

A GOVERNMENT ENTREPRENEURSHIP PROGRAM OF THE MAYAGÜEZ REGION

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ABSTRACT

Entrepreneurship training and education programs are increasingly undertaken by not only educational institutions but also by state and national government units. An evaluation of the effectiveness of such programs would be useful in improving the quality and success of these programs. With this point of view this study involves an assessment of the performance of the entrepreneurship program undertaken in the Mayagüez region by the AAFET unit of the government of Puerto Rico (AAFET is an acronym of the Spanish title which in English stands for “Administration for Training Future Entrepreneurs and Workers”). The Mayagüez region program which covers the western part of Puerto Rico is one of three regional programs covering the island of Puerto Rico.

This investigation involves the identification of the number and type of entrepreneurs initiated in this program, their survival rate, the performance and problems facing the ones that are continuing to operate. Information and data about the firms is collected using both telephone and personal interviews of the owners of these enterprises. A well designed set of questions are used to conduct telephone interviews of the entrepreneurs initiated under this program to obtain relevant information about the performance of the enterprise. This is followed by selecting a random sample of 23 enterprises from this program and conducting personal interviews to obtain in depth information and data.

Analysis of the data and other information is used to draw conclusions about the performance of these enterprises and the effectiveness of the AAFET program. An assessment of these enterprises contribution to employment and economic output is also made. Recommendations to improve the training program and methods to provide continuing assistance to ongoing enterprises developed under this program to become successful are developed. The study looks into the possibility of extending the recommendations developed here to the other two regional centers of Puerto Rico.

INTRODUCTION

It is now generally recognized that a country's economy and economic growth are strongly influenced by the dynamism of their entrepreneurial environment. Reynolds et al (1999) present a consolidated conceptual model that includes both general national, and entrepreneurial framework conditions developed in a GEM (Global Entrepreneurship Monitor) report. The model indicates how a country's entrepreneurial capacity contributes to its economic growth. In the 2001 GEM Executive report Zacharakis et al identify two categories within the total entrepreneurial activity (TEA) within a country. The two categories are identified as:

I) Opportunity Entrepreneurship and II) Necessity Entrepreneurship. Opportunity entrepreneurs are those that start a business to take advantage of a business opportunity. They have an innovative idea and want to explore it and take advantage of an opportunity in the market place. Candidates in this category tend to be educated and are employed or employable. On the other hand those that have no better choice for work or have to find alternate means to survive and support themselves are necessity entrepreneurs. Here entrepreneurship is motivated by need.

Schumpeter (1947, 1949) describes the entrepreneur as creating disequilibrium in order to profit from it. He sees the function of the entrepreneur as one to revolutionize patterns of production by exploiting an invention or innovation. However it is not easy to teach an individual to invent a creation that will cause an economic disequilibrium. In contrast to the entrepreneur as essentially an innovator Kirzner (1973, 1982) argues that an entrepreneur might simply identify an opportunity for profit rather than create one. Hence the Kirznerian entrepreneur can benefit from general education and managerial training. This paper describes and analyzes attempts to train young people to become entrepreneurs in the Kirznerian sense. They can also be considered as necessity entrepreneurs, as described by Zacharais et al.

THE AAFET PROGRAM

In an effort to provide education, training to young people between the ages of 18 to 29 the PR government created a "Service Organization of PR" in August of 1990. The operational component of the department of human resources of PR reorganized the work of the "Service Organization of PR" and in 1999 changed its name to AAFET, an acronym for its Spanish title "Administración para el Adiestramiento de Futuros Empresarios y Trabajadores" (Administration to Train the Future Entrepreneurs and Workers).

The AAFET program consists of three distinct components of activities namely: 1) Vocational Technical Program, 2) Job Corps Program and 3) Economic Development Program. The vocational technical program is based in 13 vocational institutes, the Job Corps program is conducted in 3 Job Corps centers, and the economic development program is divided into three regions. The activity of interest in the present investigation is the Economic Development Program of the western region.

Western Region of Puerto Rico

Puerto Rico, an island lying between the Caribbean sea and the Atlantic ocean (18° 15'N, 61° 30' W) is made up of a total area of 8,959 sq. km. land and 145 sq. km. water (Approximately 180 km East-West and 50 km. North-South) with a population of 3.8 million. The western region considered in this study represents the entire west coast and extends inland approximately 50 km. It consists of 14 cities mostly along the coast line which is nearly flat while the interior of the island is extremely hilly. The population of the western region is approximately 576,874. Mayagüez which represents the principal city in the west is the fifth largest city in P.R. with a population of 98,434. The number of business establishments in the western region as determined in a study (2002) under the P.R. Commerce Department add up to 24,414.

Economic Development Program

The Economic Development Program is made up of the micro enterprise sub program and the entrepreneurial development program of the Work Investment Act (WIA). The micro enterprise sub program is funded and supported by the PR Government while the Entrepreneurial Development Program is supported by the U.S. federal government.

