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**Selected Paper**  
**Southern Agricultural Economic Association**

**An Economic Analysis of Entrepreneurship in the Piedmont Triad of North Carolina**

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## **An Economic Analysis of Entrepreneurship in the Piedmont Triad of North Carolina**

### **Abstract**

Rural America can be characterized as having lower economic growth, larger poverty levels, and a higher concentration of the socially disadvantaged. One primary way of revitalizing and sustaining rural America is through the development of entrepreneurship opportunities. Thus, this study focuses on increasing the number and sustainability of entrepreneurs targeting the rural areas of North Carolina. This study employed a combination of analytical approaches to examine past and ongoing factors that contribute to rural entrepreneurs' success in the Piedmont Triad Prosperity Zone. Data derived from a survey of current entrepreneurs in the Piedmont Triad Prosperity Zone was analyzed using various qualitative and quantitative statistical methods. Analysis of variance was used to determine if there is statistical significant difference in growth of the different size of firms in different economic sectors. Trade area analysis was employed to determine the magnitude of consumer migration to various counties. The data indicated a larger migration of consumers from rural counties to the urban counties, taking advantage of agglomeration. Factor analysis and linear regression revealed that the sustainability (survival) of entrepreneurship was dependent on demographic and socio-economic factors such as business structure, location, gender, obstacles and, marital status.

### **Background**

Economic growth and development is both a process and a set of desired outcomes. The process is multifaceted and dynamic (Morgan, 2009). The process of an economic development program focuses on expanding the capacity of individuals, firms and, communities and it results in new private investment, job creation, increased wealth, and a higher standard of living for residents (UNMDG, 2015). What drives economic development, is private business: that is, businesses of all sizes starting up, relocating, or expanding in an area. They may be involved in manufacturing, distribution, agriculture, transportation, research and development (R&D), business services, or other activities. The investment these businesses make in a community gives rise to a range of related commercial activities and services. Residential growth also occurs, bringing a wide variety of retail, consumer services, recreational, tourism, and other commercial enterprises (Morgan, 2009). As noted by Stangler and Kedrosky (2010), entrepreneurship creates an environment that makes more entrepreneurship possible. Economic growth, itself a function of innovation and entrepreneurship, expands the scope for more entrepreneurship. Entrepreneurs are the bearers of often discomfiting change, and we must continue to ensure that such change is not prospectively discouraged, but welcomed and celebrated. Therefore, the most important thing we

can do to promote entrepreneurship is to provide a hospitable environment which is one of the main goals of the economic growth and development programs.

Development programs are primarily seeking to improve the living standards of residents especially in the most distressed areas. The rural areas are more in need of development efforts due to worsen economic, social and/or political factors. Additionally, rural areas tend to have significantly fewer financial, professional, scientific and information services activities which are concentrated in urban economies (Wojan & GMcGranahan, 2015). For instance, in the past decade North Carolina has been characterized by a trend of declining employment in the state's traditional industries causing a significant economic disruption and transition. As it is mentioned by Freyer, 2014, the ongoing transformation from a manufacturing-oriented economy to a service-based economy has completely upended the historic relationship between economic growth and rising incomes. As middle-wage manufacturing jobs have been replaced by low-wage service jobs across North Carolina, incomes have steadily fallen, despite seeing long-term growth in the value of the goods and services produced in the state (Freyer, 2014). Additionally, the erosion of manufacturing jobs, particularly in textiles, apparel, and furniture sectors is adversely affecting the state's urban and rural areas alike (Center of Globalization Governace & Competitiveness, 2015). Thus, efforts are needed to help revitalize the rural landscape providing employment opportunities and therefore contributing to sustain growth and development.

### **Problem Statement**

Data have shown that employment opportunities in North Carolina are growing very slowly in only 13 of the 19 major industries (Figure 1). Six industries Manufacturing, Construction, Agriculture, Utilities, Information and Transportation have experienced negative employment growth over the period 2001 to 2012. The major employment areas are in services, health care and manufacturing. More specifically, it has been reported that the Piedmont Triad Region with a historical reliance on the Textile and Furniture industries, have been slow to fully recover from the last recession compared to other regions in North Carolina. Thus, the regional focus of this study is on sustaining and revitalizing development in this region/zone through entrepreneurship. This region, Piedmont Triad Prosperity Zone (PTPZ), is one of eight that was

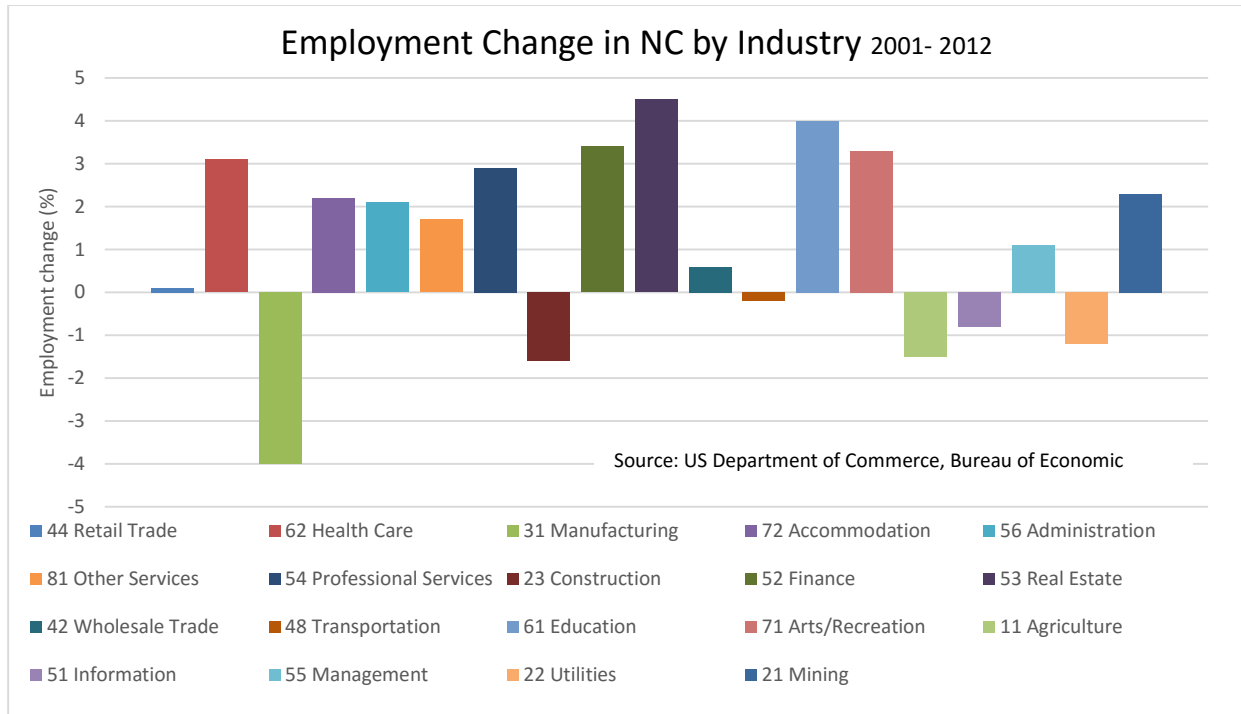
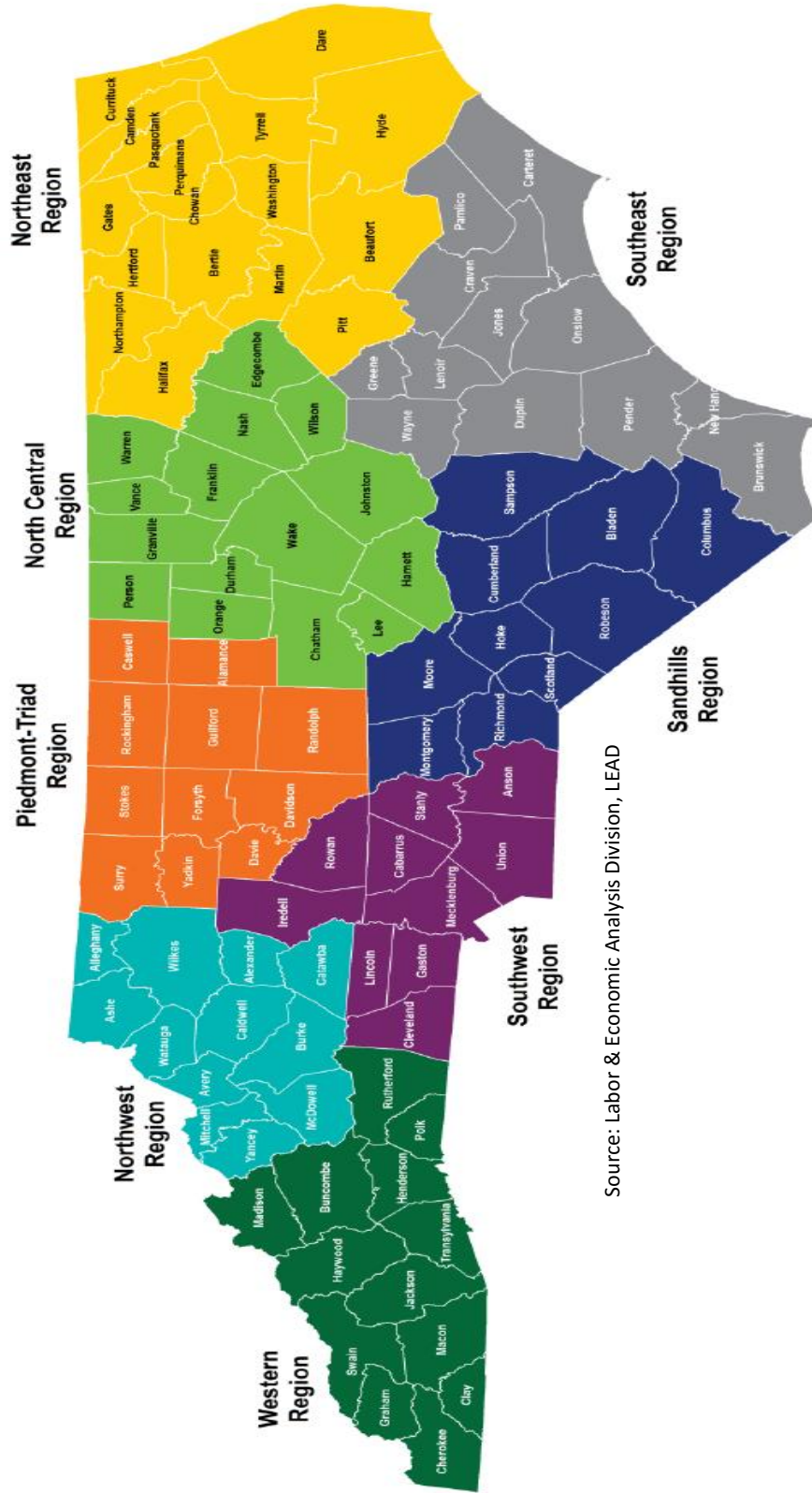


