

## **Entrepreneurship Elsewhere: Examining the Entrepreneurial Characteristics of Eastern Kentucky Adolescents**

**David Snow**

[DavidSnow@upike.edu](mailto:DavidSnow@upike.edu)

University of Pikeville and the Kentucky Innovation Network

**Justin Prater**

University of Pikeville and the Kentucky Innovation Network

### **Abstract**

Entrepreneurship is known as a legitimate academic discipline and significant contributor to economic development. Eastern Kentucky is known for its high levels of poverty and unemployment. This research examines the entrepreneurial attitudes of high school seniors and their preferences to remain in or leave Eastern Kentucky. Findings indicate few students scored in the high level of enterprising tendency and the entrepreneurial characteristics of need for achievement, calculated risk-taking, and creative tendency. Findings also indicate those with a high level of enterprising tendency are more likely to leave Eastern Kentucky for education and career with no intention of returning.

Keywords: Entrepreneurship; Education; Poverty; Socioeconomic Status

### **Introduction**

“Entrepreneurship Everywhere” is the current slogan for the United States Association for Small Business and Entrepreneurship (USASBE). This is one of the premier organizations for post-secondary teaching, research, and experiential learning in the entrepreneurship discipline. The reason for this motto is obvious. In many parts of the U.S. and the world, entrepreneurship is thriving. In 1975, only one hundred formal majors, minors, and certificates existed, but over the last twenty years entrepreneurship has emerged as a mainstream discipline (Lee et al., 2005; Torrance et al., 2013). According to Kuratko (2014), over 1,000 schools offer majors in entrepreneurship and over 2,200 universities teach at least one course in entrepreneurship. Along with this growth, an increase in business plan competitions, technology commercialization programs, product development activities, and startup company internships has occurred (Duval-Couetil, 2013).

Entrepreneurship education is now also widely offered in secondary schools. With organizations such as Junior Achievement (JA), the Kauffman Foundation, the Young Entrepreneurs Academy (YEA), the Network for Teaching Entrepreneurship (NFTE), and university-based programs, millions of students each year are taught entrepreneurship (Frazier, 2014; Hamilton, & Hamilton, 2012; Lorz, Mueller, & Volery, 2013). Entrepreneurship education at the secondary and post-secondary levels has been shown

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to positively impact students' self-efficacy, desire to attend college, academic success, attitude toward entrepreneurship, intention to become entrepreneurs, business skills, and desirability by employers (Abu Talib et al., 2012; Brown, Bowlus, & Seibert 2011; Hernandez & Newman, 2009; McNally, Martin, & Kay, 2010; NFTE, 2011; Studdard, Dawson, & Jackson, 2013).

It is known entrepreneurship is integral in the efforts of innovation and economic development (Acs & Audretsch, 2003; Audretsch & Keilbach, 2004; Baumol, 2002; Hessels & van Stel, 2011; Morris, Neumeyer, & Kuratko, 2015). Research has specifically examined entrepreneurship as an effective strategy for economic development in rural areas as well (Jaafar, Dahalan, & Rosdi, 2014; Mojica, Gebremedhim, T., & Schaeffer, 2010; Robinson, Dassie, & Christy, 2004). Entrepreneurial startups are typically born as small businesses. The majority of small business creations remain classified as small businesses throughout their lifespan (Clayton et al., 2013). Even though these organizations employ less than five hundred employees each, the economic contribution is significant. In 2011, there were 28.2 million small businesses. Small businesses comprise 99.7 percent of U.S. firms, are responsible for 63 percent of net new private-sector jobs, and employ 49.2% of all private-sector workers (Audretsch & Link, 2012; SBA, 2014).

## Eastern Kentucky

Eastern Kentucky sits in the central region of the Appalachian Mountains. Consisting of such a vast area, the Appalachian Mountains run from southern New York to northern Mississippi in eastern North America and include 420 counties in 13 states. Appalachia is classified into northern, southern, and central regions. Historically, communities in Appalachia have lagged behind the rest of the country and Central Appalachia is the poorest performing of the three regions (Bauman, 2006; Stephens and Partridge, 2011). Fifty four counties in Kentucky are classified as Appalachian (see exhibit 1). The easternmost of these are well known for their high levels of economic distress, unemployment and poverty (Heflin & Miller, 2012; Tickamyer & Tickamyer, 1988; Ziliak, 2015). Coal has been the major industry in the area for over one hundred years. However, the coal industry has experienced many booms and busts over the decades.

