Exploring the Impact of Education on Korean-American Entrepreneurs

Myung-Soo Lee, Alvin N. Puryear,
Edward G. Rogoff, Joseph Onochie,
George W. Haynes, and Ramona Kay Zachary

Education has been shown to have myriad effects on people, from increasing their incomes to changing their views of the world. In the area of entrepreneurship, education creates opportunities and increases the rate of entrepreneurial activity. This study explores education's effects on the immigrant entrepreneurship development processes and outcomes in the context of Korean-Americans by comparing a national sample of Korean-Americans with differing amounts of education. The sample is part of the National Minority Business Owners Surveys (NMBOS) carried out by the Lawrence N. Field Center for Entrepreneurship at Baruch College between 2003 and 2005. The authors hypothesize that high-education Korean-Americans will have larger and more successful businesses, have more varying types of businesses, and follow differing paths to business formation. In addition, the authors hypothesize that motivations, goals, and attitudes toward their businesses, families, and their lives generally will be different. Among other things, confidence and level of satisfaction with their business will be higher for the high-education group. The study finds that while the low- and high-education groups vary in their types of businesses, the paths followed into those businesses, and the size of their businesses, they are very similar as to their attitudes, motivations, and family interactions. Implications for future research are discussed.

Keywords: entrepreneurship, entrepreneurship education, Korean-American entrepreneurship, minority entrepreneurship

Most people accept—almost as an article of faith—that education has a beneficial effect on entrepreneurial behavior at all levels. In fact, research generally supports this view, but fills in few of the details. This study begins to fill in some of those details by examining education effects on one, relatively homogeneous, ethnic group. The findings of this study argue that when one controls for ethnicity—at least among Korean-Americans—the education effects are significant as to the types of businesses one can enter but small with respect to attitude and personal issues.

Most research carried out to date has focused on rates of entrepreneurship as the dependent variable and education as the independent variable. Robinson and Sexton (1994) provided a review of literature showing that higher levels of education lead to higher success rates for new ventures and positive effects on business growth rates. Light and Rosenstein (1995) studied census data to establish the relationship between education and entrepreneurship. But little is known about the precise mechanisms by which education creates these effects and there has been little work to define or examine these processes. There are many possible avenues to determine education's effects. For example, education might, much to the delight of business educators, actually make people better, more effective managers. Conversely, education may only be an intermediate variable in a system in which people with greater access to capital also receive educations and then, because of their access to capital, go on to start businesses in greater numbers than the less educated population.

Another perspective on the issues of entrepreneurship and education is revealed in Aronsson's interview with educator and entrepreneur David Birch (Aronsson 2004). Birch argues that entrepreneurship can be taught but that business schools do a poor job of teaching entrepreneurship because he believes that apprenticeships with entrepreneurs should be an integral to the process of entrepreneurship education. He also believes that the curriculum should include sales, more specific management skills, and how to create new products and services. From this perspective, one might hypothesize that education—at least formal business school education—will have little effect on entrepreneurship rates.

For immigrant entrepreneurs who came to the United States to pursue entrepreneurial ventures, the education they have received in their home countries may influence their entrepreneurial development and performance. Demonstrating the differential effect of the educational level on the different facets of entrepreneurial development and outcome will have a policy implication toward immigrant entrepreneurs in training and various support systems. This research is an attempt to begin to fill in those details by exploring the possible effects of varying levels of education among Korean-American entrepreneurs drawn from a broad-based, nationally representative telephone survey.

Previous Research on Education's Impact on Entrepreneurship

Most of the previous research exploring the impact of education on entrepreneurs has focused on earnings as a possible function of education level. Numerous studies have shown that the education of the self-employed exceeds those of wage and salary workers. Most studies use self-employment as interchangeable with business ownership and entrepreneurship (Boyd 1990; Bearse 1984; Borjas 1985). However, depending on the mode of action that supposes education has on entrepreneurship, it is possible to see both positive and negative impactions of education on levels of entrepreneurship within various populations. In fact, the literature offers two alternative theories of education's impact on entrepreneurship development.