Figure 1. Percentage Change in Employment in North Carolina by Industry from 2001 to 2012

created by North Carolina in 2014 as a means of enhancing customer service and improving efficiency between governmental agencies at a regional level (Hubbard, 2013) (Figure 2). The zone suffered the largest decline in number of people employed from 2008 to 2013 with a decrease of 13,500 jobs. During this period of time state payroll jobs fell by 1.8 percent while in the PTPZ, jobs fell by more than 5 percent. Average weekly wages were the third highest among the zones in 2013, but they grew by less than one percent in real terms from 2008 to 2013 and the \$15.4 billion taxable retail sales fell by nearly 4 percent (NC-LEAD, 2013). Additionally, the PTPZ's population grew considerably slower than the state as a whole and reached 1.6 million residents in 2013, coupled with a slightly higher concentration of older adults aged 45 and older. At the same time, the zone has shown that acquiring new skills is increasingly important as its economy continues to change. While educational attainment trails statewide levels, community college attendance has increased significantly and its regional high school graduation rate is among the highest.



Source: Labor & Economic Analysis Division, LEAD

Figure 2. North Carolina Prosperity Zones Map

The PTPZ remains concentrated in the Furniture and Textile manufacturing industries with more than a combined 20,000 jobs in 2013. However, furniture jobs declined by 22 percent from 2008–2013 while textile jobs fell by more than 31 percent during that period. Despite recent successes in diversifying its economic base, the PTPZ is still more heavily concentrated in manufacturing industries than the rest of the state. While Manufacturing accounted for 14 percent of private sector employment statewide, it accounted for more than 16 percent in the Piedmont-Triad region (Labor & Economic Analysis Division (North Carolina Department of Commerce, 2014). The entrepreneurial activity in the PTPZ in 2014 has more than 70% of the establishments in the private industry located in urban counties (NC-LEAD, 2015). Consequently, the particular characteristics of the PTPZ represent an enormous potential for economic development project to succeed by matching the strengths of the region in solving the recurrent problems that hold the region behind the economic development of the state.

This study conducts a comprehensive analysis of the sustainability of entrepreneurs to benefit those currently residing in rural areas of the Piedmont Triad Prosperity Zone in North Carolina. It seeks to help existing and potential rural entrepreneurs in agricultural and nonagricultural activities by providing guidance on the most assertive choices of entrepreneurship activities and will re-iterate the importance of developing entrepreneurial skills through education, research and outreach that can boost entrepreneurial activity throughout the state, thereby, creating more jobs, reducing unemployment, reducing poverty, revitalizing and sustaining rural areas.

## **Objectives**

The overall objective of this study is to identify demographic and socio-economic factors affecting the development, growth and sustainability (survival) of entrepreneurs in North Carolina. In order to determine those factors the following specific objectives are pursued:

- (1) To determine potential entrepreneur establishments to invest in by examining the growth rate/survival rate of the leading industrial sectors in North Carolina.
- (2) To determine entrepreneur growth areas (counties) by examining the pattern of retail trade for the counties located in the Piedmont Triad Prosperity Zone – the project surveyed counties.

- (3) To employ a combination of multivariate statistical approaches to assess the demographic and socio-economic profile and factors associated with surviving and growing entrepreneur operations.

## **Literature Review**

Entrepreneurship can address population loss, one of the major problems that rural communities face and it is believed to be a cause of economic distress, as found by Jolley, Nousaine & Huang, 2012, in their research entitled “Effective at the Margins: Outmigration and Economic Development in Rural North Carolina.” Their paper describes the economic and social challenges faced by Enfield, a small town in rural northeastern North Carolina. They found that residential outmigration was the demographic trend having the most significant long-term impact on the area’s economic vibrancy. Population lost and outmigration was more evident by the loss of young adults and young families and the inability to attract older adults and retirees. Difficulty to recruit and retain high quality teachers had caused Halifax County, the county of Enfield, to also become one of the lowest-performing districts in the state.

Lack of employment opportunities lead to high levels of poverty as it is portrait by McDowell and Allen Smith, 1995, in their study “Poverty among Southern Workers: Metro and Non metro Differentials”. Their study tested the extent to which factors as Age, Education, Race, Family Type, Family Size, Metro Status, Earners, Weeks Worked, Industry and interaction Race\*Earners are determinants of poverty among the working poor in metro and non- metro areas of the south. Their results indicated that the variables earners, race and family size had the most influence in determining the odds of being in poverty. However, the variable race was the most influential determinant of poverty in the non-metro area. Number of earners was the most important variable in the metro area. Thus, the findings suggest the need for more wages to reduce poverty. Entrepreneurship is one way to provide opportunities to increase wages by employing more people.