The instability of coal demand and the lack of industry diversification have contributed to the depressed economy of the region (Black, McKinnish, & Sanders, 2005; Epstein et al., 2011). In 1964, President Lyndon Johnson famously declared his "War on Poverty" from a home in Eastern Kentucky's Martin County (Lowrey, 2014; Torstensson, 2013). Although Central Appalachia is one of the poorest regions in the country, it is not from a lack of monetary infusion from state and federal agencies. In fact, over the past five decades Eastern Kentucky has received over 9 billion dollars in financial aid and remains behind in economic development, educational attainment, wages, employment levels, and standard of living (Baumann, 2006; Gebremariam et al., 2012; Hansen & Yukhin, 1970; Jung, Cho, & Roberts, 2015; Santopietro, 2002).



Exhibit 1

Because of the perceived lack of opportunity for each younger generation as it reaches early adulthood, and the factual conditions of a poorer performing economy, Eastern Kentucky has and continues to see an outward migration (Green, 2015; Hansen & Yukhin, 1970; Lichter et al., 2005; Pugel, 2016; Sanders, 1969). From the period between 2010 and 2015, some counties in Kentucky have seen an increase in population as high as 8%. However, some counties in Eastern Kentucky have seen declines higher than 6% with many of the counties in the 4-5% range (US Census Bureau, 2015). As a means of reversing this trend and improving the future prospects of this region, it is proposed a committed effort to entrepreneurship education at all levels needs to occur.

Given that Eastern Kentucky does not have a thriving entrepreneurial ecosystem, there are a couple possibilities offered as explanations. One reason may be residents of this region are not inherently or educated to be entrepreneurial. Entrepreneurship education is not mandated by the Kentucky Department of Education. Also, this region does not have any active chapters of Junior Achievement or the Young Entrepreneurs Academy, which are available elsewhere in the state. One reason may be entrepreneurial intentions do exist in these citizens. However, those possessing the wherewithal choose to move to more prosperous communities. Therefore, the purpose of this exploratory research is to (A) measure the enterprising tendency of high school seniors to see if they currently possess the mindset to be entrepreneurial, and (B) determine what proportion of these adolescents plan to move away from Eastern Kentucky.

## Methodology

The instrument used for this research was the GET2Test created by Sally Caird (Caird, 2013). This is a revision of the original GET Test created to measure enterprising tendency (Caird, 1991). This instrument is well known and has been used by other researchers (Caird, 1991; Ishiguro, 2014; Katundu & Gabagambi, 2014; Mayer et al., 2014; Mazzarol, 2007; Pizarro, 2014; Sethu, 2012). This instrument reliability (Cronbach  $\alpha = .7$ ) is sufficient for the purposes of this study. The survey examines five characteristics shown to be important qualities for entrepreneurs: need for achievement, creative tendency, calculated risk taking, locus of control, and need for autonomy (Caird, 1991). The GET2 Test includes 54 items. The need for achievement, creative tendency, calculated risk taking, and locus of control are measured by 12 items each. The need for autonomy is

measured by 6 items. Half of these items represent positive entrepreneurial statements, and the rest of them represent negative entrepreneurial statements (Ishiguro, 2014).

The survey was administered to 287 seniors attending Eastern Kentucky high schools. The survey was administered in four Eastern Kentucky high schools from four separate counties. This was done to acquire a sample more representative of the region and not one specific school in one particular county. The method used may be considered convenience sampling. At the time this research was conducted an attempt was made to elicit participation from additional schools to generate a larger sample size. However, the four high schools were the only ones immediately available to participate.

A generalization may be made that rural high schools are poorer performing than urban or suburban high schools. However, the four schools in this study rank favorably in the state of Kentucky (see table 1) ranging from the 77<sup>th</sup> percentile to the 97<sup>th</sup> percentile. Fifty four surveys were eliminated from analysis because they were not completed in full. The remaining 233 surveys were analyzed. Demographic data was collected to make the connection between student’s enterprising tendency levels and their preferences to begin employment and/or seek a college education. Questions asked if students planned to attend college immediately after high school, planned to seek employment immediately after high school, and if they planned to pursue these activities outside of eastern Kentucky.

