of market they service, kind of product & service offered. When faced with challenges, the high performing teams do not see them as setbacks but as opportunities to improvise and suggest alternative strategies, thereby leading to further benefits.

CONCLUSION

High Performance executive teams are useful assets for any organization. They are comprised of skilled executive who understand strategic management, have mutual trust in one another, and work together valuing team goals above individual assignments. In order to be successful, executive teams must be carefully formed with the right executives chosen to participate. After shared experiences, executive teams may be used to accomplish a variety of actions such as oversee a layoff, increase motivation, or assist with accomplishing the organization's objectives. Regardless of the specific situations they face and the purposes for which they are formed, they can work together to help accomplish goals if they can function as high performance teams. High performing teams are driven by effective and efficient leaders who are intelligent enough to identify risks and opportunities and who can assign duties based on the merit and performance of employees. In summary, high performance executive teams:

- Develop goals and strategic plans;
- Enhance communication among team members and throughout the organization;
- Maintain positive relationships among members;
- Solve problems and prevent them when possible;
- Make decisions on a timely basis;
- Successfully manage functional (and eliminate dysfunctional) conflict;
- Facilitate productive meetings;
- Clarify roles for team members;
- Operate in a productive, efficient, and effective manner,
- Exhibit effective and efficient (high performance) team leadership; and
- Provide development opportunities for team members throughout the organization.

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TABLE 1
CHALLENGES AND SOLUTIONS

Challenge	Solution as seen by "High Performance Executive Teams"
Stagnancy or complacency	Executives are aware that organization cannot progress by being stagnant. Therefore, they need to keep things moving in the right direction. Also, they need to identify targets and milestones and measure the extent to which they meet targets.
De-motivated employees	Employee motivation is very high on the list. Various ways to motivate employees have to be identified. Some people want more money while others prefer non-monetary factors like job rotation, interesting job profiles, autonomy, being empowered to make decisions and improve operations. Executives have to make sure they motivate team members in right way.
Competition	High performance teams are aware of their environment in terms of their competitors. It is their job to ensure that there are innovations which add more value to their product/service offerings so that they can outpace & outperform the competition.
Lack of skilled workforce	In an era of high unemployment, this issue is easier to handle by matching the right candidate to the job i.e., matching job-ability fit. However, some skills are not readily available, and organizations have to provide training for new hires.
Transition issues	When a team member or executive is ready to leave, it is normally identified in advance, and sufficient time is provided for the transition to avoid any performance gap. However, preparation must be made in case someone leaves abruptly (i.e., in case of death, accepting another job, being involved in unethical or illegal behavior, etc.). Such preparation involves mentoring, training, job rotations, and other such knowledge and experience transfer options.
Globalization	High performance teams/executives are aware of the benefits and risks of being global. They calculate these risks before making any such transition or decision. There must be strategic and tactical plans to use globalization to their organization's advantage.
Political dynamics	Political dynamics are considered as part of risks that executives face. Understanding the political dynamics and being able to address them is crucial to an executive team and their organization's long-term survival.

Optimization of a Manufacturing Management Model by a First Variational Technique

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A multidimensional dynamic manufacturing management system with unknown production and sales functions is considered. This model consisting of seven state variables and three decision variables is optimized by a first variational technique. Convergence rates of advertisement, sales, inventory, and profit are obtained and illustrated through diagrams.

INTRODUCTION

In this article a manufacturing management model to market a new product is considered. Both production and sales are assumed to be unknown. The production rate is a function of time; the sales rate is a function of the contact rate between the persons with the knowledge and the persons without the knowledge about the product, as well as the advertisement rate to promote the sales of the product. This problem is solved by a first variational technique. The results of inventory, advertisement, sales, and profit are shown through figures.

LITERATURE REVIEW

Realistic representation of dynamic industrial and management systems usually result in models involving the optimization of a nonlinear objective function subject to a set of nonlinear differential equation constraints. Various computational techniques have been proposed for solution of such problems. Some of these techniques are dynamic programming, the generalized Newton-Raphson method combined with the calculus of variations or the maximum principle, and other techniques for solving nonlinear boundary value problems resulting from the application of the classical calculus of variations. Each technique has its own limitations and can be used only for a certain class of problems. The various above methods have been compared in detail in the literature of Bhatti (2000), Hendrix and Toth (2010), Jongen et al (2004), Levy (2009), Ruszczynski (2006), Sarker and Newton (2008), Snyam (2005), and Yang et al (2001).

The purpose of this paper is to illustrate the use of the first variational technique, according to Bazaraa et al (2006), Chong and Zak (2008), Fletcher (2001), Luenberger (2008), Pedregal (2004), Smith (1998), and Struwe (2008), for solving manufacturing management problems with end condition constraints. To test the effectiveness of this technique, a seven dimensional management problem involving production, inventory, advertisement, and sales is solved.

A MANUFACTURING MANAGEMENT MODEL

Both sales and production are assumed to be unknown. The process is shown in Figure 1. A raw material is fed into two reactors in series from which the desired product B is obtained. The raw material is a mixture of A, B, and C. Since B is a new product, both inventory and advertisement are assumed for B. We also assume that both A and C have an unlimited market at a fixed price and that they can be sold as soon as manufactured.

The differential equations representing the process are as follows.

$$V_1 \frac{dx_1}{dt} = q(x_0 - x_1) - V_1 k_{a1} x_1 \tag{1}$$

$$V_1 \frac{dy_1}{dt} = q(y_0 - y_1) - V_1 k_{b1} y_1 + V_1 k_{a1} x_1 \tag{2}$$

$$V_2 \frac{dx_2}{dt} = q(x_1 - x_2) - V_2 k_{a2} x_2 \tag{3}$$

$$V_2 \frac{dy_2}{dt} = q(y_1 - y_2) - V_2 k_{b2} y_2 + V_2 k_{a2} x_2 \tag{4}$$

where

x_1, x_2 = concentrations of A in reactors 1 and 2 respectively.

y_1, y_2 = concentrations of B in reactors 1 and 2 respectively.

v_1, v_2 = volumes of reactors 1 and 2 respectively.

x_0, y_0 = concentrations of A and B in the raw material.

$k_{a,1}$, $k_{a,2}$ = reaction rate constants for the production of B in reactors 1 and 2 respectively.

$k_{b,1}$, $k_{b,2}$ = reaction rate constants for the decomposition of B in reactors 1 and 2 respectively.

q = flow rate.

The reaction rate constants are given by the expressions

$$k_{a1} = G_a \exp\left(-\frac{E_a}{RT_1}\right) \qquad k_{b1} = G_b \exp\left(-\frac{E_b}{RT_1}\right)$$

$$k_{a2} = G_a \exp\left(-\frac{E_a}{RT_2}\right) \qquad k_{b2} = G_b \exp\left(-\frac{E_b}{RT_2}\right) \tag{5}$$

where G_a, G_b, E_a, and E_b are given constants. R is the gas constant and

T_1 and T_2 are the temperatures in reactors 1 and 2 respectively.
The rate of change of Inventory is represented by

$$\frac{dI(t)}{dt} = qy_2 - C_q Q(t) \tag{6}$$

where C_q represents the number of items bought by each informed person and $Q(t)$ is the number of informed persons at time t. To determine the sales, the diffusion model due to Teichroew (1964) represented by the following equation is used.

$$\frac{dQ(t)}{dt} = (C + a(t))Q(t)\left(1 - \frac{Q(t)}{N}\right) \tag{7}$$

where N is the total number of persons in the group and C is the natural contact coefficient. The number of contacts made can be increased through advertising. The problem is to determine the rate of advertising $a(t)$ so that the total net profit over the duration of the process is maximized.

If I_m represents the optimal inventory level and T_{1m} the feed temperature, the profit equation can be written as

$$J = \int_0^T (C_1 C_q Q(t) + C_2 q x_2 + C_3 q(1 - x_2 - y_2)$$

$$- C_I (I_m - I(t))^2 - C_A (a(t)Q(t))^2$$

$$- C_T ((T_{1m} - T_1)^2 + (T_1 - T_2)^2))dt \tag{8}$$

where C_1, C_2, and C_3 are the revenues per unit from sales of products B, A, and C respectively, C_1 is the cost of inventory, C_A is the cost of advertising, and C_T is the cost of production. Introducing an additional state variable $x(t)$, Equation (8) can be represented by

$$\frac{dx}{dt} = C_1 C_q Q(t) + C_2 q x_2 + C_3 q(1 - x_2 - y_2) - C_I (I_m - I(t))^2$$

$$- C_A (a(t)Q(t))^2 - C_T \left((T_{1m} - T_1)^2 + (T_1 - T_2)^2\right) \tag{9}$$

with the initial condition
$$x(0) = 0 \tag{10}$$

The problem now reduces to finding the decision sequences $T_1(t)$, $T_2(t)$, and $a(t)$ so that the final value of x, $x(T)$, is maximized subject to the constraints of Equations (1) through (4) and Equations (6), (7) and (9). This is a seven dimensional state variable problem with three decision variables.

OPTIMIZATION BY A FIRST VARIATIONAL TECHNIQUE

Applying a first variational technique from Bazaraa (2006), Chong (2008), Fletcher (2001), Luenberger (2008), Pedregal (2004), Smith (1998), and Struwe (2008), the following recurrence relations are obtained.

$$\left.\frac{\partial S_1}{\partial x_1}\right|_t = \left.\frac{\partial S_1}{\partial x_1}\right|_{t+\Delta} + \left(\left.\frac{\partial S_1}{\partial x_1}\right|_{t+\Delta}\left(-\frac{q}{V_1} - k_{a1}\right)\right)\bigg|_t + \left.\frac{\partial S_1}{\partial y_1}\right|_{t+\Delta} k_{a1}\big|_t + \left.\frac{\partial S_1}{\partial x_2}\right|_{t+\Delta}\left(\frac{q}{V_2}\right)\bigg|_t)\Delta \tag{11}$$

$$\frac{\partial S_1}{\partial y_1}\Big|_t = \frac{\partial S_1}{\partial y_1}\Big|_{t+\Delta} + \left(\frac{\partial S_1}{\partial y_1}\Big|_{t+\Delta}\left(-\frac{q}{V_1}-k_{b1}\right)\Big|_t + \frac{\partial S_1}{\partial y_2}\Big|_{t+\Delta}\left(\frac{q}{V_2}\right)\Big|_t \right) \qquad (12)$$

$$\frac{\partial S_1}{\partial x_2}\Big|_t = \frac{\partial S_1}{\partial x_2}\Big|_{t+\Delta} + \left(\frac{\partial S_1}{\partial x_2}\Big|_{t+\Delta}\left(-\frac{q}{V_2}-k_{a2}\right)\Big|_t + \frac{\partial S_1}{\partial y_2}\Big|_{t+\Delta}k_{a2}\Big|_t + \frac{\partial S_1}{\partial x}\Big|_{t+\Delta}(C_2 q - C_3 q)\Big|_t \right)\Delta \qquad (13)$$

$$\frac{\partial S_1}{\partial y_2}\Big|_t = \frac{\partial S_1}{\partial y_2}\Big|_{t+\Delta} + \left(\frac{\partial S_1}{\partial y_2}\Big|_{t+\Delta}\left(-\frac{q}{V_2}-k_{b2}\right)\Big|_t + \frac{\partial S_1}{\partial I}\Big|_{t+\Delta}q + \frac{\partial S_1}{\partial x}\Big|_{t+\Delta}(-C_3 q) \right)\Delta \qquad (14)$$

$$\frac{\partial S_1}{\partial I}\Big|_t = \frac{\partial S_1}{\partial I}\Big|_{t+\Delta} + \left(\frac{\partial S_1}{\partial x}\Big|_{t+\Delta}(2C_I(I_m - I(t)))\right)\Delta \qquad (15)$$

$$\frac{\partial S_1}{\partial Q}\Big|_t = \frac{\partial S_1}{\partial Q}\Big|_{t+\Delta} + \left(-\frac{\partial S_1}{\partial I}\Big|_{t+\Delta}C_q + \frac{\partial S_1}{\partial Q}\Big|_{t+\Delta}(C + a(t))\left(1 - \frac{2Q(t)}{N}\right)\right.$$
$$\left. + \frac{\partial S_1}{\partial x}\Big|_{t+\Delta}\left(C_1 C_q - 2C_a a^2(t)Q(t)\right)\Delta \right. \qquad (16)$$

$$\frac{\partial S_1}{\partial x}\Big|_t = \frac{\partial S_1}{\partial x}\Big|_{t+\Delta} \qquad (17)$$

The final conditions for Equations (11) through (17) are

$$\frac{\partial S_1}{\partial x_1}\Big|_T = 0\,; \frac{\partial S_1}{\partial y_1}\Big|_T = 0\,; \frac{\partial S_1}{\partial x_2}\Big|_T = 0\,; \frac{\partial S_1}{\partial y_2}\Big|_T = 0\,; \frac{\partial S_1}{\partial I}\Big|_T = 0\,; \frac{\partial S_1}{\partial Q}\Big|_T = 0\,; \frac{\partial S_1}{\partial x}\Big|_T = 1 \qquad (18)$$

The recurrence relationships for the decision variables are as follows.

$$\frac{\partial S_1}{\partial T_1}\Big|_t = \left(\frac{\partial S_1}{\partial x_1}\Big|_{t+\Delta}\left(-x_1\frac{\partial k_{a1}}{\partial T_1}\right)\Big|_t + \frac{\partial S_1}{\partial y_1}\Big|_{t+\Delta}\left(x_1\frac{dk_{a1}}{dT_1} - y_1\frac{dk_{b1}}{dT_1}\right)\Big|_t\right.$$
$$\left. + \frac{\partial S_1}{\partial x}\Big|_{t+\Delta}(-C_T(-2(T_{1m}-T_1)\Big|_t + 2(T_1-T_2)\Big|_t)))\right)\Delta \qquad (19)$$

$$\frac{\partial S_1}{\partial T_2}\Big|_t = \left(\frac{\partial S_1}{\partial x_2}\Big|_{t+\Delta}\left(-x_2\frac{dk_{a2}}{dT_2}\right)\Big|_t + \frac{\partial S_1}{\partial y_2}\Big|_{t+\Delta}\left(x_2\frac{dk_{a2}}{dT_2} - y_2\frac{dk_{b2}}{dT_2}\right)\Big|_t\right.$$
$$\left. + \frac{\partial S_1}{\partial x}\Big|_{t+\Delta}(-C_T(-2(T_1-T_2)\Big|_t)))\right)\Delta \qquad (20)$$

$$\frac{\partial S_1}{\partial a}\Big|_t = \left(\frac{\partial S_1}{\partial Q}\Big|_{t+\Delta}\left(Q(t)-\frac{Q^2(t)}{N}\right) + \frac{\partial S_1}{\partial x}\Big|_{t+\Delta}-\left(2C_a a(t)Q^2(t)\right)\right)\Delta \qquad (21)$$

The improved decision can be obtained from

$$\theta_{j\,new}(t) = \theta_{j\,old}(t) + \frac{\Delta\phi_j \left.\frac{\partial S_1}{\partial \theta_j}\right|_t}{\sum_{t=0}^{T} \left.\frac{\partial S_1}{\partial \theta_j}\right|_t} \qquad j = 1, 2, 3 \qquad (22)$$

where $\Delta\phi_j$ is the desired improvement in the objective function due to the jth decision. Equations (11) through (21) are the recurrence relations for this problem. It should be noted that since the decision vector is multi-dimensional, individual improvements $\Delta\phi_j$ are used for each control.

The numerical values used are listed in Table 1. The initial conditions are

$x_1(0) = x_2(0) = 0.53$

$y_1(0) = y_2(0) = 0.43$

$I(0) = 8.0$

$Q(0) = 1.0$ $\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad (23)$

To start the recursive process, the following initial approximations are used for the decision variables

$T_1(t) = T_2(t) = 345°k; \;\; a(t) = 3.0; \text{ for } 0 \le t \le 1$ $\qquad\qquad (24)$

The convergence rates of advertisement, sales, inventory, and profit are shown in Figures 2 through 5. A maximum profit of 66.05 was obtained in approximately 260 iterations.

CONCLUSIONS

The manufacturing management model considered in this paper has previously been solved by a different approach namely a conjugate gradient method by Naadimuthu et al (2009). The first variational method utilized in this work is conceptually much simpler and computationally much easier compared to the conjugate gradient technique. Both the above methods reached approximately the same optimum value of the objective function.

Although in this study we have limited ourselves in the application of the first variational technique to the optimization of a manufacturing management model, this approach can be extended to various other optimization processes dealing with complex business modeling situations.

TABLE 1
NUMERICAL VALUES USED FOR THE PARAMETERS

PARAMETERS	VALUES
R	2.0
q	60.0
V_1	12.0
G_a	0.535×10^{11}
E_a	18000.0
V_2	12.0
G_b	0.461×10^{18}
E_b	30000.0
C_q	1.0
C	1.0
N	100.0
C_1	5.0
C_2	0.0
C_3	0.0
C_I	1.0
C_A	0.01
C_T	0.0005
x_0	0.53
y_0	0.43
T_{1m}	$340.0^\circ k$
I_m	20.0

FIGURE 1
BLOCK DIAGRAM OF THE MODEL
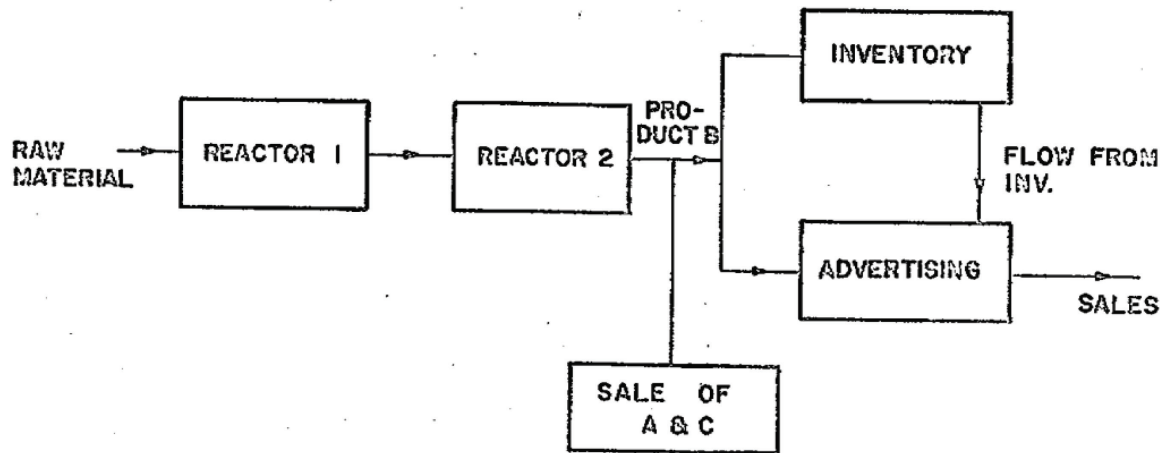
FIGURE 2
CONVERGENCE RATE OF ADVERTISEMENT, a(t)
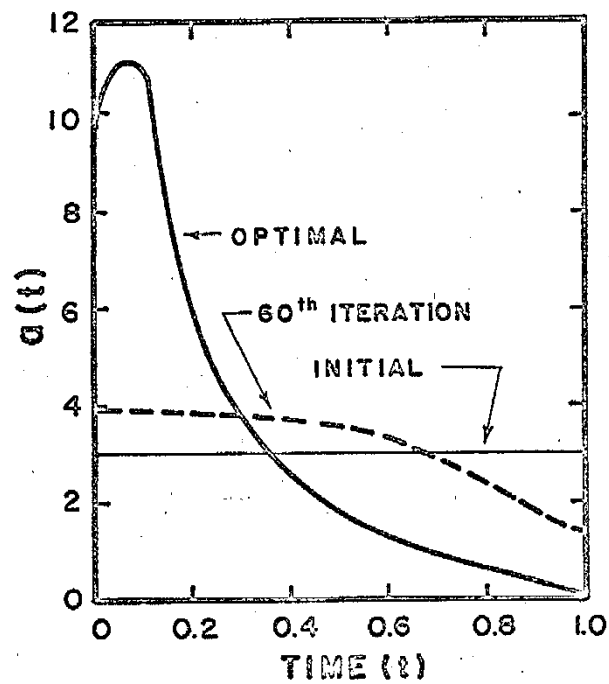
FIGURE 3
CONVERGENCE RATE OF SALES, Q(t)
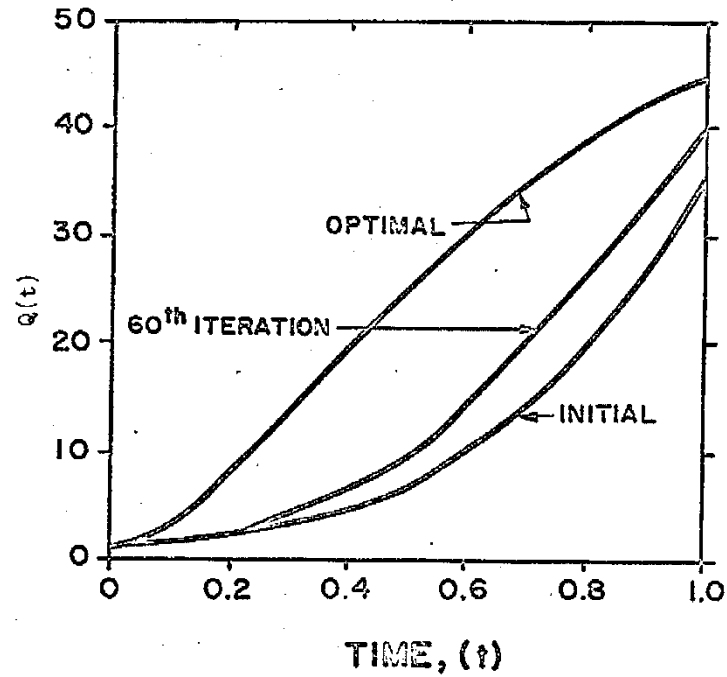
FIGURE 4
CONVERGENCE RATE OF INVENTORY, I(t)
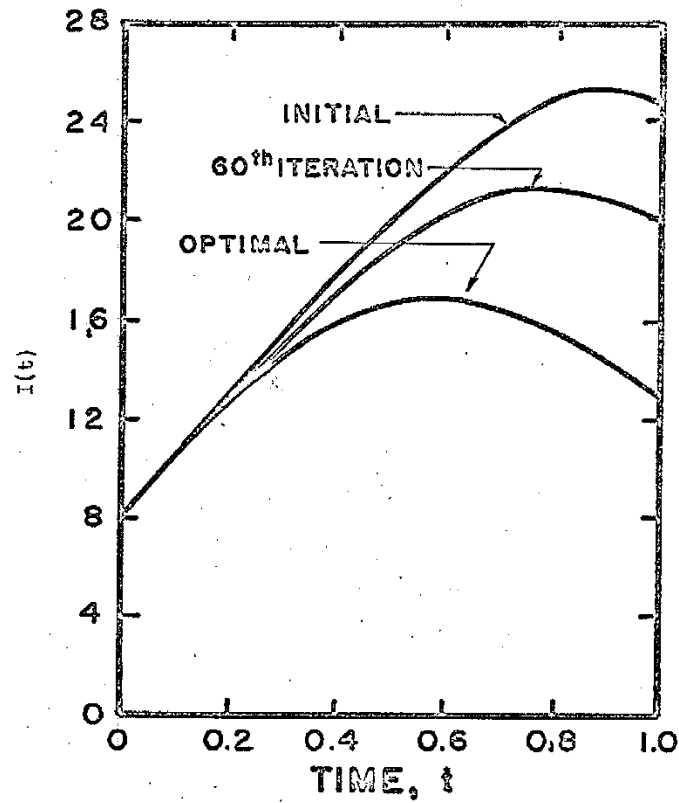
FIGURE 5
CONVERGENCE RATE OF PROFIT, X(t)
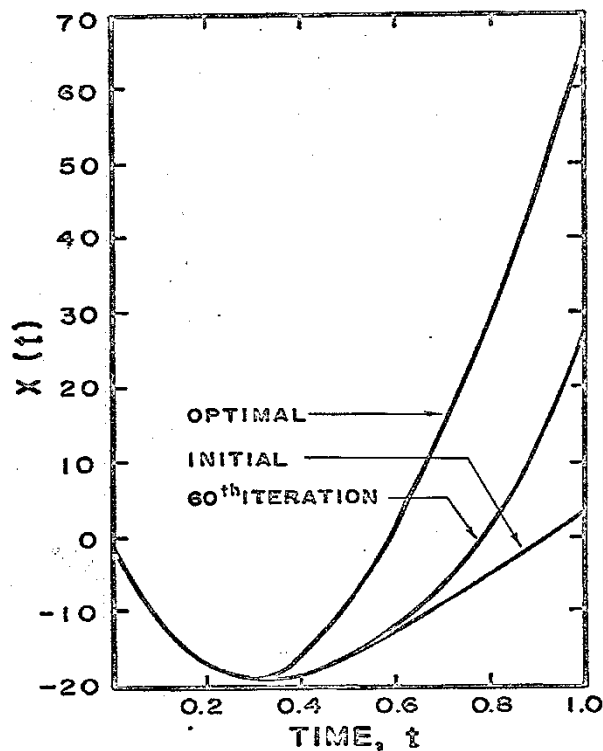
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What Small Business Owners Should Know About Employment Law

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The ability to identify and manage HRM problems in small businesses is a key area in which small firms can gain competitive advantage. For this paper, a Small Business (SBO) will refer to those companies with 15 or less employees. The authors present five important legal topics that should assist SBOs in meeting some of the most critical employment law regulations. A brief overview of these areas includes: Fair Labor Standards Act, Title VII of the Civil Rights Act of 1964, Equal Employment Opportunity Commission, Equal Pay Act of 1963, and Americans with Disabilities Act of 1990.

The American Dream -- the Pot of Gold at the end of the rainbow. It means something different to everyone. To some it is the reality of owning their own business. Unfortunately, some of those dreams turn into nightmares due to negligence in preparing for the many obligations associated with business ownership. All too often, small business owners are so concerned with making a profit and keeping the doors open that they fail to address those things that can bring disasters that often close the doors on their American Dream.

As with any business, regardless of its size, the most important asset of the company is its people, and that is also the most challenging asset to manage. Ambitious small business owners may think that it cannot be that hard to manage the day-to-day affairs of 15 or 20 employees. For the most part, they would be right. However, on any given day, those few employees can be more challenging for the owner than hundreds of employees may be in a larger company. The reality is not the number of employees, but the complex dynamics of the situations and problems that can occur. This is where the Human Resource Management Discipline (HRM) comes into play.

HRM problems have been an area of interest in entrepreneurship research for at least 20 years. The inability to identify and manage HRM problems in a small to mid-sized firm is a common cause of failure, and conversely the ability to perceive and overcome HRM problems is a key area in which small firms can gain competitive advantage (Barney, 1995; Hornsby & Kuratko, 1990). Research indicates that small business owners are not likely to focus on administrative issues, such as HRM, unless they perceive such issues to be at a critical level of importance to the firm (Cooper, Ramachandran,& Schooman,1997). These owners and managers are frequently time starved and, as a result, are unlikely to perceive or may even ignore minor issues. Thus, HRM problems are unlikely to be in the forefront of the owner's mind until they reach an acute level (1997). Lack of time to attend to details along with a lack of infrastructure can quickly bring legal problems to the small business owner (SBO). Even so, it is important for the SBO to be very knowledgeable of the laws and statutes that relate to its business creation, operation and

management, as well as other current employment trends and issues. The HRM function presents both opportunities and challenges for the SBO. The legal relationship between employer and employee is the core of the working relationship, regardless of the number of employees.

Historically, Congress has generally sought to exempt *small businesses* from federal regulation in the area of employment law. This usually means the employer has fewer than 15 employees. However, some federal statutes define thresholds at 20, 50, or 100 employees, and some federal thresholds start at one employee. "Typically, state statutes ratchet down the numbers even lower than their federal counterparts- often to just one employee" (Bryant, 2010). Local, state and federal requirements may differ according to location. For this paper, a *Small Business* will refer to those companies with 15 or less employees. The authors present five important legal topics that should assist SBOs in meeting some of the most critical employment law regulations.

IMPORTANT EMPLOYMENT LAWS AND REGULATIONS

A brief overview of five employment law areas important to every SBO follows. The key to success in all five of these areas is documentation. All important business transactions must be in writing. "Documentation, when prepared carefully, confidentially and according to company policies, is the backbone of human resources" (Mayhew, 2011). In general, if it is not written down, it did not happen.