The theory of liquidity constraint posits that individuals with a lower stock of human capital, including education, are less able to make the move to entrepreneurship. Proponents of this approach include Evans and Jovanovic (1989) and Brush (1992). Others who have found evidence of this effect include Light and Rosenstein (1995) and Evans and Leighton (1987). Bates (1990) studied the impact that increased levels of education had on business performance and concluded that increased education correlates positively with increased business survival rates. It is certainly possible to posit that with Korean-Americans, the group studied in this article, that those with less education might be restricted through various mechanisms such as poor English language skills, weak understanding of the business system, or a lack of confidence to become entrepreneurs.

An alternative approach is the theory of the disadvantaged worker, which holds that individuals who face discrimination or who, due to economic conditions, have limited employment opportunities, turn to entrepreneurship. A logical extension of this theory is that increased education will offer these groups alternatives outside of entrepreneurship. Light and Rosenstein (1995), Min (1984), and Evans and Leighton (1987) also provide evidence of this relationship. It is also possible to see how this effect could be manifested with Korean-Americans who might have limited opportunities for traditional employment for reasons such as discrimination or weak economic conditions.

Of course, the theory of the disadvantaged worker and the theory of liquidity constraint are not mutually exclusive. For different individuals and groups at varying times, either one or both may apply. It is clear from the research to date, however, that increased education correlates with increased levels of business ownership and entrepreneurship.

Light and Rosenstein (1995) estimate that for each additional year of education the likelihood of entering self-employment increases by 0.7 percent. Robinson and Sexton (1994) estimate this relationship at 0.8 percent and increase in earnings for each year of education at $1,208. In a study of African-Americans, Boyd (1990) concluded that the discrepancy between African-American and white levels of entrepreneurship could be explained by differences in training, education, and experience. Cooper and Dunkelberg (1987) found higher levels of education among entrepreneurs than among the general population. Cooper and Cascon (1992) reviewed the results of 17 studies of the performance of entrepreneurs and concluded that, overall, the results show that there is a positive impact of education on performance. Robinson and Sexton (1994) conclude that "the net result is that although education is important for wage and salaried workers, it is even more important for entrepreneurs" (p.152).

Some research findings from the education literature give us useful insights into how education affects various aspects of family business and entrepreneurship. Research in education has focused on three basic elements of change that occur to students/individuals as they progress through the education process: (1) through knowledge change, (2) through attitude change, and (3) through self-confidence change. Lee and Rogoff (1997) posited that the effects of education on entrepreneurship outcomes are mediated through two distinct paths: 1) Knowledge Impact Path (KIP) and 2) Attitude Change Path (ACP), which includes changes in the entrepreneur's self-concept. Certainly it is possible to see how Korean-Americans, like any group, could receive education effects along either path.The Lee and Rogoff study found that high-education entrepreneurs did have higher knowledge as measured on a fact-based objective scale, but goals, objectives, and self-concept were not different based on education level of the entrepreneur.

Pascarella and Terenzini (1991) sum up 50 years of research by concluding that college improves competencies in verbal skills by 21 percentile points, quantitative skills by 9.5 percentile points, and specific subject matter knowledge by 30.8 percentile points. There has not been research to determine specifically which types of education are most beneficial to entrepreneurs.

Numerous studies, including Clark et al. (1972), Astin (1977), and Chickering, McDowell, and Compagna (1969), found strong declines in the importance students placed on money and other extrinsic rewards as they progressed through college. Some later studies by Anderson (1985) and McLaughlin and Smart (1987) contradict those findings. None of these studies specifically examined immigrant groups such as the group under study here. Nonetheless, there is strong evidence that attitudes, values, and goals change with education (Pascarella and Terenzini 1991). It is therefore reasonable to expect that education levels would influence attitudes relative to entrepreneurship, which ulti-

mately leads to a higher level of entrepreneurial success.