A number of publications have suggested that the best chance for regions to transform their economies is through innovations derived from entrepreneurs (Hutcheson & Morrison, 2012); (Markley & Low, 2012); (Robinson & Sexton, 1994). Further, according to (Steele, 2013) the future success of “rural” areas is seen as closely tied to entrepreneurship. That is, small and locally



owned businesses that support a family and has one, five or ten additional employees, has been the heart of rural community through the ages. The entrepreneurial opportunities are expanding in such areas as tourism, sport and recreation facilities, professional and technical training, retailing and wholesaling, industrial applications (engineering, crafts), servicing (consultancy), value added (products from meat, milk, wood, etc.) and the possibility of off-farm work.

The relationship between small rural municipalities and institutions of higher education and their role to improve the well-being of communities by engaging communities through service learning practices has been studied by Davis; 2007, in his dissertation entitled “Higher Education: An Assessment Of Community Development based Service Learning In Small Rural Municipalities In The First Congressional District Of North Carolina.” The purpose of the dissertation was to understand the relationship between citizens and municipalities and empower them to conduct community development projects. He found that strengthening the workforce profile is a factor that most definitively has an impact on entrepreneurship in an economy.

The value of entrepreneurs and the vital role they play in the economic growth of a region was studied in an article by Henderson, 2002, entitled “Building the Rural Economy with High-Growth Entrepreneurs”. In this study the author encourage the participation of high growth entrepreneurs in the communities. He stated that there are two types of entrepreneurs; lifestyle and high-growth entrepreneurs. Lifestyle entrepreneurs are the ones that started a firm to provide family income and or support a desired lifestyle often sacrificing growth for lifestyle choices. Conversely, high-growth entrepreneurs are typically motivated to develop larger, highly visible and more valuable firms, these firms focus on obtaining the resources necessary to fuel growth and they are characterized by the presence of innovation that change the competitive climate of the market.

The study of firm survival becomes very relevant by having more information readily available to entrepreneurs. Forsyth, 2005, in his study entitled “A Note on Small Business Survival Rates in Rural Areas: The Case of Washington State” used Washington State Department of Revenue and Employment Security Department data to examine factors impacting a firm survival. Applying non-parametric duration analysis they examined a nine-year time path of rural firm survival and hazard rates in 27 rural (non-Metropolitan Statistical Area [MSA]) counties. Their study found evidence that firms that start out as employers have a clear survival advantage over

those that do not and in terms of business sectors, the wholesale/retail trades in their sample presented the lowest overall survival rates. Firms in the natural resource and service-based sectors survival rate was statistically higher (Forsyth, 2005).

Researchers dealing with large amounts of exogenous variables, which can be troublesome, often summarize data to be analyzed or utilized by data reduction techniques to improve effectiveness. Nickerson and Sloan, 1999, in their study entitled “Data Reduction Techniques and Hypothesis Testing for Analysis of Benchmarking Data” utilized a multivariate data reduction technique and regression to systematically link performance to underlying practices where the number of observed variables often reaches the hundreds, making data analysis problematic. The study utilized reduction techniques on eleven exogenous performance variables and seven endogenous variables related to product, technology and production used principal component and exploratory factor analysis. The authors were able to reduce the eleven exogenous variables to four common factors which accounted for 79 percent of the variation and the seven endogenous variables to four factors accounting for 83 percent of the variation.

## **Data**

To fulfill the objectives of this study a combination of primary and secondary data has been analyzed. Secondary data consisting of the annual number of establishments classified by number of employees in each industry in North Carolina was derived from the US Census Bureau, County Business Patterns (CBP). This data was used to determine which industries in North Carolina are contributing to the continued economic growth and development of the region. Additionally, the annual data series provide sub-national economic data by county. Annual data gathered from the years 2002 to 2012 contained information pertaining to the type of industry, size of enterprise given by number of employees and the number of establishments in each size category. Establishment is defined as a single physical location where business is conducted or where services or industrial operations are performed. The different categories listed by the County Business Patterns are establishments with: one to four employees, five to nine employees, ten to nineteen employees, twenty to forty nine employees, fifty to ninety nine employees, 100 to 249 employees, 250 to 499 employees, 500 to 999 employees and, more than 1,000 employees. For the purpose of this research, and being consistent with the Small Business Administration size categories, these categories were regrouped into small, medium, and large size enterprises for ease

of analysis. The small size enterprise comprises establishments with less than 100 employees, medium size enterprises; establishments with 100 to 999 employees and large size enterprises; establishments of more than 1,000 employees.

Trade Area analysis will be used to examine patterns of trade between counties in North Carolina, specifically the Piedmont Triad Area. Thus, retail sales data at the county and state level for the years 2007 and 2012 were obtained from the U.S. Census Bureau, Census of Retail Trade, while the county and state population data was derived from the U.S. Census Bureau, Intercensal Population Estimates for the same years and per capita income was obtained from the U.S. Census Bureau, American Community Survey 2006 to 2010 and 2008 to 2012 (U. S. Census Bureau, 2015).

The primary data employed in this study is derived from the survey designed under the USDA Evans Allen funded project entitled “Sustaining Rural Growth and Development through Agricultural Entrepreneurship”. A questionnaire consisting of seven demographic questions and thirty one socio economic questions was administered to local entrepreneurs residing in the Piedmont Triad Prosperity Zone; this zone is made up of eleven counties: Alamance, Caswell, Davidson, Davie, Forsyth, Guilford, Randolph, Rockingham, Stokes, Surry and Yadkin. This zone was selected due to its proximity to North Carolina A&T State University and in the absence of any local trade center to assist in entrepreneur activities. The survey was administered through mail, online and, also by personal contact. Initially, a sample of 260 entrepreneurs was contacted by telephone and given the option to take the survey by mail or online. Unfortunately a very low response rate was received. Thus, survey monkey was developed to reach the respondents via online with an added convenience of ease of collection and summarization. The email list consists of 475 registered businesses maintained by the North Carolina Department of Agriculture. Additionally, personal interviews were conducted at the Farmers Curb Market in Greensboro, Piedmont Triad Farmers Market in Colfax and the Farmer’s Market Downtown Reidsville. As a result of these efforts 109 completed surveys were obtained.

## **Methodology**

This study employed a combination of analytical approaches to examine factors that affect rural entrepreneur success in the Piedmont Triad Prosperity Zone, PTPZ. A set of qualitative and quantitative methods have been combined to satisfy the objectives of this study. Analysis of

Variance (ANOVA) and Survivor Technique was used to satisfy objective 1; determining the potential entrepreneur establishments for future investment. Trade Area Capture (TAC) and Pull Factor (Pf) was used to satisfy objective 2; determining entrepreneur growth areas in the PTPZ. Descriptive Statistics, Factor Analysis and Regression was utilized to satisfy objective 3; assessing the demographic and socio-economic profile and factors impacting entrepreneurs activities. Each method is briefly discussed below.

The Survivor Technique involves classifying the firms or plants of an industry by size and computing the share of industry output for each class over time. If the proportion of industry output by firms or plants of a specified size is maintained or increased, firms or plants of that size are presumed to be of the optimum size (Reekie, 1984). For the purpose of this research, the focus will be on the top four industries in North Carolina and the agriculture sector. Survivor Technique will be used to determine the survival rate of the leading industrial sectors in North Carolina and the optimal size of establishment.

ANOVA will be used to determine if there is any significant difference in the growth of industry by size of establishment. The three sizes of enterprises are small, medium and large; the industries are Service, Retail Trade, Construction, Health Care and Agriculture Industry during the years 2002 to 2012. The null hypothesis to be tested is that there is no significant difference between the three group means by industry type.