1. FLSA - Fair Labor Standards Act. This act was passed in 1938 and establishes the minimum wage, overtime pay, recordkeeping, and youth employment regulations that affect full-time and part-time employees in the private sector, as well as federal, state, and local governments. This act also covers nonexempt employees. Nonexempt employees are defined as those employees who are subject to overtime and time-keeping requirements. This means that employees have to keep track of the hours they work in a week. They must be paid overtime for any hours worked over 40 in a given work week, unless there are differing state regulated daily overtime requirements. The rate of overtime pay for any hours worked over 40 in a workweek must be at least one and one-half times their regular pay rate. Pay due to an employee who is covered under FLSA is due on the regular payday of the pay period. Any deductions made to an employee's pay for items such as cash shortages, required uniforms, tools, etc., are not legal and cannot be deducted if the deduction causes the employee's wages or overtime rate to fall below the minimum wage rate. Some employment practices are not regulated by the FLSA. The act does not require employers to provide vacation days, holidays, or premium pay for working on weekends or holidays. Employers do not have to provide sick pay when an employee is out sick nor do they have to pay for meal or rest periods. The act does not stipulate that an employer has to give pay raises or provide fringe benefits. Under the act, employers do not have to provide severance pay to discharged employees. In addition, an employer does not have to issue a discharge notice or give a reason for discharge, and they are not required to give discharged employees immediate payment of their final wages.

Making a determination as to who is covered under the FLSA is relatively simple. All employees working for a company that engages in interstate commerce, or produces goods for interstate commerce, fall under the FLSA. If the new business is one in which employees will receive tips, the tips can be considered part of their wages provided the employee is paid at least $2.13 an hour in straight wages. However, if this is your plan, employees must be informed that their tips will be included as part of their pay. Employers must be able to show that employees received at least minimum wage. If combined tips and wage do not equal at least minimum wage, the employer will have to make up the difference. "Some employees are exempt from the overtime pay provisions or both the minimum wage and overtime pay provisions. Because exemptions are generally narrowly defined under FLSA, an employer should carefully check the exact terms and conditions for each. Detailed information is available from the local Wage-Hour Offices" (SHRM, 2008)

The FLSA requires that employers keep records of time worked and wages. A time clock is not required, but accurate time information must be captured and retained. There are no set rules as to how

records should be kept. The following records must be kept for employees subject to the minimum wage provisions or both the minimum wage and overtime pay provisions:

- personal information, including employee's name, home address, occupation, sex and birth date if under 19 years of age
- hour and day when workweek begins
- total hours worked each workday and each workweek
- total daily or weekly straight-time earnings
- regular hourly pay rate for any week when overtime is worked
- total overtime pay for the workweek
- deductions from or additions to wages
- total wages paid each pay period
- date of payment and pay period covered (SHRM, 2008).

Accurate record keeping is a must in any business but especially in the small business environment. Failure to accurately record employees' time can result in miscalculation of overtime pay. Left unabated, these inaccuracies can result in employee law suits, and budget busting fines by the U.S. Department of Labor. After an approved amendment in 2008, the maximum civil penalties for FLSA violations were increased to $1,100 per violation. "The top 10 private settlements for wage and hour class-action lawsuits totaled $252.7 million last year, according to Seyfarth Shaw's *Annual Workplace Class Action Litigation Report*. The report notes that the volume of wage and hour-related litigation has grown exponentially during the past several years, and the data suggest that employees and their attorneys are bypassing DOL and pursuing private lawsuits more frequently" (Arnold, 2009).

2. Title VII of the Civil Rights Act of 1964. This act applies to all employers with 15 or more employees including federal, state and local governments, employment agencies, and labor organizations. It protects against employment discrimination which is based on sex, race, color, religion, or national origin. Equal employment opportunities cannot be denied to an individual based on any of these characteristics. It also protects individuals based on these characteristics regarding wages and benefits, recruiting, hiring, promotion, transfer, performance measurements, job training, discipline and discharge. "Examples of potentially unlawful practices include: (1) soliciting applications only from sources in which all or most potential workers are of the same race or color; (2) requiring applicants to have a certain educational background that is not important for job performance or business needs; (3) testing applicants for knowledge, skills or abilities that are not important for job performance or business needs" (SHRM, 2011). When asking for information pertaining to these characteristics, there should be a legitimate occupational qualification or business need for the information, and it should be collected on all individuals involved. If information is needed for affirmative action reasons, it is best to have employees fill out a separate form from the employment application to address this need.

Title VII is an all-encompassing act. It affects almost all areas of employee relations including hiring, firing, promotions, harassment, training, wages, and benefits. The act should not be taken lightly due to the legal implications it can bring upon a business. Title VII covers all types of harassment and hostile work environment situations. This includes the total prohibition of offensive behavior, derogatory comments, or physical conduct based on an individual's race/color. The conduct has to be unwelcome and offensive to the employee. Both the employee and the employer have a responsibility when it comes to this type of behavior. The employer is responsible for taking appropriate action to see to it that the behavior does not happen and, if it does, it is investigated and then followed by appropriate action to correct the problem. The employee is responsible for reporting any type of harassment when it occurs to prevent it from continuing.

One of the most notable Title VII cases involving harassment in the workplace is no doubt the Clarence Thomas Supreme Court confirmation hearing. The hearing took a dramatic and historical turn

when Anita Hill came forward with accusations that Clarence Thomas had sexually harassed her during the time that she had worked for Thomas at the EEOC. She alleged that she had been harassed by Thomas with inappropriate discussions of sexual acts and pornographic films after she had turned down his advances and requests for dates.

This case eventually turned into a verbal exchange of he said, she said, but it had far reaching effects on the employment environment within the United States. Prior to this confirmation hearing, sexual harassment was a topic that was very seldom if ever openly discussed in the business community. These hearings produced a nationwide heightened awareness of sexual harassment and its potential liability in the workplace. Now all prudent businesses, regardless of their size, should exercise extreme diligence when it comes to sexual harassment and make sure appropriate policies and training are in place for all employees. Based on filings with the EEOC, sexual harassment claims have more than doubled and awards have quadrupled to more than $27.8 million since this landmark case.

3. Equal Employment Opportunity Commission – EEOC. The U.S. Equal Employment Opportunity Commission (EEOC) is an independent federal law enforcement agency created by the Civil Rights Act of 1964 which went into effect on July 2, 1965. It was created to oversee a number of Federal Acts including Title VII that makes it illegal to discriminate against a job applicant based on race, color, religion, sex, or national origin. Most of the laws that the EEOC oversees relate to employers with 15 or more employees with the exception of the Age Discrimination in Employment Act (ADEA), which applies to employers with 20 employees or more. The EEOC has authority over Title VII, The Pregnancy Discrimination Act, The Equal Pay Act of 1963, The Age Discrimination in Employment Act of 1967, Title 1 of the American with Disabilities Act of 1990, Sections 102 and 103 of the Civil Rights Act of 1991, Sections 501 and 505 of the Rehabilitation Act of 1973, and The Genetic Information Nondiscrimination Act of 2008. The EEOC has the authority to investigate any allegations of discrimination and then to issue their findings. They will work with the employee and the employer to try and settle the charge, but if a settlement cannot be reached they have the authority to file a lawsuit on behalf of the employee.

The EEOC is one of the areas with which new SBOs should familiarize themselves extensively. Even the best of Human Resource Departments with airtight policies and procedures at some point in time will have to deal with the EEOC. It can be both an intimidating and expensive process for a business. Documentation is the greatest ally when it comes to an EEOC hearing. An employee can file an EEOC claim in person or by mail within 180 days of the alleged discrimination. "The 180 calendar day filing deadline is extended to 300 calendar days if a state or local agency enforces a state or local law that prohibits employment discrimination on the same basis" (Commission, 2011).

When an EEOC claim is filed against a business, the business owner will receive notice within 10 days along with the name of the investigator who has been assigned to the case. At this time, the charging employee will be asked to provide information and paperwork pertaining to the charge. The investigator will review the provided information and decide if there is reasonable cause. Employers will be asked to submit a *Position Paper* stating their side of the story. This is where the employer needs to document all information concerning the case. The employer may also receive a "Request for Information" (RFI) asking for copies of personnel policies, personnel files of all individuals involved, and any other pertinent information deemed necessary. The employer may also receive a request for an on-site visit at which time the investigator may want to interview witnesses to the alleged discrimination. Once the investigator has finished his/her investigation, the EEOC will make a determination. If there is no reasonable finding of discrimination, the charging party will be issued a letter called a *Dismissal and Notice of Rights* explaining that he or she has 90 days to file a lawsuit in Federal Court. If the EEOC determines there is cause, both parties will be issued a *Letter of Determination* stating that there is reasonable cause and will be invited to seek resolution through an informal process known as conciliation.

If conciliation fails, the EEOC can file a lawsuit in Federal court on behalf of the employee or the EEOC will send the charging party a *Notice of Right to Sue* in Federal Court within 90 days. For example, "The EEOC filed suit (*Equal Employment Opportunity Commission v. Cavalier Telephone Company,*

Inc.; Civil Action No. 3:10-cv-664 in U.S. District Court for the Eastern District of Virginia, Richmond Division) after failing to reach a pre-litigation settlement through its conciliation process" (Hastings, 2011). This suit filed in May 2003 involved the hiring practices of Cavalier Telephone Company. Cavalier had a practice of not hiring applicants age 40 or older for sales account executive positions. The company had expressed both verbally and in writing that they were seeking candidates who were recent college graduates in their 20's and 30's. In their filing, the EEOC also included two incidents of retaliations. One of these employees resigned and the other was terminated after continuing to complain about age discrimination. After eight years, Cavalier Telephone Company, Inc., agreed to pay $1 million to the two individuals who claimed retaliation and to the class action participants of 40 and older individuals who were not hired because of age according to the EEOC findings. In addition to the $1 million in awards, Cavalier had to enter into a consent decree with the EEOC to help prevent the same situation from occurring again.

All claims filed with the EEOC should be taken very seriously. Not all claims result in law suits, but as this case emphasizes, they can be very costly. A case like this can be devastating to a small business. Even if it is a claim with little or no monetary value, it can be very costly in time resources for small businesses that do not typically have Human Resource Departments.

4. Equal Pay Act of 1963. This act falls under the jurisdiction of the EEOC. "The Equal Pay Act requires that men and women be given equal pay for equal work in the same establishment. The jobs need not be identical, but they must be substantially equal. It is job content, not job titles, that determines whether jobs are substantially equal. Specifically, the EPA provides that employers may not pay unequal wages to men and women who perform jobs that require substantially equal skill, effort and responsibility, and that are performed under similar working conditions within the same establishment." (SHRM, Equal Pay Act of 1963, 2011) These factors are summarized as follows:

- *Skill:* the experience, ability, education and training required for the job; based on the skills required for the job, not the skills of the individual.
- *Effort:* the physical or mental energy used to perform the position.
- *Responsibility:* based on the overall accountability of the position.
- *Working Conditions:* based on physical surroundings and hazards.
- *Establishment:* a distinct physical location and not an entire business.

It is legal to have pay differentials between men and women which are referred to as affirmative defenses, provided they are part of a system that is based on seniority, merit, or quantity/quality of production.

5. Americans with Disabilities Act of 1990. ADA was one of the most controversial pieces of legislation passed during the twentieth century. Businesses viewed ADA as the piece of legislation that was going to cause a large number of businesses to close their doors. Now more than 20 years after the passage of the act, it is still being challenged in the courts daily. This legislation has been challenged before the U.S. Supreme Court. The SBO should be concerned with Title I of the ADA. "Title I of the Americans with Disabilities Act (ADA) of 1990 prohibits private employers, state and local governments, employment agencies and labor unions from discriminating against qualified individuals with disabilities in job application procedures, hiring, firing, advancement, compensation, job training and other terms, conditions and privileges of employment" (SHRM, 2011). The Act came about as a result of the U.S. Congress not feeling that the disabled individuals in our country, including our service men and women, were getting a fair opportunity at employment due to their disabilities. Thus, ADA was born.

Under the act, a *disabled* individual is someone with a physical or mental impairment (that substantially limits one or more major life activities), the impairment is documented, and the individual is regarded as having the impairment. A *qualified* individual is a person with a disability who can, with or without a reasonable accommodation, perform the essential functions of the job in question. *Reasonable Accommodation* may include but is not limited to making the existing facility accessible to the disabled;

restructuring the job or modifying the work schedule or potentially reassigning the person to a vacant job (a new position does not have to be created); modifying equipment, training materials or examinations; or providing a qualified reader or interpreter.

"An employer is required to make a reasonable accommodation to the known disability of a qualified applicant or employee if it would not impose an *undue hardship* on the operation of the employer's business. Undue hardship is defined as an action requiring significant difficulty or expense when considered in light of factors such as an employer's size, financial resources and the nature and structure of its operation" (SHRM, 2011). For example, a firm may have a position open for an Accountant in the Accounting Department located on the third floor of the building. After careful consideration it is found that the most qualified person for the position is an individual who is confined to a wheel chair, but after doing a cost analysis it is deemed cost prohibitive to put in an elevator. Therefore, the elevator would not be a reasonable accommodation. If the person could be located in a vacant office on the first floor and someone could collect their work several times a day, this would, in fact, be a reasonable accommodation. The act does not say nor does it imply that production or quality standards must be lowered, nor does the employer have to provide personal use items like glasses or hearing aids.

Title I also covers medical examination and drug and alcohol abuse. The act restricts employers from asking job applicants about their disability. You cannot ask about the severity or the nature of their disability. You can, however, question applicants about their ability to perform specific job functions. The act does not prohibit you from making a job offer contingent upon the results of a physical exam and drug screen as long as you do the same for all employees in the same or similar jobs.

Persons with disabilities who engage in illegal use of drugs are *not* covered by the ADA. As stated in Title 42, Chapter 126 "Equal Opportunities for Individuals with Disabilities," Section 12114, Sub-chapter (d) of the act, "a test to determine the illegal use of drugs shall not be considered a medical examination" (Justice, 2009).

Due to the large amount of litigation that has been brought before the court system, and a number of the decisions that have been handed down by the Supreme Court, the Americans with Disabilities Act was amended and the new law was signed on September 25, 2008, by President George W. Bush. This new law is referred to as the ADA Amendments Act of 2008 (ADAAA) and became effective on January 1, 2009. The Act was amended to restore the intent and protections of the Americans with Disabilities Act of 1990.

"The ADAAA focuses on the discrimination at issue instead of the individual's disability" (Center, 2009). "The Act emphasizes that the definition of *disability* should be interpreted broadly. The Act makes important changes to the definition of the term *disability* by rejecting the holdings in several Supreme Court decisions and portions of Equal Employment Opportunity Commission's (EEOC) ADA regulations" (Commission, Notice Concerning The Americans With Disabilities Act (ADA) Amendments Act of 2008, 2008). The Act retains the ADA's basic definition of *disability* as an impairment that substantially limits one or more major life activities, a record of such an impairment, or being regarded as having such an impairment. However, it changes the way that the statutory terms should be interpreted in several ways. Most significantly, the Act:

- Directs EEOC to revise the portion of its regulations that defines the term *substantially limits*;
- Expands the definition of *major life activities* by including two non-exhaustive lists:
  1. The first list includes many activities that the EEOC has recognized (e.g., walking) as well as activities that EEOC has not specifically recognized (e.g., reading, bending, and communicating);
  2. The second list includes major bodily functions (e.g., functions of the immune system, normal cell growth, digestive, bowel, bladder, respiratory, neurological, brain, circulatory, endocrine, and reproductive functions);
- States that mitigating measures other than ordinary eyeglasses or contact lenses shall not be considered in assessing whether an individual has a disability;
- Clarifies that an impairment that is episodic or in remission is a disability if it would substantially limit a major life activity when active;

- Changes the definition of *regarded as* so that it no longer requires a showing that the employer perceived the individual to be substantially limited in a major life activity, and instead says that an applicant or employee is *regarded as* disabled if he or she is subject to an action prohibited by the ADA (e.g., failure to hire or termination) based on an impairment that is not transitory and minor;
- Provides that individuals covered only under the *regarded as* prong are not entitled to reasonable accommodation (Commission, 2008).

The intent was to make it easier for an individual to seek protection under the ADA. In its original form, most laws or acts were intended to help employers and employees maintain a working relationship. However, every time a law or act is tested within our judicial system and new interpretations are issued, these same laws seem to put a wedge between the very entities they were meant to bring together. The legal aspects of business are ever changing and must be a continuing study for anyone in the business arena.

CONCLUSION

Developing competitive advantage through better understanding and implementation of HRM practices may be more important to SBOs because small businesses do not usually have the tangible resource bases to compete with larger and more established firms (Cardon & Stevens, 2004). The advantages developed through HRM can result in intangibles such as a positive organizational culture and a strong firm knowledge base. Such intangible assets are valuable, rare, and difficult to imitate (Arthur, 1994; Huselid, 1995).

For the SBO the legal aspects of running a business are only a small part of a very large and dynamic picture. Running a small business is no small task. SBOs bear the burden of their family, their employees, customers, and the community, but the rewards can be great.

It is important to build a solid foundation of systems and processes around complying with all of the federal, state and local government regulations. The road to success for SBOs will not always be a smooth one. "You must maintain unwavering faith that you can and will prevail in the end, regardless of the difficulties, and at the same time have the discipline to confront the most brutal facts of your current reality, whatever they might be". (Collins, 2001).

RECOMMENDATIONS

An extension of this project could include developing a Resource Guide specifically designed for SBOs with 15 employees or less to include the most up-to-date listings of laws, statutes, agencies, resources (both online and print), and historical examples of legal cases most pertinent for these small firms and business owners.

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Does Serving the Poor Reduce Hospital Quality? An Assessment of Cross-Sectional Data – 2006-2009

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Current health reform legislation includes revenue reductions to hospitals not meeting quality standards set by the Centers for Medicare and Medicaid Services. Using publicly available data for hospitals from 2006-2009, the study sought to determine the extent to which services to the poor and uninsured resulted in lower quality of patient care in hospitals in the United States. Multivariate regression indicated a significant relationship between higher levels of volume for poor/uninsured patients and lower performance on quality measures that will impact future payments. Thus, hospitals serving the poor/uninsured may lose future payments, putting these hospitals at financial risk.

INTRODUCTION

The challenge of serving the poor continues to grow for providers and healthcare policy makers in the United States (Bazzoli, Clement, & Hsieh, 2010). Low reimbursements for services to Medicaid beneficiaries (Blue Cross, Blue Shield, 2008) or non-payment by the uninsured contribute to significant strains on hospital financial stability (Zwanziger, Khan, & Bamezai, 2010). This effect may be magnified for organizations serving as "safety net" facilities – care providers for high proportions of Medicaid and Uninsured patients (Bazzoli, et al., 2012). At the same time, hospitals are increasingly accountable for demonstrated quality in the services they render to patients. Pay for performance (P4P) reimbursement strategies such as the Value-Based Purchasing program included in the Patient Protection and Affordable Care Act of 2010, and being implemented by the Centers for Medicare and Medicaid Services (CMS), will place hospitals at risk of funding losses if quality does not meet established standards. Such losses could contribute to closure or conversion of facilities away from a safety net mission. A difficult paradox thus evolves for hospitals in this nation – maintaining or improving quality of care while continuing to serve large proportions of patients that cannot fully reimburse the costs of their care. This work seeks to quantify the extent to which a hospital's burden of care to the poor may adversely influence performance on quality measures - measures that will soon impact hospital reimbursements and thus their financial viability. Such an outcome could put access to care by the poor and uninsured at great risk (Bazzoli, et al., 2012).

The approach taken is a longitudinal evaluation of a national cross-section of hospitals centered on answering two research questions. The first question to be addressed is:

Does an increase in the proportion of patients with Medicaid or no insurance served by a hospital adversely impact quality as measured by CMS Hospital Compare data across U.S. hospitals over a period of more than one year?

Additionally, a reduction in staffing levels has been noted as an adaptive strategy by hospitals seeking to maintain financial viability in the face of constrained reimbursements associated with larger proportions of patients with Medicaid or no insurance (Schuhmann, 2008). The extent to which this tactic is used has been surmised to adversely impact quality measures of patient care (Lindrooth et al., 2006). Therefore, a second research question explored is:

Do changes in staffing levels associated with increased proportions of patients with Medicaid or no insurance have an adverse impact on quality as measured using the CMS Hospital Compare data?

BACKGROUND AND LITERATURE REVIEW

The decline in availability of employer-based health insurance along with a decline in general employment (Cunningham, 2008) and reductions in payment rates for Medicaid services (Fronstin, 2005) form a multi-faceted challenge to healthcare providers today. Medicaid payment rates have been estimated at approximately 87% of the costs of care (Blue Cross Blue Shield, 2008) and the uninsured may contribute even less payment toward the costs of their care (Cram, et al., 2010). Hospitals are not able to control environmental factors that drive their patient mix, and therefore might adapt in a way that has a negative impact on quality measures. As an example the requirements of the Emergency Medical Treatment and Active Labor Act (EMTALA) compels hospitals to provide medical stabilization services to any patient without consideration of ability to pay. In view of revenue reductions brought on by higher volumes of care to patients unable to pay the costs of their care, management may be forced to respond with decisions to limit resources devoted to other patient care services to keep their facilities open.

There is ample evidence of resource limitation by management as an adaptive behavior to revenue constraint noted in the literature. Dranove and colleagues (1998) observed that hospitals serving larger proportions of Medicaid patients tended to decrease the quality or number of services provided to all patients if unsuccessful in shifting unreimbursed costs of care to other payer sources. Zwanziger, Khan, and Bamezai (2010) posited that hospitals engaged in higher levels of safety net activities – inclusive of serving Medicaid and uninsured patients – maintained relatively stable financial performance at the expense of lower quality of care. Jha et al. (2009) noted poorer quality in hospitals that received high levels of Disproportionate Share Hospital (DSH) reimbursements (a measure of the proportion of poor patients served) as a part of an evaluation of EHR adoption in safety net hospitals. A similar response was suggested in Volpp et al. (2005) in their evaluation of the effects of limited cost shifting as an adaptive response by hospitals in markets with higher competition for access to higher paying, commercially insured patient volumes.

These observations seem of interest in the context of a relationship between increased delivery of care to Medicaid and uninsured patients in light of work by Blegen et al. (2011), where it was noted that patients in hospitals serving predominantly poor populations had poorer outcomes. These adaptive responses by hospital managers could be reasonably expected as suggested under resource dependency theory (Kazley and Ozcan, 2007; Kim, McCue & Thompson, 2009; Pfeffer & Salancik, 1978;).

A specific adaptive strategy in response to revenue constraints is limiting staffing, an expense classification that exceeds half of hospital operating expenses (Schuhmann, 2008). Previous studies reveal a relationship between hospitals adapting to increased volumes of Medicaid and uninsured patients by reducing staffing levels and in so doing, sacrificing the quality of care provided (Dranove & White, 1998; Lindrooth et al., 2006; Zwanziger, Khan, & Bamezai, 2010). Weiss, Yakusheva & Bobay (2011) noted reduced staffing levels as an adaptive response in hospitals with an adverse impact on the quality of patient readiness for discharge. Similarly, hospitals in the State of California adapted to mandated nurse

staffing ratio regulations by reducing resources available to provide care to the indigent and poor (Reiter et al., 2011).

While limiting patient care resources in response to an external constraint like reduced reimbursements is a reasonably expected adaptation, such behavior could be counterproductive if it ultimately results in quality decreases and further resource constraints. This presents a policy concern in view of the coming pay for performance incentives delineated in current health reforms. If hospitals' adaptations to environmental threats lower performance on quality measures that drive future reimbursements, a downward spiral of poorer quality and resource constraints could result. Carrying that prediction forward, safety net hospitals could of necessity cut resources and potentially reduces quality, which could reduce future revenues, eventually resulting in financial demise and thus reducing care access for their vulnerable populations.

The literature to date in this area has focused on limited groups of hospitals in specific regions of the United States (Blegen, et al., 2011; Reiter, et al., 2011; Volpp, et al., 2005). Also, the types of hospitals assessed tended toward academic medical centers (Volpp, 2005; Blegen, et al., 2011). Furthermore quality measures used in previous studies focused on specific medical conditions (Blegen, et al., 2011) or hospital mortality (Volpp, et al., 2005). Some work noted here evaluated the extent of a hospital's safety net role on the basis of survey results (Lindrooth, et al., 2006), proportion of patient discharges or patient days provided for Medicaid or uninsured patients (Volpp, et al., 2005), or the amount of Disproportionate Share Hospital (DSH) payments received by a hospital (Blegen, et al., 2011; Jha, et al., 2009; Kazley and Ozcan, 2007).

Therefore to tackle these issues from this distinct vantage point, the current investigators choose to approach the research questions using multi-year, cross-sectional data to assess potential quality impacts on safety net providers across the nation. Of additional interest in evaluating the question of impacts on quality by care to Medicaid and uninsured patients here is the extent to which relative resource utilization may influence observed results. Use of gross charges as an index of such differentials is an approach used in Mayer, et al. (1998) and presents a useful and unique approach in the context of this work. To this end, the aforementioned literature clarified two hypotheses to address the research questions under study. The primary hypothesis proposes:

> H_1 – Increased proportions of services rendered to patients with Medicaid or no insurance reduce measured quality in hospitals.

This hypothesis would be accepted with a statistically significant association between a higher percentage of services provided to Medicaid or uninsured patients in hospital and lower measures of quality in those hospitals.

 A second hypothesis arising from the background work reviewed is:

> H_2 – Staffing levels and observed quality decrease in hospitals as the proportion of
> services rendered to patients with Medicaid or no insurance

This hypothesis would be accepted if statistically significant associations between lower levels of staffing, higher proportions of services provided to Medicaid or uninsured patients, and lower measured quality in those hospitals were noted.

METHODS

The investigators used a least squares regression approach to evaluate the extent to which the hypothesized relationships exist. The data needed to model these correlations are available through publicly available sources. The CMS Hospital Compare database provides multi-year metrics on the quality of care for several clinical conditions and is available for the majority of hospitals across the United States (Lutfiyya, et al., 2007). This database captures performance data on processes associated

with better patient outcomes including acute myocardial infarction, congestive heart failure, pneumonia, and surgical services. Treatment or intervention processes specific to each clinical condition are tracked and reported in the database. For example, the Heart Failure condition includes the following four process measures:

- Patients Given ACE Inhibitor or ARB for Left Ventricular Systolic Dysfunction (LVSD);
- Patients Given an Evaluation of Left Ventricular Systolic (LVS) Function;
- Patients Given Discharge Instructions; and
- Patients Given Smoking Cessation Advice/Counseling.

A total of thirty-two different processes of care associated with the four clinical conditions mentioned, reported for the years 2006-2009, were employed in the current study. However, the Hospital Compare data does not present one comprehensive measure of quality across conditions.

Therefore to evaluate overall quality, a weighted average of performance quality for all conditions was calculated. Such an approach is consistent with that used by Jiang and colleagues (2009) in evaluation of quality of care oversight in hospitals. The performance quality variable for each facility was derived by multiplying the score for each measure tracked by the number of cases observed. These adjusted scores were summed and then divided by the total number of cases to arrive at a weighted average of quality of care for a particular hospital. An example of the weighted average calculation for a hospital is illustrated using data from Table 1.

TABLE 1
EXAMPLE WEIGHTED AVERAGE CALCULATION FOR STUDY HOSPITALS

Clinical Condition	Measure	Score	Cases	Score * Cases
Heart Attack	Heart Attack Patients Given Beta Blocker at Discharge	.60	5	3.00
Heart Attack	Heart Attack Patients Given PCI Within 90 Minutes Of Arrival	.58	4	2.32
Heart Failure	Patients Given an Evaluation of Left Ventricular Systolic (LVS) Function	.24	25	6.00
Pneumonia	Pneumonia Patients Given Initial Antibiotic(s) within 6 Hours After Arrival	.93	28	26.04
Totals			82	39.36

Using this example the total of the "score * cases" value for all four measures is 39.36. Dividing that value by the number of cases (82) yields the weighted average for this hospital, 0.48. The composite measure of quality for each hospital used in the analysis as the dependent variable was calculated in this manner.