It is widely believed that education enhances one's confidence and sense of self. It is also believed that these are characteristics that should enhance entrepreneurial success. However, the research related to both these propositions has been less definitive than the conventional wisdom. Pascarella and Terenzini (1991) summarize the literature as failing to establish a clear link between education and self-concept, but also point out the numerous methodological problems that interfere with research on this subject. Jennings (1994) reviewed the literature in the area of psychological traits of entrepreneurs and concludes that no clear relationship between traits and entrepreneurs has yet been established. Jennings comes to a similar conclusion to that of Pascarella and Terenzini regarding the numerous methodological barriers that exist in this realm.

The research to date pertaining to increased education and entrepreneurs can be summed up in three conclusions:

1. Increased education correlates positively with increased likelihood of entering business ownership or entrepreneurship.
2. Increased education correlates positively with increased earnings.
3. Increased education correlates positively with an increased longevity of the individual's business venture.

These three overarching conclusions of past research form the basis of the hypotheses discussed below.

Hypotheses

To establish education effects on immigrant entrepreneurship development process and outcomes, a number of hypotheses are generated and put forth.

Hypothesis 1

There are several reasons to presuppose that Korean-Americans with more education will have larger and longer-lasting businesses. First, higher-education Koreans who emigrated to the United States were probably wealthier at the time of their emigration, giving them financial resources to start and support business growth. Second, higher-education Korean-American entrepreneurs may be able to benefit from being part of a better-educated and wealthier personal and family network from which to draw personal and financial resources. Third, education may have prepared them to manage the process of business growth in their ventures better than their lower-education counterparts. Thus the following hypothesis is put forth:

H1: Korean-American entrepreneurs with higher education will have businesses with larger scope of business operation as measured by years in business and number of employees.

Hypothesis 2

It is well known in the immigrant entrepreneurship literature that many immigrants who have worked as professionals in their home countries cannot continue their professional jobs due to licensing requirements and language barriers. Given the multiple barriers, though, it is expected that the more educated group of immigrants would have higher probability to continue the same or related professional jobs and build ventures around those professions compared to lower education groups. This leads to the following hypothesis:

H2: The types of businesses will vary based on education with higher-education entrepreneurs having greater numbers of professional services firms.

Hypothesis 3

In relation to paths to entrepreneurship development, it is also expected that high-education group of immigrants followed a much broader path in creating, owning and managing their businesses compared to the lower education group. This prediction can be justified several ways. First, many higher-education entrepreneurs have likely arrived in the United States with more money than their lower-education counterparts, which gives them more options. Second, the education literature in general establishes that education exposes students to alternative paths they can follow. Third, education is a qualification and element of credibility that supports entrepreneurial ventures. For these reasons, Hypothesis 3 will be tested.

H3: Entrepreneurs with greater education will have more varied paths to business initiation than entrepreneurs with lower amounts of education.

Hypothesis 4

In the education literature many studies have explained the impact of education on the entrepreneurial outcomes by introducing different mediating variables such as knowledge change and attitude change. In explaining the education effect on immigrant entrepreneurship, it is expected to see the similar mediating roles of various knowledge and attitudinal variables thus creating varying motivations and goals based upon level of education. This leads to the following hypothesis:

H4: Motivations and goals for becoming an entrepreneur will vary with education level.

Hypothesis 5

If education successfully transmits knowledge to students, then people who have received more education will have greater knowledge than the lower-education counterparts.

This, in turn, should create greater confidence on the part of the higher-education group as stated in the Hypothesis 5.

H5: Confidence in their knowledge of business will be greater for business owners with higher education.

Hypothesis 6

A hypothesis arises from the previous hypothesis that the higher-educated cohort will have larger, more successful businesses than the lower-educated cohort. If that is so, then the entrepreneur's themselves should see and appreciate this success in their own ventures.

H6: The more highly educated business owners will rate their businesses as being more successful than the lower education group.