Trade area analysis was employed to determine the magnitude and ability of a county to capture commercial activities from other counties within the PTPZ. The trade area analysis indicates whether or not a county is attracting customers from outside its boundaries or if people residing in a county are spending more for retail items. This analysis yields values that can be used to determine inflows and outflows of retail sale customers. Trade area capture is determined by dividing the county's actual retail or service sales by the state per capita expenditures adjusted by the relative per capita income between county and state (Harris, 1995 and Moore, 2008)

Trade area capture for retail sector  $j$  in county  $i$ , ( $TAC_{ij}$ ) is estimated as:

$$TAC_{ij} = \frac{As_{ij}}{(As_{sj}/Ps) \times (Y_c/Y_s)}$$

Where

$A_{sij}$  represents annual taxable retail sales for sector  $j$  in county  $i$ ;

$A_{ssj}$  represents annual taxable retail sales for sector  $j$  for the state

$P_s$  is the state population

$Y_c$  is county per capita income

$Y_s$  is state per capita income

If the trade area capture is larger than the county population then it means that the county is attracting consumers from outside its boundaries or people who reside in the county are spending more for these retail items. If the trade area capture is less than the county population, then the county is not even capturing the retail/service purchases of its own residents or the county residents are spending relatively less than the statewide average (Thomas R. Harris, 1985).

Pull Factor is derived to estimate the amount of sales that were from customers outside the county. Pull factor is a ratio which explicitly derives the portion of consumers that are from outside the county boundaries. It is calculated by dividing the trade area capture by the county population.

$$P_{fij} = \frac{TAC_{ij}}{POP_i}$$

Where

– $P_{fij}$  is the pull factor value for commercial sector  $j$  in county  $i$

– $TAC_{ij}$  is the trade area capture value for commercial sector  $j$  in county  $i$

– $POP_i$  is population in county  $i$

Dividing the Trade Area Capture by the County Population removes the influence of population change within a county and focuses attention on the county's ability to draw outside consumers. Therefore, the  $P_f$  is showing how much of the sales are due to local or foreign purchases. A trade pull factor greater than 1.0 indicates that the city/county is pulling in retail trade from beyond its boundaries. Thus, the balance of trade is favorable. Alternatively, a trade pull factor less than 1.0 indicates that the city/county is not capturing the shoppers within its boundaries. A trade pull factor equal to 1.0 indicates that there is a perfect balance of trade. The purchases of city/county residents who shop elsewhere are offset by the purchases of out-of-city/county customers (Moore, 2008)

Factor analysis was used to satisfy objective 3. Factor analysis was employed as a data reduction tool to reduce the large survey data set to a workable and statistical feasible number. To determine the factors affecting the survival of entrepreneurs in the Piedmont Triad Prosperity Zone several entrepreneurship characteristic/variables were assessed. Although success can be measure

by different means, the present study defines success as sustainability of the enterprise, based on the hypothesis that enterprises that are efficient will survive over time and expand. The dependent variable representing survival of business is the number of years a business has been in operation. The explanatory variables are the demographic and socio-economic characteristics of the sample of the entrepreneurs of the Piedmont Triad Prosperity Zone (Appendix A). Thus, factor analysis was performed on 31 survival characteristic of the entrepreneur. For the factor analysis, basic factor analysis equation can be represented in matrix form as:

$$Z_{px1} = \lambda_{pxm} F_{mx1} + \epsilon_{px1}$$

Where

Z is a px1 vector of variables,

$\lambda$  is a pxm matrix of factor loadings

F is a mx1 vector of factors and

$\epsilon$  is a px1 vector of error (unique or specific) factors.

It will be assumed that factors were not correlated with the error components. Moreover, this study employed the principal components factor analysis extraction method and Varimax rotation, which generally results in reasonably interpretable simple structure (Thompson, 2004).

SPSS was used to derive the rotated component matrix (Appendix B) which is a matrix of the factor loadings for each variable onto each factor. The variables are listed in the order of size of their factor loading because SPSS is directed to give the output sorted by size for ease of analysis and interpretation. Factor loadings are correlation coefficients between variables and factors and they are used to obtain factor scores for selected factors.

Regression analysis is used as part of the methodology to satisfy objective 3. Regression analysis is employed as a statistical tool for the investigation of relationships between variables. Factors with Eigenvalues greater than one were employed in the multiple regression analysis yielding factor scores. The score values of the selected factors or components were considered as independent variables in the multiple regression analysis which will be used to predict the survival of an entrepreneur, measured as the number of years a business has been in operation. The regression equation is presented as:

$$S = a + b_1FS_1 + b_2FS_2 + \dots + b_nFS_n + e$$

Where “a” is the regression constant (its value is zero),  $b_1$  through  $b_n$  are regression coefficients of Factor Scores (FS). FS is factor scores and “e” is the error term of the regression model. Regression coefficients were tested by using t-test. Determination coefficient ( $R^2$ ) was used as predictive survival criteria for the regression model. All the data was analyzed using Statistical Package for Social Science (SPSS). The overall hypothesis to be tested is that all the factors scores will have a significant and positive effect on an entrepreneur survival.

### **Empirical Results**

The survey instrument used in this study was comprised of 38 questions soliciting information from business owners concerning their current operation. Appendix C presents the variables and the percentages of the most predominant participant’s responses to the survey questions. The first seven variables represents demographic information and shows that most of the participants reside in rural areas, are males, married, white, between the ages of 50-60, highly educated with at least a BS/BA degree, and with family income of over \$100,000. The remaining variables are socio-economic factor profiling each survey participant. The data depicts that most businesses have been in operation for an average of 17 years, they have less than 3 employees, primarily family members and still operate their first company. Starting their business they were faced with many obstacles such as financing, lack of information, managerial/entrepreneurial skills, marketing, bookkeeping/accounting and finding skilled employees. Additionally, most of the participants stated that they know where to obtain training and financial assistance and were satisfied with the support they have received. The primary legal structure of the businesses was sole-proprietorship with most participants stating that they wanted to create their own business. The dominant business type was retailing/wholesaling operations. Moreover, most of the funds for the business operation was acquired through personal savings. The participants indicated that their business operations generated on average less than \$50,000 annually. In general, most of the participants also indicated that they have a business plan and plan to expand in the immediate future. However, a number of obstacles to their continued success were reported, the most common obstacle was finding a market for their products. Current marketing efforts have centered on marketing in rural area, urban areas, farmers market communities and online. Additionally, basic advertising has been through business website, flyers/newsletters and word-of-mouth. Thus, most participants stated that business classes related to better marketing would be most helpful.

Additionally, they suggested that classes on federal regulations, business structure and credit would be most beneficial.

Results from the ANOVA, indicated that there was no significant difference between small, medium and large firm size within the industrial sectors. Thus, all further analysis will examine differences between the individual industrial sectors.

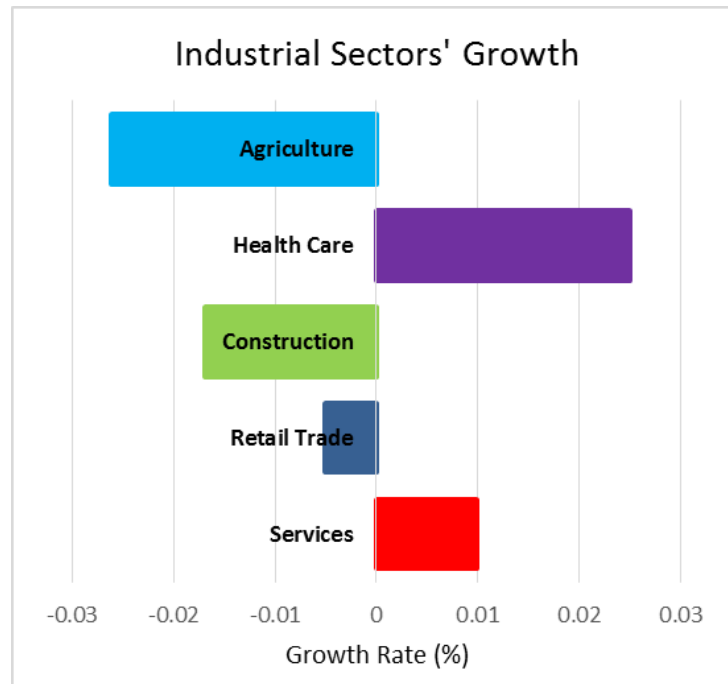


Figure 3. Industrial sector growth rate

A further application of a t-test showed that there was a significant difference between Service and Retail Trade and Service and Agriculture. Significant difference was also found in Health Care and Retail Trade, Health Care and Construction and Health Care and Agriculture.