Table 1 2014-2015 Rankings				
County	School	Overall Score	Percentile in KY	Classification
Pike	Pikeville Independent	80.4	97	Distinguished
Floyd	Allen Central	79.1	96	Distinguished
Johnson	Johnson Central	73.2	82	Proficient
Martin	Sheldon Clark	72.4	77	Proficient

\*Kentucky Department of Education, <https://applications.education.ky.gov/src/>

Table 1: 2014-2015 Rankings

## Results

Measurements for each of the five criteria and for the composite score of enterprising tendency are classified into three levels: low, medium, or high, based upon survey scoring. For the measure of enterprising tendency, scores from 44-54 are high (very enterprising), 27-43 medium (somewhat enterprising), and 0-26 low (likely prefer guidance from superiors). For the individual characteristics of Need for Achievement, Creative Tendency, Calculated-Risk Taking, and Locus of Control, the maximum score is 12 with 10-12 the high range and 0-6 the low range. For Need for Autonomy, the maximum score is 6 with the high range 4-6 and 0-2 the low range. Table 2 and Exhibit 2 display the results of the students.

As you can see, only 5 of the 233 respondents scored in the high range for enterprising tendency. This equates to only 2.15% of the entire sample. Other noteworthy scores of

low proportion of the sample in the high range include Need for Achievement at 9.44%, Creative Tendency and 11.16%, and Calculated Risk-Taking at 9.44% of the sample. Also important to recognize are the proportion of scores in the low range for Need for Achievement at 40.34%, Need for Autonomy at 36.05%, and Creative Tendency at 43.78% of the entire sample. It is pertinent to take note of the creative tendency scores. Timmons and Spinelli (2004) argue that creativity is integral to the concept of entrepreneurship and is particularly relevant in the teaching of entrepreneurship. Personal creativity is the precursor of innovative behavior and thus a central dimension of enterprising potential (Athayde, 2009).

Table 2 Enterprising Tendency Scores						
	High		Medium		Low	
	Number	Percent	Number	Percent	Number	Percent
Need for Achievement	22	9.44	117	50.21	94	40.34
Need for Autonomy	80	34.33	69	29.61	84	36.05
Creative Tendency	26	11.16	105	45.06	102	43.78
Calculated Risk-Taking	22	9.44	134	57.51	77	33.05
Locus of Control	59	25.32	123	52.79	51	21.89
Enterprising Tendency	5	2.15	195	83.69	33	14.16

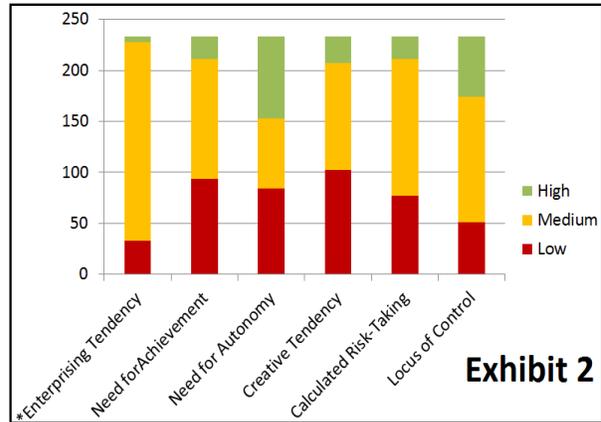


Exhibit 2

The mean score for Enterprising Tendency is 31.9223 with a standard deviation of 5.4235. The distribution is uni-modal and fairly symmetrical, displaying a nearly normal condition (see exhibit 3 and table 3).

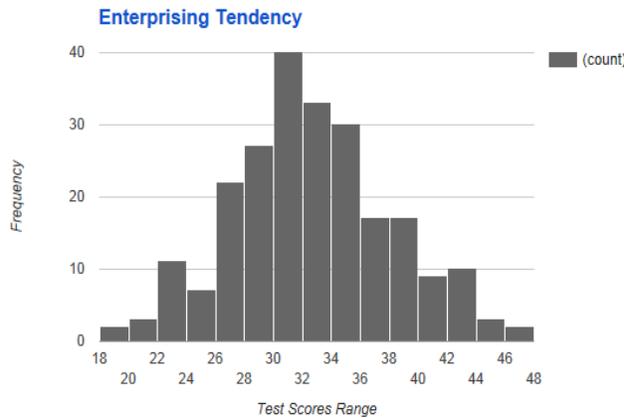


Exhibit 3

	M	SD	N
Need for Achievement	6.9072	1.8223	233
Need for Autonomy	2.9800	1.2169	233
Creative Tendency	6.8876	1.9205	233
Calculated Risk-Taking	7.0981	1.9521	233
Internal Locus of Control	8.0494	1.8060	233
Enterprising Tendency	31.9223	5.4235	233

Table 3

Concerning the demographic information, of the 233 respondents, 114 were male and 119 were female. The ages ranged from 17 to 19 with 17 = 64 students, 18 = 145 students, and 19 = 24 students. When asked if they planned to attend college after high school, 201 answered Yes. When asked if they planned to go to work after high school, 94 answered Yes. Overlap was present concerning these two questions in that 77 plan to find employment and go to college after high school. Also interesting is that 14 answered No

to both the question of going to work after high school and going to college after high school. It appears these individuals plan to do neither.