Hypothesis 7

Often it is believed that better educated people tend to sort out life priorities better when they have to manage their conflicting situations and that they tend to better attribute their success and failure to appropriate causes. If this is so, then Hypothesis 7 should be affirmed.

H7: Priority given to business relative to nonbusiness aspects of their lives will vary with education.

Hypothesis 8

From the perspective of immigrant entrepreneurship development, it is plausible to think that higher-education groups would have developed broader perspectives on the possible ventures they can get into as immigrants. For example, given that immigrants tend to rely heavily on the business networks based on schools they attended in their home countries, higher-education groups can take advantage of the education-based social networks. This leads to the following hypothesis:

H8: Overall satisfaction with business and with family will be greater for business owners with more education.

Methodology

The sample in this study is part of the National Minority Business Owners Surveys (NMBOS) carried out by the Field Center for Entrepreneurship at Baruch College between 2003 and 2005. In 2005 using nationwide samples, telephone interviews were completed with 200 Korean-Americans who are owner-managers of businesses. To qualify for the survey, an owner-manager had to have been in business for at least one year, worked at least 320 hours per year in the business, involved in the day-to-day management of the business, and resided with another family member.

The survey instrument was based on the protocols that were developed by a 17-college and university research consortium, the Business Research Group: NE-167 Cooperative Regional Research Committee (Winter et al. 1998). Since telephone interviews with the Korean-American entrepreneurs were conducted either in English or Korean at the request of the respondent, the survey instrument had to be translated into Korean.

A total of 7,522 Korean-American residential telephone numbers and 18,742 Korean-American business telephone numbers were called to complete 200 interviews.

Sample Characteristics

Table 1 presents the sample characteristics for the Korean-American business owners who comprise the sample, splitting the sample into a low-education group that has gone as far as high school education and one year in college and a high-education group that has at least two years in college or more. Though the division of low- and high-education groups is somewhat arbitrary, it will serve our purpose of comparing two groups given the fact that Korean-American business owners showed a highly skewed distribution of education level. Bifurcating the sample in this way also, in effect, corresponds to making the high-education group the equivalent of an associates degree or higher and the lower-education group as having received approximately high-school level education and some exposure to college or less. For the low-education group, the mean years of school is slightly below 12 and for the high-education group, the mean is 16.1 or slightly above college level.

As Table 1 shows, there are few demographic differences between the low-education group and the high-education group. The low-education group has a mean age of 53 years while the high-education has a mean age of 49 years. Although this is significant at the 5 percent level, the difference is small. Household size, marital status, size of the community in which they reside, years in business, and percentage of businesses that are home-based all show no differences between the groups. The high-education group does report speaking English as the primary language at home more than the low-education group, by a margin of 17.1 percent to 12.3 percent, but this difference is not statistically significant. Notably, the high-education group reports that the total number of workers employed in its business is 5.0 compared to 2.5 for the low-education group.

Table 2 presents data on immigration of the Korean-American business owners. Overwhelming both the high-education group and the low-education group are first generation Americans. The low-education group is 96.9 percent first generation and the high-education group is 93.9 percent first generation, reflecting the main immigration pattern to

Table 1. Sample Characteristics

	Education Levels	
	Low<=13	High>13
N	64	130
Demographics		
Age	53.0*	49.1*
Age when first started working in this business	41.8	39.8
Years in the United States	20.8	20.7
2004 mean household total income	$104,701 ($127,034)	$118,375 ($202,130)
Mean highest education level achieved	11.8*	16.1*
Percent married	90.6%	83.1%
Number of people living in household (including owner)	3.4	3.2
Population size of respondent's community		
50,000 or more	57.9%	59.7%
10,000 to 49,999	24.6%	19.3%
2,500 up to 9,999	10.5%	15.1%
2,499 or below	7.0%	5.9%
Health rating (1=Excellent, 4=poor)	2.0	2.0
Percent of sample for whom English is primary language at home	12.3%	17.1%
Religion		
Percent Catholic	23.2%	20.9%
Percent Protestant	57.1%	60.0%
Percent Other	5.4%	13.0%
Percent No Religion	14.3%	6.1%
Business Information		
Years in business	11.1	9.3
Total employees other than owner who work in the business	2.5*	5.0*
Number of total employees who are relatives	0.6	0.7
Percent of home-based businesses	6.3	10.0
Legal Form		
Sole proprietorship	65.6%	60.8%
Partnership	3.13%	3.1%
C corporation	21.9%	23.9%
S corporation	6.3%	10.0%
Other	3.1%	2.3%
Median gross business income in 2004	$85,000	$110,000
Mean gross business income in 2004	$200,105	$370,307
Sample standard deviation	$291,120	$1,048,797