The state program and the WIA program are designed to provide training and education to young people to start a business and manage its operation. While both programs give basically the same training material there are some distinct differences in the approaches taken by each of these with respect to the topics covered in the training, the distribution of materials and the duration of the program.

The state program takes a very direct approach to educate and orient the students. It goes directly to train participants in the basics of business functional areas of accounting, finance marketing, and personnel management. The fire department, health department, and the administration of rules and permits (ARPE) agencies visit them during their training period to educate them about the different permit requirements to start a business in Puerto Rico. This program extends over a period of 3 months.

The WIA program includes all the aspects of the state program. In addition the program puts more emphasis to develop and improve the self esteem and motivation of the participants, and help them with their personal issues as much as possible. The program dedicates more time to their training to help and guide the participants to develop their business proposal. The program is more people oriented, focusing on the development of the individual so they will be more receptive, ready, and open to the training materials. This program extends over a period of 5 months and is thus 2 months longer than the state program.

The two programs in their training cover the basics of starting and managing an enterprise. The areas covered include the following topics:

- Strategies of planning and managing a small business.
- Preparing job description, staffing & managing employees.
- Assessing the market and competition.
- Promotion, Publicity & Public Relations.
- Identifying customers & creative sales.
- Revenues, costs and cash flows.
- Budgets and accounting records.
- Regulations, Permits and Agencies.

These topics are covered in a set of manuals along with a series of exercise. During the training program the students discuss cases relating to the different topics, and complete the exercises. They prepare questionnaires, make market analysis presentations, practice sales techniques, and prepare budgets and cash flows.

At the end of the AAFET and WIA programs the participants are expected to have familiarized with the essential aspects of starting a business and operating it. They hand in a portfolio containing materials and projects they have completed in each of the courses. Following this the students develop a business plan of a business they want to start and submit it for approval and funding support. The staff of AAFET and WIA evaluate the plans and recommend those that are considered acceptable for financial support. The AAFET program participants whose business plans are successful receive a sum of \$900 to start their business. The successful WIA program participants receive a sum of \$1,100 for their startup.

INVESTIGATION

The current investigation is based on a study of a sample of 63 enterprises initiated through the AAFET and WIA programs of the western region. The sample was drawn from a list of 205 enterprise listing provided by the Mayagüez center. This list of 205 is derived from the total number of enterprises initiated in the AAFET and WIA programs over the years 1990 to 2003. The two programs together initiate about 100 startups each year. Thus the total population of enterprises initiated over this period in the western region is approximately 1,300. Information for 40 in the sample of 63 of these enterprises was obtained using telephone interviews and the remaining 23 involved personal visits & interviews. A questionnaire designed for both of these interviews was used to collect the following information about these enterprises:

- Is the enterprise continuing its operation in 2005 or is it out of business.
- The start up date of the operating business.
- The number of employees when it started and the number now.
- Performance of the business operation during the first year and its performance now.
- Expectations of its continuing operation and growth in the future.
- Current sales volume.
- Major problems facing the business.
- Nature of assistance and needs of the entrepreneur and the enterprise.

The information generated from these interviews involves both qualitative & quantitative data. The analysis of the information is as follows. (Summary data obtained from the interviews is given at the end of the paper in tables)

Survival

Of the 40 enterprises whose telephone numbers were available 13 were successfully contacted while 12 did not respond even after several attempts (4-5), and 15 were out of service. The 22 personal visits resulted in 12 enterprises being out of business and 10 were continuing in their operation. The results show:

Sample size $n = 63$

Successfully continuing operation in 2005: 23

Enterprises no longer in operation: 40

Survival rate of enterprises in the sample over the period (2003-2005) of 2 years: 36.5%

Years in business

The surviving enterprises range in their length of operation from 2 to 18 years with a mean of 6.9 years. Since 50% of these businesses are more than 4 years in operation their chances of continuing survival are good.

Table 1

Sales revenues

In spite of this length of business operation a substantial number (48%) of these enterprises have gross revenues of \$35,000 or less. Only 22% of these enterprises have gross revenues exceeding \$100,000. Sales revenues of these enterprises range from a yearly low of \$5,200 to a high of \$600,000. The median sales volume of the sample is \$44,200. (The median value is used to describe the central tendency of the sample sales volume since there are some extreme values. Extreme values in a sample affect the mean as a measure of its central tendency.)

These enterprises can be group into three categories:

- | | |
|---|-----|
| 1. Enterprises with sales revenues less than \$35,000 | 48% |
| 2. Enterprises with sales revenues between \$35,00 to \$105,000 | 30% |
| 3. Enterprises with sales revenues greater than \$105,000 | 22% |

Table 2

Table 3

Employment

Most of the enterprises namely 70% have just 1 employee. The remaining 30% have 2 or more. The average number of employees at the start of these businesses was 2.1 while the average now in 2005 is 3.8 employees per business. Even so a few of these business 13% have substantially fewer employees now than when they started. These businesses find that it is not easy to find good reliable workers and monitor their performance.