One of the primary goals of this research was to determine if and how many of the participants desire to move away from Eastern Kentucky. When asked if they planned to leave Eastern Kentucky after high school, 98 answered Yes, 107 answered No, and 28 answered maybe. This is up to 54% who may leave the area after finishing high school. When asked if they planned to return to Eastern Kentucky, all 98 answered No. Another statistic of note is of these 98 who do not intend to return, 4 were from the high enterprising tendency group of 5, 89 from the medium range group of 195, and 5 from the low enterprising group of 33. This is 80%, 46%, and 15% respectively of each group (high, medium, and low) who plan to leave and not return. This appears to indicate those with higher enterprising tendencies (medium to high) are more likely to want to leave eastern Kentucky than those with lower (low to medium) enterprising tendencies. Therefore, an ANOVA was performed to test this assumption. When comparing the group of 98 who plan to leave with the group of 107 who want to stay, the results indicate a significant difference is not present (see Table 4). A p-value less than .05 indicates there is a significant difference among the groups. The students who answered “maybe” in regard to leaving the region were not included.

	SS	df	MS	F	p
Between:	0.716	1	0.716	0.025	0.874
Within:	5,758.375	203	28.366		
Total:	5,759.090	204			

Table 4

Since data was collected to record the number of males and females taking the survey, and information was gathered to ascertain the respondents’ propensity to leave (see table 5), comparisons were made among the two major categories of groups (stay or leave) and their subsets (male or female). Enterprising tendency was higher for the group wanting to leave Eastern Kentucky than the group wanting to stay. Enterprising tendency was higher for the males from both groups than for the females from both groups.

Number	233	114	119	98	50	48	107	50	57
Category	Entire Group	Male	Female	Plan to Leave	Male	Female	Plan to Stay	Male	Female
Enterprising Tendency	31.92229	32.04002	31.77682	32.26409	32.64524	31.8829	32.14572	32.5787	31.71273
Need for Achievement	6.90717	6.81569	6.98532	6.98313	6.80357	7.16270	6.85926	6.95000	6.76852
Need for Autonomy	2.98004	2.97054	2.98817	3.02302	3.10060	2.94544	3.10613	3.17130	3.04097
Creative Tendency	6.88761	7.09657	6.69475	7.13353	7.51310	6.75397	6.87905	7.06250	6.69560
Calculated Risk-Taking	7.09808	7.08605	7.02990	7.01637	7.10417	6.92857	7.07674	7.12037	7.03310
Locus of Control	8.04939	8.07117	8.07869	8.10804	8.12381	8.09226	8.22454	8.27454	8.17454

Table 5

However, these scores are not statistically significant and simply indicate the group as a whole does not rank highly in the five characteristics of enterprising tendency or enterprising tendency itself. The only significant difference in scores occurs in the category of creative tendency. This is evident when comparing the mean score of males who plan to leave (7.51310) to mean score of females who want to stay (6.69560). ANOVA was performed to test for significance between these groups (table 6). A p-value less than .05 indicates there is a significant difference among the groups. The p-value is .035. There appears to be a difference between the males who plan to leave (7.51310) and the females who plan to leave (6.75397). ANOVA was also performed to test for significance between these groups (table 7). A p-value less than .05 indicates there is a significant difference among the groups. The p-value is .055

	SS	df	MS	F	p
Between:	17.801	1	17.801	4.541	0.035
Within:	411.599	105	3.920		
Total:	429.400	106			

Table 6

	SS	df	MS	F	p
Between:	14.113	1	14.113	3.760	0.055
Within:	360.301	96	3.753		
Total:	374.414	97			

Table 7

## Discussion

The other primary goal of this research was to measure the entrepreneurial attitude of high school seniors in Eastern Kentucky. The results of the survey show the majority of the respondents are in the medium range with very few in the high range. Some of the contributing factors to this are the rather high proportions in the low ranges of Need for Achievement and Creative Tendency, and low proportions in the high ranges of Need for Achievement, Creative Tendency, and Calculated Risk-Taking. The high range for enterprising tendency is 44-54, the medium range is 27-43, and the low range is 0-26. The mean for this sample is 31.9223 which is in the lower end of the medium range. The standard deviation is 5.4235. These findings indicate the enterprising tendency (entrepreneurial mindset) of high school seniors, at least the participants in this study, is not high.