*Statistically significant at 95% C.I

Table 2. Generation of the Owner of the Business

	Education Levels	
	Low<=13	High>13
N	64	130
Responses	*Percent Distribution*	
First-generation (founding generation) owner	96.88%	93.85%
Second generation	3.13%	5.38%
Third generation	0.00%	0.00%
Fourth generation or higher	0.00%	0.77%
Column percent total	100.00%	100.00%
Chi-square value	1.0058*	
p-value	0.6048	
Fisher's exact test: p-value	0.8126	

Note: Values in table for percent distribution are in percentages rounded off to the nearest hundredth.

*Warning: 50% of the cells for the Korean-American Sample have expected counts less than 5. Chi-square may not be a valid test. Therefore, use the p-value from the Fisher's exact test as the probability that the samples for lower and higher education levels within each ethnic group are the same.

the United States from Korea that took place between 1970 and 1995.

Table 3 presents the industry classifications for the businesses represented by each group and, although the overall distribution differences are not statistically significant, 50.00 percent of the low-education group's businesses are personal services compared to 31.54 percent of the high-education group. This, along with the high-education group having approximately 7 percent more of its businesses being retail trade in nature, likely explains the differences in employment size. It is also noteworthy, as well as predictable, that professional businesses are concentrated in the high-education group, with 10.00 percent of their businesses being professional while none of the low-education group reported owning such businesses.

Table 4 presents data on the path that the survey respondents followed to starting their businesses. Likely reflecting the larger number of professional service businesses in the high-education group, the high-education group reports starting their own businesses 44.62 percent of the time compared to 37.50 percent of the time for the low-education group. The low-education group obtained ownership more often after working in their current business as an employee or by purchasing the business from a nonfamily member.

Table 3. Industry Classification		
	Education Levels	
	Low<=13	High>13
N	64	130
Retail farm	1.56%	1.54%
Production farm	1.56%	0.77%
Other agriculture, forestry, and fisheries	3.13%	1.54%
Construction	1.56%	3.08%
Manufacturing	0.00%	3.13%
Transportation, communications	0.00%	0.00%
Wholesale trade	3.13%	5.38%
Retail trade	31.25%	38.46%
Finance, insurance, and real estate	0.00%	0.77%
Business and repair services	4.69%	0.77%
Personal services	50.00%	31.54%
Entertainment and recreational services	3.13%	3.08%
Professional and related services	0.00%	10.00%
Mining	0.00%	0.00%
Column percent total	100.00%	100.00%
Chi-square value*	18.1970*	
p-value	0.0771	
Fisher's exact test: p-value	0.0250	

Note: Values in table for percent distribution are in percentages rounded off to the nearest hundredth.
*Warning: 75% of the cells for the Korean-American Sample have expected counts less than 5. Chi-square may not be a valid test. Therefore, use the p-value from the Fisher's exact test as the probability that the samples for lower and higher education levels within each ethnic group are the same.

Combined, these two paths accounted for 57.81 percent of the low-education group's path to business ownership, compared to 49.23 percent for the high-education group.

Hypotheses Testing

Business Outcomes

It was hypothesized that Korean-American entrepreneurs with higher education will have businesses with larger scope of business operation as measured by years in business and number of employees (H1).