Staffing level measures in a hospital should take into account the myriad outputs of inpatient, outpatient, and emergency room services as well as the multiple labor inputs including nurses, technicians, therapists, and ancillary department staff. The full-time equivalent (FTE) employees per adjusted occupied bed (AOB) or FTE/AOB figure has been utilized effectively as a comprehensive measure encompassing the multiple inputs and outputs of a hospital (Zhao, et al., 2008; Lindrooth et al., 2006). Data to calculate values for this variable were obtained from Medicare cost reports filed by each hospital for periods of a full year in length for each year considered in this study. The investigators adopted this convention to avoid any potential biases from using partial year cost reporting periods that could be influenced by high or low utilization variances in a given season.

The extent of service to patients with Medicaid or with no insurance was evaluated by using the charges for such patients as a percentage of charges for all patients in the hospital during that fiscal year. While other studies have used measures of inpatient volume or DSH payments, those measures did not assess the overall proportion of services provided to Medicaid or uninsured patients. Since services could be provided to patients in a hospital through multiple avenues (inpatient, outpatient, or the emergency room), charges establish a relative value of each service provided to the patient. Therefore the amount of charges billed for services to patients with Medicaid or the uninsured as a percentage of charges billed to all patients was used as a measure of the services provided to these targeted subgroups.

Other categorical variables such as hospital ownership, teaching status, rural location, multi-hospital system affiliation, and patient capacity could have influence on the relationships posited. Therefore these additional variables were included in the model. Hospital ownership was evaluated using a dummy variable where the base case was non-profit ownership and other categories were set up for for-profit ownership and local government ownership. The teaching status, rural location, and multi-hospital affiliation variables were binary with a value of 1 assigned to each variable respectively if the hospital had a physician teaching program, designated as a rural facility by CMS, or was a member of a multi-hospital system. Patient capacity was measured using the hospital's licensed bed capacity. Data for these variables were obtained from Medicare cost reports filed by each hospital for the years 2006-2009. Case mix index – a relative measure of the average severity of patients served by a hospital – could also exert an influence on the issues under study. Thus case mix index values obtained from CMS for each hospital for the years 2006-2009 were included in the model.

RESULTS

There were 4,406 records created for this analysis, with a record being comprised of available data for all variables in the Medicare Cost Report filed for a full 365 day fiscal year period, quality measure values from Hospital Compare database, and published values from the CMS case mix index files for the years 2006-2009.

The regression model proposed here was analyzed using the Stata statistical package and generated an r-squared value of 0.1665. Rerunning the model with robust standard errors yielded an identical result, and a covariance analysis among all regression variables found no evidence of serial correlation in the model. Results of the model run are depicted in Table 2.

TABLE 2
REGRESSION MODEL RESULTS – QUALITY AND REVENUES FROM
MEDICAID/UNINSURED

Variable	Coefficient	Standard Error	*P*-Value
% Revenue From Medicaid & Uninsured Patients	-0.04	0.009	*
FTE/AOB	-0.00	0.001	0.793
For-Profit Ownership	-0.15	0.003	*
Government Entity Ownership	-0.02	0.003	*
Teaching Hospital	0.02	0.003	*
Multi-Hospital System Affiliation	0.01	0.002	*
Rural Location	-0.01	0.003	0.003
Licensed Bed Capacity	< -0.01	<0.001	0.046
Case Mix Index	0.09	0.005	*
Constant	0.76	0.007	*

* - *p*-value < 0.001

Generally, significant relationships were observed between the proportion of hospital revenues from Medicaid or uninsured patients and observed measures of quality in hospitals, after controlling for ownership, location, teaching status, multi-hospital system affiliation, bed capacity, and case mix. The negative coefficient of the "% Revenue From Medicaid & Uninsured Patients" variable indicates an inverse relationship between this variable and the dependent variable – "Weighted Average Quality Score". In this case, it appears that as the percentage of revenues from Medicaid/uninsured patients in a hospital declines, the weighted average score for that hospital increases. This result appears consistent with the literature and lends support to accept the proposition set forth in H_1.

Other observations noted in this model were statistically significant relationships between ownership, teaching status, case mix (all $p<0.001$), rural location ($p = 0.003$), and bed size ($p = 0.046$). The amount of decline in quality for an increase in the proportion of hospital revenues from Medicaid or uninsured patients appeared slightly greater in government-operated hospitals than in for-profit hospitals (Government: $\beta = -0.0192$; For-profit: $\beta = -0.0153$, both $p <0.001$). Multi-hospital system affiliation, teaching status, and case mix index appear to contribute to maintaining higher weighted average scores on Hospital Compare process of care quality measures, despite the pressures imposed by higher proportions of utilization by Medicaid and uninsured patients.

To further delineate the relationship between the proportion of revenues from Medicaid or uninsured and the composite score on the process quality measures, study hospitals were stratified into halves above and below the mean for each variable. The stratified observations were then cross-tabulated as summarized in Table 3.

TABLE 3
CROSS-TABULATION OF MEDICAID/UNINSURED REVENUES
AND PROCESS QUALITY MEASURES

Medicaid/Uninsured % Revenues	Composite % Score on Quality Measures		
	Below mean	Above Mean	Totals
Below mean	1,015 (23%)	1,188 (27%)	2,203 (50%)
Above mean	1,188 (27%)	1,015 (23%)	2,203 (50%)
Totals	2,203 (50%)	2,203 (50%)	4,406 (100%)

The higher proportion of cases noted in the bottom-left and top-right cells in this cross-tabulation provides additional empirical support for the strength of relationship between these two key variables (Pearson chi square = 27.17, $p <0.001$). As the proportion of revenues attributable to Medicaid and Uninsured patients increases in a hospital, observed performance on the Hospital Compare process of care quality measures in a hospital appears to decline.

Also tested in this study was the relationship between levels of staffing measured by FTE employees per adjusted occupied bed and the percentage of hospital revenues from Medicaid or uninsured patients. The results of this analysis are presented in Table 4.

TABLE 4
REGRESSION MODEL RESULTS – FTE/AOB AND REVENUES FROM MEDICAID/UNINSURED

Variable	Coefficient	Standard Error	P-Value
% Revenue From Medicaid & Uninsured Patients	0.01	0.002	*
Weighted Average Quality	-0.11	0.004	*
For-Profit Ownership	0.32	0.003	*
Government Entity Ownership	0.06	0.005	*
Teaching Hospital	<-0.01	0.006	*
Multi-Hospital System Affiliation	0.01	0.004	0.482
Rural Location	0.05	0.003	*
Licensed Bed Capacity	< -0.01	<0.001	*
Case Mix Index	-0.10	0.009	*
Constant	2.76	0.229	*

* - *p*-value < 0.001

Review of this model indicates a negligible relationship between the proportion of hospital revenues from Medicaid or uninsured patients and levels of FTE/AOB staffing. While seemingly counterintuitive, Norton and Lipson (1998) posited that external subsidies to safety net providers might create a disincentive to adopt more efficient operational norms, including lower levels of staffing. Thus, there appears little evidence to support the notion that increased utilization by these categories of patient have translated to staff resources adversely impacting observed quality, after controlling for ownership, location, teaching status, multi-hospital system affiliation, capacity, and case mix. Given this observation, H_2 as proposed here cannot be accepted.

DISCUSSION

The study results suggest that decreased reimbursements arising from greater proportions of Medicaid and uninsured patients are correlated with adverse impacts on quality of care process performance measures. However the lack of a significant association between increased Medicaid and uninsured utilization and FTE/AOB staff levels suggests adaptive strategies that entail reduced staffing do not appear to contribute to lower observed quality. In addition, observed model coefficients for ownership variables where declines in quality scores were lower in for-profit hospitals, suggest that such organizations may have found more effective means of compensating for the financial strain of increased Medicaid/uninsured patient loads.

Sharing of resources among multi-hospital system affiliates and the presence of teaching physicians may be explanations for the observations of improved quality, despite increases in Medicaid/uninsured utilization. Increased case mix index values translating to higher weighted average scores on Hospital Compare quality measures may be explained by hospitals having advanced resources to treat more severe illnesses leading to improved levels of patient care quality. Conversely, operation of a hospital in a rural setting appears contributory to poorer performance on Hospital Compare quality measures. Since rural hospitals included in this study tended to serve higher proportions of Medicaid and uninsured patients (mean percent for rural = 19.77% versus 13.28 % for urban), the challenge of maintaining higher quality performance appears magnified. This observation is consistent with Lee and colleagues (2010).

LIMITATIONS AND OPPORTUNITIES FOR FURTHER RESEARCH

Built upon secondary data using high-level performance metrics, the current model has its limitations. The Hospital Compare database focuses on process of care quality measures and may not be able to identify other challenges or contributors to quality of care. Also, while use of billed charges as a measure of relative resource allocation can be illustrative within a hospital, large variances in pricing practices among types of charge items could skew percentages calculated in this model. Finally, the use of the FTE/AOB metric as an overall measure of staffing levels may mask the effect of differences in employee skill mix that may be contributory to observed performance on quality measures.

Additionally, the analysis demonstrates some consistency with the tenets of resource dependency theory where increased constraint on collected hospital revenues arising from increased proportions of Medicaid and uninsured patients could manifest lower performance on process of care quality measures. However, the model does not delineate which resources are actually constrained by management. Since a relationship with labor efficiency was not established here, other inputs associated with higher performance on these measures could be inhibited by the burden of higher proportions of services provided to the poor and uninsured. This represents an opportunity for future study.

The observation of nominal impacts on quality by staffing levels merits further evaluation in view of hypothesized relationships between staffing levels and measures of quality in the literature. Also, the factors that link teaching status, multi-hospital system affiliation, and case mix index and higher quality performance merit further evaluation. Finally, further work is needed to identify factors that cause for-profit hospitals to have lesser declines in quality performance than government operated hospitals when faced with comparable levels of increase in Medicaid/uninsured patient utilization.

CONCLUSION

From the hospital management perspective, it seems that higher levels of Medicaid and uninsured patient utilization can serve as a warning to decreased performance in clinical process of care quality measures assessed using the CMS Hospital Compare database. If the relationships observed here continue once the CMS Value-Based Purchasing program is fully implemented, hospitals that serve higher levels of Medicaid and uninsured patients may be placed at even greater risk of lost revenues. Consequently, there may exist a significant need to help hospitals that serve proportionately more of the Medicaid and uninsured populations in the United States. Given the important role that hospitals serving the Medicaid and uninsured populations have in a community healthcare delivery system, additional risks to the ongoing financial viability of such facilities represents an important policy question to address. The prospect of further adverse financial impact on such facilities also raises a question in equity to the extent that access to hospital care by Medicaid and uninsured populations is reduced by closure or operational retrenchment in these facilities. In the absence of modification to currently proposed policies in this area, policy makers and hospital managers must become more attentive to strategies that improve quality performance while limiting the drain on already significantly constrained hospital resources.

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Working to Achieve First-Rate Training Using Second Life

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Achieving complete transfer of learning when involved with training and development is usually more of a hope than a reality. Recently Virtual Human Resource Development has shown great value as a supplement to traditional employee training methods that support understanding and learning. Among the techniques being employed in VHRD, a three dimensional virtual web platform known as Second Life has achieved significant positive results in a relatively short period of time. This paper is an attempt to determine the extent of the positive results that Second Life has reportedly achieved in various professions such as business, education and health care.

INTRODUCTION

Training programs utilizing techniques such as role playing and simulation have long been considered effective methods in enhancing the transfer of learning between the organization and newly hired employees. It is generally believed that active methods of training consistently help to achieve an efficient and effective transition of a new employee in becoming a productive and fully functioning member of the company. Over the last several decades experimentation has taken place to test the viability of using methods involving virtual reality as platforms for training and development. Efforts in the emerging field of Virtual Human Resource Development (VHRD) to combine traditional didactic training processes with virtual interactive role playing methods have shown promising results in terms of the perceived value of the training experience as expressed by the participants (Broadribb and Carter, 2009). Imagine then how much more effective training through role playing could become if the trainee not only would be able to act out a training scenario but also could live it before his or her own eyes while fulfilling the dual role of participant and observer at the same time.

The consistent support and increased call for the use of virtually created worlds to enhance learning and employee training and development have been well documented with one of the most highly regarded methods being a virtual reality tool known as Second Life (SL) (Fortney, 2007; Jones, 2007). While SL is the best known and most subscribed of the three dimensional multi-user virtual environments (MUVEs), others such as Utopia Universe, Active Worlds, World of Warcraft, Disney's Club Penguin and THERE.com have also been used in ushering in the next frontier in communication, social networking, electronic commerce and education (Lee, 2008; Little, 2011). While virtual reality has been a well known concept since the early 1980s, innovative, creative and rapid advances such as SL have created MUVEs that have taken us from wearing bulky headsets to easily generated, perceptually rich and personalized environments around ourselves that allow us to experience a full range of stimuli that supports human asset development (Schroeder, 1997; Salmon, 2009).

WHAT IS SECOND LIFE?

Second Life (originally known as Linden World) traces its beginnings back to 1991 with a concept developed by Philip Rosedale who worked to create the world in a microcosm (Rymaszewski, 2007). SL is a computer based representation of a virtual world where "inhabitants" interact with each other in a multidimensional world through graphically created human images known as avatars (Boulos et. al., 2007). After several years of refinements and enhancements the initial testing of the Beta version of SL took place in 2002 and it was made available for public use in 2003 (Little, 2011). Besides the real world quality of the 3-D multidimensional interactions of the avatars in a wide variety of situations and scenarios created by the users, the current global economic conditions, the time and cost of required for travel and the increased awareness and the understanding of virtual worlds have made the exploration of Second Life a practical matter to be pursued in a variety of contexts, especially in areas such as training and development (Broadribb and Carter, 2009). In addition, the true nature and potential of SL became more universally known as a result the release of the James Cameron film, *Avatar* in early 2010.

As a three dimensional web system, SL is transforming training and education through its innovative blending of graphics, gaming elements, chat rooms and online commerce into a single platform and is described by some as being all the rage in the training sector (Gronstedt, 2007). Organizations such as IBM, Sun, Dell, British Petroleum, Intel, NASA and National Public Radio are investing millions of dollars in transferring their training programs to the metaverse of SL's virtual training platform, along with museums, educational groups and a number of government agencies who regularly stage events, seminars and workshops in SL (Wiecha et. al., 2010). In addition, over 300 colleges and universities have already embraced SL in the further development and refinement of their instructional pedagogy (Jarmon et. al., 2008; Wiecha et. al., 2010). SL boasts about 15 million residents and is predicted to attract an estimated 80 percent of active internet users by late 2011 (Varvello and Voelker, 2010; Gronstedt, 2007). Therefore, the potential for supplementing current training techniques along with the creation of new development methods in the area of VHRD seems limitless.

PRACTICAL LEARNING AND TRAINING APPLICATIONS

The role of technology as a major force impacting the area of learning in the 21st century has long been acknowledged and anticipated (Knowles, 1989). While trainers in a variety of professional fields realize the great potential of using new virtual technology formats and platforms such as SL as effective training enablers, they also are weary of its barriers and potential problems (Mancuso et. al., 2010). While great expectations abound as far as the value of virtual collaborations to achieve significant levels of learning, potential barriers such as technological glitches, steep trainee learning curves and initial development costs which can be prohibitive for smaller organizations need to be acknowledged and dealt with. Nonetheless, the use of MUVEs in all types of learning and training environments is nothing less than a technology phenomenon. Several studies have already been conducted to show how the use of SL has provided significant benefits as an innovative teaching tool in the instruction of courses such as art history, museum studies, business and psychology at the undergraduate and graduate levels at several universities (Stevens et. al., 2010). A recent study conducted concerning the use of SL in a project-based graduate communications course found that it was effective in integrating project-based pedagogy, technical training and outcomes assessment (Jarmon et. al., 2008). In anticipation of the further and extensive use of SL in educational instruction at the college level another study looked at the results achieved by students who attended classes as part of a virtual campus which provided four types of virtual space including a virtual campus, collaborative zones, lecture rooms and recreational areas (DeLucia et. al., 2009). In this case, SL was used as a tool to facilitate both synchronous learning and collaboration. The results achieved by the students indicated positive learning experiences brought about by the perception of belonging to a learning community, the perception of awareness, presence and communication. In addition, technological educational communities for several years now have seen the continued advantage of gaining access to geographically dispersed students using distance learning which

can be greatly enhanced through the use of SL (Boulos et. al., 2007). Outside of formal educational settings, students and teachers across the world have already been taking advantage of MUVEs to meet on virtual islands for intellectual discussions, 3-D webinars and other learning experiences using digital materials that they create, use and store (Lagorio, 2007). Not to be left behind their teaching colleagues, the Alliance Library System (now known as Community Virtual Library) established a series of virtual library spaces in SL in 2006 which are staffed by librarians throughout the world as a way to make information available and to better reach professors, researchers and students (Little, 2011).

Another field which has widely embraced SL has been the in the areas of medical and health care education and training. SL is currently being utilized in a variety of medical and health care educational applications. The most prominent at this point deal with good nutrition and healthy food choices, cardiac and heart murmur simulations, genetics, educating people about schizophrenic hallucinations and using the media to promote public health (Boulos et. al., 2007). In addition, numerous studies over the last few years have reported on the positive results achieved in medical training using SL. Nursing and medical students are now regularly trained using virtual equipment, procedures and simulations to interact with patients dealing with conditions such as type 2 diabetes or respiratory illness to build skills and confidence (Mesko, 2009). In training sessions where SL was the primary training method for medical professionals the participants all reported that SL was superior to other online methods and most went so far as to express the idea that SL was as good as, or better than, face-to-face training sessions and would agree to train using SL in future medical educational opportunities (Wiecha et. al., 2010).

The use of games and simulations in military training has a long history. The more recent addition of technology has further enhanced military training where scenarios can be played out in remote locations that give an armed force a marked advantage over the other. In this area SL has not only been used in military training in the use of attack drones it has actually become the actual method of weapon deployment and mission execution (Smith, 2010).

SECOND LIFE AND VIRTUAL HUMAN RESOURCE DEVELOPMENT

In considering the impact that contemporary technology has had on both our personal as well as professional lives, the use of virtual activities to expand and enhance training effectiveness seems to be an obvious and natural progression in establishing VHRD as a new construct (McWhorter, 2010). In fact, VHRM has already been considered by some as the next generation of knowledge management that is encouraging a paradigm shift that will take some time to achieve a harmonious blend of present practices and systems with new advances in human resource development (Bennett, 2010). Many organizations have already experienced positive outcomes from the shift to VHRD and SL. Promising results have been reported in terms of time savings, the efficient creation and delivery of training, the increased impact of training events, an improved organizational ecology and the optimal utilization of human capital in the workplace (Short, 2010; Bennett and Bierema, 2010; Nafukho et. al., 2010). The advanced sophistication of SL has provided training and development professionals in the human resource field an amazing opportunity to build upon effective traditional training and development methods using technology tools and applications unimagined only several years ago.

Whether VHRD is regarded as an environment, process or a construct, it provides a creative way to enhance the power of the combination of people and technology (Bennett, 2010). VHRD is one of the best ways to develop knowledge workers who support the organic nature of organizations and to leverage what some call the ineffable human element that leads to organizational success (Nafukho et. al., 2010). The use of VHRD methods such as SL provides a number of benefits to the efforts devoted to the areas of workplace training and education such as first-person experience, engaged participation, the use of several senses to absorb the training and the ease of interaction due to reduced anxieties associated with potential social barriers (Garcia-Ruiz et. al., 2010).

Due to the many perceived benefits of SL, many businesses are well beyond the point of considering its use as a viable training tool. Organizations such as IBM have wholly embraced and employed the concept of SL for years as evidenced by the fact that they developed virtual world usage guidelines in

2007 for their "Netizens" to follow when engaged in SL experiences in both training and in the conducting of business (Konrad, 2007). As a result of wide scale adoption organizations have regularly begun to incorporate SL as a key part of training their employees in areas relating to virtual team building, mentoring, workplace and job safety procedures, mock interviewing, effective leadership development and disaster preparedness (McWhorter, 2010). Through SL's simulation experience, companies have been also able to get new executives up to speed and helping them gain a deeper understanding of the complexities of the organization's global business (Regan and Delaney, 2010). In certain business training contexts the use of SL as a training platform has provided learning opportunities that other methods have not been able to duplicate or achieve an environment conducive to enlightened understanding. According to those in training and development at IBM and Intel, SL offers the advantages to manipulate scale and perspective by allowing trainees to virtually explore the physical layout of a big oil rig, fly around a network diagram or examine a molecule to see the three dimensional placement of atoms (Gronstedt, 2007). It is now a common occurrence for many organizations to direct their employees to receive training through a SL virtual campus with avatars interacting with each other as instructors and students in environments now routinely accepted as learning sites (Reeves and Reed, 2010).

OTHER BUSINESS RELATED APPLICATIONS

Due to the media rich context of SL, other business applications include real-time decision making and interaction, customer relations, virtual meetings, corporate recruiting, the facilitation of outsourcing, off shoring arrangements and understanding diversity and inclusion (Ahmad and Barkhi, 2011; Krell, 2007). Executives have come to realize that the availability of SL provides a vast number of business related opportunities for employees to learn about issues and situations that are involved in their day-to-day professional activities. For example, in the area of international business, it can help potential expatriates meet their hosts at less cost and with fewer family disruptions. In the area of diversity training SL allows employees to become someone of a different race, religion or gender promoting more workplace harmony and helping to minimize fair employment litigation (Hastings, 2009). In addition, in an era of global business and decentralized business organization design strategies, SL promotes collaboration and creativity among multi-cultural, geographically dispersed work groups and can help "shrink the world" by making it easier to get thousands of employees from five continents to attend a virtual corporate conference (Regan and Delaney, 2010).

IMPLICATIONS AND CONCLUSIONS

As far as the continued development and use of 3-D MUVEs and tools such as SL as training methods are concerned, a very basic standard may be most appropriately applied. If it can be shown with confidence that this area of VHRD can offer assured opportunities for low-cost and high value learning it should merit the investment in time and energy needed for it to be more fully be utilized (Salmon, 2009). A recent survey of training practitioners and early adopters concluded that SL, or some similar platform, would more than likely see large scale adoption within the next few years in all types of applications and contexts (Kirriemuir, 2008). Therefore, work needs to continue to insure that what is done in this area achieves the criteria of reasonable cost balanced with strategy, significant levels of learning transfer and an appreciation of the process by both the trainer and the student (Bennett and Bierema, 2010).

Many users of SL, including human resource managers, believe that specific guidelines for the proper use of MUVEs and SL need to be developed similar to those developed several years ago by IBM (Konard, 2007). Krell (2007) outlines specific usage guidelines that will help shape positive VHRD experiences that include elements that relate to developing a usage policy, sensitizing new users to SL, understanding the private versus public boundaries of discretion and privacy, consulting legal counsel as to the ramifications of virtual relationships and the expectation of the deliberate and controlled use of the platform to avoid being overwhelmed.

Besides being concerned with the actual usage of SL as a means of delivering training content, the issue of assessing its effectiveness as a training tool persists. In evaluating VHRD practices the ability to determine the impact of learning, the value of virtual workers, and the degree of fair, inclusive and equitable environments remain important measurement issues (Chapman and Stone, 2010; Bennett and Bierema, 2010). The continued use of VHRD will require Human Resource managers and others of authority in organizations to develop policies unlike those previously seen. It will present interesting challenges to those in organizations charged with the responsibility to adopt and adapt standards and procedures that govern the virtual professional, legal and ethical actions of their employees. This ultimately may mean the seeking out of professional expertise and resources outside the organization in the form of experts and consultants to deal with the intended and potential unintended consequences of VHRD. As a result of the growth of MUVEs and SL, many training consulting firms have emerged to help organizations more smoothly navigate the virtual world of corporate training and education. Because some companies find it difficult to bridge the gap between traditional development methods and virtual training they have turned to consulting firms such as the Future Work Institute to help them build programs that can ease the potential concerns faced by employees who are new to the virtual training world (Hastings, 2009).

The attempt to strike a comfortable balance between what we know and what is to come in the area of human resource training and development is extremely difficult. One area of concern is that in the interim period it will be quite common to have several generations of employees involved in the delivery and the learning of the information associated with the acquiring of the knowledge and skills needed to successfully perform work assignments (Noe, 2010). While Generation X and Y are very comfortable with a highly technical world of instant information access and digital communications that they have always known, Baby Boomers rely on personal interactions and group processes to share and learn information useful for acquiring knowledge (Solomon, 2010). Human resource training experts are therefore presented with the challenge of blending the various teaching and learning styles of the employees to achieve the greatest result. However, it needs to be acknowledged that the millennial generation is the fastest growing portion of the U.S. workforce and that they seek a stimulating work environment and are most comfortable with VHRD and SL (Lancaster and Stillman, 2010). Therefore, at least for the foreseeable future, a delicate balance needs to be developed and maintained that will hopefully find the various groups meeting at some agreeable medium.

Regardless of the generational group that employees find themselves in, the nature of life and work seem to be rapidly moving away from face-to-face interaction to a variety of technologies to fill the communications gap (Williams, 2009). After it is all said and done the reality of the new training paradigm is virtual reality. While the potential is great for the new and improved VHRD methods that for now supplement current tools, it seems inevitable to some that it may someday totally supplant them which may be cause for concern and alarm. Many see tools such as SL as methods that will minimize the personal value of human interaction, eliminate physical presence and totally remove the ability to perceive and interpret body language. In addition, impersonal interactions may encourage behavior that would not be undertaken in person but may be encouraged through the veil of acting through an avatar. According to Konrad (2007), it may be very important for companies to act as IBM did to set standards of conduct that their employees must adhere to while interacting in the SL Metaverse. This applies to the appearance of their avatar, its actions, behavior and gestures. The existence of rules and guidelines when involved in cyber collaborations should help to "reinject", to some degree, the human touch and thus provide some degree of control that could minimize conflict, maximize productivity and set a reasonable standard of ethical behavior (Coleman and Levine, 2008). The further development and refinements of VHRD and SL offer promises of significant rewards and challenges to both organizations and their employees. However, the real ultimate value to be realized through the use of these virtual tools rests with each individual human resource professional along with their organizations to act responsibly in the application of human judgment, tolerance and understanding.

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Huayi Brothers: Setting Strategy for a Chinese Entertainment Conglomerate

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This case is intended for the use in both undergraduate and graduate courses with an international business and/or marketing focus. It explores the challenges faced by Huayi Brothers, a private entertainment company in China. This case is helpful for global business and marketing courses, because it allows students to deal with the complexities of a company operating within the Chinese entertainment industry. Students can learn about the industry and then use course material to analyze the current situation and relevant issues to develop solutions to the challenges faced by this Huayi Brothers.

OVERVIEW

Huayi Brothers began in 1994 as a film company in the growing Chinese entertainment industry. In the last 16 years, brothers and founders Wang Zhongjun and Wang Zhonglei grew their business into the most influential and largest private entertainment media company in China. Initially created as a film production company, it was not long before Huayi Brothers expanded into other sectors of the entertainment industry. Throughout the company's brief existence, they have gradually ventured into sectors such as television, talent, music, and other entertainment marketing fields. In 2011, Huayi Brothers plans to create the largest television and film studio complex in East Asia and continue to expand its operations. With the addition of its new studio, Huayi Brothers is aiming to earn $1.5 billion in box office revenue by 2016. From the company's actions and expectations, it appears that Huayi Brothers

is contemplating moves that would allow them to continue to grow in both the Chinese entertainment industry and globally. In a rapidly expanding Chinese market, the opportunity for growth is tremendous. The challenge for Huayi Brothers will be finding the best way to achieve this growth. The question is: Should Huayi Brothers continue its attempt to grow by keeping a hand in every sector of the entertainment industry in China, or instead focus on the single sector that is the most profitable for them?

Corporate History

Huayi Brothers' involvement in the entertainment industry is both broad and deep. The company extends horizontally in the industry by incorporating many different aspects of entertainment into its business operations. It focuses not only on film, but also television, music, advertising, artist management, gaming, and even theme parks. These niches are split into six business divisions that operate under the Huayi Brothers name, which include Huayi Brothers Stars, Huayi Brothers Motion Pictures, Huayi Brothers Television, Huayi Brothers Music, Huayi Brothers Global Media Group and Huayi Brothers Advertisement (China.org, 2011). Although the company is organized into six business divisions, the majority of its profits come from film production, television series production, and artist management. This span of sectors is ambitious for this emerging industry in China. In fact, Huayi Brothers is the only company in China that concurrently does production of films along with artist management (Huayi Brothers, 2011).