Employing survivor technique it was found that the Health Care industrial sector was the more sustainable over the years as displayed in Figure 3. Consequently, an entrepreneur whose business is related to the Health Care has been more sustainable during the last decade than the other industries.

### Trade Area Analysis

Table 1 shows TAC and  $P_f$  for each of the eleven counties in the PTPZ of North Carolina for the years 2007 and 2012. The three metropolitan statistical areas are Burlington, Greensboro-



High Point and Winston Salem located in Alamance, Guilford and Forsyth County, respectively. The micropolitan statistical areas are Lexington-Thomasville and Mount Airy located in Davidson and Surry County, respectively. The remaining counties are classified as non-metropolitan or rural counties. The data indicates that only four of the eleven counties; Alamance, Forsyth, Guilford and Surry have a TAC that is greater than the county population. This implies that these counties are attracting consumers from outside their boundaries. Therefore, entrepreneur opportunity may exist in these counties. The remaining seven counties TAC is less than the county population implying that these counties are not capturing the retail/services purchases of their own residents, thus, entrepreneurship opportunities are questionable. The pull factor ( $Pf$ ), is also provided in Table 1, it measures how much of the retail trade activity is derived from other counties. The data show that the  $Pf$  is also greater for Alamance, Forsyth, Guilford and Surry. A factor greater than one implies the county is pulling in retail trade from beyond its boundaries. For instance, Surry County has the largest  $Pf$  of 1.36 and 1.46 for the years 2007 and 2012, respectively, which implies, that 36 or 46 percent of his retail sales is derived outside the county. On the other hand, when the  $Pf$  is less than one it is an indication of low commercial activity in the county and their residents are either getting their retail trade items from outside the county or reducing their spending as for example Caswell County that has the lowest  $Pf$  of 0.23 and 0.31. This suggests that 77 and 69 percent of its retail sales is flowing to adjacent counties.

Knowing the flow and direction of trade indicates to entrepreneur potential future location for business operations. Some counties are steadily losing TAC and their  $Pf$  is lower than 1 as it is the case of Davie, Randolph and Stokes Counties which lose Retail Trade sales from the years 2007 to 2012 not being able to capture the spending of their own population. Therefore, in order for these counties to improve capture of local dollars and recapture lost trade development strategies will be needed. What it is basically depicted in this study is the position of each county and the direction of the changes over time. From the eleven counties four are increasing their  $Pf$  and seven have decreased. This directional change provides an idea of potential good areas where entrepreneurs can be successful. Additionally, Figure 4 complements our previous discussion by showing graphically the counties that are attracting consumers from outside their boundaries and the ones that are losing consumers to other areas. This suggests that future entrepreneur should consider operating in the following four counties; Guilford, Forsyth, Alamance and Surry whose

Table 1. Trade Area Capture and Pull Factor for Counties in PTPZ, 2007 and 2012

County	Retail Trade (Th)		Personal Income/Capita		State/Capita Retail Trade		TAC		Population per County		Pull Factor (Pf)	
	2007	2012	2007	2012	2007	2012	2007	2012	2007	2012	2007	2012
North Carolina	114,578,173	120,691,007	33,735	25,285	12,566	12,381			9,118,037	9,748,181		
Alamance	1,968,813	2,108,413	29,575	23,517			178,716	183,097	144,712	153,672	1.23	1.19
Caswell	52,986	63,883	25,917	18,191			5,489	7,172	23,914	23,183	0.23	0.31
Davidson	1,264,173	1,301,842	29,332	22,503			115,704	118,148	159,126	163,542	0.73	0.72
Davie	407,832	360,172	34,594	26,864			31,649	27,381	40,260	41,366	0.79	0.66
Forsyth	5,202,887	5,569,392	37,600	26,377			371,484	431,211	338,638	357,967	1.10	1.20
Guilford	7,252,646	6,979,731	37,013	26,384			526,049	540,263	468,466	500,894	1.12	1.08
Randolph	1,156,737	1,107,887	27,160	21,526			114,337	105,109	138,855	142,326	0.82	0.74
Rockingham	839,555	866,255	27,550	20,944			81,811	84,468	93,164	92,646	0.88	0.91
Stokes	226,515	222,118	27,141	21,063			22,406	21,536	47,079	46,756	0.48	0.46
Surry	1,054,073	1,067,104	28,497	20,352			99,301	107,080	73,027	73,568	1.36	1.46
Yadkin	238,645	242,856	27,611	21,897			23,204	22,650	37,965	38,056	0.61	0.60

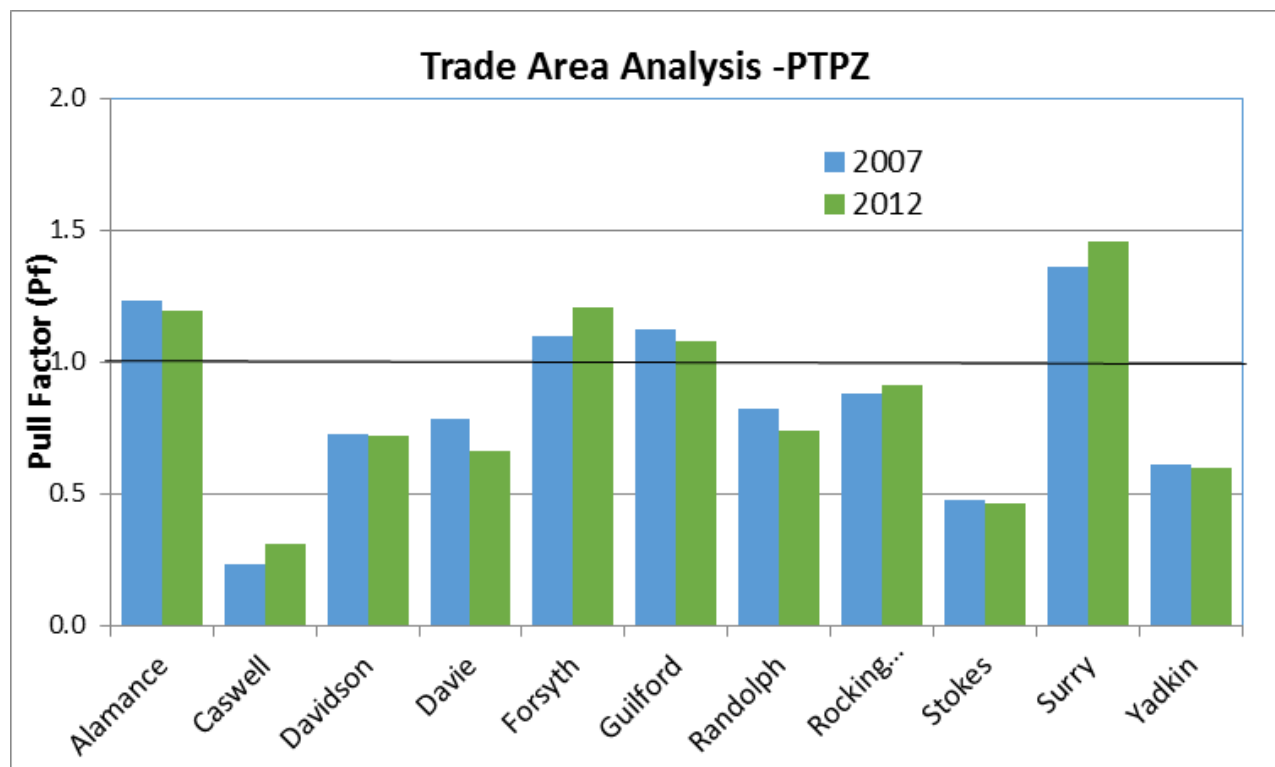


Figure 4. Trade area analysis of the PTPZ during the years 2007 and 2012

$Pf$  is greater than one. It should be also noted that these counties have the largest population and is predominantly an urban population. However, Surry County is an exception given that it is primarily a tourist area for its natural scenic attractions and it has a core urban micropolitan area. Contrariwise, the rural counties, with lower population tend to be adjacent to a more urban county thus the  $Pf$  is lower.