Table 4

Table 5

Business status

While 52% of the enterprises felt that their business is in good or very good condition, all of them indicate that they will continue to operate in the next year or many more years. In terms of the future almost 50% of them expect to grow rapidly or moderately.

Table 6

Problems facing the enterprises

Some of the problems identified by the respondents are as follows:

A large number of enterprises (48%) indicated that the major problem they faced; in continuing their business operations or to expand their operation, was in obtaining commercial loans. Often they had to seek personal loans and even in these situations they received little help from the regional offices and they found the process to be very time consuming.

The next major problem appears to be obtaining proper facilities with necessary utilities. A total of (39%) said they faced the problem of finding a proper location. Other problems identified relate to marketing to identify customers (13%). Finding appropriate employees who are dependable, honest and hard working was a problem faced by 17% of the businesses.

CONCLUSIONS AND RECOMMENDATIONS

A major problem of the present study has been the difficulty of obtaining adequate and proper data and information. The list of enterprises contained only 20% of the businesses with telephone numbers. Further there is lack of information concerning the relation between the list of 205 enterprises and the approximate 1,300 total start ups. It was difficult to design a random sample; the sample drawn in this study is a convenience sample and thus limits inferential analysis.

A one sample runs test was made to evaluate the randomness of the convenience sample used in this study. The runs test is used to determine whether the order or sequence of observations in a sample is random. The null hypothesis is: The items in the sample are generated randomly. The critical values of R (number of runs) are 5 for the lower tail and 17 for the upper tail of the distribution. When the observed value of R falls between 5 and 17, the decision is to not reject the null hypothesis. Here the value of R was 14, the decision is to not reject the null hypothesis. Not enough evidence is provided to declare that the data are not random.

Even considering the sample as random we can only draw inferences about the 205 enterprises and will not be able to make any reliable statistical inferences about the population of 1,300 enterprises initiated by the Mayagüez region. (Efforts to determine the nature of the list of 205 from the 1,300 startups is currently being made).

Using the sample information as a pilot study we can draw some conclusions and make recommendations to improve the AAFET and WIA programs.

In a paper on “Entrepreneurship education and training in Canada: a critical assessment” Ibrahim and Soufami (2002) find that the small and medium size enterprises suffer from a considerably high failure rate that is largely attributed to the lack of management skills & planning which can be improved by providing training and education in the business areas. They

go on to develop a conceptual framework for entrepreneurship training which could be adopted in improving the training of AAFET & WIA participants.

In order to ensure the success of even a micro enterprise potential candidates approved for receiving financial support from the state or federal government need to exhibit to some extent entrepreneurial traits associated with successful entrepreneurs; traits such as need for achievement, independence, control, and willingness to accept reasonable risk in view of the uncertainty in the marketplace with respect to many aspects of operation of an enterprise. In the context of providing management skills ensure that potential entrepreneurs in their educational and training programs acquire the skills of developing strategy, financial planning, and cash flow management, marketing to enhancing sales, and networking to establish contacts in the business community and the government agencies.

Another major problem of the AAFET and WIA programs is the limited follow up of the enterprises initiated through their training and financing activities. Lack of personnel has resulted in limited information about the first year performance of these enterprises and (little or) no information in their succeeding years. In order to evaluate the success of this program it is extremely important that a mechanism be set up where by the following activities can be undertaken.

- A planned number of contacts by Mayagüez region personnel during the 1st, 2nd and 3rd years of operation of the business enterprises. They could undertake 12 visits the first year, 6 the second year and 3 the third year to collect basic information about the business operation and their problems.
- Schedule a seminar every 3 months inviting all the enterprises in each region and provide information and solutions to deal with some of the common problems faced by many of the businesses and identified during the visits by the personnel.
- Revise the curriculum to provide training and practices to learn proper book keeping and accounting procedures.

Table 1: Years of Business Operation

# of years in business	Mean of years	# of Companies
≤ 2		4
2.1 to 3.0		5
3.1 to 4.0	6.87	2
4.1 to 5.0		3
> 5.1		9
Total		23

Table 2: Distribution of Sales

Categories of Sales	Frequency	Percent (%)	Average of Years in Operations
Less than \$35,000	11	48%	3.18
\$35,000 to \$100,000	7	30%	10.14
More than \$100,000	5	22%	10.40
Total	23	100%	

Table 3: Sales Volume

Sales Volume (Annual)	
Mean	\$85,890
Median	\$44,200
Minimum	\$5,200
Maximum	\$600,000

Table 4: Employee Distribution

Class	Class Limits	Employees	
		Start	Now
		Frequency	Frequency
2	1 and under 2	16	10
3	2 and under 3	1	4
4	3 and under 4	3	2
5	4 and over	3	7
	Total	23	23

Table 5: Average of Employees

	Employees Start	Employees Now
Mean	2.1	3.8

Table 6: Current Business Status

Current Business Status	Distribution		Sales		Average of Years in Operations
	Freq.	%	Average	Median	
Very Good or Good	12	52%	\$89,523	\$49,000	6.75
Average or Poor	11	48%	\$81,927	\$18,000	7.00
Total	23				

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