Table 4. Path to Starting a Business		
	Education Levels	
	Low<=13	High>13
N	64	130
	Percent Distribution	
Start the business	37.50%	44.62%
Inherit the business from family member	1.56%	2.31%
Work in the business as employee	6.25%	3.85%
Purchase the business from family member	1.56%	1.54%
Purchase the business from non-family member	51.56%	45.38%
Some other way	1.56%	2.31%
	100.00%	100.00%
Chi-square value	1.6242*	
p-value	0.8983	
Fisher's exact test: p-value	0.9044	

Note: Values in table for percent distribution are in percentages rounded off to the nearest hundredth.
*Warning: 58% of the cells have expected counts less than 5. Chi-square may not be a valid test. Therefore, use the p-value from the Fisher's exact test as the probability that the samples for lower and higher within each ethnic group are the same.

As Table 1 shows, number of years in business is 11.1 for the low-education group and 9.3 for the high-education group. This difference is not statistically significant. Since the age of the samples is slightly younger for the high-education group at 49.1 compared to 53.0 for the low-education group and the high-education group spent an average of more than four years in education than the low-education group, it is possible that the difference in years in business is simply a reflection of fewer years of opportunity that the high-education may have had.

In answering the question "How many total employees other than the owner work in the business," the high-education business owners reported a mean of 5.0, compared to a mean of 2.5 for the low-education business owners. Because many of the businesses in the samples are family businesses and family members working in businesses is common among many ethnic groups, the study asked how many of the business' workers are, in fact, family members. Interestingly, there is little difference on this measure. The low-education group has a mean number of family members working in their businesses of 0.6 and the high-education group has a

mean of 0.7, pointing out that the difference in employees is not caused by varying degrees of family involvement. This difference in employees is statistically significant and points toward the likelihood that, although the business income differences are not shown to be statistically significant as pointed out above, they perhaps are truly different.

In sum, these data do not prove that high-education Korean-American business owners have more successful businesses, but the data do suggest this because the number of employees is significantly larger and the income data from a reduced sample along with the number of employees suggests it. Further, the high-income group has accomplished this with approximately two years fewer of business longevity.

Hypothesis 2 predicted that the types of businesses will vary based on education with higher-education entrepreneurs having greater numbers of professional services firms.

Table 3 shows the types of industries represented by the businesses in the sample for both the high and low-education groups. Not surprisingly, given the concentration of Korean-Americans in urban centers, there is minimal agricultural business in either group. The high-education group has 3.1 percent in manufacturing, while the low-education group has none. Given the technical nature and higher capital investment required for manufacturing, this is understandable. Greater differences are seen in the higher preponderance of retail trade among the high-education business owners by a rate of approximately 38 percent to 31 percent over the low-education group. Under the rubric of business and repair services, the low-education group has a rate of 4.69 percent while the high-education group has only 0.77 percent. Personal services, another category that has low barriers to entry as it pertains to education, also has seen a greater preponderance of low-education business owners at 50.0 percent compared to 31.5 percent among the high-education group.

Personal service businesses, a category that includes hair and nail salons, represents half of the low-education group but less than a third of the high-education group. Conversely, a category with high barriers to entry as far as education is concerned is professional services and while 10.0 percent of the high-education group had businesses in this sector, none of the low-education group did.

Applying a chi-square test to this table confirms statistical significance at the 10 percent level. Therefore, based on this data, Hypothesis 2 is confirmed that there are significant differences between the high-education Korean-American business owners and their low-education counterparts as far as business industry type.

Paths to Entrepreneurship

Hypothesis 3 posited that entrepreneurs with greater education will have more varied paths to business initiation than entrepreneurs with lower amounts of education.

Table 4 shows that 44.62 percent of the high-education group started their businesses while 37.50 percent of the low-education group did. As discussed in the literature review, education opens up a wider world to students. Therefore, in the context of entrepreneurship, one might expect that high-education aspiring entrepreneurs would follow more diverse and challenging paths to business ownership. Since starting a business may be more likely to involve developing a concept, writing a plan, and raising capital it is likely that people with higher levels of education can complete this process more adeptly than people in lower-education groups.