### **Factor Analysis and Linear Regression**

Through exploratory factor analysis all variables (about 59) were analyzed in a correlation matrix, variables with correlation coefficients larger than 0.9, which can represent singularity in the data, were excluded. The component matrix was also checked for variables exhibiting weak loading factors; those variables were also excluded from the data set. Exploratory factor analysis was run again until thirty of the variables correlated very well and none of the correlation coefficients were particularly large. The determinant of the matrix was larger than 0.00001 indicating that there were no multicollinearity problems.

Keiser- Meyer Olin test with a value of 0.568 indicated that the pattern of correlations was relatively compact implying factor analysis is appropriate for these data. The significant test tells us that the R-matrix is not an identity matrix; therefore there are some relationships between the variables. For these data Bartlett's test is highly significant,  $p < 0.001$ , indicating that factor analysis is appropriate.

After conducting factor analysis on the entrepreneur's demographic and socio-economic variables/characteristics the rotation factor loadings from the component matrix (Appendix B), communalities and variances for the 30 characteristics were derived (Appendix D). Between one to six variables/characteristics were found to load in one of the eleven factors. These eleven factors were selected because they have eigenvalues greater than one and were selected as the explanatory variables for the multiple regression model (Tabachnick & Fidell, 2007).

Additionally, communality values were higher in some factors, for example, SemLCOO had a communality value of 0.73, indicating that 73% of the variance in SemLCOO is accounted for by factors one through eleven. Then the proportion of the variance in a set of variables accounted for by a factor is the sum of square loading for the factor (SSL) (variance of factor)

divided by the number of variables (when the rotation is orthogonal). Thus, the proportion of variance accounted for by the five variables loaded on factor one, BusKnow is 13.70 %.

Factors two through eleven accounted for the remainder of the variance and are shown in the last column of Appendix D. Because rotation is orthogonal, the eleven factors together are responsible for the 69.3 percent of the variance in variables. The proportion of variance in the solution accounted for by a factor, or the proportion of covariance, is the sum of loadings for the factor divided by the sum of communalities.

The factors were named to represent the variables that loaded within it as depicted in Appendix E. The variables that accounted for the largest variance are shown in descending order. Therefore, factors with several variables will have a name that represents all variables that are accounted for under that factor.

Given the orthogonal rotation, it is easy to find the values of loadings in descending order. The values of loadings are correlations between variables and corresponding factors. The correlation values indicated in bold represent the highest correlations between variables and corresponding factors Appendix B. The greater the loading, the more the variable is a pure measure of the factor. For example, factor 1 consist of four variables SemLCOO, SemBMSS, StObsMkAcct and AtTnCC which exhibit the highest correlation with factor 1 thus, is consider as a group. This group, factor 1, was renamed BusKnow because they represented the entrepreneurs knowledge of business tools. Similarly, factors two through eleven are represented by the variables with higher loading values or higher correlation with the corresponding factor and also renamed and presented in Appendix E.

To obtain the factor score values factor score coefficients in Appendix D were used. These factor score values for the eleven factors selected were the independent variables in the linear regression analysis used to determine the significant factors that explain the survival of entrepreneurs in the PTPZ. In the present study, five of the eleven selected independent factors/variables were found to have significant impact on the dependent variable, entrepreneur survival, measured by number of years a business has been in operation.

As depicted in Table 2, only five of the eleven factors exert a positive and significant effect on the survival of entrepreneurs. Those factors are: BusStr, Gender, Obstacles, STAT and LOC.



significant impact in the survival of an entrepreneur, this factor is represented by current obstacles and family income, suggesting that an entrepreneur that has been able to overcome obstacles and have higher family income will have more chances to survive in business. The factor STAT which is represented by marital status and how the business was funded also have a positive impact in the survival of an enterprise, meaning that if entrepreneur is married and has personal funds as described in the study, the entrepreneur will have a higher survival rate.

## **Conclusions**

The overall results of this study suggest that to be a successful entrepreneur requires an individual to consider investing in businesses related with the health care industry or service industry. However, data over the last two years indicate significant positive growth in the Agriculture industrial sector which may indicate future entrepreneur potential. Additionally, the focus should be also in the counties that are attracting more commercial activities. In this case, those counties are Guilford, Forsyth, Alamance and Surry. Moreover, to be a successful entrepreneur requires one to secure appropriate business structure, maintain a high impact marketing strategy, be located in or adjacent to an area with growing commercial activities, a male, free of barriers associated with marketing their product and if possible married.

Additionally, since the difference in survival rate between small, medium and large enterprises was not statistical significant one can suggest that entrepreneurs will have a good chance to succeed by engaging in small size enterprises. As it was previously mentioned, small entrepreneurs can improve economic growth and development in a region by creating more jobs, reducing unemployment, reducing poverty, revitalizing and sustaining rural areas.

A detail study about the commercial activity of Surry County is suggested for further studies to reveal the causes of the flowing of retail trade activity by entrepreneurs in one of the most commercial oriented rural county in the PTPZ. It is also recommended that further studies be continued to pursue an analysis of the demographic characteristics separately from the socio-economic variables to get a closer look at the way variables correlate with the dependent variable and how the variables load in different factors. This type of analysis could reveal different combinations of factors that may impact entrepreneur's survival different from the one derived in

this study. Moreover, it could generate more significant variables that might positively or negatively contribute to entrepreneurs continued success.

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## Appendix A: Definition of Variables