However, entrepreneurship can be taught. Recognizing an opportunity, solving a problem, developing an appropriate solution for the problem, constructing a business model, acquiring the necessary resources, starting the venture, and growing the business are skills (i.e. competencies) anyone can learn (McGuigan, 2016; Morris et al., 2013). Research has shown an entrepreneurial mindset and entrepreneurial abilities can be fostered through education (Martin, McNally, & Kay, 2013; Rauch & Hulsink, 2015; Schenkel, D’Souza, & Braun, 2014).

An important distinction to state here is the difference in business education, knowledge and skills, versus entrepreneurial education, knowledge, and skills. All the participating high schools are rated as either proficient or distinguished by the Kentucky Department of Education. Two of the schools are in the 96<sup>th</sup> and 97<sup>th</sup> percentile. All of these schools

teach business courses. However, business education and entrepreneurship education are not synonymous (Morris et al., 2013; Morris & Kaplan, 2014). Entrepreneurial experience has been shown to contribute to the development of human capital and enhance skills and abilities which positively impact future career opportunities (Burton, Sorensen, & Dobrev, 2016; Parker, 2013; Toft-Kehler, Wennberg, & Kim, 2014).

So, what can be done to ameliorate this condition? It seems prudent to suggest that entrepreneurship education should become an integral component of the K-12 curriculum because it is action-oriented and contributes to the development of capabilities which serve to enhance one's ability to navigate the world and are beneficial throughout one's career (Krueger, 2009; McEwen & McEwen, 2010; Studdard, Dawson, & Jackson, 2013). This already occurs in metropolitan areas. The rural areas, especially Central Appalachian Eastern Kentucky, need to adopt similar practices and policies in order to prevent further population and economic decline.

### Limitations and Future Considerations

An increase in sample size, including a larger selection of high schools, may provide a more accurate representation of the attitudes of high school seniors in this region. Another relevant demographic question to ask is if the respondents have considered starting a business. Additional research may be conducted by teaching an entrepreneurship program to a group of high school students including pre and post surveys to see if enterprising tendency increases and by how much. Additional research may be conducted comparing the survey results of a group of Eastern Kentucky high school students to the results of a group of metropolitan Kentucky high school students for possible differences. Many instruments exist to measure entrepreneurial attitude. Research utilizing other surveys and tests could yield different results.

### So What

The results of this study affirm the observations and assumptions of the researchers. The majority of high schools seniors tested do not possess an entrepreneurial mindset and do desire to leave the region. These insights have been considered a call to action. It has been proven entrepreneurship education affects students' entrepreneurial attitudes, entrepreneurial competencies, and desire to become entrepreneurs (Abu Talib et al., 2012; Harris et al., 2008; Morris et al., 2013). It has also been proven entrepreneurship positively impacts economic development, even in rural areas (Ghio et al., 2015; Mojica, Gebremedhim, T., & Schaeffer, 2010) and is a powerful driver of job growth (Decker et al., 2014). Therefore, an entrepreneurship program has been constructed, partnerships developed, and resources allocated to teach a ten-week entrepreneurship program to seven high schools in far Eastern Kentucky. Ideally, entrepreneurship curriculum will become compulsory throughout K-12 education. This is not thought to be a panacea, but it is a start in a positive direction for this region. Many other policies and changes must be enacted to support education, entrepreneurship, and economic development if long-term substantive improvement is to be achieved.

### Conclusions and Implications

To summarize the findings of this research: entrepreneurship contributes to economic development. Eastern Kentucky is desperate to implement measures to stimulate

economic development. The region has highly ranked high schools teaching business courses, but they do not teach entrepreneurship. The students surveyed do not rate highly for enterprising tendency, need for achievement, creative tendency, calculated risk taking, locus of control, or need for autonomy. Entrepreneurship education is shown to positively impact academic success, attitude toward entrepreneurship, intention to become an entrepreneur, business skills, and desirability by employers. It is logical to teach entrepreneurship in Eastern Kentucky at the K-12 level as one initiative in an attempt to improve the mindset of the youth. This will aid in the formation of an entrepreneurial ecosystem to enhance economic development in the region by enlightening each successive generation to the possibilities of creating their own opportunities for career in their home towns, as opposed to the continued migration of young adults to other communities for education, career, and contributions to society.

In conclusion, this research has provided results important to the fields of entrepreneurship, education, and economic development as they pertain to rural areas with traditionally non-diverse economies, similar to the conditions of Central Appalachian Eastern Kentucky.