Within many of these units, Huayi Brothers shows a vertical depth in the industry. This is especially apparent in the film sector of its business. The CEOs have created a model of producing, distributing, and releasing movies all in one system, and show a strong desire to continue with this type of in-house movie-making (Yao, 2011). Huayi Brothers is involved in the films from conception to distribution, owning many of the cinemas that the films are shown in when released. The extremely popular movie *The Forbidden Kingdom,* starring Jackie Chan and Jet Li, was both produced and distributed by Huayi Brothers, for example. The company also often uses its own talent, and creates its own advertising and marketing campaigns for its films, which shows how integrated many of its business divisions have become. By being able to handle all of these tasks within the company, it eliminates the need for them to outsource to other companies. The combination of horizontal and vertical presence in the media industry has made Huayi Brothers a true entertainment conglomerate in China.

Market Analysis

The Chinese film industry is composed of a few main competitors dominating the market, including Bona Film Group, Enlight Pictures, Huayi Brothers, and China Film Group (D'Altorio, 2011). The rapid growth of the market has allowed for each of these organizations to become very successful without having to worry about competitors taking away market share. Growth has been the primary focus of the individual companies. Strict government regulation of foreign film distribution in China means only 20 foreign films are imported into China each year. The Chinese government hopes this reduces the pressure from international competition protecting the industry by reducing completion while it builds to its full potential, and market stabilization has occurred.

In China, one of the most difficult things to do in business is reach customers. While there are 200 million middle-class potential customers, the subpar infrastructure and vastness of the country makes it a challenge to reach everyone (Hunt, 2011). As of 2010, China only had 313 movie theaters and 6,200 screens (Nerenberg, 2011). Not only are there a limited number of screens, movies are expensive for the general public to go to on a regular basis. Even with limited screens, the Chinese film industry grossed $1.5 billion in box office earnings in 2010, just behind India's $2.2 billion in gross earnings and still way behind the United States' $11 billion in gross earnings in 2010 (Nerenberg, 2011). While low by compared to the U.S. in gross box office earnings, last year's $1.5 billion in receipts was a 64% rise from 2009, making China the fastest growing movie market in the world (Landreth, China's Film Industry Prepares for Big Leaps in the Year of the Rabbit, 2011). With box office receipts increasing at such a high rate, more theaters and screens are being planned. Chinese officials expect 20,000 screens to be operating by 2015 and 40,000 by 2040, which would put it on par with North America (Barnes, 2011).

As generation Y continues to grow, the marketing opportunities are endless for Huayi Brothers. Research shows that "by 2015, the number of Chinese adults under 30 is expected to swell 61%, to 500 million, equivalent to the entire population of the European Union" (Elegant, 2007). With generation Y driving China's current boom, Huayi Brothers has the opportunity to take advantage of online marketing thus enabling them to reach a large amount of potential consumers while keeping costs low. This can be done by utilizing vertical marketing in video games based on popular movies or artists that Huayi Brothers is already have under contract. The Chinese youth spend a large amount of time online blogging and playing video games. "China's total number of online gamers is expected to grow by 8-10 million people per year through 2013, increasing from nearly 50 million in 2008 to nearly 95 million by 2013, representing a Compound Annual Growth Rate of 13.9%" (Huayi Brothers, 2011).

Advertising occurs not just in the cross use of video games, but Huayi Brothers relies on product placement within productions as part of the company's strategy (Huayi Brothers, 2011). With China's vast and growing market, an increasing number of companies are willing to invest in product placement. In product placement, companies pay to have their brand product used prominently within the movie. This avenue of revenue has an important impact on Huayi Brothers' vertical business units throughout the entertainment industry. For example, a phone company may invest in a product placement opportunity that involves the star of Huayi Brothers' next potential blockbuster taking a call from a phone model this company produces. These placement opportunities are currently extended to scripts, plots, and the casting of foreign actors, anything that may affect the masses and influence popular culture.

Huayi Brothers' Future
Huayi Brothers is one of the most influential, if not the top entertainment media corporation in China. The scope of its organization presents it with the possibility of numerous opportunities for growth and expansion. While the wide spectrum of media that Huayi Brothers is involved in helps it grow, it does not mean that it should stay on the same path of operation. Expansion is not just adding more, it is also making changes that will help strengthen the organization.

One of Huayi Brothers largest and most promising business units is in the film industry. In 2009 this unit controlled 9% of the China movie market. In 2010, Huayi Brothers reached 17% of the overall domestic box office in China in 2010. There are a wide variety of moves and decisions that Huayi Brothers is making in order to bolster this segment of their corporation.

To keep up with the increasing demand for films and to occupy new screens, film companies are looking to increase their output of films. Huayi Brothers announced in February of 2011 that it would be building East Asia's largest indoor film and TV studio in Shanghai as part of a $152 million cultural complex (Landreth, Huayi Brothers Plans East Asia's Largest Indoor Studio Complex for Shanghai, 2011). This new studio complex will not only help in the production of more films and television, but it will also be used as a tourist attraction to further promote their films and characters. This film and television studio is just the beginning of massive expansion for Huayi Brothers. A little over three months after the announcement of the film studio, Huayi Brothers publicized its plans to build a $462 million movie-themed park in Suzhou, a city of six million people about one hour's drive from Shanghai (Landreth, China Studio Huayi Brothers to Build Theme Park Near Shanghai, 2011). These studios and parks showcase Huayi Brothers' efforts to expand their reach and draw in more customers, utilizing a vertical structure in their supply chain. These attractions will help further market their films, projects, characters, and talent.

Even with the plans for and additions of new theaters and screens and the building of attractions, there are still plenty of challenges that the industry faces. Some of these challenges include censorship, limited creative capacity, government imposed quotas on imported films, and the struggle to reach their desired audience. Perhaps the biggest issue for the Chinese film industry is the government imposed theater releases import limit of 20 foreign films a year. The importation rights belong solely to the State-owned China Film Group Corp, which shares exclusive distribution rights with Huaxia Film Distribution Company (Wei, 2011). This quota, although it is meant to protect the Chinese film industry from foreign films taking over the market, is actually putting restraints on potential growth for entertainment media

companies such as Huayi Brothers. This limit on imported films keeps film companies like Huayi Brothers from showing films that would have greater appeal to its audience, thereby possibly restricting its distribution revenue. However, the cap on imported films helps keep the market from being dominated by foreign studios, aiding Huayi Brothers' production business unit.

Currently, the 20 foreign titles that have previously been allowed in each year compete with more than 500 domestic movies (Jaffe, 2011). Although foreign films have such a small showing, nevertheless they are still the lifeblood of the film industry in China. Hollywood imports made more money on average in 2010 than their leading Chinese-language counterparts. According to Shanghai consultancy Artisan Gateway the top ten Hollywood imports, led by Avatar, each grossed an average of $48.9 million in China, whereas the top 18 Chinese films, led by Chinese made blockbuster Aftershock, each grossed an average of only $31.5 million (Jaffe, 2011). Even with the quota, foreign titles are raking in the cash. Imported films have accounted for around 45% of the Chinese box-office revenues (Jaffe, 2011).

Huayi Brothers is seeking to circumvent the import quota issue by entering into joint ventures with foreign film studios. In June of 2011, Huayi Brothers formed a joint venture with Legendary Pictures creating Legendary East Ltd. This move will benefit Huayi Brothers in numerous ways. Huayi Brothers will co-produce the movies with Legendary East and distribute them in China (Fritz, 2011). Since the films will be made domestically they will not fall under the import quota of only 20 films a year. This not only benefits Legendary Pictures by allowing more of their films into China, but it also adds to Huayi Brothers library of films that they will be able to market to potential movie goers, increasing its market share. Legendary East will be headquartered in Hong Kong and they expect to produce one or two English-language films for worldwide audiences annually year beginning in 2013 (Fritz, 2011) and (Finke, 2011).

In addition to creating a potential for growth in Huayi Brothers' market share of the Chinese box office, the joint venture with Legendary Pictures also creates unique opportunities to learn from other experienced professionals while broadening their knowledge of the global market and entertainment offerings. Even though an increase in potential revenues and in market share is appealing, "money is not the problem – the film industry is desperate for creative talents," according to Wang Zhongjun, chairman of Huayi Brothers (Xiahua, 2011). Joint ventures, like the one Huayi Brothers entered into with Legendary Pictures are just one way that it, along with other film companies, can delve into a wider variety of subject material.

While working in conjunction with foreign film studios helps expand the business and create more opportunities, it is not the only way the Huayi Brothers is looking to penetrate further in the rich Chinese market. Against the backdrop of high-stakes competition for the attention of China's roughly 200 million potential middle class moviegoers, Chinese companies are forming partnerships designed both to improve their films' competitive edge and establish footholds in the growth areas of exhibition, Internet distribution and online gaming (Landreth, China's Film Industry Prepares for Big Leaps in the Year of the Rabbit, 2011). Huayi Brothers have just recently become active participants in both.

It was only last December that Huayi Brothers joined forces with Chinese online game developer Giant Interactive Group Inc., creating Beijing Huayi Giant Information Technology Co. Huayi Brothers will eventually invest around $10.5 million in the new company for a 51% stake (Ye, 2010). This is a huge move for Huayi Brothers. By dipping into one of China's fastest growing entertainment sectors Huayi Brothers is taking another step forward in bringing its content to consumers through another medium. Currently the goal is developing 3D online games with the possibility of developing games into films and films into games (Ye, 2010). Delivering more and new quality content to customers, this move into a surging sector of the entertainment industry fits snuggly into Huayi Brothers' core business. Zhang Yanan, an analyst with Beijing-based investment firm Zero2IPO Group agrees, "The online game industry is the most profitable sector in the Internet economy right now, and it can be easily integrated into the company's core business areas" (Ye, 2010).

Conclusion

In a growing Chinese market, the opportunity for growth exists. The only issue is finding the best way to achieve this growth. Huayi Brothers currently is very successful operating and expanding as is, doing things the way it is, however, its future could be a different story.

As the case demonstrates, new avenues that Huayi Brothers is pouring itself into are bringing in moderate revenues. With a substantial market and little to no competition, one can make the case for Huayi Brothers being a first mover into growing markets. The speed at which this is taking place is extremely fast and there may come a time when a more experienced, smarter, or well-equipped competitor moves into these market arenas and steals the competitive advantage.

Many companies combat the problem of spreading too thin by focusing on their core competencies and resources. This strategy can be exemplified by 'The Hedgehog Concept,' in *Good To Great*, by Jim Collins. The concept outlines 'Great Companies' that have gotten rid of profit centers and business units that do not turn a substantial profit. (Collins, 2001)

There comes a time in each and every company's life when it has to make a decision on which path to follow, a decision that will determine that it is as an organization. In this case the question remains: Should Huayi Brothers continue its attempt to grow by keeping a hand in every sector of the entertainment industry in China, or instead focus on a single sector with most opportunity for profit?

HUAYI BROTHERS TEACHING NOTES

Learning Objectives
1) Students will describe the unique challenges of the entertainment market in China.
2) Students will review current business strategies and reflect on possible future changes based on current market data.
3) Students will apply Porter's 5 Forces Model to the entertainment industry in China.
4) Students will use the Resource Based View to determine Huayi Brothers sustainable competitive advantage.

Application

This case is intended for the use in both undergraduate and graduate courses with an international business and/or marketing focus. This case is helpful for global business and marketing courses, because it allows students to deal with an international situation, analyze the issue, and come up with a solution. Other courses in which this case could be relevant include courses focused on organizational behavior, and entrepreneurship. The case focuses on the Chinese entertainment industry, therefore, it provides a means for international business classes looking to understand the inner complexities of a Chinese industry. Finally, case allows students to use course material and other theories to evaluate the current situation within Huayi Brothers based in an understanding of the entertainment industry as a whole.

Questions
1. Describe the unique features of the Chinese entertainment market.
2. Use Porter's Five Forces Model to analyze the film industry in China.
3. What type of organizational structure does Huayi Brothers have, and is this consistent with the marketing plan for the company? If structure and strategy work together, how does Huayi Brothers' current structure reinforce their strategy?
4. How does the government, through import quotas and censorship, help and/or hurt the development of the film production business of not just Huayi Brothers but the Chinese film industry as a whole?
5. Should Huayi Brothers continue to be integrated within so many aspects of the entertainment industry, or should they focus on the division where the greatest competitive advantage is greatest? What division do you believe gives them the opportunity for a sustainable competitive advantage and why?

TEACHING NOTES

1. Describe the unique features of the Chinese entertainment market.
China's market is very unique when compared to the entertainment industries in most other countries across the world. After reading about the market situation in China, students can identify several factors that contribute to the distinctiveness of China's market, such as:

   a. Government involvement
   b. Weak but developing infrastructure
   c. Intense market growth
   d. A large potential customer base

The government plays a major role in the entertainment industry in China. Censorship is prevalent in this country, and the government can easily regulate the information that even private companies disseminate within China. In most countries, the entertainment industry has more freedom to choose what messages to convey in films, television, music, marketing, etc. However, the Chinese government does not allow certain messages, and the industry in China must work around these regulations and be prepared to deal with the Chinese government. This affects not only the production of all the forms of entertainment made in China, but the type and amount of entertainment imported from other countries. The government restricts the number of foreign movies that can be imported into the country every year. Limiting this number is an attempt to protect Chinese filmmaking, as well as minimize foreign influence.

The infrastructure needed for the entertainment industry includes movie screens. The number of movie screens in the country is low compared to the market demand, especially on key nights. While huge theaters are popping up in large metro areas, there are few theaters in other parts of the country. Movies, therefore, are inaccessible for a large part of the population. In 2010, only 313 theaters existed with 6,200 screens. Consistent regulations are another part of the infrastructure lacking in some respects, even with the censorship of the Chinese government being applied with some variety.

The growth, both real and potential, is possibly the most unique aspect of the Chinese market compared to other countries. The Chinese film and entertainment industry has seen intense growth in the last fifteen years. This has allowed corporations in the industry to grow rapidly without having to worry much about competition to increase market share.

Here are some statistics regarding Chinese growth in this industry:

   1) Movie market experienced a 64% rise from 2009 to 2010
   2) The film industry earned $1.5 billion in 2010
   3) 20,000 screens are expected to exist by 2015
   4) 40,000 screens are expected to exist by 2040 (Huayi Brothers, 2011)

Market growth is coming through the growth the middle class in China. With a population of over a billion people, many who are experiencing disposable income for the first time, the market opportunities seem endless. However, students should question how many of these are potential customers. The Generation Y adults are expected to equal 500 million by 2015. This is a large potential customer base unseen in most countries and markets, but what percentage are really potential customer is an area for discussion.

2. Use Porter's Five Forces Model to analyze the film industry in China.
Students can use Porter's Five Forces Model to understand the strength of the forces in this industry. Students should use information in the case to analyze each of the forces and should also do additional research to supplement the case information. This will demonstrate the need to look beyond given material when doing appropriate analysis. Students should be able to describe each of the forces: threat of new entrants, threat of substitute products, power of buyers, power of suppliers, and the level of rivalry.

Students should recognize that the strong potential for growth will encourage new entrants into the market, both domestic and international. The attraction of the large number of potential customers will

make this an attractive area for investment. Many of the large competitors in the Chinese film industry did not start out in film but transitioned to film once they saw a growing industry and strong profits. This trend may continue on and pose a large threat as many large marketing or advertising firms would be able to enter the industry with a strong financial backing along with expertise and brand awareness. Barriers to entry are high, however. The Chinese government has strong control over the industry and regulations that are in place to protect the domestic market may keep foreign companies from being able to gain a strong presence. In addition expansion in the film industry requires investment in an infrastructure of movie theaters; this requires considerable investment.

The threat of substitute products is high. This is similar to other countries in which the internet provides opportunities for other types of entertainment that competes directly with film. In the past three decades, the number of Chinese watching Chinese films has significantly declined. Much of this decline can be attributed to television and movies becoming popular in China much later than other counties and increased technological abilities available to the middle class. Because of the late entrance of media entertainment into the Chinese market, many consumers are using substitutes because they have the ability to watch movies from home or are more interested in watching television in a private setting. Many movies are being pirated online, decreasing sales even more and keeping those potential customers at home (Chinese Film Industry and Movie Business). Because of its late entrance into the Chinese market, going to watch a film in theater is not a cultural norm, leaving many other activities open as substitutes.

Within the film industry buyer power depends on theatre ownership. The low number of movies available gives the film company some power and the constriction on the number of foreign movies also reduces the power of the theatre owners. Many film companies deal with this buyer power by actually owning the movie theaters. This ownership issue is not a product of buyer power as much as access to customers. The individual Chinese movie goer has many opportunities to spend their disposable income and have turned out to be price sensitive to the experience. Low switching costs are one of the realities of this industry.

Supplier power is strong in the Chinese film industry due to the government's maximum 20 foreign films allowed to play in China each year. Because movie theaters are extremely limited in their options of foreign films, these foreign suppliers have a great deal of power over the theaters giving them a large amount of price discretion. This large amount of price discretion enables the suppliers to overprice their films which can hurt theaters' margins as well as decrease the amount they can discount ticket prices in order to draw new customers in.

Rivalry among the competitors is low at this point. The industry is going through rapid expansion and the competitors are concentrating on increasing the market through adding customers rather than competing for existence.

Overall the industry is attractive, but the very real challenges of the governmental barriers to entry will protect those within the industry. While companies want to increase the number of foreign films pushing to open the market could mean a large increase in the number and size of future competitors.

3. What type of organizational structure is used by Huayi Brothers? How does this structure fit the strategy of the company?

Students should be able to identify the structure in place for Huayi Brothers. As the company has expanded from film production to other facets of entertainment the structure has adapted. Now with roughly 6 major business units, the Huayi Brothers organization displays a process-centered structure. Instead of a traditional functional organization--where departments such as marketing, finance, and operations oversee the production of products or services--Huayi Brothers has built units that focus on the product or service. For example, the modeling and music business units are separate from the film production unit.

Expansion within the film business has been included areas within the value chain. For example, Huayi Brothers can produce a film at one of its production studios, cast a model/actor from its modeling agency, provide the soundtrack for the movie from its music unit, distribute the movie throughout its

theater network, and provide exciting movie themed rides at an amusement park. This integration of marketing product lines within the organizational structure may provide many payoffs for the company. However, it may also blur the area that is the real core competence and allow that competitive advantage to erode because of concentration on too many different areas.

Students may question what type of strategy the Huayi Brothers are using. At this point within the film industry it seems that quantity is trumping quality. Having the different areas in separated out allows for replication. The model replicates the old studio model used by Hollywood in the 1930's-50's where we saw movies cranked out at a fast past. With the same writers, actors, directors, and stage sets movies were produced at a fast past, though the originality was sometimes low. This is in contrast to movies in the US today which are produced as more of a project, bringing together multiple companies and independent contractors for each project, increasing the originality, cost, and time invested.

Students may question or suggest how Huayi Brothers coordinates these projects that go across the different lines. While the case does not provide information about a matrix or project management type infrastructure, students should note that these would be ways to more efficiently manage the complex projects in which the company is involved.

4. How does the government, through import quotas and censorship, help and/or hurt the development of the film production business of not just Huayi Brothers but the Chinese film industry as a whole?

China currently imposes a strict import quota on films allowing only 20 foreign films per year to be distributed in China. The import quota system is in place to help local producers better survive against what would be a massive influx of films and content from foreign studios. Not only is it designed to protect the market shares of Chinese film corporations, the quota is a way to monitor the type of information coming into the country. It protects local culture, stories, and legends from being too heavily influenced from outside sources.

Students should recognize that the foreign film quota helps corporations like Huayi Brothers on the film production side by keeping out extra competition. This limit means that films produced by Huayi can get an audience. Huayi Brothers can put more effort in to their own films as far as marketing them and keeping them in theaters longer. The Huayi Brothers name is attached to more film production. However, Chinese producers are limited in the kinds of movies that they can make. There are censorship restrictions on appropriate topics and viewpoints. This puts restrictions on the creative capabilities of many film studios.

While the import quota is in place to protect the Chinese film market, it is significantly handicapping its growth potential in other segments. Students should point out that since Huayi Brothers owns many of the theatres the limited number of foreign films hurts revenues generated in these venues. Foreign films make significantly more money and are a stronger draw for the theatres. More and more theaters and screens are being built and upgraded across China. It is a booming industry. By limiting the exposure to foreign films revenue Chinese theaters would receive are negatively impacted. In addition, customers coming to see an imported film might learn of a film made by Huayi Brothers that they were unaware of and come back later to see it.

Chinese produced films are making money, but this is not necessarily because of quality, rather it is because of the captive audience. This is where the import quota comes into play again. While foreign made films may be edited slightly or have some changes made due to censorship, these provide a much wider appeal because of stories and production quality. Though the industry is growing and becoming more and more popular among Chinese consumers, quotas and censorship are putting restraints on what could become a monsters industry.

Huayi Brothers is trying to overcome some of the barriers put in place on the industry by joint ventures with foreign film studios. The import quota of only 20 films per year will not impact any films that are made in China. By producing a film with a foreign studio in China, Huayi Brothers will be able to add films made with foreign expertise. Huayi Brothers' joint venture with Legendary Pictures will allow them to make films alongside a foreign studio and distribute them in China. The joint venture with

Legendary Pictures, creating Legendary East, generates unique opportunities to learn from other experienced professionals, broaden knowledge of the global market, learn the technological knowhow in producing quality audio and visual effects, and increase their entertainment offerings.

Legendary East also provides them with a wider pool of talent to choose from and work with in generating new material and producing quality pictures. In addition the partnership will give Huayi Brothers access to the global marketplace.

5. Should Huayi Brothers continue to be integrated across the entertainment industry or focus on what division their competitive edge is greatest? Suggest the type of analysis the company should perform in considering the options. What division provides the greatest opportunity for a sustainable competitive advantage? Why?

Students should recognize that Huayi Brothers have a lot of divisions to coordinate. With its hands in many different sectors of a vastly growing industry, it is getting harder to focus energy on the most profitable areas. As the industry continues to grow at an intense rate, it will become harder to keep up with the pace of the growth in every area of entertainment. While the company can experience growth in all of its business sectors, the long term ability to maintain a competitive advantage in all of these areas will be tough as new, more focused competitors enter the market. By trying to maintain all of the business units, it could end up falling behind in everything.

In order to keep a competitive edge, should Huayi Brothers focus on the areas that make the most money and have the most potential for growth? Students should suggest the company perform a situational analysis. This could include a SWOT analysis as well as the use of the Resource Based model to identify the key competitive advantages. A major teaching tool for this question is to go over the Resource Based View in conjunction with Huayi Brothers' unique and quickly changing market. This concept focuses on VRIN, in which a company should focus on ventures based on their available resources, and their resources are: Valuable, Rare, Imperfectly imitable, Non-Substitutable (Barney, 1991). Huayi Brother's resources to be analyzed could include creative talent, production/ distribution assets, and market knowledge

A portfolio analysis might also be suggested as a way to make recommendations about areas for focus. Students might point out that the talent management portion of the company does not make the company a lot of money, and takes up time and resources it could focus on film and television, which are the largest revenue sources for the company. Discussion could focus on what possible in direct advantages might be coming to the company from this unit. By working on this and trying to build synergy, Huayi Brothers hopes to maintain its advantage in these areas in the future. The company could continue with a business model much like Disney or Universal. This would allow it to continue the new partnerships and projects it has been working on, such as the new theme park to promote its movies and joint ventures with global companies.

Instead of expanding into many sectors the company may choose to minimize the number of sectors it works in and focus its attention on the quickly growing film and television industries. It is already one of the leaders in these areas, and it will be easiest for Huayi Brothers to expand in this sector. The company is already spending $152 million to build a giant film/television studio, which will allow them to grow this part of the company quickly. By refocusing its efforts on the most profitable area of the company, it can continue to operate vertically within this sector and produce, distribute, and release more films within this growing market. Students should consider if this is the company's best chance to take advantage of its huge head start in this potentially massive market.

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Creating a Culture of Enterprising Women through Succession Planning

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One of the potent mechanisms of ensuring economic empowerment and equitable distribution of wealth among women in Africa is through entrepreneurship and succession planning. Consequently, this paper reports an empirical analysis of female entrepreneurs in Ghana in relation to their business and succession planning intentions. The study revealed that though respondents would want their businesses to outlive them and possibly transfer the business to their children or family members, only few of such entrepreneurs have a formal written succession plan. The paper therefore discusses the implications of the findings in relation to sustainable women empowerment through succession planning.

INTRODUCTION

Few cases promoted by the United Nations have generated more intense and widespread support than the campaign to promote and protect women. The UN Charter was the first international agreement to proclaim gender equality as a fundamental human right. For years, the Organization has helped create an historic legacy of internationally agreed strategies, standards, programmes and goals to advance the status of women worldwide. While progress has been achieved, statistics (retrieved from unstats.un.org) indicate that much work remains to be done:

i. *Of the world's 1.3 billion poor people, it is estimated that nearly 70 per cent are women.*
ii. *Women earn only 10 per cent of the world's income.*
iii. *Jobs deemed suitable for women are invariably low-pay, low-status positions.*
iv. *Women own less than 1 per cent of the world's property.*
v. *Women make up two-thirds of adults worldwide who cannot read or write;*
vi. *Women work two-thirds of the world's working hours,*
vii. *Only 13 of the 500 largest corporations in the world have a female Chief Executive Officer.*
viii. *Married women from the less developed regions do not fully participate in intra household decision-making on spending, particularly in African countries and in poorer households.*
ix. *In the private sector, women continue to be severely underrepresented in the top decision making positions.*

Improving women's economic opportunities can take many forms, including developing women's entrepreneurship opportunities. Consequently, this paper supports the growing evidence of a significant causal relationship between entrepreneurship, economic growth and poverty reduction and therefore

proposes a succession planning in female entrepreneurial ventures as lasting solution to the plight of women. Succession planning is critical to the business owner and the small business sector as a result of its implications for the future of Africa's overall economy and job creation potential. For instance, Small & Medium Enterprises (SMEs) represent over 90% of private business and contribute to more than 50% of employment and of Gross Domestic Product in most African countries (UNIDO, 1999). SMEs are also believed to contribute about 70% to Ghana's GDP and account for about 92% of businesses in Ghana (Abor & Quartey, 2010). Thus, wealth creation through entrepreneurship is potentially a very significant means of ensuring economic empowerment and shared economic growth.

Furthermore, family and privately owned businesses represent an important section of the Ghanaian economy. However, many small and medium-sized enterprise owners have founded and built their businesses without giving much thought to what will happen when it is time to retire. Research shows that many small firms go out of existence after ten years and only three out of ten into a second generation (Zimmerer, Scarborough and Wilson, 2007). More significant, only 12 - 16% of all family enterprises make it to a third generation and just only 3% make it to the fourth generation and beyond (Kuratko and Hodgetts, 1998; Zimmerer, Scarborough and Wilson, 2007). A study demonstrated these facts by examining the life expectancy of 200 successful manufacturing firms indicating that the average life expectancy for a family business is 24 years, which is also the average tenure for the founders of a business (Kets de Vries, 1993; Beckkhard & Dyer, 1983). One of the major causes of SMEs' lack of continuity includes failure to prepare for the next generation through succession planning.

The objectives of the paper therefore are to examine the characteristics of female entrepreneurs and their businesses; the attitude/intention of the female entrepreneurs towards management succession; and propose a succession planning strategy, based on the outcome of the study with the ultimate goal of empowering women.

LITERATURE REVIEW

The Concept of Succession Planning

The notion of succession planning spans a range from any efforts to plan for top management succession to an expansive view of systematic internal talent development. Succession planning is a process in which the business owner plans for the transfer of knowledge, skills, labour, management, control and ownership of an SME to the next generation. It is not a one-time event. Instead, it is a process that usually takes several years to do well by ensuring the continuation of a business through the generations. It could be perceived as a strategic plan with a targeted goal to provide an organization with the staff required to meet current and future operating needs. In essence, succession planning is defined as "a dynamic, on-going process of systematically identifying, assessing, and developing leadership talent; and recognizing key contributors to meet future organizational strategic and operational needs" (Kimball, 2005: as cited in Nink, Boyer & Fogg, 2006, p. 34). Huang (1999) defines succession planning as "any type of formal rules or procedures in arranging for managerial succession". Alternatively, Rothwell (2001, pg. 6) defines succession planning as "a deliberate and systematic effort by an organization to ensure leadership continuity in key positions, retain and develop intellectual and knowledge capital for the future, and encourage individual advancement." This view clearly encompasses more positions than that of the chief executive, and implies an on-going program of individual leadership development throughout the organization. This comprehensive approach is tied to strategic human resources management (Kesner & Sebora, 1994), leadership development (Bernthal & Wellins, 2006; Groves, 2007), and beyond to overall workforce planning (Kiyonaga, 2004). Many organisations define succession as the grooming of a small number of replacements for top executives, typically with one replacement per position. This approach, commonly referred to as replacement planning, still exists in many organisations (Rothwell 2001).

