

IMPACT OF INTERNET ON A SMALL BUSINESS IN NICARAGUA

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Abstract

This paper reports on a small business in Leon, Nicaragua that was started in 1997. With a loan from a microfinance organization, equipment was acquired for the silk screening operation. The researcher reports on the challenges that are faced in developing countries where the infrastructure is unreliable, and poverty pervasive. Advertising is non-existent, and a business must expand through personal contact. The introduction of a PC into the business and an Internet connection to the world in 2000 was expected to open up the possibilities for the fledgling business. The paper reports on the results of Internet availability, and the effects on the business.

Keywords: microfinance, internet, Nicaragua, small business

Introduction

Since the first browsers appeared in the early 1990's the nature of business transactions has been altered in the U.S. although some adjustments have taken place. There was a period of time where numerous entrepreneurs with little or no business training, but with a technology background, started small businesses. The investment banking community was not familiar with the style of doing business and being reluctant to let an opportunity slip, funded many small entrepreneurs. However, several successive years without a profit turned the scrutiny of those investors to the structure of their customers. The result is that today many venture capitalists are running some of the more successful "e-businesses" and imposing the business practices that every successful organization must have. The Internet economy did however open a new vista for the established commercial sector, and hardly a large corporation exists today without a presence on the World Wide Web (web) (Knight, 2001).

There are important economies to be realized from conducting some transactions over the web but the conventional system design principles should not be overlooked. The web has a tendency to level the playing field, such that any organization with a web page is able to compete for business provided there is substance behind the front. A business model that relies solely on the web has proven to be untenable because a business that cannot survive in the old economy will probably not survive in the e-business environment. Each day small and large businesses that were solely web based are going out of business. However, the web is not at fault, and is not causing the businesses to fail. It is the failure of the principals of the firms to understand how to run a business that has caused most of the failures. The web is 10 percent technology, and 90 percent other factors (Damle, 2001).

There are numerous success stories (Knight, 2001) in the e-business space that confirm the viability of the web as a transaction handler. While this paper is not concerned with the security of the transactions conducted in e-business, it is a topic that has received significant attention (PWCGlobal, 2001). Airlines, hotels, restaurants, stores, and other outlets have found it profitable and beneficial to conduct transactions over the web. Although only six percent of sales came from the web in 1998 for regular transactions the volume is estimated to grow to 21 percent by 2000 (White Paper, 1999).

It is true that in the U.S., Canada, and to a lesser extent Europe, the growth of the web is predicted to increase significantly, with the U.S. the clear leader. No other country has the number of computers per capita than the U.S. Japan and the countries listed above have the infrastructure to support computer activity. This is a reflection of a somewhat higher standard of living than most of the rest of the world. Even though the economy in these countries has continued to grow and support a strong employment outlook, there are some countries other than the U.S. that have experienced a shrinking economy in 2001. Despite that, the existence of an educated work force, a reliable infrastructure capable of supporting a robust economy, and a healthy population, together present a picture of a promising future.

In contrast there are developing countries around the world that face a very different future. Most of the world's poor are located in China, India, Africa, several Caribbean, Central and South American countries. The U.N. cites statistics that indicate that the majority of the world's population lives in poverty. The cycle of poverty is difficult to break when the majority of those poor people are also uneducated or under-educated (www.un.org/depts/unsd/social, 2001). They are often relegated to continued service in menial jobs with little hope of advancement.

The author has assisted in the development of businesses in several developing countries and in areas without any resources that are normally considered indispensable to the conduct of business. To run a bakery without the benefit of electricity or running water, and where the price of bread is fixed although the cost of raw materials continues to rise (Tucker, Tellis, 2000), is a challenge few organizations in the developing world have to face.

Develop model

In order for it to succeed, a model must drive the business. Some of the noted e-business failures can be attributed to the absence of a viable business plan (Knight, 2001). Dr. Christensen discussed the importance of a "sustaining technology" that defeated "disruptive technology". He used the examples of established business in the "old economy" that were able to overcome the startup companies that only had their beginning in the "new economy." Whereas most of the startups did not have a tested supply chain and management expertise, the established companies only had to add a new channel of distribution. With their existing reputation, they were able to increase their business, whereas the startups were unable to sustain what they thought were innovative ideas (Knight, 2001).

Creating a business model for e-commerce starts with the basic challenge:

Define what the enterprise is,

What it wants to be, and

What role electronic commerce can play (White Paper Library, 1999).

What is clear in the above model is that the decision to use e-commerce is subject to the normal decisions that must be made in the development of any business. Most of the failures of the so-called "dot-coms" can be traced to organizations that started at the third step instead of starting with the first. Christensen said in an interview with Strategy and Leadership "when there's already an established player to whom the Internet appears to be sustaining in character, .. I'll bet on the incumbent every time.." (Knight, 2001).

The challenge appears in applying an e-business model. There is no fixed model to follow even in the same industry (Wilder, 2001). However, following a sound business plan is still imperative. Venture capitalists who earlier were eager to pour money into startups, no longer do so without a sound management team and a business plan that promises profitability in the near term.