## References

- Abu Talib, M. (2012). Innovative Use of IT Applications for Teaching Entrepreneurship to Youth: UAE Case Study. *European, Mediterranean & Middle Eastern Conference of Information Systems*.
- Acs, Z., & Audretsch, D. (2003). *Innovation and Technological Change. Handbook of Entrepreneurship Research: An Interdisciplinary Survey and Introduction*. Dordrecht, The Netherlands: Kluwer. 55-80.
- Athayde, R. (2009). Measuring Enterprise Potential in Young People. *Entrepreneurship Theory & Practice*, 33(2), 481-500.
- Audretsch, D., & Link, A. (2012). Valuing an Entrepreneurial Enterprise. *Small Business Economics*, 38(2), 139-145.
- Audretsch, D., & Keilbach, M. (2004). Entrepreneurship Capital and Economic Performance. *Regional Studies*, 38(8), 949-959.
- Baumann, R. (2006). Changes in the Appalachian Wage Gap, 1970 to 2000. *Growth and Change*, 37(3), 416-443.
- Baumol, W. (2002). *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism*. Princeton, NJ: Princeton University Press.
- Black, D., McKinnish, T., & Sanders, S. (2005). The Economic Impact of the Coal Boom and Bust. *Economic Journal*, 115(503), 449-476.

- Brown, K., Bowlus, D., & Seibert, S. (2011). Online Entrepreneurship Curriculum for High School Students: Impact on Knowledge, Self-Efficacy, and Attitudes. *USASBE Proceedings*, 1351-1364.
- Burton, D., Sorensen, J., Dobrev, S. (2016). A Careers Perspective on Entrepreneurship. *Entrepreneurship Theory and Practice*, 40(2) 237-247.
- Caird, S. (2013). General Measure of Enterprising Tendency Test. The Open University's Repository of Research Publications and Other Research Outputs. Retrieved from [http://oro.open.ac.uk/5393/2/Get2test\\_guide.pdf](http://oro.open.ac.uk/5393/2/Get2test_guide.pdf)
- Caird, S. (1991). Testing Enterprising Tendency in Occupational Groups. *British Journal of Management*, 2, 177-186.
- Clayton, R., Sadeghi, A., Spletzer, J. & Talan, D. (2013). High-Employment-Growth Firms: Defining and Counting Them. *Monthly Labor Review*, 136(6), 3-13.
- Decker, R., Haltiwanger, J., Jarmin, R. & Miranda, J. (2014). The Role of Entrepreneurship in US Job Creation and Economic Dynamism. *Journal of Economic Perspectives*, 28(3), 3-24.
- Duval-Couetil, N. (2013). Assessing the Impact of Entrepreneurship Education Programs: Challenges and Approaches. *Journal of Small Business Management*, 51(3), 394-409.
- Epstein, P., Buonocore, J., Eckerle, K., Hendryx, M., Iii, B., Heinberg, R., Glustrom, L. (2011). Full Cost Accounting for the Life Cycle of Coal. *Annals of the New York Academy of Sciences*, 73-98.
- Frazier, A. (2014). YEA! For Entrepreneurship. *Business NH*, 31(11) 10-11.
- Gebremariam, G., Gebremeskel, H., Gebremedhin, T., Schaeffer, P., Phipps, T. & Jackson, R. (2012). Employment, Income, Migration and Public Services: A Simultaneous Spatial Panel Data Model of Regional Growth. *Papers in Regional Science*, 91(2), 275-297.
- Ghio, N., Guerini, M., Lehmann, E & Rossi-Lamstra, C. (2015). The Emergence of the Knowledge Spillover Theory of Entrepreneurship. *Small Business Economics*, 44(1), 1-18.
- Green, M. (2015, July8). More Than Half of Kentucky's Counties Losing Population, Census Data Shows. <http://www.wdrb.com/story/29503122/more-than-half-of-kentuckys-counties-losing-population-census-data-shows>
- Hamilton, S., Hamilton, M. (2012). Development in Youth Enterprises. *New Directions for Youth Development*, 134, 65-75.