Additionally, "succession planning is a proactive attempt to ensure that leadership in an organization will be continuous by identifying how these positions will be filled as both planned and unplanned

departures occur" (Schmalzried & Fallon, 2007, p. 169). It therefore includes the transfer of ethics, values, and traditions along with the actual business itself.

Succession planning focuses on three main areas. First, it addresses the needs of the entity as senior leadership ages and retires. Second, it helps the entity prepare for an unexpected event such as the sudden illness or death of a person in a key leadership role in the organization. Finally, succession planning ensures that an organization has the right personnel in place to function at peak efficiency both presently and in the future. Thus, succession planning can serve as a means to take an organizational inventory of human capital and better identify existing or future gaps. Activities included in succession planning vary both with the breadth of perspective and in formality. A basic technique entails identifying in advance the specific subordinate best suited to serve as the next successor; a similar but somewhat more involved method is maintaining a ranking of several individuals within the organization. Evidence suggests inadequate succession planning in many organizations (Ip & Jacobs, 2006). Impediments to succession planning cover a wide range of issues, from other work/time demands and a need for performance management, to reluctance to provoke organizational politics, to inadequate awareness or even basic foot dragging on the part of top management and/or board of directors. Smaller organizations especially may perceive a lack of resources (monetary, time, expertise) to devote to succession planning, as well as thin ranks of internal talent and limited opportunity for grooming a successor (Ip & Jacobs, 2006). Morris, William and Nel (1996) suggest three general factors that are associated with effective transitions. First, preparation of heirs in terms of formal education, training, work experience, motivation is essential. Secondly, relationships among family and business members include communication, commitment, trust, loyalty, conflict, shared values and traditions, jealousy. Thirdly, planning and control activities include succession planning and creation of family council. In practical terms, approaches to succession management can range from processes aimed solely at CEO replacement to broader all-encompassing leadership development programs (Taylor, Watt and Bennett 2004).

Conversely, no one likes thinking about their mortality and some business founders so closely identify with their ventures that they cannot imagine their business continuing without them. One of the greatest challenges facing many SMEs in the 21st century is how to deliberately plan for a well-designed change of leadership while maintaining organizational continuity and meeting or exceeding organizational goals. Some additional insights into current trends, approaches and challenges in succession management were provided by a recent international survey of 1572 leaders, 1461 employees and 117 human resources staff from 117 organisations in 14 countries (Bernthal and Wellins 2003). Key findings included the fact that succession management has grown as an issue of importance to business leaders. When asked to identify their most important business priorities, the study further revealed that leaders nominated, in order: 1) controlling costs, 2) identifying ways to improve quality, 3) improving customer relationships/ service, 4) improving or leveraging company talent, 5) improving production/ operational efficiency involves line management to identify and/or develop candidates. In another survey, the leadership development and succession management practices of Australian organisations were compared with overseas organisations (USA, UK, Germany, France, Singapore, Malaysia, Hong Kong) (Watt and Business 2005). Key findings showed that despite the growing importance of succession management, 41% of Australian respondents indicated their organisation did not have a succession management system in place. This compares with 36.4% of organisations from other countries surveyed. On a scale of 1 (not at all effective) to 10 (extremely effective) respondents were asked to rate the overall effectiveness of their succession management system. On average Australian respondents rated their systems 4.5 compared to 4.35 for all other respondents.

SMEs in Ghana: Definitions and Characteristics

In Ghana, small businesses are the bedrock of economic development. The number of people that depend on SMEs for their livelihoods is considered to be much higher. Thus, small -size enterprises (SMEs) are generally perceived to be the seedbed for indigenous entrepreneurship and generate all the many small investments, which would otherwise not have taken place.

Businesses differ in their levels of capitalisation, sales and employment. Hence, Small Scale enterprises have been variously defined by different institutions. For instance, in 1971, the Bolton Committee formulated an "economic" and a "statistical" definition. Under the economic definition, a firm is regarded as small if it meets the following three criteria:

a) it has a relatively small share of their market place;
b) it is managed by owners or part owners in a personalised way, and not through the medium of a formalised management structure;
c) it is independent, in the sense of not forming part of a large enterprise.

The Committee also devised a "statistical" definition to be used in three main areas:

a) quantifying the size of the small firm sector and its contribution to GDP, employment, exports etc.;
b) comparing the extent to which the small firm sector's economic contribution has changed over time;
c) applying the statistical definition in a cross country comparison of the small firms' economic contribution.

According to the European Commission (EC), the SME sector is made up of three components:

a) firms with 0 to 9 employees - micro enterprises
b) 10 to 99 employees - small enterprises
c) 100 to 499 employees - medium enterprises.

In effect, the EC definitions are based solely on employment rather than a multiplicity of criteria. More so, the EC definition did not assume the SME group is homogenous, that is, the definition makes a distinction between micro, small, and medium-sized enterprises (Storey, 1994).

The United Nations Industrial Development Organisation (UNIDO) also defines SMEs in terms of number of employees by giving different classifications for industrialized and developing countries. The definition for industrialized countries is given as follows:

• Large - firms with 500 or more workers;
• Medium - firms with 100-499 workers;
• Small - firms with 99 or less workers.

The classification given for developing countries is as follows:

• Large - firms with 100 or more workers;
• Medium - firms with 20-99 workers;
• Small - firms with 5-19 workers;
• Micro - firms with less than 5 workers.

The Ghana Statistical Service (GSS) considers firms with less than 10 employees as Small Scale Enterprises and their counterparts with more than 10 employees as Medium and Large-Sized Enterprises. Besides, the National Board of Small Scale Industries (NBSSI) in Ghana applies both the fixed asset and number of employees' criteria. It defines a Small Scale Enterprise as one with not more than 9 workers, has plant and machinery (excluding land, buildings and vehicles) not exceeding 10 million Cedis (US$ 9506, using 1994 exchange rate). Steel and Webster (1990) and Osei et al (1993) in defining Small Scale Enterprises in Ghana used an employment cut off point of 30 employees to indicate Small Scale Enterprises. The latter however dis-aggregated small scale enterprises into 3 categories: (i) micro - employing less than 6 people; (ii) very small, those employing 6-9 people; (iii) small -between 10 and 29 employees.

A more recent definition is the one given by the Regional Project on Enterprise Development Ghana manufacturing survey paper. The survey report classified firms into: (i) micro enterprise, less than 5

employees; (ii) small enterprise, 5 - 29 employees; (iii) medium enterprise, 30 – 99 employees; (iv) large enterprise, 100 and more employees (Teal, 2002 as quoted by Abor and Quartey, 2010).

METHODOLOGY

The study utilized a descriptive research design, the purpose of which was to capture the relevant issues that surround succession planning as regards to female entrepreneurs. Data for this study was obtained through survey involving sixty-two females who owned and manage their own small enterprises at the Adentan Municipality in Ghana. Convenience sampling was deemed appropriate for the sampling technique due to the extent to which the target population was scattered in the Municipal and the difficulty involved in locating them. A structured questionnaire was employed for the collection of data. Data was analyzed using descriptive statistical methods.

RESULTS AND DISCUSSIONS

Characteristics of Female Entrepreneurs in Adentan Municipality

Data obtained showed that 66% of the female entrepreneurs have completed only up to secondary school, while 34% had attained their bachelor's degree as their highest. Most of the respondents were between 20-29 years (43%) and 40 – 49 years (47%), while 10% are between 30-39 years. 43% of the respondents were single, 26% were divorced, 18% are married and 13% widowed.

Furthermore, most of the sampled business ventures (56%) had existed for six years, while 31% had just began their business (between 1-3 years) and a few (13%) were up to 9 years. 50% of the respondents had full time employees between 1-5 years, 34% had employed more than ten workers and only few respondents (3%) had no full time employees. As regards to type of ownership, all the respondents indicated that their businesses were wholly owned by them. This is possibly so because sole proprietor business is the most common for micro and small enterprises in Ghana. Most (40%) of the female entrepreneurs are into mechanising (wholesale/retail), 18% are operating in the manufacturing sector, 32% are in the finance, real estate and educational sector, and a few (10%) in the restaurant business.

They have approximately GH¢1,000 ($600) to GH¢5,000 ($3,300) as their size of investment with an annual income ranging from GH¢2,000 ($1,200) to GH¢6,000 ($4,000) which is a major characteristic of micro and small enterprises in Ghana

Most of the respondents (68%) were first generation business, thus they were the founders of their own business, while 31% are second generational business with one respondent in charge of third generational business. Table 1 provides the descriptive statistics.

Table 1 gives a general description of the respondents. It could be argued that education provides a basis for the intellectual development which entrepreneur requires in conducting business successfully, the converse argument is that business ownership is not an intellectual activity (Storey, 1994). The educational status of the Ghanaian population generally shows that illiteracy is more prevalent among women than men and that a lower number of female adults attain higher education as compared to their male counterparts (Amu, 2009). The relatively low educational status and literacy levels for women give credence to their concentration in informal private sector employment and self-employment which according to Storey (1994) is an opportunity for less academically successful to earn high incomes.

TABLE 1
GENERAL PROFILE OF RESPONDENT FEMALE ENTREPRENEURS
n=62

Variable	Response	F	%
Highest Educational Attainment	Junior/Senior high school	41	66
	Bachelor's Degree	21	34
Age	20 – 29 years	27	43
	30 – 39 years	6	10
	40 – 49 years	29	47
Marital Status	Married	11	18
	Single	27	43
	Divorced	16	26
	Widowed	8	13
Age of Business	1-3 years	19	31
	4-6 years	35	56
	7-9 years	8	13
Number of full time Employees	None	2	3
	1-5	31	50
	6-10	8	13
	More than 10	21	34
Business Ownership	Individually owned	62	100
Business Sector/Industry	Manufacturing	11	18
	Merchandise	25	40
	Finance& Real Estate	10	16
	Education	10	16
	Restaurant	6	10
Size of Investment	Below GH₵1,000	2	3
	1,000 – 1,999	14	22
	2,000 – 2,999	11	18
	3,000 – 3,999	11	18
	4,000 – 4,999	24	39
Annual Income for 2010	Below 2,000	7	11
	2,000 – 2,999	34	55
	3,000 – 3,999	11	18
	5,000 – 5,999	10	16
Respondents' Status	Founder– first generation	42	68
	Inheritance – second generation	19	31
	Inheritance – third generation	1	1

Source: field data, 2011

Another important characteristic of the typical female entrepreneurs is their involvement in the trading of merchandise. This sector is characterised by ease of entry of small scale operators, minimum capital requirement and educational level, which easily thrives in the informal sector. According to World Bank estimates, most businesses in Ghana, which account for 70% of employment in the country, fall within the categories of "micro", "small" and "medium" entrepreneurs. They range from farming activities, trading of general goods, manufacturing such as such as textiles and garment, arts and crafts.

More so, the study revealed that majority of the female entrepreneurs is quite young. This corroborates a previous survey conducted amongst small scale enterprises in Ghana which revealed that young people owned almost 40% (Osei, et al., 1993). Young people become entrepreneurs for several reasons, sometimes out of necessity and sometimes to capitalize on an opportunity.

In terms of their top three sources of funds, 50% the female respondents indicated that they mostly rely on 'bank loans', 'retained profits' and 'leasing' as the main sources of funds for their business. They could be as a result of the proliferation of financial institutions in Ghana specializing in SMEs financing.

Sources of Motivation of the Female entrepreneurs

The study revealed in Table 2 that 69% of the female entrepreneurs indicated that their major source of motivation for starting their own business is to be 'self-dependent'; while 31% indicated 'to carter for family needs' among other things.

TABLE 2
SOURCES OF MOTIVATION
n=62

Sources of Motivation	f	%
To earn money	0	0
To be self-dependent	43	69
Motivation from family and friends	0	0
Carter for family needs	8	13
All the above	11	18

Source: field data, 2011

Interestingly the overwhelming common motivating factor for women creating their own business is to be 'self-dependent'. Women's motives for starting and leading a business have been documented in many studies to help illuminate the desires and needs of women. Women's reasons for business start-up reasons encompass a wide range: desiring greater work-life flexibility, seeking challenge, fulfilling a long-felt desire, or escaping an organizational glass ceiling. Self-actualization is the most important reason given by women in a survey of 223 business owners (Lee and Rogoff, 1997), including goals of maximizing personal skills/abilities, contributing to society, and gaining respect and recognition. Vijaya and Kamalanabhan (1998) in their study of 195 potential women entrepreneurs in India found that money for them was rarely the primary driving force, thus, confirming the present study. According to Vijaya and Kamalanbhan, social issues and problems provide an impetus for women to begin business. Other important motivation factors for women were the need to provide security to the family, and a desire to have flexibility in their occupational and domestic spheres of life. Moore and Buttner (1997) interviewed 129 women entrepreneurs in the United States of America and followed up with focus groups one year later, asked the question, "Why and how did women with exposure to corporate life decide first to enter the organization and then to leave it for entrepreneurship?" Their findings revealed five thematic clusters of reasons women left their jobs to start a business: need for self-determination (including need for greater autonomy and freedom) and challenge; blocks to corporate advancement (including lack of career advancement, discrimination and a feeling of "no fit" with the corporate culture); organizational dynamics that dealt with power and politics; and desire for greater family-career balance.

This implies that an important clue to a woman's status is her degree of participation in economic life and control over her environment. Consequently, higher economic status and self-reliance instils women (particularly in Ghana) with power to make changes and choices about their lives which include education, housing, health-care, and political participation and freedom to form a career with a sense of pride and a feeling of accomplishment. This sense of fulfilment is more rewarding than money.

Attitude towards Business Succession and Intentions

The descriptive statistics in Table 3 indicate that the respondent female entrepreneurs in Ghana would like the business to outlive their generation. However, about 60% of the respondents have no formal succession plan. This possibly could be explained by the attitude of majority (90%) of the female entrepreneurs who still want to remain active after 65years. That is to say, 50% will like to remain active in their own business beyond 65 year because of good health, 22% will like to be active beyond 65 years because they perceive themselves as identifiable with their business, and 18% would do so due to concerns about potential successors. Only 10% do not see themselves as active beyond 65 years. This clearly shows that the respondent entrepreneurs have not fully planned and prepared for the future of their business.

Furthermore, 64% of the respondents implied that upon retirement, they prefer to transfer their business to their children or other family members, 18% indicated they would seriously consider selling their business, while another 18% indicated that they do not have plans at the moment. Table 3 presents the findings below:

TABLE 3
BUSINESS SUCCESSION PLAN INTENTIONS
n=62

Variable	Response	*f*	%
Belief in Business to outlive current generation	Yes	62	100
Availability of succession plan	Formal succession plan in place	25	40
	Informal succession plan in place	10	16
	No succession plan	27	44
Activity in Business after 65 years	Yes, will be active	56	90
	NO	6	10
Preferred Option upon retirement	Transfer business to children or family member	40	64
	Would seriously consider selling business	11	18
	No plans at the moment	11	18
Mode of Transfer to Children	Wills	44	71
	Sales	10	16
Choice Successor	Male	24	39
	Female	38	61

Source: field data, 2011

Further probing revealed that 40% of those who would seriously consider selling would do so because they have concerns for the future, 18% would sell due to lack of family successor, 10% would sell because sales price exceeds expectation and 2% as a result of wishing to retire. Entrepreneurs consider selling their venture for numerous reasons. Based on 1,000 business owners surveyed by Fox and Elek (1992), some of the reasons are boredom and burnout, lack of operating capital, no heirs to inherit the business, desire for liquidity, aging and health problems among others. In addition, 77% of the respondents prefer family ownership as regards to business succession and continuity, preferably through wills (71%) and sales (16%). Given the opportunity, 61% of the respondents also indicated that they would prepare a female successor because women are better managers and are good at business, 39% prefer men because men are more daring and can take risks.

The study also hints in Table 4 that the entrepreneurs' attitudes toward succession planning are not favourable. Thus generally, the respondents are not comfortable in planning for the future of their business. Succession presents a serious and unique problem for small businesses for a number of reasons. Unlike large formal organizations in which ownership and control are separate and ownership is either dispersed or institutionalized, small businesses are characterized by the fusion of these attributes in one individual, the owner-entrepreneur, who embodies the organizational structure of the enterprise. Furthermore, there are no established procedures (in the Ghanaian context) for smoothly replacing the entrepreneur and succession is often unplanned. This affirms a study of 172 Zimbabwean indigenous small-scale businesses which indicated that succession had not yet become a serious issue for the business owners. Six out of the 10 businesses studied did not have a clear succession plan. While all the business-people knew the individuals whom they wanted to take over their businesses, only three of the business owners had actually appointed those people to positions that would enable them to exercise a substantial

TABLE 4
ATTITUDE TOWARDS SUCCESSION PLANNING
n=62

Attitudes/Perception	SA	A	U	D	SD
1. Succession is surrendering power over the business and a first step toward losing control over life	8	4	42	8	0
2. Letting go of business control means losing an important part of one's identity	15	1	7	29	10
3. Succession involves making hard choices that affect both the business and the family, and it is preferable to avoid the inevitable conflict involved	1	21	8	13	19
4. I am not comfortable leaving my business in the hands of a successor	6	11	16	14	15
5. I believe my business will not survive without my leadership	6	27	12	8	9
6. When my business matures, I shall be willing to allow a successor to take over my business	22	11	0	20	9
7. In my absence I believe my business will not be managed properly	9	23	15	15	0

Source: field data, 2011

amount of authority and responsibility to prepare them to take over in the event of a sudden death or incapacitation of the founder (Maphosa, 1996). Thus, despite the proven economic and social benefits of the private sector in the developing world, the problem of succession, replacing exiting owner-entrepreneurs, ultimately confronts small businesses in Ghana.

Succession Planning as a Sustainable Driver of Women Empowerment

The United Nations Population Fund defines women's empowerment through five major components: women's sense of self-worth; their right to have and determine choices; their right to have access to opportunities and resources; their right to have the power to control their own lives, both within and outside the home; and their ability to influence the direction of social change to create a more just social and economic order, nationally and internationally. These five components are particularly applicable to the economic sphere, where women's economic empowerment can be achieved by targeting initiatives to expand women's economic opportunity; strengthen their legal status and rights; and ensure their voice, inclusion and participation in economic decision-making.

This paper however proposes business succession planning as an indispensable component of women's empowerment. The results of the study illustrate the quest of female entrepreneurs to benefit from entrepreneurship as a core component in building socially inclusive and participatory economies. First, it is important for female entrepreneurs to deliberately perceive business succession as a matter of urgency irrespective of the size or age of their business if they want to break the vicious cycle of disadvantaged women. This is important due to unforeseeable events such as illness or some form of physical incapacitation, mental or psychological breakdown, resulting in the individual having to withdraw from the business or sudden death. These types of events are often unforeseen, and normally, the entrepreneur seldom has a contingency plan for dealing with them. As a result, when they occur they often create a major problem for the business progress.

Second, in order to sustain empowerment, female entrepreneurs should identify their potential female successors (as indicated by the results of the study) who must be groomed for the future of the business. According to Scarborough and Zimmerer (2006), if management succession is to be effective, it is necessary for the process to begin early in the successor's life. Thus, the business owners should involve their children (preferably the girl child) in their businesses while they are still in junior high or high school. Finally, planning for business succession protects not only the founder or the successor, but it preserves the sustainability of the business itself which has an important multiplier effect on the economic wellbeing of women in Ghana and Africa in general as regards to economic empowerment and poverty eradication.

CONCLUSION

Based on the outcome of the study, this study concludes that entrepreneurship is the clearest path to women's economic emancipation and empowerment. Consequently, succession planning is specifically vital to sustainable economic development among women in Ghana and Africa in general. Therefore, we must continually foster enterprising cultures among women to keep businesses alive for generations to come.

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Measuring Personality in Business: The General Personality Factor in the Mini IPIP

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The Mini-IPIP is a 20 item measure of the Big Five personality domains, used in business for pre-employment selection. A study was conducted to determine if this short version of the IPIP had a general personality factor as found in longer Big Five measures. A sample of 269 adult males and females was administered the Mini-IPIP. Confirmatory factor analyses examined several models. A single general personality factor (GFP) model fit the data well as did a two factor model (DeYoung, Peterson, & Higgins ,2002; Digman, 1997), and a higher-order general personality factor (GFP) model,(Musek, 2007; Rushton & Irwing, 2008). The current analyses confirmed the general factor. Implications for research and practice are discussed, including a call for investigating the practical application in business and theoretical consistency of the general personality factor.

INTRODUCTION

The contemporary study of personality has arrived at a consensus that traits can be reliably organized into five broad domains called the Big Five (Costa & McCrae, 1992). The Big Five domains are: Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. Neuroticism is sometimes called by its positive counterpart, Emotional Stability. Uses of the Big Five range from clinical evaluations (Nigg, Blaskey, Huang-Pollock, Hinshaw, John, Willcutt, & Pennington, 2002; Watson, Clark, & Harkness, 1994) to modeling or predicting job performance (Barrick & Mount, 1991; Ones, Mount, Barrick, & Hunter, 1994; Tett, Jackson, & Rothstein, 1991). The use of personality measures in the prediction of occupational outcomes has been well established. Barrick and Mount (1991) conducted a meta-analysis of the predictive efficiency of the Big Five personality domains for training and job performance across 117 studies. They found that conscientiousness was consistently related to training proficiency and job performance in every criterion and occupational category measured and estimated the meta-analytic correlation between conscientiousness and job performance at $\rho = .22$. Tett et al. (1991) refined the Barrick and Mount estimate to $\rho = .26$. Barrick, Mount, and Judge (2001) noted "results support the previous findings that conscientiousness is a valid predictor across performance measures in all occupations studied" (p. 9).

Goldberg (1981) pioneered lexical theory which became a foundation for the *NEO Personality Inventory* (*NEO-PI;* Costa & McCrae, 1985) that measured the domains of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. Using the NEO-PI-R (*NEO-PI –Revised*; Costa & McCrea, 1992) as an example, each of the five domains has six facets that are subscales measuring a particular construct. The sum of the six facets yields the domain score. There are 240 items in the *NEO-PI-R* and administration takes about one hour. The *NEO Five-Factor Inventory (NEO-FFI)* is a 60 item version of the NEO-PI-R. It assesses only the domains, but can be administered in about 15 minutes. Non-commercial versions of Big Five inventories also are available. Among the most frequently used for research is the 100 item *International Personality Item Pool, IPIP,* (Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger, & Gough, 2006). There is also a 50 item version of the *IPIP* (International Personality Item Pool, 2011), a 20 item *Mini-IPIP* (Donnellan, Oswald, Baird, & Lucas, 2006) and a *Ten Item Personality Inventory* (*TIPI*; Gosling, Rentfrow, & Swann, 2003). Business reasons for shortening the Big Five instrument include saving administration time, reducing fatigue, and allowing other instruments to be administered in a specific time period.

Digman (1997) suggested two hierarchical factors for the Big Five in which Alpha was defined by Neuroticism, Agreeableness, and Conscientiousness, and Beta was defined by Extraversion and Openness. DeYoung, Peterson, and Higgins (2002) in their study relabeled these factors as Stability and Plasticity. Musek (2007) confirmed a general factor of personality (*GFP*) that was hierarchically superior to Alpha/Stability and Beta/Plasticity in the Big Five model in three samples. Rushton and Irwing (2008), using meta-analytic correlations from 16 separate studies totaling 2,916 participants, reported that measures of the Big Five have a hierarchical structure with two second-level factors identical to Digman's and a single third-level general personality factor, *GFP*.

Ashton, Lee, Goldberg, and de Vries (2009) demonstrated that hierarchical factors can be found from uncorrelated broad factors if arranged optimally among observed scores. They did not offer a practical empirical example from the literature.

Findings by van der Linden, Scholte, Cillessen, te Nijenhuis, and Seger (2010) supported the existence of a general personality factor including "likeability" and "popularity" in a sample of adolescents. de Vries (2011) reanalyzed their data and concluded that support for a general personality factor was unwarranted due to analytic issues such as Heywood Cases and better fit of non-hierarchical models. Revelle and Wilt (2010) argued that the *GFP* accounted for much less common variance than the general factor in cognitive ability (*g*) and is difficult to interpret. Just (2011) reviewed the literature regarding the *GFP* and concluded that "Data from a number of highly diverse measures of personality have revealed the position of the *GFP* atop the hierarchy of personality structure…" (p. 770).

While there has been substantial research on the longer versions of Big Five measures, there has been less research on shorter versions. Cooper, Smillie, and Corr (2010) conducted a confirmatory factor analysis of the *Mini-IPIP* items and concluded that a five factor model reflecting the Big Five domains was the most plausible model. However, there has not been an investigation of the general personality factor of the *Mini-IPIP*. If the longer and shorter versions are measuring the same personality constructs, then there should be a *GFP*. If the longer and shorter versions are not the same, the test scores cannot be interpreted in the same manner and it is likely that the tests are not measuring the same construct. Hence, if the tests are not comparable, comparisons, accumulation of results, and inferences, will be misleading.

The purpose of the current study was to determine if the *Mini-IPIP* revealed a general personality factor. Additionally, we sought to determine whether a hierarchical structure, commensurate with longer measures of the Big Five, similar to Digman, (1997), DeYoung et al. (2002), Musek (2007), and Rushton and Irwing (2008) was plausible in this short version. This will also help determine if the longer and shorter measures assess the same constructs and permit meaningful comparisons and inferences.

METHOD

Participants

The participants were 269 adult males (38%) and females (62%) from metropolitan San Antonio, Texas ranging in age from 18 to 81 with an average of 44 years. Their average job experience was 23 years. Educational attainment was 1.1% high school graduate, 8.4% some college, 24.9% college graduate, and 65.6% post-graduate. By ethnicity, the participants were 47.6% Hispanic, 39.6% white, 9.5% African American, and 3.3% other. All were employed full time in a broad array of jobs.

Instruments

The 100 item *IPIP* is a public domain instrument that produces scores for the Big Five (Goldberg et al., 2006). The *Mini-IPIP* is a 20 item version of a Big Five instrument (Donnellan et al., 2006). It was developed because of the need for a measure of the Big Five domains that took less time to administer. The developers recognized that unlike the 100 item *IPIP* or the *NEO-PI-R*, 20 items would not allow for the replication of the 30 facet scores. Because reduced administration time was an important goal, only the five domain scores were included in the *Mini-IPIP*.

Correlations of the domain score of the *IPIP* and the *Mini-IPIP* were used as a developmental criterion (Donnellan et al., 2006). The correlations between the *IPIP* and the *Mini-IPIP* for like-named domain scores from a development study of 2,663 participants are: Conscientiousness (r = .90), Agreeableness (r = .89), Neuroticism (r = .92), Openness to Experience (r = .85), and Extraversion (r = .93).

Analyses

Multiple confirmatory factor analyses (CFAs) were conducted on the five domain scores of the *Mini-IPIP* using LISREL 8.7 (Jöreskog & Sörbom, 2004). The CFAs used maximum likelihood estimation. Four CFAs were performed. The first CFA sought to determine if the data could be well represented by a single factor. The second applied Digman's (1997) two factor (Stability and Plasticity) model. The third model applied Rushton and Irwing's (2008) hierarchical model, with intermediate factors representing Stability and Plasticity and a higher-order *GFP*.

The fourth model employed the unequivocal test of Erdle, Irwing, Rushton, and Park (2010). It tested for the existence of a general personality factor by specifying the two factors of Stability and Plasticity as uncorrelated. This test first estimates the model with Digman's two factors uncorrelated and then estimates it with the factors correlated. A difference in fit indicates the most likely structure. A better fit for the uncorrelated factors removes the possibility of the hierarchical *GFP*. A better fit for the correlated factors provides support for the hierarchical *GFP*.

Several fit statistics were used: χ^2, Root Mean Square Error of Approximation, (RMSEA), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Standardized Root Mean Square Residual (SRMR), and Critical N (CN). We applied the values for determining quality of fit as suggested by the literature (Hu & Bentler, 1999; Lance & Vandenberg, 2009).