It was against this background that Serigraf started business in Leon, Nicaragua. The principal owner sought advice from the local operative of a nongovernmental organization (NGO) and financing from a micro finance institution (MFI).

Small Business in Nicaragua

It is thus remarkable to report on one business that was started in 1997 by Natalie in the front porch and living room of her house. Serigraf had the benefit of reliable electricity, and running water, and a visionary president whose dedication and education accounted for the success of the business. Natalie started Serigraf to harness her technical skills as a computer literate professional. Access to credit is uncommon for the middle class as well as the poor in developing countries. Thus in order to purchase the necessary equipment, and the requisite startup capital, any small business has usually to resort to family members.

Serigraf benefited from the MFIs in Leon, Nicaragua, from one of which she was able to secure a \$500 loan. Serigraf was in the silk screening business, and sought customers from all over the town. Leon had a population of about 140,000 people, most of who lived in or near the town. Natalie was an adjunct instructor in the local State University and taught computer literacy courses. She was therefore familiar with the advantages of automation and the power of the Internet. However, Serigraf did not have the resources to start off at a high level of mechanization.

The business plan was to start with just one manual press, and a small library of images in wooden frames stacked in the front porch of Natalie's house. Keeping the overhead low was an astute strategy. This is particularly true considering that creating a small business is a significant challenge in most developing countries. In Leon, the challenges were myriad, and any one of them could have caused and still may cause the business to fail. One serious impediment was the absence of a local newspaper, local television station, and only one radio station. One creative method of advertising was to equip a car with a loudspeaker and drive slowly around selected neighborhoods repeating a message. That might not be the most effective method of attracting customers to a silk screening business. Since there was no advertising channel, the only other method was by personal contact. Thus Natalie had to spend many hours each day making personal calls on potential clients. While telephones were fairly common in Nicaragua, "cold calling" was not culturally acceptable in Nicaragua.

However, Serigraf had a broader purpose than merely imprinting images on a shirts and other material. Natalie identified youths at risk, and provided them with training in silk screening. As they developed their skills she moved them to more skilled tasks, so that they could start their own business. It should be noted that unemployment in Nicaragua is over 50 percent, but perhaps a little lower in Leon (www.un.org/depts/unsd/social, 2001). The rate of illiteracy was over 40 percent, and attendance in school was lower as the grades advanced

(Directory of Education, 2001). Against this backdrop, what Serigraf had chosen to do could be beneficial to the business.

Between 1997 and 1999 Serigraf relied on local organizations for business, and occasionally on a group of foreign visitors. Leon was a well-known historic site for its churches, and some other important historic locations. Some of the visitors represented non-governmental organizations (NGO) that were interested in the type of enterprise that Serigraf represented. Thus Natalie had become involved with many of the NGOs in Leon as a means of expanding her business and providing occupation to the street children.

Serigraf had a Board of Directors consisting of local business people and some of the more active NGOs in Leon. In 1999 they produced a matrix of successes, difficulties, conclusions, and recommendations. A matrix was created for those categories for Marketing and Sales, Design and Production, Administration and Finance, and Young People. This analysis was sophisticated in its concept and effective in highlighting the challenges that faced the fledgling business.

In summary, the matrix was a revealing document as it highlighted challenges and opportunities in specific areas. The Market and Sales matrix identified the region's economic distress and high unemployment rate (www.un.org/depts/unsd/social, 2001), and recommended that Serigraf should broaden its client base. The Board recommended adding a person who would concentrate on sales. The Design and Production matrix identified the absence of modern equipment, and inadequacy of staff training. Recommendations were to seek a loan to add equipment, and to send employees for training on that equipment. The Administration and Finance matrix pointed out continuing difficulty with work contracts and getting tasks completed on time. A better strategic plan should replace the ad hoc planning that prevailed. The recommendations included adding accepting responsibility to the training of employees. The author in other developing countries has observed this problem. The Young People matrix pointed to the failure of the instructor to guide the trainees appropriately, and their work areas did not foster a professional attitude. The Board recommended that the management of Serigraf should retrain the instructor.

The Use Of the Internet

During 1997 and 1998, Serigraf conducted business as most other businesses in Leon and certainly all other silk-screening firms. Serigraf used the manual presses, and acquired some pictures and text for the printing operation. Modifications were difficult and time-consuming. Natalie herself had to do most that work, thus reducing the time that she could spend on developing new business. With another small loan from an MFI, Serigraf acquired a small computer. Natalie was knowledgeable enough to know the advantages that would derive from such an improvement. However, she also knew that the PC had to be capable of handling the high level of graphics and color manipulation that the business required. She thus acquired a very robust PC and acquired the software licenses needed for image processing.