		Definition of Variables			
Variable	Description	Responses			
<b>Location</b>	Location	Rural	Urban		
<b>Gender</b>	Gender	Male	Female		
<b>Marital Status</b>	Marital status	Single	Married	Widow	Separated/Divorced
<b>Ethnicity</b>	Ethnicity	African American	African	Asian	Hispanic
		Native American	White	Other	
<b>Age</b>	Age Category	Under 20 years	20-29 years	20-29 years	30-39 years
		40-49 years	50-60 years		
<b>Education</b>	Highest level of schooling	Less than High School	High School	Some College	College Education (BS, BA)
		Postgraduate (MS, MBA, PhD)		Certificate/training courses	
<b>Income</b>	Family Income	\$10,000 or less; \$10,001 to \$20,000; \$20,001 to \$30,000; \$30,001 to \$40,000; \$40,001 to \$50,000; \$50,001 to \$60,000; \$60,001 to \$70,000 \$70,001 to \$80,000; \$80,001 to \$90,000; \$90,001 to \$100,000 Greater than \$100,001			
<b>YearsOp</b>	Years Business has been in operation	Actual number of years			
<b>FTemp</b>	Full time employees	Number of FT employees			
<b>FamEmp</b>	Family members employed	Actual number of family members employed			
<b>FirstCo</b>	First company	Yes or No			
<b>TrainAsstnc</b>	Know where to get training assistance	Yes or No			
<b>FinAsstnc</b>	Know where to get financial assistance	Yes or No			
<b>ConsHh</b>	Consumers are households	Yes or No			
<b>Business Plan</b>	Business Plan	Yes or No			
<b>Expand</b>	Plan to expand	Yes or No			
<b>Opportunities</b>	Think there are opportunities for other businesses	Yes or No			
<b>HelpYours</b>	Would creation of other businesses, help yours?	Yes or No			
<b>MKRuUrFM</b>	Marketing in local areas	Local rural community	Nearby urban area,	Farmer's Market	
<b>MkVblnBus</b>	Marketing online/internationally/business	Website/online orders, International markets, Other			
<b>Funds</b>	How initial funds were accumulated	Personal Savings, Support from Family and Friends, Bank loans, Grants, Other sources			
<b>LegalStr</b>	Business Legal Structure	Sole Proprietorship,	Partnership: General Limited,	Registered Limited Liability,	
		Other Partnership	Corporation: Business Nonprofit, Close,	Professional,	
		Cooperative, Other Corporation			
<b>Revenue</b>	Revenue	\$1.00 to \$10,000	\$10,001 to \$50,000	\$50,001 to 100,000	\$100,001 to \$250,000
		\$250,001 to \$500,000 > \$500,001			
<b>suppSatisf</b>	Satisfaction with support received	Not satisfied, Somewhat satisfied, Very satisfied, Not applicable/Do not have any outside support			
<b>ObsNow</b>	Current Obstacles	There are no obstacles, finance, finding a market for products, bookkeeping and accounting, finding skilled employees, Long hour away from family, Other			
<b>GSFood</b>	Goods/Services produced related to food	Bakery, Butchery, Fruit and vegetable processing, Processed cheese and yoghurt, Winery, Nursery			
<b>GSSalesServ</b>	Goods/Services are arts, recreation, services	Direct Marketing, Livestock equipment and structures, Tourists related activity, Sport and recreational facilities, Servicing (financial, custodial, etc), others			
<b>ConsBSTFedIntr</b>	Main consumers are	Other businesses, Local, State or Federal Agencies/Institutions, International markets, others			
<b>StObsLack</b>	Initial Obstacles were	Start up finance, Lack of information/advice on how to start a business			
		Inappropriate management skills, Lack of entrepreneurial skills			
<b>StObsMkAcct</b>	Initial obstacles were	Gender/racial discrimination, Finding a market for products/service, Bookkeeping and accounting			
		Finding skilled employees, Long hour away from family, Other			
<b>AdvOutS</b>	Advertising by high impact media	Newspaper ads, Television commercials, Government operated website/Internet, Magazines			
<b>AdvIn</b>	Advertising on short range media	Business website/Internet, Flyers, Word-of-mouth, other			
<b>SuppCommEd</b>	Support received from service agencies	Small Business Administration, Cooperative Extension, NC Rural Economic Development Center, Universities/Communities Colleges			
<b>SemBMSS</b>	Think seminars in the following would help	Preparing a business plan, Marketing assistance for business, Overview of microenterprise and self-employment opportunities, Steps in starting a business			
<b>SemLCOO</b>	Think seminars in the following would help	Local/state/federal regulations, policies and procedural requirements, Choosing a legal business structure, Obtaining and using credit.			
<b>HowStart</b>	How the business started	Created my current company myself, Family business that I inherited, A business that I purchased			
		Created the business with my spouse, Created the business with my children,			
		Created the business with other family, Created the business with a friend, other			
<b>TypeAct</b>	Type of activity	Education, Banking/Finance/Accounting, Medical/Dental/Healthcare, Manufacturing and Processing			
		Online Retailer, Transportation/Utilities, Wholesaling/Retailing/Distribution,			
		Business Services/Consultant, Marketing/Advertising/Entertainment, other			
<b>Budget</b>	Annual Budget	\$1.00 to \$10,000	\$10,001 to \$50,000	\$50,001 to 100,000	\$100,001 to \$250,000
		\$250,001 to \$500,000 > \$500,001			

## Appendix B: Rotated Component Matrix

Rotated Component Matrix											
Factors Variables	BusKnow	BusStr	InfoSource	DevPhase	BusAst	LOC	BusPln	Gender	Obstacles	HowStart	STAT
SemLCOO	<b>.745</b>			-.285		-.130	-.169	.140	-.104		
StObsMkAcct	<b>.725</b>			-.166		.168			.171	.264	
SemBMSS	<b>.665</b>	-.134	.261	-.184		-.145				-.271	.209
AtTnCC	<b>.610</b>	.161		.261			.255			.139	-.318
FTemp	-.141	<b>.805</b>				-.171		-.123			
Revenue		<b>.717</b>	.124			.181		.331			
YearsOp		<b>.713</b>				.103		.422	.271		.118
AdvOutS	.206	<b>.643</b>	.157	-.127	.127	.137		-.325	-.142	-.113	
KpInfTVRMd	.110	.113	<b>.790</b>								
ConsHH	.163		<b>.669</b>	-.189	.114		.411				
KpInfNeigRel	-.232		<b>.643</b>	-.101				-.277		.362	.144
MKRuUrFM	.412	.174	<b>.620</b>					.166	.101	-.187	-.107
AdvIn	.327		<b>.567</b>	.158	.241		-.119	-.286	-.192		-.236
Opprt			<b>.366</b>	-.254		.228	-.274	.224	.262	-.334	.150
Age		.140		<b>.741</b>		.153		.198	.192		.127
StartAge	-.181	-.261		<b>.691</b>			.102	-.129			.126
FirstCo	-.113	-.159		<b>.581</b>	.140	-.134	-.128	.134		.202	
TrainAsstnc				.144	<b>.892</b>						
FinAsstnc		.111	.105		<b>.874</b>						
Location						<b>-.842</b>					
Ethnicity		.187				<b>.669</b>		.120		.153	
SuppSatisf	-.113				.238		<b>.759</b>				
BusPlan	.213			.125	-.187		<b>.561</b>		.510		
ConsBStFedIntr	.502	.264	.114	.165	.167		<b>-.502</b>				
Gender	.102			.157		.149		<b>.792</b>	-.140		
ObsNow		.221		.218		.172			<b>.702</b>		-.190
Income		.321		.245	-.131			.102	<b>-.562</b>	-.374	-.105
HowStart		-.109								<b>.807</b>	
MaritalStatus	-.165			.303						.156	<b>.744</b>
Funds	.379	.216	-.123	-.137		.310		-.281			<b>.561</b>

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 17 iterations.

## Appendix C: Variables Definition and Dominant Value

Variable Definition and Dominant Value			
Variable	Description		Dominant Value
Location	Location	71%	Rural
Gender	Gender	53%	Male
Marital Status	Marital status	84%	Married
Ethnicity	Ethnicity	83%	White
Age	Age Category	29%	50-60 years
Education	Highest level of schooling	38%	College Education (BA, BS)
Income	Family Income	32%	>100,000
YearsOp	Years Business has been in operation	17	Years in average
FTemp	Full time employees	88%	less than 3 emp
FirstCo	First company	61%	yes
TrainAsstnc	Know where to get training assistance	57%	yes
FinAsstnc	Know where to get financial assistance	47%	yes
Funds	How initial funds were accumulated	71%	Personal Savings
LegalStr	Business Legal Structure	62%	Sole proprietorship
Revenue	Revenue	71%	\$1-\$50,000
ConsHh	Consumers are households	83%	Households
Business Plan	Business Plan	61%	Yes
Expand	Plan to expand	52%	Yes
suppSatisf	Satisfaction with support received	50%	Somewhat
ObsNow	Current Obstacles	39%	Finding a market for the product
Opportunities	Think there are opportunities for other businesses	79%	Yes
HelpYours	Would creation of other businesses, help yours?	49%	Yes
GSfood	Goods and Services produced related to food	56%	Yes
GSSalesServ	Goods and Services related to arts, recreation, services	66%	Yes
MKRuUrFM	Marketing in rural, near urban and farmer's market community	88%	Yes
MkWblnBus	Marketing online, internationally or other business	39%	Yes
ConsBStFedInt	Consumers are international, other business, state/federal agencies/institutions	39%	Yes
StObsLack	Initial Obstacles finance, lack of information, managerial or entrepreneur skills	55%	Yes
StObsMkAcct	Initial obstacles marketing, bookkeeping/accounting, finding skilled employees	59%	Yes
AdvOutS	Advertising by Newspaper, TV, radio gov website, magazines/trade shows	26%	Yes
AdvIn	Advertising on business website, flyers/newsletters, word of mouth	90%	Yes
SuppCommEd	Support received from service agencies	47%	Yes
SemBMSS	Think classes of business, marketing, microenterprise would help	43%	Yes
SemLCOO	Think classes of federal regulations, business structure, credit would help	47%	Yes
HowStart	How the business started	45%	wanted to create my own company
TypeAct	Type of activity	38%	Wholesaling/retailing
FamEmp	Family members employed	46%	0, 39% 1 or 2
Budget	Annual Budget	49%	\$10,000 -\$50,000