RESULTS

Table 1 summarizes the means and standard deviations of the *Mini-IPIP* domain scores. Table 2 presents the correlations of the scores. After reflecting the negative correlations with Neuroticism, the correlations between the domain scores ranged from .007 (Neuroticism and Extraversion) to .293 (Agreeableness and Openness) with a mean correlation of .141.

TABLE 1
MEANS AND STANDARD DEVIATIONS FOR THE MINI-IPIP DOMAIN SCORES

Score	Mean	SD
Agreeableness (A)	16.42	2.33
Openness (O)	16.10	2.54
Extraversion (E)	15.04	3.01
Conscientiousness (C)	17.00	2.27
Neuroticism (N)	11.87	2.54

TABLE 2
CORRELATIONS AMONG THE MINI-IPIP DOMAIN SCORES

Domain	A	O	E	C	N
Agreeableness (A)	1.000				
Openness (O)	0.293	1.000			
Extraversion (E)	0.261	0.171	1.000		
Conscientiousness (C)	0.178	0.133	0.048	1.000	
Neuroticism (N)	-0.186	-0.099	0.007	-0.036	1.000

CFAs

Results of the CFAs are presented in Table 3. The first CFA, which sought to determine if the data could be represented by a single general personality factor, indicated a good fit of the model to the data. LISREL modification indexes suggested that the error terms of the Openness and Agreeableness observed variables should be permitted to correlate. This was done, but gave unacceptable results with a negative error variance for Agreeableness and a strong negative correlation (r = -.87) between Agreeableness and Openness. These two results were deemed unacceptable and work on this correlated-errors model was discontinued. The single general personality factor CFA that accounted for 32% of the common variance was retained. This model is presented in Figure 1

TABLE 3
FIT INDEXES FOR THE CFA MODELS

	One Factor	Digman (1997)	Rushton & Irwing (2008)	Non-Hierarchical
X^2 df p	3.84 5 p < .57	3.20 4 p< .52	3.20 3 p<.36	41.53 6 p<.00
RMSEA (lower-upper)	0.00 (0 - .074)	0.00 (0 - .080)	0.01 (0 - .110)	0.14 (.10-.190)
SRMR	.027	.025	.025	.11
CFI	1.00	1.00	1.00	.46
GFI	1.00	1.00	1.00	.95
CN	1111.73	1020.85	950.28	109.49

FIGURE 1
FACTOR LOADINGS FOR A GENERAL PERSONALITY FACTOR
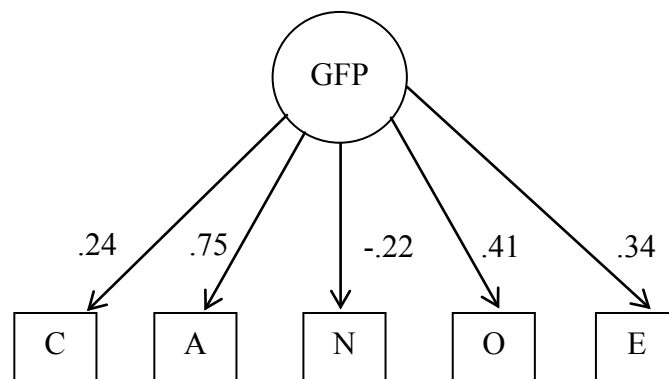
Note: The factors are the general factor of Personality (GFP), conscientiousness (C), agreeableness (A), neuroticism (N), openness (O), and extraversion (E).

The second CFA applied Digman's (1997) two factor model (i.e., Alpha and Beta, latter called Stability and Plasticity) to the data. This model also fit the data quite well. See Figure 2.

FIGURE 2
FACTOR LOADINGS FOR THE MODEL WITH TWO FIRST-ORDER FACTORS
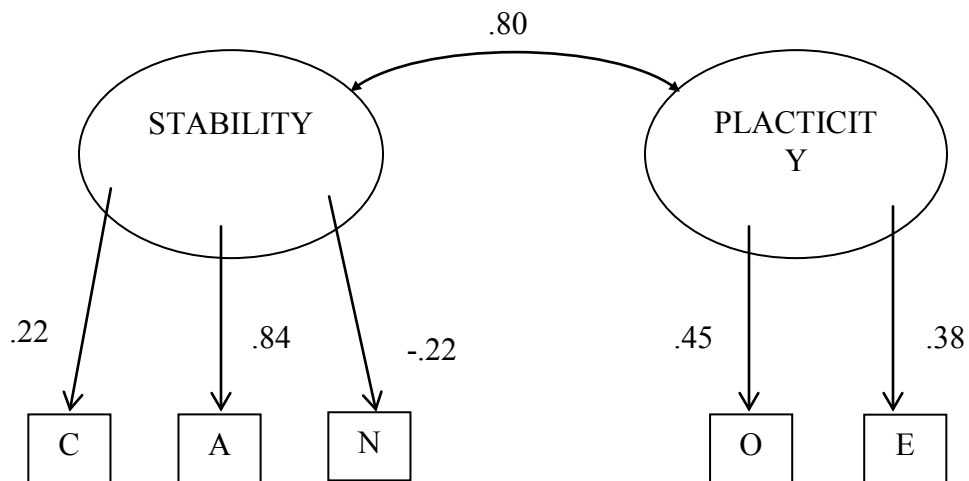
Note: The factors are Stability, Plasticity, conscientiousness (C), agreeableness (A), neuroticism (N), openness (O), and extraversion (E).

A third CFA evaluated a higher level general factor of personality (*GFP*) as suggested by Musek (2007) and Ruston and Irwing (2008). Both lower-order factors were influenced by the higher-order factor. The fit was very good. Figure 3 illustrates this model and factor loadings.

FIGURE 3
FACTOR LOADINGS FOR THE HIERARCHICAL MODEL
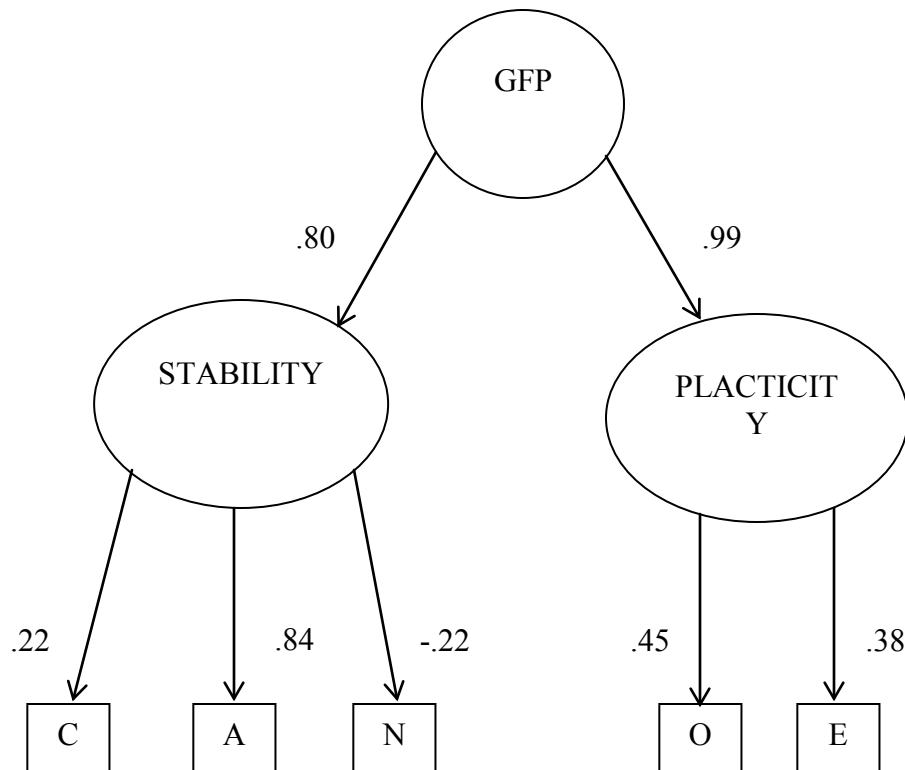
Note: The factors are general factor of personality (GFP), Stability, Plasticity, conscientiousness (C), agreeableness (A), neuroticism (N), openness (O), and extraversion (E).

Finally, following the unequivocal test of Erdle et al. (2010), a CFA was conducted in which the two first-order factors were specified to be uncorrelated. Consistent with Erdle et al. the fit was very poor, further supporting a general personality factor.

DISCUSSION

Cooper, Smillie, and Corr (2010) conducted a confirmatory factor analysis of the *Mini-IPIP* items and concluded that a five factor model reflecting the Big Five domains was the most plausible model. The current study is the first investigation of the general factor and hierarchical structure of the *Mini-IPIP*. Results confirmed the existence of a general personality factor in both a one factor model and a hierarchical factor model with Stability and Plasticity similar to that of longer Big Five measures (DeYoung et al., 2002; Digman, 1997; Musek, 2007; Rushton & Irwing, 2008). Because the *GFP* and the higher order factor structures of the longer and shorter versions are the same, they are generally measuring the same personality constructs, and can be interpreted in much the same manner. Hence,

comparisons are likely to be more meaningful. Inferences are likely to be consistent with studies using the longer versions once results are corrected for unreliability. In addition, a better understanding of the similarity could be made by meta-analyses including both the long and short versions and conducting moderator analyses of long versus short versions on the corrected correlations. Finally, using the shorter Big Five instrument makes business sense, saving administration time, reducing applicant or employee fatigue, and allowing other instruments to be administered in a finite time period.

Given the good fit of the one factor model and the results found by Cooper et al. (2010), the *Mini-IPIP* seems to be more homogenous than expected. One reason may be due to the process for developing the *Mini-IPIP*. The developers of the *Mini-IPIP* followed the best professional practices. They used four good items from each domain and maximized the inter-item consistency via factor analytic results. Reducing the *IPIP* to 20 items necessarily left out content found in some of the facets for each domain.

Erdle et al. (2010) observed "There was no plausible alternative to a model without a general factor" (p. 344). We observed much the same. The existence of hierarchical factors has implications for practice and research. The fundamental issue is determining the appropriate level of score to use from the *Mini-IPIP*. Is it the five domains, the two hierarchical factors, or the single general factor? The two hierarchical factors and the general factor are expected to be more reliable than the domains, but the domains are more familiar to practitioners and researchers. If the purpose is to maximize the prediction of important outcome variables such as job performance, then the hierarchical factors or the general factor may be more useful. If the purpose is to understand the factors that make up personality then the five domains may be more useful.

Several questions must be answered. First, is the general factor or are the hierarchical factors the sources of valid variance analogous to the factor of general mental ability (*g*) in cognitive tests? If so, then development of future Big Five measures can concentrate on establishing the hierarchical factors rather than trying to measure the specific sources of variance. This would facilitate construction of future Big Five measures.

Determination of the sources of validity, general factor, hierarchical factors, or the domain specific factors, can be found by comparing the validity of the hierarchal factors to the validity of the hierarchical factors and the specific factors. An increase in the R^2 would indicate a contribution to validity by the specific factors. See Ree and Earles (1991) for an example.

Is the general factor the source of validity? The answer to this question has theoretical as well as practical implications. The interpretation of this factor would need to be developed and tested across a range of situations. If the general factor is the source of validity it suggests that *theories* of personality would need to be adapted to reflect this result.

It is also important to estimate the mean and variance differences on all the factors between men and women and among ethnic groups. This would establish normative data for these groups on each factor to facilitate the ongoing understanding of expected results. This also would permit the assessment of adverse impact to see if it is more or less likely with the factors compared to the five domain scores.

Further, it would be important to know how much of the differences between domain scores were due to hierarchical factors and how much were due to lower-order factors. This would be especially important to interpretation of profiles that portray differences in a graphic display to highlight high and low scores. Profile misinterpretation could occur if differences due to hierarchical factors were interpreted as differences due to lower-order factors.

A highly focused and rigorous stream of research investigating the practical application and theoretical consistency of personality factors, and factor structure is needed. We join Just (2011) in calling for multiple routes for future *GFP* research.

NOTE

[1]The opinions expressed are those of the authors and are not necessarily those of the United States Government, the Department of Defense, or the United States Air Force.

Third-generation Business Incubation Practices in Malaysian ICT Incubators – A Bridge Too Far?

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Business incubation is an economic development tool that is widely used to stimulate the growth of small-to-medium sized enterprises (SMEs). The Malaysian government in line with the country's aspirations to become a developed nation by the year 2020, has established its own incubation programs to catalyze the growth of ICT SMEs. This paper examines four constructs of the business incubation process: Selection Performance, Monitoring and Business Assistance Intensity, Resource Allocation and Professional Management Services. A total of 118 incubatees from ICT incubators in Malaysia responded to an online survey questionnaire. Principal component analysis and multinomial logistic regression analysis were used to determine the components of business incubation process and test their relationships with Business Incubation Performance. Results show that all four constructs and their respective components are significant predictors of Business Incubation Performance. The findings provide valuable information for policy-makers, business incubator managers, and potential incubatees regarding better incubation management practices thus driving incubator development towards best-practice, third-generation incubators.

INTRODUCTION

The increasingly important role of business incubation as a useful strategy and effective method to accelerate growth and development of technology-based small-to-medium sized enterprises (SMEs) has been widely acknowledged in the economic and entrepreneurship literature (Aernoudt, 2004; Lee & Yang, 2000; OECD, 1996; Phan, Siegel, & Wright, 2005). Atherton and Hannon (2006) state that incubators are known to accelerate the growth of new businesses and to create significant employment opportunities through the generation of new businesses. Furthermore, international benchmarking studies, such as the Global Entrepreneurship Monitor (GEM) concur with the notion that new businesses, facilitated by incubators, play an important role in advancing a nation's competitiveness through enhanced innovativeness and the exploitation of new knowledge and technology. Additionally, incubators have also been observed to reduce new business failures (Feng-Ling et al., 2004).

This paper examines four constructs of the business incubation process: Selection Performance, Monitoring and Business Assistance Intensity, Resource Allocation, and Professional Management Services and their significance in predicting incubator performance. Principal component analysis (PCA) and multinomial logistic regression analysis were used to first reduce and order the data to a more manageable set and then examine relationships between the four identified constructs and their associated components with the categorical, dependent variable – business incubator performance. Results revealed that all four constructs and individual components of the constructs are significant predictors of business incubation performance. The empirically-based findings in this paper indicate that the current state of play in Malaysian ICT incubators is characterized by small pockets of excellence though overwhelmingly there is room for substantial improvement in the way incubators are organized and managed; in the way incubatees are selected; in the way their progress is monitored, and in the way ICT incubators in Malaysia create and leverage knowledge regarding best practices across the entire industry. The paper proceeds as follows; firstly, a review of the incubation literature is provided, followed by an outline of the methodology adopted regarding data collection and analyses, leading on to presentation of results and discussion. The paper ends with a summary and conclusions.

LITERATURE

The term 'business incubator' has been defined in various ways by researchers in the extant literature. The reason for this variation in defining business incubator could be largely due to the diversity among incubators, their sponsors, and their purposes. This is supported by Voisey *et al.* (2006) who added that the continuous growth in business incubation and the on-going diversification of configurations has led to increased difficulty in defining business incubators precisely.

The National Business Incubation Association (NBIA) in America defines business incubator as 'a business assistance program targeted to start-ups and early stage firms with the goal of improving their chances to grow into healthy, sustainable companies' (Adkins, Sherman, & Yost, 2001). Alternatively, Business Innovation and Incubation Australia (BIIA), defines business incubator as a new hybrid type of economic development facility that combines features of entrepreneurship, business facilitation and real estate development (businessincubation.com.au). The Small Business Council of Australia defines business incubation as 'a systematic approach to new enterprise development which can be described as consisting of five dimensions including enterprise development, a business consultancy network, entrepreneurial synergy, flexible affordable working space and shared office services' (http://www.small businessaustralia.org.au). These dimensions can be generally understood as the purpose, benefit, design and management of business incubators. For this study, the latter definition was adopted as it provides a comprehensive meaning of the term.

The development of business incubation practices has been a subject of significant interest because of its proven ability in stimulating economic growth through job and wealth creation as seen for example in the United States and the United Kingdom. The reported impacts of business incubation have largely been realized in the increased number of SMEs as well as increased competitiveness in new venture creations. Subsequently, business incubators are also known to create employment opportunities (Besser, 1996; Peters, Rice, & Sundararajan, 2004) and have impacted gross domestic product (GDP) of countries such as the US and China (NBIA, 1997). North American business incubators alone have reportedly created more than 250,000 jobs over a ten year period up to 2004 (Peters et al., 2004; Semih & Erol, 2004). Job creation from activities related to business incubation is an indicator of the positive growth in economic performance in some parts of the world. Various agencies from the public and private sectors as well as research institutes and universities have taken keen interest in business incubation, leading to an increasing breadth of literature on the subject (CSES, 2002; Kae-Kuen & Hung-Shun, 2006; UKBI, 2003).

Early studies conducted include lessons learned from European incubators (Berger, 1984), business incubator as economic development tool (Carroll, 1986), structure, policy, and services in the incubator industry (Allen & McCluskey, 1990) and developing regional areas through business incubators (Kang,

1993). More recent studies (e.g. Schwartz and Hornych, 2008) focused on strategic specialization of incubators for example in the biotechnology, biochemistry or pharmaceutical industries. Studies have also been conducted on business incubation in developing countries, Adegbite (2001) for example examined the development of incubators in Nigeria and found that one of the major constraints on incubator performance was chronic tenant overstay.

Phan *et al.* (2005) acknowledged incubator development as one of the main prongs of business incubator-incubation research, alongside research done at the incubatee level, entrepreneur level, and system level. Research suggests that incubator level research involves issues that generally relate to the institutional aspects of the incubator; for example, profile of incubators, examination of the physical constitution of incubators, benefits of co-locating within incubators, types of services at the incubators, best practices of business incubators and critical elements of success of the incubators. Extensive incubator level research has been undertaken with the purpose of profiling the incubator types according to their objectives, services, and facilities offered and their role in enhancing economic development. Among the studies that have been conducted at the incubator level, Allen and Rahman (1985) studied positive environment for entrepreneurs within incubators and Cooper (1985) investigated the role played by incubator organizations in promoting growth-oriented firms. Both studies discussed incubator characteristics and the relationship between incubators and small firms. Similar-themed studies were also conducted by Carroll (1986) and Martin (1997) who examined topics including business incubator life cycle, types of funding available for incubators, benefits of incubation, and how incubators play a role in developing new enterprises. Another key area of investigation was undertaken by Tornatzky, Batts, McCrea, Lewis and Quittman (1996) who suggested that business incubation is an effective development tool and requires modest investment while providing excellent return on investment to regional economies.

Despite extensive research conducted on business incubation, the literature suggests that limited academic research on incubation development in Malaysia has been undertaken and even less so on ICT incubators. Information regarding business incubation in Malaysia is, to date, primarily descriptive, originating from consultant survey reports and government white papers, and provides a rather narrow perspective on the incubation system. This research fills this gap and provides a response to the Government of Malaysia's (InfoDev, 2010; Malaysia Plan, 2011) concerning incubator operators and incubatees improving their knowledge and practices regarding the incubation process and management.

The research provides a basis for understanding the current scenario of the Malaysian ICT incubation system and proposes recommendations for the betterment of incubation management in terms of knowledge and best practices. The outcomes of this research are significant for current and future entrepreneurship research, especially in the area of business incubation, as it provides empirical analysis of the components that influence ICT business incubation performance in Malaysia. Findings from this research allow understanding of better incubation management practices leading to possible generation of more sophisticated ICT start-ups with greater potential for growth and sustainability, by the incubators.

METHODOLOGY

Data Collection Procedures
A questionnaire based on previously tested and validated scales from studies conducted by Hackett and Dilts (2008) was distributed via email and in person to 180 ICT incubatees, covering the entire ICT incubator population in Malaysia. Participants for the survey questionnaire were initially identified from their respective incubator websites. Basic information regarding the name of the incubatees, email addresses, and phone numbers were then obtained from the incubator managers. The participants were tenants of the ICT incubators, referred to in this study and in the literature as incubatees. These companies are ICT-based companies with diverse business natures ranging from mobile and wireless communication to internet-based business applications. The link to the online survey questionnaire was emailed to the incubatees of ICT incubators in February 2010 together with a short introductory letter from the researcher indicating the nature of the research, the researcher's affiliation, and that participation was

entirely voluntary. By the end of May 2010, the total number of useful responses was 118, yielding a response rate of 65.5 per cent.

Data Analysis Procedures

In selecting an appropriate technique for analysing the data set, Hair *et al.'s* (2010b) procedures for selection of multivariate technique were followed. Principal component analysis (PCA) was selected as the most appropriate technique given the exploratory nature of the initial analysis. Tabachnik and Fidell (2007) support this approach advocating PCA is a better choice for researchers that require an empirical summary of a data set.

Data analyses were undertaken in three principal stages (data screening, exploratory factor analysis, and multinomial logistic regression) using PASW Version 18.0. As part of the preparation and screening process, data were tested for violations of statistical assumptions (e.g., multicollinearity, outliers, and normality) as well as identifying missing data. Data screening revealed that there were no missing data and the data was fit to analyze. The statistical procedures involved a two-step process: firstly, exploratory factor analysis (EFA), followed by multinomial logistic regression. Factor analysis was conducted to assess the unidimensionality of the four constructs developed in examining relationships with Incubation Performance: (i) Selection Performance, (ii) Monitoring and Business Assistance Intensity, (iii) Resource Allocation and (iv) Professional Management Services.

This paper reports on the results of the multinomial logistic regression that tested the significance of the four constructs in the business incubation process on the dependant variable, Business Incubation Performance. The initial analysis using PCA reduced 86 variables to a more manageable eleven components. The eleven components accounted for 79.2% of the total variance explained. This more than meets the acceptance level of 60% of total variance explained set out by Hair *et al.*, (2010a) and Tabachnick and Fidell (2007). Reliability analysis was undertaken at two levels; firstly to measure internal consistency of the measures and secondly, to measure the reliability of the extracted component structure. Total scale reliability as well as individual component reliabilities as measured by Cronbach's coefficient alpha were all well above the .60 threshold advocated by Hair *et al.*, (2010a). Subsequently, the associations between the eleven extracted components were examined using multinomial logistic regression to test the significance and explanatory power of the identified components in relation to Business Incubation Performance.

Multinomial logistic regression has been employed by previous researchers in numerous entrepreneurship (Gubrium & Holstein, 2002; McCracken, 1998; Patton, 2002; Srivastava & Thomson, 2009) and business incubation research (Rothaermel & Thursby, 2005). Multinomial logistic regression is used to model the relationship between a binary response variable and one or more predictor variables, which may be either discrete or continuous. In other words, multinomial logistic regression can be used to: predict a dependent variable on the basis of continuous and/or categorical independent variables and to determine the per cent of variance in the dependent variable explained by the independent variables to rank the relative importance of independent variables; to assess interaction effects; and to understand the impact of covariate control variables (Field, 2009).

Multinomial logistic regression applies maximum likelihood estimation after transforming the dependent into a logit variable (the natural log of the odds of the dependent occurring or not). In this way, multinomial logistic regression estimates the probability of a certain event occurring. In this paper, multinomial logistic regression is used to estimate the probability of different degrees of Business Incubation Performance occurring, delineated as (i) '*Our company is barely surviving*'; (ii) '*Our company has met its break-even and is moving on a path toward profitability*'; (iii) '*Our company is making profit*'; and (iv) '*Our company is highly profitable*'.

Multinomial logistic regression calculates changes in the log odds of the dependent, not changes in the dependent variable itself. Alternatively, discriminant analysis has been used in the past but is now more frequently being replaced with multinomial logistic regression, as this approach requires fewer assumptions in theory, is more statistically robust in practice, and is easier to use and understand than

discriminant analysis. Two goodness-of-fit tests (Pearson and Deviance) were performed; tables of observed and expected frequencies, and measures of association were also produced.

RESULTS AND DISCUSSION

The initial PCA revealed that eleven components yielded Eigenvalues greater than 1, for 86 variables in the data set which is within the range advocated by Tabachnick and Fidell (2007). The multinomial logistic regression analysis was performed in five phases consisting of one full model analysis and four individual model analyses. The full model analysis incorporates the eleven components previously extracted from the EFA, and grouped under their respective broader constructs, i.e. Selection Performance, Monitoring and Business Assistance Intensity, Resource Allocation, and Professional Management Services, to enable examination of their relationships with the four outcome categories.

The individual model analyses examine each component's relationship with Business Incubation Performance. Results of the multinomial logistic regression analyses will be presented in the following manner: firstly, a full model evaluation highlighting the relationship between the four broad constructs and business incubation performance in general; secondly, results from the Selection Performance construct will be presented, followed by Monitoring and Business Assistance Intensity, Resource Allocation and finally, the Professional Management Services construct.

Evaluations of the Multinomial Logistic Regression Model

Peng, Lee and Ingersoll (2002a), advocate that multinomial logistic regression evaluations may best be based on the following: (a) overall model evaluation, (b) statistical tests of individual predictors, (c) goodness-of-fit statistics, and (d) validations of predicted probabilities. This approach has been adopted here in presenting the results.

Overall Model Evaluation

A logistic model is said to provide better fit to the data if it demonstrates an improvement over the intercept-only model (also called the null model). The intercept-only model serves as a good baseline because it contains no predictors. Consequently, according to this model, all observations would be predicted to belong in the largest outcome category. An improvement over this model is examined using inferential statistical tests such as the likelihood ratio and Wald tests. TABLE 1 presents the full model evaluation consisting of all four constructs. The table reveals that Selection Performance (F1), Monitoring and Business Assistance Intensity (F2), Resource Allocation (F3), and Professional Management Services (F4) are all significant predictors of Business Incubation Performance ($p < .05$). The chi-square values also suggest that similar relationships with high values for F1, F2, F3, and F4. The interaction of all four constructs reveals the strongest effect as a predictor ($p = .003$, $\chi(3) = 14.024$).

TABLE 1
ULL MODEL EVALUATION

Predictors	Chi-Square	df	p
Intercept	18.43	3	.001
Selection Performance (F1)	13.02	3	.005
Monitoring and Business Assistance Intensity (F2)	9.50	3	.023
Resource Allocation (F3)	8.75	3	.031
Professional Management Services (F4)	13.39	3	.004
Final	14.02	3	.003

As mentioned earlier, the dependent variable, Business Incubation Performance is measured by four categorical outcomes. Multinomial logistic regression enables independent variables to predict group memberships, and as this study uses four outcomes, one of the outcomes ('*Our company is barely surviving*') has been used as a reference category. Hence, there are three models generated from this data: Model 1 ('*Our company has met its break-even and is moving on a path toward profitability*'), Model 2 ('*Our company is profitable*'), and Model 3 ('*Our company is highly profitable*'). Based on data presented in TABLE 2, the first model shows no significant relationship between the constructs and Business Incubation Performance with all values of *p* greater than .05. However, Model 2 and 3 show significant relationships with Business Incubation Performance (*p*-values < .05).

TABLE 2
PARAMETER ESTIMATES FOR THE FULL MODEL

Group 1: Our company has met its break-even and is moving on a path to profitability	β	SE β	Wald's χ^2	p	e^β (odds ratio)
Predictor					
Constant	.176	2.943	.004	.952	
Selection Performance (F1)	.001	.024	.002	.963	.999
Monitoring and Business Assistance Intensity (F2)	.000	.061	.000	.998	1.000
Resource Allocation (F3)	.057	.043	1.762	.184	.944
Professional Management Services (F4)	.020	.026	.585	.444	1.020
Group 2: Our company is making profit					
Constant	35.271	14.425	5.979	.014	
Selection Performance (F1)	.195	.075	6.731	.009	1.215
Monitoring and Business Assistance Intensity (F2)	.258	.107	5.828	.016	1.295
Resource Allocation (F3)	.026	.084	.098	.754	1.027
Professional Management Services (F4)	.122	.047	6.618	.010	1.130
Group 3: Our company is highly profitable					
Constant	41.092	22.568	3.315	.069	41.092
Selection Performance (F1)	.265	.134	3.914	.048	1.304
Monitoring and Business Assistance Intensity (F2)	.145	.182	.640	.424	1.156
Resource Allocation (F3)	.083	.138	.356	.551	1.086
Professional Management Services (F4)	.202	.099	4.162	.041	1.223

The Wald statistic is equal to the ratio of β divided by SE squared; it has a chi-square distribution. For each Wald statistic, $df = 1$ and $p = .0000$.