- Hansen, N. & Yukhin, R. (1970). Locational Preferences and Opportunity Costs in a Lagging Region: A Study of High School Seniors in Eastern Kentucky. *Journal of Human Resources*, 5(3), 341-353.
- Harris, M., Gibson, S., Taylor, S., & Mick, T. (2008). Examining the Entrepreneurial Attitudes of Business Students: The Impact of Participation in the Small Business Institute®. *USASBE Proceedings*, 1471-1481.
- Heflin, C. & Miller, K. (2012). The Geography of Need: Identifying Human Service Needs in Rural America. *Journal of Family Social Work*, 15(5), 359-374.
- Hernandez, S. & Newman, C. (2009). Positive Long-Term Impact of Minding Our Business Entrepreneurship Programs for Low-Income Middle School Students.
- Hessels, J., & van Stel, A. (2011). Entrepreneurship, export orientation, and economic growth. *Small Business Economics*, 37(2), 255-268.
- Ishiguro, J. (2014). What Influences Entrepreneurial Career Choice?: An Exploratory Analysis of the Sally Caird's GET2 for Japanese High School Students. *Allied Academies International Conference: Proceedings of the Academy of Entrepreneurship*, 20(1), 9-13.
- Jaafar, M., Dahalan, N., & Rosdi, S. (2014). Local Community Entrepreneurship: A Case Study of the Lenggong Valley. *Asian Social Science*, 10(10), 226-235.
- Jung, S., Cho, S., & Roberts, R. (2015). The Impact of Government Funding of Poverty Reduction Programmes. *Papers in Regional Science*, 94(3), 653-675.
- Katundu, M. & Gabagambi, D. (2014). Entrepreneurial Tendencies of Tanzanian University Graduates: Evidence from University of Dar-es-Salaam. *European Academic Research*, 1(12), 5525-5558.
- Krueger, N. (2009). The Microfoundations of Entrepreneurial Learning and....Education: The Experiential Essence of Entrepreneurial Education. In Page, G., Gatewood, L. & Shaver, G. *University-Wide Entrepreneurship Education* (35-59). Cheltenham, UK: Edward Elgar.
- Kuratko, D. (2014). *Entrepreneurship: Theory, Process, Practice*. 9th ed. Mason, OH: Cengage/South-Western Publishers.
- Lee, S., Chang, D., & Lim, S. (2005). Impact of Entrepreneurial Education: A Comparative Study of the U.S. and Korea. *International Entrepreneurship and Management Journal*, 1(1), 27-43.
- Lichter, D., Garrat, J., Marshall, M., & Cardella, M. (2005). Emerging Patterns of Population Redistribution and Migration in Appalachia. Washington DC: Appalachian Regional Commission.

- Lorz, M, Mueller, S., & Volery, T. (2013). Entrepreneurship Education: A Systematic Review of the Methods in Impact Studies. *Journal of Enterprising Culture*, 21(2), 123-151.
- Lowrey, A. (2014, January 5). 50 Years Later, War on Poverty is a Mixed Bag. *New York Times*, pp A1-A4.
- Martin, B., McNally, J., & Kay, M. (2013). Examining the Formation of Human Capital in Entrepreneurship: A meta-analysis of Entrepreneurship Education Outcomes. *Journal of Business Venturing*, 28(2), 211-224.
- Mayer, I., Kortmann, R., Wenzler, I., Wetters, A., & Spaans, J. (2014). Game-Based Entrepreneurship Education: Identifying Enterprising Personality, Motivation and Intentions Amongst Engineering Students. *Journal of Entrepreneurship Education*, 17(2), 217-244.
- Mazzarol, T. (2007). *Awakening the Entrepreneur: An Examination of Entrepreneurial Orientation Among MBA Students*. Paper presented at the EFMD 37<sup>th</sup> Entrepreneurship, Innovation, & Small Business (EISB) Annual Conference, September 13-14, 2007.
- McEwen, T. & McEwen, B. (2010). Adding Entrepreneurship to the General Education Curriculum. *Allied Academics Conference: Proceedings of the Academy of Entrepreneurship*, 16(2), 37-42.
- McGuigan, P. (2016). Practicing What We Preach: Entrepreneurship in Entrepreneurship Education. *Journal of Entrepreneurship Education*, 19(1), 38-50.
- McNally, J., Martin, B. & Kay, N. (2010). *Examining the Formation of Human Capital Entrepreneurship: A Meta-analysis of Entrepreneurship Education Outcomes*. Presented at the Annual Meeting of the Academy of Management. Montreal Canada.
- Mojica, M., Gebremedhim, T., & Schaeffer, P. (2010). A County-Level Assessment of Entrepreneurship Development in Appalachia Using Simultaneous Equations. *Journal of Developing Entrepreneurship*, 15(1), 3-18.
- Morris, M., Neumeyer, X., Kuratko, D. (2015). A Portfolio Perspective on Entrepreneurship and Economic Development. *Small Business Economics*, 45(4), 713-728.
- Morris, M., Kaplin, J. (2014). Entrepreneurial (Versus Managerial) Competencies as Drivers of Entrepreneurship Education. *Annals of Entrepreneurship Education and Pedagogy* (134-151). Cheltenham, UK: Edward Elgar.