Appendix D: Rotation Factor Loading, Communalities and Variance

Variables	Factor Score Coefficients											Communal ity	Variance	Proportion of Variance accounted for
	BusKnow	BusStr	InfoSource	DevPhase	BusAst	LOC	BusPln	Gender	Obstacles	HowStart	STAT			
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11			
SemLCOO	0.271	-0.076	-0.047	-0.095	0.008	-0.098	-0.068	0.130	-0.045	0.007	0.058	0.729	4.110	13.70%
SemBMSS	0.245	-0.111	0.036	-0.025	0.013	-0.112	0.050	-0.003	0.071	-0.223	0.237	0.710		
StObsMkAcct	0.275	-0.018	-0.080	-0.054	0.042	0.075	-0.025	-0.005	0.105	0.212	-0.030	0.689		
AtTnCC	0.240	0.078	-0.036	0.173	-0.088	-0.010	0.183	-0.062	-0.094	0.139	-0.250	0.671		
YearsOp	-0.024	0.249	0.011	-0.036	-0.010	-0.052	-0.008	0.238	0.177	0.038	0.100	0.792	2.772	9.24%
FTemp	-0.080	0.378	-0.038	-0.006	-0.032	-0.157	0.069	-0.148	0.028	0.063	-0.085	0.736		
Revenue	-0.045	0.245	0.043	-0.056	-0.024	0.038	-0.038	0.179	-0.034	0.016	0.063	0.706		
AdvOutS	0.033	0.257	-0.006	-0.019	0.039	0.082	-0.003	-0.288	-0.093	-0.035	0.024	0.714		
KpInflNeigRel	-0.165	0.008	0.318	-0.038	-0.035	-0.018	-0.079	-0.121	0.043	0.257	0.088	0.726	2.365	7.88%
KpInflVVRMd	-0.065	0.020	0.347	0.060	-0.051	-0.041	-0.062	0.023	-0.026	0.024	-0.015	0.669		
AdvIn	0.064	-0.023	0.182	0.129	0.074	0.103	-0.064	-0.216	-0.131	-0.033	-0.165	0.678		
ConsHH	-0.023	-0.027	0.273	-0.095	0.005	0.059	0.276	0.069	-0.091	0.004	0.044	0.707		
MKRuUrFM	0.070	0.021	0.240	0.059	-0.095	-0.089	0.044	0.114	0.067	-0.106	-0.040	0.678		
Opprt	-0.106	-0.126	0.184	-0.140	0.015	0.124	-0.184	0.185	0.200	-0.260	0.150	0.591		
Age	0.037	0.039	0.010	0.367	-0.045	0.018	-0.010	0.054	0.118	-0.054	0.105	0.691	2.048	6.83%
StartAge	0.004	-0.103	0.003	0.348	0.028	0.070	0.045	-0.134	-0.025	-0.143	0.105	0.648		
FirstCo	-0.008	-0.050	0.063	0.281	0.033	-0.105	-0.122	0.086	-0.016	0.142	-0.032	0.496		
TrainAsstnc	0.041	-0.059	-0.055	0.021	0.513	0.013	0.018	0.035	0.086	-0.106	0.082	0.851	1.792	5.97%
FinAsstnc	-0.008	-0.005	-0.032	-0.066	0.484	-0.022	-0.006	0.016	-0.012	0.031	0.031	0.812		
Location	0.005	0.112	0.027	0.035	-0.049	-0.563	-0.010	0.047	0.004	0.073	0.068	0.735	1.576	5.25%
Ethnicity	-0.064	0.042	0.035	0.007	-0.056	0.410	0.011	0.023	-0.076	0.120	-0.032	0.549		
BusPlan	0.105	0.014	0.017	0.081	-0.123	-0.086	0.334	-0.043	0.318	-0.068	0.030	0.680	1.394	4.65%
SuppSatisf	-0.014	0.005	-0.015	-0.037	0.107	0.056	0.492	0.040	-0.118	-0.039	0.018	0.658		
ConsBStFedIntr	0.175	0.058	-0.029	0.126	0.093	-0.009	-0.313	-0.019	0.010	0.030	-0.014	0.652		
Gender	0.034	-0.042	-0.019	0.007	0.048	0.042	0.033	0.539	-0.140	0.054	-0.015	0.736	1.327	4.42%
ObsNow	-0.001	0.086	-0.048	0.110	0.022	0.046	-0.114	-0.135	0.507	-0.058	-0.162	0.674	1.203	4.01%
Income	-0.011	0.106	0.031	0.147	-0.119	0.044	0.028	0.018	-0.398	-0.215	-0.082	0.674		
HowStart	0.045	0.014	0.017	-0.001	-0.035	0.032	-0.041	0.068	-0.027	0.607	0.024	0.692	1.158	3.86%
MaritalStatus	-0.006	0.026	0.044	0.154	-0.010	-0.121	0.022	0.051	-0.051	0.067	0.595	0.720	1.041	3.47%
Funds	0.176	0.059	-0.124	-0.028	0.055	0.186	0.021	-0.222	-0.075	-0.040	0.437	0.727		
													20.79	69.28%

\*p: < 0.10, \*\*p: < 0.05

## Appendix E: Description of the Factors/Variables Renamed

<b>Renamed Variables to Factor Load</b>		
Factor	Variable	Description
BusKnow: Business Knowledge	SemLCOO	Seminars of interest: -Local, state and federal regulations, policies and procedure requirements. - Choosing a legal business structure. - obtaining and using credit
	StObsMkAcct	Obstacles faced at starting of business: -finding a market for product/service. - bookkeeping and accounting.- finding skilled employees, gender/racial discrimination.- long hour away from family
	SemBMSS	Seminars of Interest: Preparing a business plan. - Marketing assistance for business. - steps in starting a business. - Overview of Microenterprises and self-employment opportunities.
	AtTnCC	Most important in deciding to attend an educational workshop: Topics/subject covered during the workshop. - convenience and location. - cost
BusStr: Business Structure	FTemp	Number of full time employees
	Revenue	Revenue generated by the business per year
	YearsOp	Number of years the business has been in operation
	AdvOutS	Mainly advertising the business by: -newspaper ads.- tv/radio. - government operated website/internet.- magazines/trade shows
InfoSource: source of Information	KpInfTVRMD	Entrepreneur stay abreast of what is happening in the business community: - tv/radio.- newspaper. Media
	ConsHH	Consumers are mainly households
	KpInfNeigRel	Entrepreneur stay abreast of what is happening in the business community: - - by neighbors and relatives
	MKRuUrFM	Marketing area is mainly: local rural community./- nearby urban area.- farmers market
	AdvIn	Mainly advertising the business by: -business website/media.- flyers/newsletter.- word-of-mouth
DevPhase: Developmental Phase	Opprt	Think there are opportunities for other business in the region
	Age	Current age of entrepreneur
	StartAge	Age when the entrepreneur started the business
BusAst: Business Assistance	FirstCo	currently operating the first company created
	TrainAsstnc	Know where to find training assistance
LOC: Location	FinAsstnc	Know where to find financial assistance
	Location	Location
BusPln: Business plan	Ethnicity	Ethnicity
	SuppSatisf	Entrepreneur is somewhat or very satisfied with the level of support received
	BusPlan	entrepreneur follows a business plan
Gender	ConsBStFedIntr	Consumers of product/service are -other businesses.- local, state or federal agencies. - international markets
	Gender	Gender
	ObsNow	Entrepreneurs faced obstacles currently: -finance.- finding a market for products.- bookkeeping and accounting.- finding skilled employees.- long hour away from family
Obstacles	Income	Total family income
	HowStart	How the business was started: -wanted to create own company.- business inherited.- purchase a business.- wanted to create business with spouse, with children, with a friend, with other family
STAT: Status	HowStart	How the business was started: -wanted to create own company.- business inherited.- purchase a business.- wanted to create business with spouse, with children, with a friend, with other family
	MaritalStatus	Marital status
STAT: Status	Funds	Funding to start the business by: - personal savings, support from family and friends, bank loans, grants