Statistical Tests of Individual Predictors

The statistical significance of individual regression coefficients (i.e., βs) is tested using the Wald chi-square statistic (TABLE 2). According to TABLE 2, F1, F2, and F4 were significant predictors of the outcome category '*Our company is making profit*' ($p < .05$). The high corresponding Wald test values also show the significance of these three constructs. This means the probability of incubatees making a higher profit is higher if they are carefully selected, given adequate monitoring and business assistance, and provided Professional Management Services. Meanwhile, providing incubatees with resources does not necessarily aid them towards making profit. The test of the intercept (i.e., the constant in TABLE 1)

merely suggests whether an intercept should be included in the model. For the present data set, the test result ($p > .05$) suggests that an alternative model without the intercept might be applied to the data. Consequently, F1 and F4 were also significant predictors for the outcome category '*Our company is highly profitable*'. This could be interpreted as companies tend to be highly profitable when incubators select the incubatees carefully, as well as provide them with Professional Management Services. Consequently, monitoring of incubatees and providing resources (in isolation) to the incubatees may not be significant to creating incubatees that are highly profitable.

The *βs* are the logistic regression coefficients. Negative *βs* reveal a negative or inverse relationship, whereas positive *βs* indicate positive relationship (Scarborough & Zimmerer, 2000). The odds ratio in the last columns is more straightforward in interpretation than the *βs* (log odds). An odds ratio of 1 is equivalent to log odds of 0. An odds ratio of 1, and log odds of 0 signify no relation of the independent variable to the dependent variable. The odds ratio is the probability that an event will happen divided by the probability that the event will not happen (Norusis, 1994). The findings in TABLE 2 show that for every unit increase in Selection Performance, the odds that the incubatee will be making profit is increased by 21.5%, while for every increase in Monitoring and Business Assistance Intensity, the odds of an incubatee making profit is increased by 29.5%.

Goodness-of-Fit Statistics

Two descriptive measures (R^2 indices) defined by Cox and Snell (1989) and Nagelkerke (1991) respectively, are presented in TABLE 3. These indices are variations of the R^2 concept defined for the OLS regression model. Due to the limited interpretation of R^2 in multinomial logistic regression (Peng, Lee, & Ingersoll, 2002b), the R^2 indices can be treated as supplementary to other more useful evaluative indices, such as the overall evaluation model, tests of individual regression coefficients, and the goodness-of-fit test statistic (Peng et al., 2002b). The Cox and Snell R^2 measure indicates a greater model fit with higher values, but with a limit of less than 1 (<1) (Hair et al., 2010b). The Nagelkerke R^2 is an adjusted version of the Cox and Snell R^2 and covers the full range from 0 to 1 (Hair et al., 2010b), and therefore it is often preferred. The R^2 values indicate how useful the explanatory variables are in predicting the response variable and can be referred to as measures of effect size.

TABLE 3
GOODNESS-OF-FIT TESTS OF THE FULL MODEL

	Chi-Square	df	p
Pearson	257.923	297	.951
Deviance	217.464	297	1.000
R^2			
Cox and Snell			.297
Nagelkerke			.326

In normal linear regression, summary measures of fit are functions of a residual defined as the difference between the observed and fitted value. In logistic regression, there are several ways to measure the difference between the observed and fitted values. There are two measures of the difference between the observed and the fitted values: the Pearson residual and the Deviance residual, both of which suggest that the model fit to the data well and was acceptable. In other words, the null hypothesis of a good model fit to data was tenable.

Validation of Predicted Probabilities

Multinomial logistic regression predicts the logit of an event outcome from a set of predictors. The resultant predicted probabilities can then be revalidated with the actual outcome to determine if high

probabilities are indeed associated with events and low probabilities with non-events. The degree to which predicted probabilities agree with actual outcomes is expressed as either a measure of association or a classification table. Peng, Lee and Ingersoll (2002b) recommend the use of the classification table in addition to the overall evaluation table to help communicate findings to readers. The classification table (TABLE 4), which produces a contingency table of observed versus predicted responses for all combinations of predictor variables (Hall & Hofer, 1993), indicates the extent of how the model correctly predicts each outcome category. In an ideal model, all cases will be on the diagonal and the overall per cent correct will be 100%. In this study, the full model classifies correctly 48.8% which is well above the 39.5% (1.25 x 31.6% = 39.5%) chance accuracy criteria, hence classification accuracy is satisfied in this study.

TABLE 4
CLASSIFICATION TABLE FOR THE FULL MODEL

Observed	Predicted				
	Our company is barely surviving	Our company has met its break-even and is moving on a path toward profitability	Our company is making profit	Our company is highly profitable	% Correct
Our company is barely surviving	12	6	10	0	42.9%
Our company has met its break-even and is moving on a path to profitability	8	14	14	1	37.8%
Our company is making profit	3	8	24	1	66.7%
Our company is highly profitable	1	0	2	1	25.0%
Overall Percentage	22.9%	26.7%	47.6%	2.9%	48.6%

The research focuses on the performance outcomes of the incubatees which is the dependent variable with four categories: '*Our company is barely surviving*'; '*Our company has met its break-even and moving on a path toward profitability*'; '*Our company is making profit*'; and '*Our company is highly profitable*'. Their performance can be categorized as follows: 32 firms (27.1%) were barely surviving; 44 firms (37.3%) had met their break-even; 38 firms (32.2%) were making profit; and 4 firms (3.4%) were highly profitable. The remaining results of the multinomial logistic regression analysis will be presented in the next section. The analysis examines individual components within each construct and investigates their relationships with Business Incubation Performance.

Selection Performance
Due to the exploratory nature of this study, Field (1993) recommends the use of stepwise methods in situations where no previous research exists on which to base hypotheses for testing and when the research seeks a model to fit the data. Both forward entry and backward entry methods were tested with each yielding results that were not significantly different to each other.

The model fitting information table (TABLE 5) compares the model (or models in a stepwise analysis) to the baseline (the model with only the intercept term in it and no predictor variables). It is a useful table that denotes the improvement of the model as a result of entering the predictors of the model (Hall & Hofer, 1993). The chi-square statistics for this model suggests that it is highly significant, indicating that the interactions have a significant effect on predicting whether incubatee performance was significant. TABLE 5 presents the overall model evaluation for the Selection Performance construct. The table reveals that within the Selection Performance construct, *Financial Characteristics, Managerial* and *Marketing Characteristics,* and *Product Characteristics* contribute significantly to the model ($p < .05$).

TABLE 5
MODEL-FITTING INFORMATION TABLE SELECTION PERFORMANCE CONSTRUCT

	Chi-Square	*df*	*p*
Intercept	.000	0	.
Financial-based selection	52.368	33	.017
Market and managerial-based selection	72.543	48	.013
Product-based selection	78.000	42	.001

Based on the parameter estimates in TABLE 6, selection based on product characteristics appears to be the strongest predictor for '*Our company is making profit*' (p = .041 and Wald's χ^2 = 4.183). The odds ratio value of 1.157 suggests that the probability of incubatees making profit is increased by 15.7% with a unit performance increase in selecting potential incubatees based on their products.

TABLE 6
PARAMETER ESTIMATES FOR SELECTION PERFORMANCE CONSTRUCT

Group 1: Our company has met its break-even and is moving on a path to profitability	*β*	SE *β*	Wald's χ^2	*p*	e^{β} (odds ratio)
Constant	-.623	1.421	.192	.661	-
Financial-based selection	.139	.107	1.703	.192	1.150
Market and managerial-based selection	-.093	.075	1.558	.212	.911
Product-based selection	.049	.058	.735	.391	1.051
Group 2: Our company is making profit					
Constant	-4.528	2.059	4.835	.028	-
Financial-based selection	-.036	.123	.087	.768	.964
Market and managerial-based selection	.056	.087	.419	.517	1.058
Product-based selection	.146	.071	4.183	.041	1.157
Group 3: Our company is highly profitable					
Constant	-5.904	4.855	1.479	.224	-
Financial-based selection	.083	.232	.127	.721	1.086
Market and managerial-based selection	-.122	.136	.812	.368	.885
Product-based selection	.251	.194	1.678	.195	1.285

The Pearson and Deviance statistic tests for the fit of the model to the data are shown in TABLE 7. Evidence of the goodness-of-fit of logistic models can be explained by R^2 index for either the entire model or for each predictor. The Deviance statistic here demonstrates that the model is a strong fit of the data ($p = .99$; $< .05$ level), while the Nagelkerke R^2 value of .83 likewise indicates the model is useful in predicting business incubation performance.

TABLE 7
GOODNESS-OF-FIT TESTS FOR SELECTION PERFORMANCE

	Chi-square	*df*	*p*
Pearson	66.345	159	1.000
Deviance	73.844	159	.99
R^2			
Cox and Snell			.755
Nagelkerke			.830

Finally, the classification table for analysis of Selection Performance components as shown in TABLE 8 below suggests a 75.4% correct prediction, well above the 39.5% chance accuracy criteria, indicating good prediction of the model.

TABLE 8
CLASSIFICATION TABLE PREDICTING MEMBERSHIP OF OUTCOME CATEGORIES BY SELECTION PERFORMANCE

Observed	Predicted				
	Our company is barely surviving	Our company has met its break-even and is moving on a path toward profitability	Our company is making profit	Our company is highly profitable	% Correct
Our company is barely surviving	22	8	2	0	68.8%
Our company has met its break-even and is moving on a path toward profitability	5	36	3	0	81.8%
Our company is making profit	0	10	28	0	73.7%
Our company is highly profitable	0	1	0	3	75.0%
Overall Percentage	22.9%	46.6%	28.0%	2.5%	75.4%

The following section presents regression analysis of the Monitoring and Business Assistance Intensity construct.

Monitoring and Business Assistance Intensity

The model-fitting information in TABLE 9 presents the overall fit of the model. Firstly, the chi-square statistics for this model show that comprehensiveness and quality of the business assistance contributes significantly to the model, ($p < .05$) while time intensity of the interaction is not a significant predictor to the model ($p > .05$).

TABLE 9
MODEL-FITTING INFORMATION TABLE FOR MONITORING AND BUSINESS ASSISTANCE INTENSITY CONSTRUCT

Predictors	Chi-Square	df	p
Intercept	4.387	3	.223
Comprehensiveness and Quality	10.598	3	.014
Time Intensity	.665	3	.881

The parameter estimates in TABLE 10 show that comprehensiveness and quality of the business services appear to be a significant predictor to the outcome '*Our company is making profit*', ($p = .003$; Wald's $\chi^2 = 8.925$). The odds ratio value suggests that there is a 12.4% increase in companies making profit with each corresponding increase in comprehensiveness and quality of the business assistance provided.

TABLE 10
PARAMETER ESTIMATES FOR MONITORING AND BUSINESS ASSISTANCE INTENSITY CONSTRUCT

Group 1: Our company has met its break-even and is moving on a path toward profitability	β	$SE\ \beta$	Wald's χ^2	p	e^{β} (odds ratio)
Constant	-.882	1.843	.229	.632	
Comprehensiveness and Quality	.051	.028	3.255	.071	1.052
Time Intensity	-.012	.095	.016	.898	.988
Group 2: Our company is making profit					
Constant	-4.519	2.232	4.098	.043	
Comprehensiveness and Quality	.117	.039	8.925	.003	1.124
Time Intensity	.064	.108	.345	.557	1.066
Group 3: Our company is highly profitable					
Constant	-.931	3.508	.070	.791	
Comprehensiveness and Quality	.004	.055	.005	.944	1.004
Time Intensity	-.060	.186	.104	.747	.942

The Deviance statistic in TABLE 11 demonstrates that the model is a good fit of the data ($p = .954$). The Nagelkerke R^2 value of .83 also indicates the model is useful in predicting business incubation performance.

TABLE 11
GOODNESS-OF-FIT TESTS FOR MONITORING AND BUSINESS ASSISTANCE INTENSITY

	Chi-Square	df	p
Pearson	148.844	171	.888
Deviance	141.052	171	.954
R^2			
Cox and Snell			.72
Nagelkerke			.83

The classification table below (TABLE 12), for analysis of Monitoring and Business Assistance Intensity components suggests a 43.2% correct prediction, well above the 39.5% chance accuracy criteria, indicating good prediction of the model.

TABLE 12
CLASSIFICATION TABLE PREDICTING MEMBERSHIP OF OUTCOME CATEGORIES BY MONITORING AND BUSINESS ASSISTANCE INTENSITY

Observed	Predicted				
	Our company is barely surviving	Our company has met its break-even and is moving on a path toward profitability	Our company is making profit	Our company is highly profitable	% Correct
Our company is barely surviving	10	11	8	0	34.5%
Our company has met its break-even and is moving on a path toward profitability	7	15	19	0	36.6%
Our company is making profit	1	17	20	0	52.6%
Our company is highly profitable	1	3	0	6	60.0%
Overall Percentage	16.1%	38.9%	39.8%	5.08%	43.2%

The following section presents multinomial logistic regression analysis for the third component, Resource Allocation.

Resource Allocation

Based on the full model analysis presented earlier in TABLE 1, Resource Allocation appears to be a significant predictor of Business Incubation Performance. This section examines the construct's individual components and their relationship to incubation performance. The overall fit of the model for this particular construct is represented in TABLE 13. Firstly, the chi-square statistics for this model suggests that all elements within Resource Allocation are significant ($p < .05$). *Resource Utilisation* is the strongest predictor ($p = .008$) followed by *Resource Quality and Availability* ($p = .049$).

TABLE 13
MODEL-FITTING INFORMATION TABLE FOR RESOURCES ALLOCATION CONSTRUCT

Predictors	Chi-Square	df	p
Intercept	14.984	3	.002
Resource Utilisation and Quality	11.905	3	.008
Resource Availability	7.854	3	.049

Individual contributions of the components to the model indicate that not all components within the Resource Allocation construct are significant predictors for Business Incubation Performance as shown in TABLE 14. *Resource Utilisation* and *Resource Quality and Availability* appear to significantly contribute to the outcome category '*Our company has met its break-even and is moving on a path toward profitability*' ($p = .019$, Wald's $\chi^2 = 5.481$; $p = .017$, Wald's $\chi^2 = 5.704$) respectively. The odds ratio value ($e^\beta = 1.178$) indicates that there is a 17.8% increase in the probability that the company will meet its break-even and is moving on a path toward profitability given every corresponding unit increase in quality and availability of resources. Alternatively, there is a 7.4% increase in the same outcome category with every corresponding unit increase in *Resource Utilization*.

TABLE 14
PARAMETER ESTIMATES FOR RESOURCE ALLOCATION CONSTRUCT

Group 1: Our company has met its break-even and is moving on a path toward profitability	β	SE β	Wald's χ^2	p	e^β (odds ratio)
Constant	1.958	1.933	1.026	.311	
Resource Utilisation and Quality	-.302	.129	5.481	.019	.740
Resource Availability	.164	.068	5.704	.017	1.178
Group 2: Our company is making profit					
Constant	-8.494	4.248	3.998	.046	
Resource Utilisation and Quality	.155	.146	1.127	.288	1.167
Resource Availability	.147	.087	2.885	.089	1.158
Group 3: Our company is highly profitable					
Constant	-16.281	13.630	1.427	.232	
Resource Utilisation and Quality	.041	.400	.010	.919	1.041
Resource Availability	.386	.220	3.072	.080	1.472

The Pearson and Deviance statistics in TABLE 15 shows that the model is a good fit, with Deviance statistic value of $p = 1.00$, and Pearson value of 0.929. The Pseudo R^2 values show that both Cox and Snell's and the Nagelkerke's measures to be 0.246 and 0.271 respectively, indicating a weaker explanatory strength of the variable in predicting business incubation performance.

TABLE 15
GOODNESS-OF-FIT TESTS FOR RESOURCES ALLOCATION

	Chi-Square	df	p
Pearson	256.36	291	.929
Deviance	216.71	291	1.000
R^2			
Cox and Snell			.246
Nagelkerke			.271

The final table presented for the logistic regression analysis for Resource Allocation is the classification table (TABLE 16). The model has predicted 49.6% correctly, satisfying the criteria for chance accuracy of 39.5%.

TABLE 16
CLASSIFICATION TABLE PREDICTING MEMBERSHIP OF OUTCOME CATEGORIES BY RESOURCE ALLOCATION

Observed	Predicted				
	Our company is barely surviving	Our company has met its break-even and is moving on a path toward profitability	Our company is making profit	Our company is highly profitable	% Correct
Our company is barely surviving	6	9	17	0	18.8%
Our company has met its break-even and is moving on a path toward profitability	2	27	14	0	62.8%
Our company is making profit	3	10	25	0	65.8%
Our company is highly profitable	0	2	2	0	.0%
Overall Percentage	9.4%	41.0%	49.6%	.0%	49.6%

The following section presents results from Professional Management Services construct.

Professional Management Services

The model-fitting information regarding Professional Management Services in TABLE 17 indicates that only Staff and Personnel Management contribute significantly to the model (p = .044), while other variables such as *Strategic Management, Financial Management,* and *Marketing* and *Promotion Management* are not significant.

TABLE 17
MODEL-FITTING INFORMATION FOR PROFESSIONAL
MANAGEMENT SERVICES CONSTRUCT

Predictors	Chi-Square	*df*	*p*
Constant	9.700	3	.021
Strategic Management	2.369	3	.499
Financial Management	4.030	3	.258
Marketing and Promotion Management	3.670	3	.299
Staff and Personnel Management	8.117	3	.044

The parameter estimates shown in TABLE 18 also indicates that *Staff and Personnel Management* is the strongest predictor to the outcome category '*Our company is making profit*'. The odds ratio value of 1.189 indicates that there is an 18.9% increase in this outcome category with every corresponding unit increase in *Staff and Personnel Management.*

TABLE 18
PARAMETER ESTIMATES FOR PROFESSIONAL MANAGEMENT SERVICES CONSTRUCT

Group 1: Our company has met its break-even and is moving on a path toward profitability	β	SE β	Wald's χ^2	*p*	e^β (odds ratio)
Constant	1.153	1.838	.393	.531	
Strategic Management	.075	.086	.756	.384	1.078
Financial Management	-.116	.089	1.687	.194	.891
Marketing and Promotion Management	-.100	.076	1.732	.188	.905
Staff and Personnel Management	.035	.065	.290	.590	1.036
Group 2: Our company is making profit					
Constant	-5.785	3.361	2.964	.085	
Strategic Management	-.022	.096	.053	.817	.978
Financial Management	.040	.100	.159	.690	1.041
Marketing and Promotion Management	.050	.088	.315	.575	1.051
Staff and Personnel Management	.173	.076	5.199	.023	1.189
Group 3: Our company is highly profitable					
Constant	-7.920	7.473	1.123	.289	
Strategic Management	.187	.183	1.043	.307	1.205
Financial Management	.004	.196	.000	.983	1.004
Marketing and Promotion Management	-.029	.182	.026	.873	.971
Staff and Personnel Management	.176	.147	1.426	.232	1.193

TABLE 19 presents goodness-of-fit tests for this construct and shows a Deviance statistic value of .997, suggesting that the model fits to the data well.

TABLE 19
GOODNESS-OF-FIT TESTS FOR PROFESSIONAL
MANAGEMENT SERVICES CONSTRUCT

	Chi-Square	*df*	*p*
Pearson	310.596	297	.282
Deviance	235.441	297	.997
R^2			
Cox and Snell			.217
Nagelkerke			.239

Finally, the classification table (TABLE 20) for the Professional Management Services shows that this model has classified 47.8% correctly, well above the 39.5% criteria for classification accuracy.

TABLE 20
CLASSIFICATION TABLE PREDICTING MEMBERSHIP OF OUTCOME CATEGORIES
PROFESSIONAL MANAGEMENT SERVICES

Observed	Predicted				
	Our company is barely surviving	Our company has met its break-even and is moving on a path toward profitability	Our company is making profit	Our company is highly profitable	% Correct
Our company is barely surviving	13	8	10	0	41.9%
Our company has met its break-even and is moving on a path toward profitability	7	20	15	0	47.6%
Our company is making profit	7	9	22	0	57.9%
Our company is highly profitable	0	3	1	0	.0%
Overall Percentage	23.5%	34.8%	41.7%	.0%	47.8%

SUMMARY AND CONCLUSIONS

It is generally accepted that Business Incubation is a useful approach in fostering new ventures. In an ideal world, incubators will accelerate the venture creation process through reducing financial and commercial risk for incubates whilst also enabling an environment that drives collaboration and innovation resulting in knowledge spill-overs that benefit incubates, the incubators and the incubation industry as a whole. However, the literature points to substantial variation in achieving these aims and the research reported on in this paper regarding ICT incubators in Malaysia likewise observed significant issues relating to business incubation performance. The theoretical and practical understanding of the underlying components impacting upon Business Incubation Performance remains at a nascent state,

particularly in the Malaysian context. The model tested and presented in this paper goes some way to improving our understanding and provides a validated basis for future research in particular regarding ICT incubation.

The significant impact of Selection Performance on Business Incubation Performance distinguishes it as a critical factor in the business incubation process. In particular, the importance of '*Product-based selection, 'Market and managerial-based selection', and 'Financial-based selection'* are worthy of note. The results suggest that adoption of detailed selection criteria in regard to each of the three attributes is essential in improving the chances of incubation success. The selection criteria should be benchmarked against world's best practice and a natural progression of the research presented in this paper is the development of such a selection criteria index. The index will enable incubatee-selection best practices among the ICT incubators to be uniformly adopted and managed across the industry so that a more granular picture of success factors may be developed industry-wide. Careful selection of potential incubatees will not only drive a 'quality in-quality out' approach it would also attract greater external investment particularly given the reduced cycle times in the ICT industry relating to product development and commercialization.

In terms of Monitoring and Business Assistance Intensity, incubators that provide extensive monitoring and comprehensive business assistance along with adequate interaction with incubator management, are characterized by incubatees that are making profit. It was found that incubators that provide a range of business assistance and that seek feedback regarding their services tend to perform better than those who do not. Furthermore, results suggest that the amount of interaction between incubatees and incubator managers is a weak predictor of incubatees' outcomes – it is the quality of the interaction not the amount! This suggests that incubators need to advance their ability to build and sustain communities of practice consisting of inter-incubator firms and external experts and facilitators. Currently, knowledge and resources reside in siloes and it will be imperative for the ICT incubation industry in Malaysia (and elsewhere) to more effectively use (appropriate) resources at the right time and adopt innovative measures such as enterprise and industry-wide digital networking platforms to both create and consume knowledge in real time. A nested network model where diversity, collaboration and connection occur amongst incubatees, between incubators and external firms and individuals, and across the ICT incubation industry is essential.

The importance of providing resources that aid in the sophistication of technology development and crucially application should not be understated, for example rapid prototyping of new products and services that result from user-driven design and innovation can significantly reduce the time (and cost) to reach the point of fail/fast – fail/cheap or hopefully rapid scale to market. Evidence from this study indicates that some of the participant incubators and many of the incubatees do not even have fully functioning websites. This is inexcusable and it would appear there are simple measures close to hand (such as functioning websites) that could easily be taken to improve market visibility for incubator products and services and to promote knowledge exchange. Incubator boundaries could be opened to attract interaction with more established firms by providing fee-for-service in the form of, for example technology labs or rapid manufacturing machinery.

Finally, Professional Management Services currently provided at the incubators were founded to be limited in terms of expertise and availability, leading to inefficient management of the incubatees. The incubation literature has established that incubatees require extended forms of support in management services to assist them, particularly in their early stages. It is quite difficult for incubator management to provide the required breadth (and depth) of services internally hence providing even greater impetus toward development of a networked, community of practice approach.

The current state of play regarding ICT incubation in Malaysia is one of some concern. Extensive funding has been poured into the industry over some time now with modest returns. It does appear that best practice is a bridge too far however there is hope and this lies in overcoming the fragmented approach that characterizes current practices and the research presented in this paper provides a base for understanding what is required to improve business incubation performance and initial directions for how this could be achieved. This will require 'galvanized good-will' from policymakers, practitioners and

researchers in further developing and fine-tuning a systemized approach to Selection Performance, Monitoring and Business Assistance Intensity, Resource Allocation, and Professional Management Services; factors found in this study to be significant in predicting business incubation performance.

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Medical Tourism in India: A Strategic Approach Towards Effective Branding for Health Care Services Marketing

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In the Asian belt, India along with Thailand, Malaysia, Singapore, Hong Kong, Indonesia and the Philippines are the popular medical travel destinations. India has a 'health tourism' business with a line of varied treatments and therapies. It is a global product having medical tourists from the US, UK, Mauritius, south-east Asia, Mauritius, Fiji, Bangladesh, Afghanistan, and Singapore besides having more than a billion domestic customers. This research paper focuses on an integrated branding strategy by understanding the various value drivers of the brand image of a medical tourism product. It builds the PPP model for promoting medical tourism in India.

INTRODUCTION

Travelling for medical care is a historical phenomenon. In ancient times, almost thousands years back people travelled across the seas for treatments and healing for their ailments. They sought quality health care associated with medical expertise and rarely experienced the cultural tremors. Today, health care is offered as a tourist product in name of medical tourism and every year millions of medical tourists cross the borders of their nations in search of quality treatments at low costs. Indeed the world is experiencing a boom in this industry and in the Asian belt, India along with Thailand, Malaysia, Singapore, Hong Kong, Indonesia and the Philippines are the popular medical travel destinations. India has a "health tourism" business with a line of varied treatments and therapies along with a holistic health management offering consisting of yoga, massages, traditional Ayurvedic medicine and other self-inflicted punishments for general wellbeing.

HEALTH CARE INDUSTRY IN INDIA

Health care services form an integral part of social and commercial services marketing. The health care services are delivered by both public and private service operators and they provide a wide variety of health care products. The Indian healthcare sector has been growing at a faster pace in the past few years. This industry is one of the sunrise industries in India and has a great market potential. It is stated that India will spend US$ 45.76 billion on healthcare in the next five years as the country is witnessing changes in its demographic profile accompanied with lifestyle diseases and increasing medical expenses. Revenues from the healthcare sector account for 5.2 per cent of the GDP and it employs over 4 million people. By 2012, revenues can reach 6.5 to 7.2 per cent of GDP and direct and indirect employment can double. Private healthcare will continue to be the largest component in 2012 and is likely to double to US$ 35.7 billion. It could rise by an additional US$ 8.9 billion if health insurance cover is extended to the

rich and middle class. Coupled with the expected increase in the pharmaceutical sector, the total healthcare market in the country could increase to US$ 53-73 billion (6.2-8.5% of GDP) in the next five years states the report of CII and the McKinsey. (1)

HEALTH CARE IN INDIA

The health care services are delivered by both public and private service operators and they provide a wide variety of health care products. The   corporate service providers in this sector are making their presence felt of late. Names like Global Hospitals, CARE, Dr. R.V. Prasad Eye Hospitals, Hindujas, NM Excellence have been rendering world class medical care. A few health care providers have been accredited with high global quality ratings that make the Indian health care product offered with high quality, lower costs and impressive success rates. For example, the super specialty hospitals like Escorts and multi specialty hospitals like Apollo have got A rating by CRISIL, NHS (UK) identifying India as a favored destination for surgeries, the BSI accrediting Escorts Hospital. Further accreditation by the US NGO Joint Commission's JCI certifies hospitals worldwide putting them on global standards of health care. Few big private healthcare providers such as Apollo, Fortis/Wockhardt, Max, Jaslok Hospitals, Lilavati, Breech Candy, Bombay Hospital, Hinduja Hospital etc. are having their individual brand and presence in overseas markets through tie-ups with insurance companies and patient facilitation centres.

Indian health care product is a global product today that has vast clientele from prominent countries like US, the UK and Mauritius, south-east Asia, Mauritius, Fiji, Bangladesh, Afghanistan, and Singapore. In the domestic market, India, with more than a billion customer base, is witnessing increased demand due to advanced life expectancy, growing disposable income, cost effective pricing and expectations of personal well being. It is considered as a 'superior good'. Indian health care industry has specialized in cardiac care, joint replacements, cosmetic surgery, dentistry that fetches medical tourists from the world. The non-allopathic treatments like Ayurveda, Yoga, acupressure, acupuncture etc. have another band of niche clientele.