- Morris, M., Webb, J., Fu, J. & Singhal, S. (2013). A Competency-Based Perspective on Entrepreneurship Education: Conceptual and Empirical Insights. *Journal of Small Business Management*, 51(3), 352-369.
- NFTE. (2011). Evaluation Studies Commissioned by the National Foundation for Teaching and Entrepreneurship, conducted by Brandeis University (1993-1997), the Koch Foundation (1998-1999), and the Harvard Graduate School of Education (2002-present). New York: NFTE.
- Parker, S. (2013). Do Serial Entrepreneurs Run Successively Better-Performing Businesses? *Journal of Business Venturing*, 28(5), 652-656.
- Pizarro, N. (2014). An Institutional and Pedagogical Model that Fosters Entrepreneurial Mindset Among College Students. *Journal of Entrepreneurship Education*, 17(2), 143-162.
- Pugel, D. (2016, May 23). *Rural Kentucky Population Continues Decline While Urban and Suburban Areas Grow*. Retrieved from <http://kypolicy.org/rural-kentucky-population-continues-decline-urban-suburban-areas-grow/>
- Rauch, A. & Hulsink, W. (2015). Putting Entrepreneurship Education Where the Intention to Act Lies: An Investigation into the Impact of Entrepreneurship Education on Entrepreneurial Behavior. *Academy of Management Learning & Education*, 14(2), 187-204.
- Robinson, K., Dassie, R., & Christy, R. (2004). Entrepreneurship and Small Business Development as a Rural Development Strategy. *Southern Rural Sociology*, 20(2), 1-23.
- Sanders, J. (1969). The Depressed Area and Labor Mobility. *Journal of Human Resources*, 4(4), 437-450.
- Santopietro, G. (2002). Analyzing Income Convergence at the County Level: The Case of Development in Central Appalachia. *Journal of Economic Issues*, 36(2), 893-906.
- SBA. 2014. *Office of Advocacy News Release*. SBA.gov.
- Schenkel, M., D'Souza, R. & Braun, F. (2014). Entrepreneurship Self-Efficacy, Intent and Intensity: Does Experiential Training Enhance or Inhibit Predisposition? *Journal of Developmental Entrepreneurship*, 19(1), 1-21.
- Sethu, H. (2012). Study of Entrepreneurial Tendencies in Manipal University Students Based on GETT. *Entrepreneurial Tendencies*, 1(2), 78-83.
- Stephens, H. & Partridge, M. (2011) Do Entrepreneurs Enhance Economic Growth in Lagging Regions? *Growth & Change*, 42(4), 431-465.

- Studdard, N., Dawson, M., & Jackson, N., (2013). Fostering Entrepreneurship and Building Entrepreneurial Self-Efficacy in Primary and Secondary Education. *Creative Knowledge and Society*, 3(2), 1-14.
- Tickamyer, A. & Tickamyer, C. (1988). Gender and Poverty in Central Appalachia. *Social Science Quarterly*. 69 (4), 874-891.
- Timmons, J. & Spinelli, S. (2004). *New Venture Creation: Entrepreneurship for the 21<sup>st</sup> Century* (6th ed.). New York, NY: McGraw Irwin.
- Toft-Kehler, R., Wennberg, K. & Kim, P. (2014). Practice Makes Perfect: Entrepreneurial-Experience Curves and Venture Performance. *Journal of Business Venturing*, 29(4), 453-470.
- Torrance, W., Rauch, J., Aulet, W., Blum, L., D'Ambrosio, T., De los Santos, K. (2013). Entrepreneurship Education Comes of Age on Campus: The Challenges and Rewards of Bringing Entrepreneurship to Higher Education. *Kauffman Foundation*, 1-28.
- Tortensson, D. (2013). Beyond the City: Lyndon Johnson's War on Poverty in Rural America. *Journal of Policy History*. 25 (4), 587-613.
- United States Census Bureau. (2016). Population QuickFacts. Retrieved from <http://www.census.gov/quickfacts/table/PST045215/21189,21227,21>
- Ziliak, J., (2015). Income, Program Participation, Poverty, and Financial Vulnerability: Research and Data Needs. *Journal of Economic & Social Measurement*. 40(1) 27-68.