Serigraf now had the ability to create a wide variety of images and modify existing ones. They could customize patterns effortlessly. Most importantly, Natalie could train another employee in the use of the software and use the extra time to develop the business. This was a very successful step in the growth and modernization of Serigraf. The Board was supportive of

the improvements and encouraged the management to investigate how the Internet could further expand the business. Natalie negotiated a telephone connection to a large Internet Service Provider (ISP) in Leon, and thus access to the web.

The first use of the Internet was to exchange graphic files via the Internet. This was highly efficient because Natalie was able to work on the image for a shirt, and send the file to the customer for approval electronically. She could also make changes and return the files to the customer. This was a significant savings for Serigraf, because the time spent in a car or walking between the office and the customer was spent doing productive work. An example of this saving was when Fairfield University ordered T-shirts from Serigraf. The logo and text were delivered via email, and an image of the finished shirt was sent to the school for approval. Some of the more senior employees were trained in the use of the graphics package. Not all the customers have Internet access, and therefore proofs still have to be sent to some customers using local transportation.

The Board reviewed the results of the electronic communication, and asked the company to expand using the Internet. Accordingly in January 2001, the ISP for an increased fee agreed to host a website for Serigraf. The expectation was that the presence on the web would attract new business and reliance on local customers would diminish. The researcher asked the management what plans were made to handle the increase. The response was that in keeping with the mission of Serigraf, even more at-risk youth would be added to the business. There was no shortage of young people in need of occupation.

However, no business has resulted from this channel. The researcher has reviewed the issues and interviewed the ISP to determine the reason for the failure to attract any attention from any source. The researcher also interviewed the management of Serigraf to determine what, if anything was preventing inquiries from reaching Serigraf over the Internet. Clearly Serigraf followed a sound business plan. Following the model presented earlier (White Paper Library, 1999) Serigraf had clearly made a carefully considered entry into the silk screening business, and once that business was established, the use of the Internet was considered. The incremental use of the Internet was also in keeping with the model, as Serigraf balanced its need to expand with its mission to serve the street children of Leon.

The findings of the interviews and investigations showed that the management of Serigraf had adequate contingency plans to grow the business. The projected increase in business would be handled by adding more street children to work with their older peers. The researcher found this to be a viable expectation. What was less certain was the ability to ship the completed orders from Leon, Nicaragua to any other location, whether in Nicaragua or overseas. Thus far tourists willing to take the finished products as their own baggage carried foreign orders back with them. The researcher suggested that a formal delivery method had to be evaluated. Serigraf was concerned about what the cost of shipping would do to the overall price. However, the ISP did not inform Serigraf that in hosting the website, there was no plan to add Serigraf to any search engines. Serigraf will soon begin investigating how to become a true web presence so that orders could be accepted beyond the borders of Leon. Natalie was reminded that the delivery issue had to be resolved before any expansion could be planned.

Conclusions

Nicaragua is faced with innumerable problems resulting from being under a dictatorship, from war, from natural disasters (landslides, earthquakes, volcanoes), political corruption, and above all, widespread poverty. There are many NGOs working in the country to alleviate the human suffering, as the government lacks the resources or the will to solve those problems. Leon is a very vibrant community about one hour north of the capital Managua. It has several universities including the oldest state university in the country. Unlike some of its neighbors, Nicaragua has an infrastructure that can support much of its planned development, but lacks the financial resources to do so. There is widespread electrification except in the remote villages, fairly consistent water supply, abundant fruit and vegetables, and plentiful cattle and seafood. However, unemployment is nearly 60 percent (www.un.org/depts/unsd/social, 2001), and the resulting poverty forces most children to leave school within a few years, seldom completing even middle school. This deprives business of an educated workforce.

MFIs have provided a source of capital to organizations that would normally have no hope of borrowing to grow the business. With the government unable to serve the needs of small businesses, particularly those without any collateral, MFIs have been responsible for much growth in Nicaragua. Thus when Serigraf approached an MFI with a loan request, and a well designed business plan, there was little hesitancy in getting approval. With the funds and a good business plan Serigraf was able to start business in 1997.

After a successful start, Serigraf sought to expand using the Internet. While some efficiency resulted from using email over the Internet, no new business resulted. The researcher found that the ISP had not arranged for Serigraf to be listed on any search engines, hence the website did not generate any business. In solving that problem, Serigraf also needed to examine a reliable and affordable method of delivering the finished product. The main source of business would be NGOs that visit or have visited Leon. Serigraf has a plan that would draw in sufficient help if the business expands.

Recommendations

Serigraf should negotiate with the ISP to register its website with the major web search engines. The research has shown that an organization that was successful before entering the Internet economy is likely to succeed in the new economy provided its business is appropriate for this new paradigm (Knight, 2001). There are several examples of successful small vendors on the Internet, and the researcher can find no literature to show why Serigraf would not succeed.

Serigraf should follow the recommendations of its Board and modify the training of its employees, and include more graphics and other technical training. Serigraf should use the services of an NGO to design a superior website. Once the website has been registered it will be easier to attract attention from remote sites. Serigraf should also begin dealing with the logistical issues of delivery and billing so that the customers' needs are met.

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