There is little difference between the groups in the incidence of inheriting or purchasing their business from a family member. The low-education group is more likely, by a margin of 51.56 percent to 45.38 percent, to have purchased their business from a nonfamily member. This finding may reflect the reality that with fewer tools available to initiate a new venture, the low-education group is more likely to purchase already existing businesses.

Overall, however, with a chi-square value of 1.62, the table fails to find statistically significant differences between the two groups relative to the paths they followed to business ownership.

Attitudes and Motivations

Hypothesis 4 put out for empirical testing that motivations and goals for becoming an entrepreneur will vary with education level.

Table 5 shows the answers on a five-point Likert scale to eight questions about the important of various personal motivations and goals related to their entrepreneurial activities. Hypothesis 4 is based on the theory that education generally introduces students to a broader world along with diverse goals for one's life and career. More specifically, business education may teach students about the various possible goals for entrepreneurial activities.

The data in Table 5 reveal only one question for which there is a statistically significant difference in the mean responses between the low and high-education groups. When asked about the importance of "gaining maximum control over my life," the low-education had a mean answer of 3.46 and the high-education group had a mean score of 3.29, which is not statistically significant. When asked about the importance of "earning lots of money," the low education group had a mean score of 2.95 and the high-education group had a mean score of 3.02, again not significant.

When asked how important "the ability to live where and how they liked" was in their choice of career, the low-education group had a mean response of 3.46 and the high-education group had a mean response of 3.29 which are not signif-

Table 5. Motivations and Goals Related to Starting a Business

	Education Levels			
	Low<=13 (n=64)	High>13 (n=130)	t-value	p
Question Businesses often help people reach their personal goals. Please think of what motivates you to have your own business: (On a scale of 1 to 5, where 1 is the least important and 5 is the most important)				
Gaining maximum control over my life	3.49	3.30	0.91	0.36
Earning lots of money	2.95	3.02	-0.35	0.72
Living how/where I like	3.46	3.29	0.74	0.46
Building financial security for my family	4.30	3.92	2.24	0.027
Utilizing my skills and ability	3.78	3.72	0.31	0.75
Contributing to our society	2.64	2.76	-0.56	0.58
Satisfaction of creating or building a business	3.50	3.41	0.46	0.64
Serving the Korean community in which I live	2.13	2.20	-0.33	0.74

icantly different. The importance of "building financial security for my family" showed the greatest difference between the two groups with the low-education group have a mean response of 4.30 and the high-education group having a mean response of 3.92, a statistically significant difference. "Utilizing my skills and ability" was answered almost identically by the two groups, with the low-education group having a mean score of 3.78 and the high-education group having a mean score of 3.72. "Contributing to our society" was rated 2.64 by the low-education group and 2.76 by the high-education group, not a statistically significant difference.

When asked about the importance of having the "satisfaction of creating or building a business" as a motivation, the low-education group had a mean response of 3.50 and the high-education group had a mean response of 3.41. Finally, when asked the importance of "serving Korean community in which I live" as a motivation for starting a business or goal for the business, the answers were again almost identical for the two groups. The low-education group had a mean response of 2.13 and the high-education group had a mean response of 2.20, not statistically significant.

Table 6. Self-Confidence levels in Terms of Subjective Knowledge and Expectation of Success

	Education Levels			
Questions	Low<=13 (n=64)	High>13 (n=130)	t-value	p
How do you rate yourself on the following scale in terms of your business knowledge in general? (On a scale of 1 to 5, where 1 is not at all knowledgeable and 5 is extremely knowledgeable)	4.31	4.11	1.27	0.21
From your point of view, how successful has your business been to date? (On a scale of 1 to 5, where 1 is very unsuccessful and 5 is very successful)	3.31	3.56	-1.65	0.10

In sum, relative to the motivations and goals of their entrepreneurial activities, Hypothesis 4 is rejected with only one of the eight measures showing a significant difference between the two groups.