MEDICAL TOURISM IN INDIA

Medical tourism is a blend of tourism and health thereby known as 'health or medical tourism.'' It can be broadly defined as 'a provision of 'cost effective' private medical care in collaboration with the tourism industry for patients needing surgical and other forms of specialized treatment.' (2) It includes three directions-outbound; inbound and intra bound medical tourism. People who travel for medical care are called as 'medical or health tourists'. When people cross their national borders in search of world class medical treatment on cost basis, they are called as 'medical tourists'. Low costs of medical treatments and surgeries, world class facilities and expertise, advanced technology and quality etc. are the features of Indian medical tourism. An estimated 150,000 patients from about 55 countries visited India in 2004. Majority of them flow from neighboring countries like Bangladesh, Sri Lanka & Nepal. A study by the Confederation of Indian Industry (CII), a business lobby, and McKinsey, a consultancy, has estimated that "medical tourism" could bring India an additional 50 billion-100 billion rupees ($1.1 billion-2.2 billion) in annual revenue by 2012. (3) In fact, medical tourism in India is one of the sunrise industries which have enormous potential in view of the global boom in this industry.

Medical insurance is one of the attractive segments in India. Privatization of health care services has given impetus to fast growth of health care industry. Today a medical tourist bundles his elective treatment with vacation for tropical tourism. A medical tourism product is packaged with alternate traditional therapies like Ayurveda, naturopathy, allopathy, yoga, meditation etc. targeted at High end medical tourists.

LITERATURE REVIEW

Leigh Turner (2007) concludes that with globalization, increasing numbers of patients are leaving their home communities in search of orthopedic surgery, ophthalmologic care, dental surgery, cardiac surgery and other medical interventions. Reductions in health benefits offered by states and employers will likely increase the number of individuals looking for affordable medical care in a global market of privatized, commercial health care delivery.

*Devon Herick (2007) notes that g*lobal competition in health care is allowing more patients from developed countries to travel for medical reasons to regions once characterized as "third world." Many of these "medical tourists" are not wealthy, but are seeking high quality medical care at affordable prices. Annette Arellano (2007) observes that trade in health care services therefore now includes countries promising "first-class services at third-world prices."

Gunn (1972), (cited by Chon, 1991) establishes that tourist destinations can convey images that are artificially created by a particular marketing strategy. Then, the existing contrast between the created image and the perceived reality is, often, the cause of the tourist's dissatisfaction. On this point, Bourdeau (1991) thinks that images and attitudes that the traveler adopts towards certain tourist destinations depends on the differences resulting from the tourist's experiences lived *in situ* and his tourism background.

Morgan & Pritchard (1998) states that, "In terms of tourism destination branding, provenance is even more critical because countries pre-exist any identity crafted for them by marketers and neither their advertisers nor the consumers can have objective views of them." Informing tourists before and after they reach a destination is considered a marketing component.

Beerli and Martın (2004) introduced nine dimensions with attributes determining the perceived tourist destination image, such as natural resources, general infrastructure, tourist infrastructure, tourist leisure and recreation, culture, history and art, political and economic factors, natural environment, social environment and the atmosphere of the place.

HEALTH CARE SERVICE CONCEPT

The health care services industry is not a just profession but a commercial activity in India. It is covered by Consumer Protection Act, 1986 and includes allopathy/English medicine, homeopathy, naturopathy, Ayurveda, unani, nature care, pranic healing, reiki etc. (4) The main service products available in this industry are- hospitals; allied services include pathological labs, ambulance services, private mortuaries, pharmacy centers; paramedical services relate to fitness centres, beauty clinics dealing with obesity & skin problems and academic institutions are those like medical colleges, nursing schools, research centre etc.

The typical health care service product is provided by hospitals through diagnosis, treatment, post-operational care; supplementary services include maintenance of case history, registration, billing & support operations like laundry, diet, pharmacy, stores, security, transport etc. The service process is featured with two directions like services for the in patients; services for the out patients; tele-medical consultation and; counseling on various lifestyle parameters.

NEED FOR STUDY

This research paper focuses on understanding the various value drivers that build the brand image and perceptions of hospitals. It also conceptually builds a strategy for better marketing. The need for the study is obvious on the following concerns-

- There is a growing potential for India's health care products and medical tourism of late in domestic as well as inbound tourist market;

- There is a tremendous significance attached to positive perceptions and brand image for a niche product like health care where the human element is a crucial focal point throughout the service experience;
- There are some prominent health care service providers in public and private offerings where tourists perceptions on brand and image are essential for better marketing;
- Understanding the various customer value drivers for effective marketing can help in utilizing the market potential.

RESEARCH OBJECTIVES

This study is an outcome of an empirical study conducted on perceptions of foreign tourists on select world-class hospitals-health care service providers and Brand India in medical tourism. It focused on following research directions-
- To explore the brand image & perceptions on India as a medical tourism destination;
- To know the tourists' satisfaction on various services attached to a medical tourism product like hospital;
- To understand the marketing variables of effective branding for better marketing;
- To suggest a conceptual framework for effective branding by hospitals for medical marketing.

DATA COLLECTION METHODOLOGY

Research methodology included a convenient sample of 70 inbound (foreign) medical tourists availing of hospital services in the city of Bangalore. All the medical tourists had flown in India for allopathic treatment including surgeries. They included 62% of males and   38% of females. The sample respondents were chosen from world-class hospitals namely Apollo Hospitals, M.S.Ramaiah Memorial Hospital, Manipal Hospital, Mallya Hospital, and Narayana Hrudayalaya. Questionnaires were administered to collect responses on demographic profiles of these respondents, their perceptions and satisfaction on medical tourism product of hospitals. The data generated by this pilot survey was analyzed by simple percentage method.

FINDINGS AND DISCUSSIONS

The respondents' profiles revealed that more males travelled to India for medical tourism than females and 72% of the respondents belong to age group between 20 and 40 years.

TABLE 1
DEMOGRAPHIC PROFILE OF RESPONDENTS (MEDICAL TOURISTS) IN %

Gender	Males	62	Females	38
Age	20 yrs	20-40	40-50	Above 50
	0	72	20	8
Education	Below SSLC	Degree	P.G.	Above P.G.
	12	67	13	8
Occupation	Employees	Self employed	Professionals	Dependents
	35	19	23	23
Apollo H	MSRMH	Manipal H	Mallya H	Narayana H
16	48	28	04	04

It was noted that 68% of the medical tourists have only one companion in travel and 20% travelled with their friends.

TABLE 2
TOURISM RELATED PROFILE IN % OF THE RESPONDENTS

Companions	None	1	> 2	Friends
	4	68	8	20
Mode of transport	Air	Rail	Hired vehicle	Govt. buses
	84	8	0	8
Place of accommodation	Hospital	Hotel	KSTDC Hotels	relatives
	32	40	12	16
Duration of stay	Till care	<a week	One month	>a month
	33	17	25	25

When asked the question "Do you plan to visit other tourist places in Karnataka?" 76% of them gave positive responses.

BRAND IMAGE & PERCEPTIONS OF MEDICAL TOURISM

The questionnaire was based on the factors that indicated the tourists' perceptions on brand image of India. Since medical tourism product includes all the 7Ps of services marketing, questions focused on the main offering, pricing, distribution, promotion, physical evidence, processes and people involved in medical tourism product-hospitals.

30% of the medical tourists expressed being in India was "a pleasant experience" and 32% felt it was "a great country". 8% wished to come back.

TABLE 3
PERCEPTIONS ON BRAND INDIA

Perception	Percentage
Tourist destination	08
Land of diversity	04
Home away from home	08
Great country	32
Pleasant experience	36
Unpleasant experience	00
Worth coming back	08
No comments	04

On exploring the reasons for medical tourism, it was apparent that 48% arrived due to low costs of medical treatment and 24% visited due to insurance budget limits. Over the satisfaction on the hospital and other allied tourism services, majority of them felt that most of the hospitals are offering good services. The services were compared on their perceptual responses from 'excellent' meaning world class to unsatisfied scale. Air connectivity, costs and quality of health care, physicians' proficiency, quality accreditations etc. had 'world class' perceptions.

TABLE 4
REASONS FOR MEDICAL TOURISM

Factors	Percentage
Low costs	48
Quality health care services	18
Expertise	02
Insurance budget	24
Personal care & bonding	00
Home country	04
Tourist package	00
Quality certifications	00
Personal reasons	04
Tourist destination	00

TABLE 5
**SATISFACTION ON HOSPITALS & ALLIED MEDICAL TOURISM SERVICES (%)**

Types of services	Excellent (World class)	Satisfied	Unsatisfied
Air connectivity	38	58	04
Telecommunications	38	62	00
Costs of health care	40	60	00
Quality of health care	43	57	00
Physicians' proficiency	45	55	00
Quality accreditations	45	55	00
Accommodation	12	65	23
Local Transportation	11	56	33
Food & Refreshments	06	18	76
Sanitation	06	76	18
Personal care	11	72	17
Medicines/Health goods	11	68	21
Safety / security	10	40	50
Local Assistance	05	32	63
Onward Journey assistance	05	40	55
Police Assistance	05	41	54

Lack of good food and refreshments, safety and security, local and onward journey assistance, police assistance were the major factors of dissatisfaction.

A STRATEGIC APPROACH TOWARDS EFFECTIVE BRANDING OF MEDICAL TOURISM

The survey findings led to conceptualization of a framework which can promote medical tourism in India. The effective branding of 'India' as 'medical tourism destination' and of hospitals as 'medical tourism product' can be taken up as illustrated in the following figure.

ILLUSTRATION 1
**MODEL OF EFFECTIVE BRANDING FOR BETTER MARKETING**
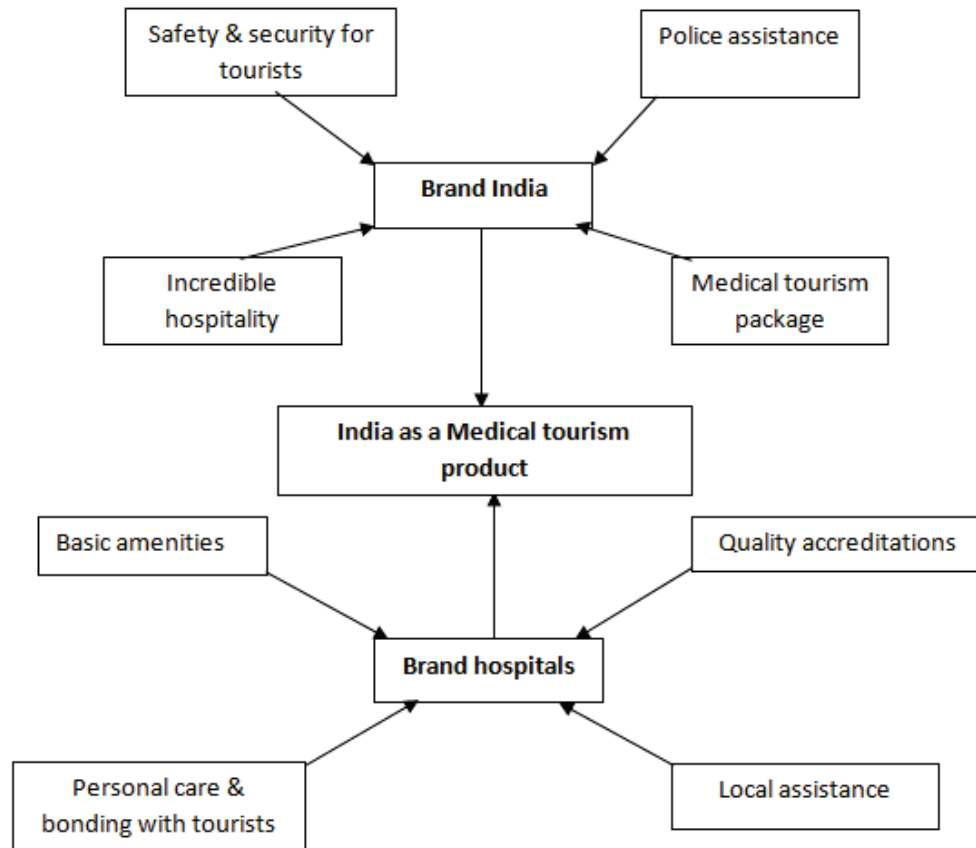
Source: Developed by author

Medical tourism in India can be promoted by Public (i.e. Government authorities) and Private (i.e. the super specialty Hospitals) Partnership. The public authorities can brand 'India' as 'Medical tourism destination' by promoting safety, security and police assistance to tourists. Medical tourism packages can be proposed linking health care and tropical tourism. Hospitals can have uniform global quality accreditations and go for customized marketing with personal touch and bonding with the patients.

ILLUSTRATION 2
MODEL OF BETTER MARKETING THROUGH EFFECTIVE BRANDING
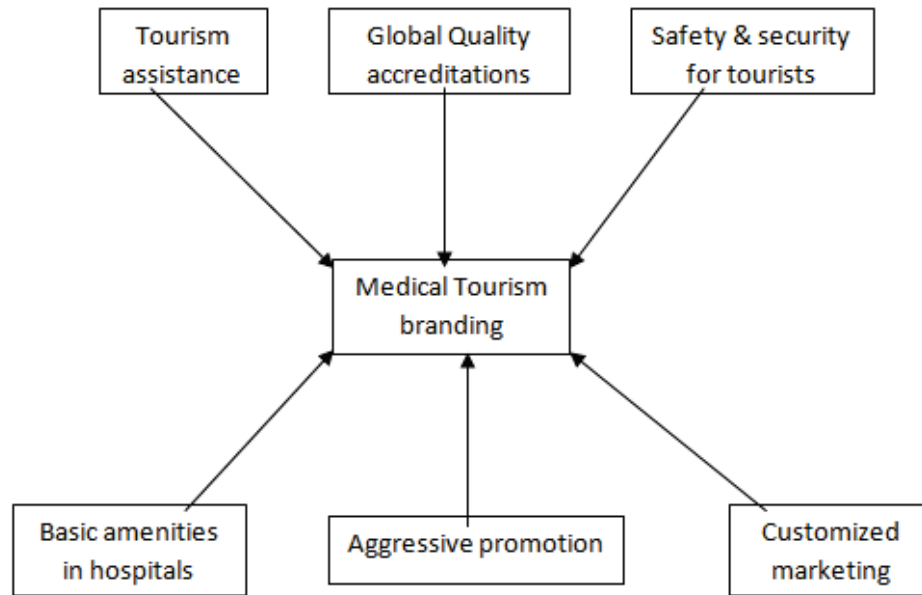
Source: Developed by author

The synchronization of Public and Private Partnership alone can project the medical tourism as a lucrative foreign exchange earner and open a new sector of global business promoting employment and health care industry growth.

CONCLUSION

What ails Indian medical tourism industry? There are many schemes launched by the government to provide health care to the poor segment of society. The Rashtriya Swasthya Bma Yojana, Vajpayee Arogyashree, Yashasvini Cooperative Farmers Health Care Scheme, Suvarna Arogya Chaitanya for School Children, Employees Insurance Scheme, and ESI scheme etc. are designed to provide monetary shield for availing health care against high costs of treatment by the poor people. However 90% of the surgeries are conducted in private hospitals. Out of the total GDP, only 1% is allocated for health care which makes the government hospitals unequipped with necessary infrastructure and facilities for providing health care. Further the services taxes on air conditioned private hospitals increase the medical bills at least by 20-25%   In the domestic market we have only 51 doctors for every 100,000 people, compared with 279 per 100,000 in America. It accounts for only 5.1% of gross domestic product. The BPL and poor people can't afford to avail of health care services. Further for such a populous country, only 60,000 heart surgeries are done every year. (4) In the international market scenario, India comparatively attracts lesser medical tourists than its counterparts like Thailand. Most of those arriving in India come from poor countries. Developed countries like the USA, Britain and Canada have costliest, overloaded health systems, producing long waiting lists that create high market potential for Indian service provider. Though India is well-qualified, certified and cheap in every aspect of health care, from new-drug discovery and testing to surgery, it is still not considered as a very attractive medical tourism destination.

Though the health care sector cannot be looked at as revenue generator, the medical tourism can be projected as a lucrative foreign exchange earner. The government should relook at the policy and focus on improving the major infrastructural drawbacks relating to connectivity from homeland to choice destinations, poor roads, risky sanitation and hygiene, telecommunication blockades etc., lead to lesser choice of hospitals as a medical tourist product. Further the non-uniform accreditations of hospitals add to confusion and distrust. There can be a uniform world class accreditation for health care services. The cultural factors like emotional bonding between the medical tourist and the Medicare provider can be taken up at individual levels by the health care marketers.

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Organization Development and Social Entrepreneurship:
Do Well By Doing Good

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The need to understand and integrate the theoretical development of organization development (OD) and social entrepreneurship literature is becoming important because of the parallel practices and principles that exist in both fields: humanistic/social values, whole systemic change, and effective sustainable strategy. Thus, this paper explores the relationship between social entrepreneurship and OD. It suggests that the Do Well By Doing Good principle can be used as a guide for integrating the studies of both fields and moving the theoretical development of both fields forward.

INTRODUCTION

Businesses have traditionally been viewed as profit-seeking organizations, more interested in net gains than in employee (human) relations. Recently, however, this attitude has begun to undergo a sea change, as companies recognize that involving people in the design of their work may be "the shortest route in the long run—to lower costs, higher quality and more satisfied customers" (Weisbord, 2004). The field of *organization development* (OD) was founded with just that aim: to provide "a set of techniques and strategies for changing, developing and enhancing the functioning of organizations—especially the internal human features of the organization" (Cameron, Dutton, & Quinn, 2003). The field of *social entrepreneurship* has a similar objective. Typically, social entrepreneurs seek to help organizations address and create opportunities to achieve their social purpose. The intended outcome is to "help companies reduce costs, gain resources, expand markets, and develop new products and practices more quickly" (Cummings & Worley, 2008).

Thus, the fields of OD and social entrepreneurship each promote the importance of organizational virtuousness, a concept that includes the key attribute of social betterment (Cameron, Dutton, & Quinn, 2003). Motivated by this observation, this paper has two objectives: (1) to explore OD and social entrepreneurship and identify how they use parallel practices in their pursuit of organizational virtue, and (2) to introduce the *Do Well By Doing Good* principle, which can be used as a guide for both communities and organizations to prosper.

SOCIAL ENTREPRENEURSHIP AND OD: SHARING SOCIAL CONCERNS

The term "social entrepreneurship" is rooted in the word "entrepreneur," which originated in French economics as early as the 17th and 18th centuries and means someone who undertakes a significant project or activity. But what about the "social" aspect? There is no clear answer here. Indeed, a variety of definitions have been put forth. As Dees (1998) acknowledges, "Social entrepreneurship means different

things to different people." He notes, however, that practitioners and scholars generally view social entrepreneurship in one of three ways: it can refer to (1) not-for-profit organizations starting for-profit earned-income ventures," (2) "anyone who starts a not-for-profit organization," and (3) "business owners who integrate social responsibility into their operations." Yet still other definitions of social entrepreneurship focus "on the process and resources used by social entrepreneurs" (Dacin, Dacin, & Matear, 2010).

The definition of organization development is equally debated. As Cummings and Worley (2008) say, "there are a number of OD definitions that exist today." As early as 1969, Beckhard defined OD as an effort "(1) planned, (2) organization-wide, and (3) managed from the top, to (4) increase organization effectiveness and health through (5) planned interventions in organization's 'processes,' using behavioral science knowledge." Even today, many practitioners and scholars studying in the field of OD assume its primary purpose is to achieve organization effectiveness and high performance, which "takes the form of financial outcomes, balancing the budget in a nonprofit organization and having a robust return on investment and net profit in a profit-making, commercial enterprise" (Burke, 2008).

Burke (2008) sees OD as a profit-making, commercial enterprise. Nevertheless, Cameron, Dutton, and Quinn (2003) point out that organization development was founded on "a set of techniques and strategies for changing, developing and enhancing the functioning of organizations—especially the internal *human features* [emphasis added] of the organization." And others see organization development as "a professional field of *social action* [emphasis added]" (Cummings & Worley, 2008). What we are seeing in the literature, then, is a melding of social concerns. Scholars and practitioners in the field of social entrepreneurship continue to debate whether social entrepreneurship should be "studied as a separate field" or "should . . . fit into the broader schema of organizational and management studies" (Austin, Stevenson, & Wei-Skillern, 2006). Similarly, when it comes to the role people should play in business, Davis (1973) believes in embracing the dignity of everyone in the workplace, "since all businesses are socially embedded, long-term success is a function of their ability to embrace specific human goals [that] fulfill the dignity, creativity, and potential of free men" (p. 75).

Researchers and practitioners alike have claimed that we are living in an "age in which the boundaries between the government, nonprofit, and business sectors are blurring" (Ryan, 1999). Dees and Anderson (2003) state that this blurring results from a search for "more innovative, cost-effective, and sustainable ways to address social problems and deliver socially important goods, such as basic education and health care. Much of the action revolves around experiments using business practices and structures to serve social objectives. Increasingly, government agencies and nonprofit organizations are adopting frameworks, methods, and strategies from the business world in hopes of improving their performance." In particular, social entrepreneurship and organization development increasingly share three key concepts: social impact, change, and sustainability.

Social Impact

Social impact is defined as "the creation of a positive, lasting change in the well-being of a community's constituents" (Williamson, 2011). Social entrepreneurship also has a "social impact" in the business sector (Mair & Marti, 2006). OD traditionalists, similarly, encourage practitioners to do what is "'right' by assuring that organizations promote positive social change and corporate citizenship" (Cummings & Worley, 2008). The challenge here is how to measure social impact. Most recently, the term "scaling social impact" has been suggested when discussing organizational performance. The term has "efficiently and effectively become a key issue for both practitioners and researchers of social entrepreneurship" (Bradach 2003). The definition of scaling within the context of social entrepreneurship means: "increasing the impact a social-purpose organization produces to better match the magnitude of the social need or problem it seeks to address" (Dees, 2008). According to Bloom and Smith (2010), the "managers of social entrepreneurial organizations and the donors and agencies that fund and support them are eager to learn how to scale social impact so that the program impact on society becomes wider."

Change

Typically, social entrepreneurs are the change agents to help a social-purpose organization address and create opportunities for organizations to achieve their social purpose. The importance of systemic change is expressed by many practitioners who are experimenting with new ways of "getting the whole system in the room," as Weisbord (2004) puts it. What Weisbord means is involving all the various stakeholders of a particular business or social issue in the deliberations about it. According to Weisbord, this whole system thinking by leaders and their staff might work in an organization that allows for personal growth and exploits employee's capabilities to help an organization meet its business goals and community initiatives. ShoJi Shiba, winner of the MIT Deming Prize, believes that transformative change can occur only when a "noble purpose" exists, when someone "wants to know, what is the contribution to society or the planet?" (Axelrod, 2010). Mair and Marti (2006), in a working paper titled "Social Entrepreneurship Research: A Source of Explanation, Prediction and Delight," use the Said Business School at Oxford University definition to describe social entrepreneurship as a professional, innovative, and sustainable approach to systemic change that resolves social failures and grasps opportunities. This definition might be used by scholars and practitioners in the field of OD. Cummings & Worley (2008) see organizations making themselves more streamlined and nimble, more responsive to external demands and more ecologically sustainable. They are involving employees in key decisions and paying for performance rather than for time. They are taking the initiative in innovating and managing change, rather than simply responding to what has already happened. Organization development plays a key role in helping organizations change themselves. It helps organizations assess themselves and their environments and revitalize and rebuild their strategies, structures, and processes. It also helps organization members go beyond surface changes to transform the underlying assumptions and values governing their behaviors (Cummings & Worley, 2008, p. 5).

Sustainability

In both organization development and social entrepreneurship, one of the goals has to be sustainability so that the organization or business can continue to focus on creating healthy, effective workplaces and vibrant communities. As Mair and Marti (2006) say, "in social entrepreneurship, social wealth creation is the primary objective, while economic value creation, in the form of earned income, is necessary to ensure the sustainability of the initiative and financial self-sufficiency."

What will be the effect if these commonalities between social entrepreneurship and organization development persist? Cummings and Worley (2008) expect "an increase call for a return to OD's traditional values and practices." They argue that "OD should be driven by long-established values of human potential, equality, trust, and collaboration." They suggest that the "major objective of OD should be to promulgate these root values through interventions that humanize work, organizations, and society; help employees balance work and family life; promote diversity and spirituality at the workplace; and champion the self-actualization of organization members." As Cummings and Worley (2008) point out, "several interrelated trends are affecting the context within which OD will be applied in the near future, including, the global economy, workforce, technology and small businesses." In turn, scholars will need to use action research to understand these changes.

Also, practitioners and scholars must recognize the powerful influence of shared values and supportive practices on the field of OD in the future. Research has been published about supporting a policy on responsible progress. Cummings and Worley (2008) write,

> Responsible progress begins with an economist's definition of an effective system, integrates traditional OD and more recent effectiveness values, and promotes a set of practices to actualize those values. The responsible progress policy asserts that individuals, organizations, and countries can pursue economic and personal success though open innovation that leverages and nurtures cultural diversity and the ecology.

What about the future of social entrepreneurship? Should everyone aspire to be an organization development practitioner and/or social entrepreneur? Dees (2001) answers this question with an emphatic "No. Not every social sector leader is well suited to being entrepreneurial. While we might wish for more entrepreneurial behavior in both sectors, society has a need for different leadership types and styles. We need social entrepreneurs to help find new avenues toward social improvement as we enter the next century."

DO WELL BY DOING GOOD

The combined principles and practices of organization development and social entrepreneurship discussed in this paper can assist an organization to *Do Well By Doing Good*: to focus on creating healthy, high-performing workplaces and vibrant communities.

For practitioners and scholars, the importance of this discussion is as follows. First, we need to be clear on our understanding of the foundational tenets of OD and the developing theories of social entrepreneurship in order to advance a sound understanding of how each field might influence each other. Second, we need to initiate dialogue about how to approach OD in the future, when social entrepreneurship and OD are combined and implemented; to this end, the *Do Well By Doing Good* principle provides an excellent first step.

Do Well By Doing Good principle consists of four central components of OD and social entrepreneurship: (1) it is a values-driven process focusing on people, the planet, and profit; (2) it promotes the importance of involving employees and stakeholders in the decision-making process; (3) it emphasizes managing the change process that aligns both internal systems and external demands; and (4) it outlines a sustainable strategy to revitalize and rebuild the organization and community strategy, structure, and process to maintain sustainability.

CONCLUSIONS

The purpose of this paper has been to initiate a discussion about the overlapping principles of social entrepreneurship and organization development. Figure 1 shows that the fields of OD and social entrepreneurship both promote the importance of social/humanistic values and positive phenomena, including "the investigation of positive dynamics, positive attributes, and positive outcomes in organizations" (Cameron, Dutton, & Quinn, 2003). Specifically, both seek to develop more effective and efficient endeavors to effect positive change, whether within the workplace or in our communities. Both, in fact, support the *Do Well By Doing Good* principle, which can be used as a guide when developing theories and practices that focus on cost-effectiveness, systemic change, and sustainability while simultaneously pursuing social and organizational virtue. Scholars from both organization development and social entrepreneurship can use this principle to better understand their fields and, possibly, to formulate a new theory that integrates the two disciplines.

FIGURE 1
DOING WELL BY DOING GOOD
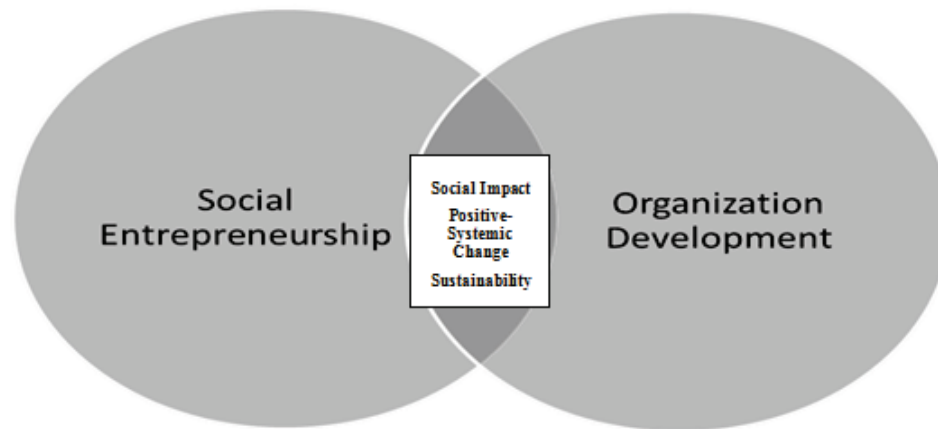
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