As an additional dimension of testing the effect of education on the attitudinal outcomes, it was hypothesized that confidence in their knowledge of business will be greater for business owners with high education (H5).

Table 6 shows the low-education group had a mean response of 4.31 and the high-education group had a mean response of 4.11 which is not a statistically significant difference. One might expect that education would impart a greater confidence to members of the high-education group. However, when asked to rate themselves on a five-point Likert scales for their business knowledge, little difference is found between the two groups. Thus, this hypothesis is rejected.

As Hypothesis 6, it was predicted that the more highly educated business owners will rate their businesses as more successful than the lower education group. When asked to rate their business success, one might expect that more high educated individuals perceive themselves and their business-

Table 7. Priority Given to Conducting Business Relative to Nonbusiness Aspects of Life

	Education Levels			
Questions	Low<=13 (n=64)	High>13 (n=130)	t-value	p
We would like to know how you would describe yourself as a businessperson. (On a scale from 1 to 5, where 1 means that for you the business is a way of life, and 5 means that for you the business is only a way to earn income.)	2.78	2.75	0.15	0.88
We would like to know how you would describe yourself as a businessperson. (On a scale from 1 to 5, where 1 means that business needs come first and 5 means that family needs come first.)	4.238	4.032	1.15	0.253

es as better than average in part because as the data above shows they have larger businesses than the low-education group. As Table 6 shows, while the direction of the difference supports this, the difference of the means of 3.31 for the low-education group and 3.56 for the high education group is significant only at the 10 percent level and therefore is rejected.

Family/Business Interaction

To investigate the effect of education level on the family-business interaction, it was hypothesized that priority given to business relative to non-business aspects of their lives will not vary with education.

Table 7 presents data that answer the question of whether education alters a business owner's focus toward or away from family. To test this, respondents were asked to describe themselves on a five-point scale as businesspeople with 1 meaning that they see "business as a way of life" and 5 meaning that business is "only a way to earn income." As Table 7 shows, there is little difference in the answers to these questions. The low-income group had a mean of 2.78 while the high-income group had a mean of 2.75.

Both groups were similarly asked to rate themselves on a five-point scale as a business person with 1 meaning that "business needs come first" and 5 meaning that "family needs come first." Again, there is no statistically significant difference between the two groups. The low-income group had a mean score of 4.24 and the high-education group had mean score of 4.03.

Table 8. Priority Given to Conducting Business Relative to Nonbusiness Aspects of Life—Long-Range Goals

Question	*Education Levels*	
Which of the following is the most important long-range goal for your family?	Low<=13	High>13
N	(n=60)	(n=126)
Good family relationships	37.50%	32.56%
Balance between work and family	10.94%	18.60%
Adequate family income	3.13%	6.98%
Secure future for younger family members	23.44%	14.73%
Secure retirement resources	23.44%	24.81%
Other	1.56%	2.33%
Column percent total	100.00%	100.00%
Chi-square value	4.979*	
p-value	0.418	
Fisher's exact test: p-value	0.439	

Note: Values in table for percent distribution are in percentages rounded off to the nearest hundredth.

*Warning: 25% of the cells have expected counts less than 5. Chi-square may not be a valid test. Therefore, use the p-value from the Fisher's exact test as the probability that the samples for lower and higher within each ethnic group are the same.

Table 8 presents an overview of the respondents' view about the long-range family goals that may reflect the role that business plays in their lives. The respondents were asked to rank five long-range family goals: having good family relationships, a balance between work and family, adequate family income, a secure future for younger family members, and having secure retirement resources. Although on a chi-square measure the groups are not statistically different in their responses, the low-education group did rank "good family relationships" and a "secure future for younger family members" somewhat higher than the high-education group. The high-education group, on the other hand, rated "balance between work and family" first 18.60 percent of the time compared to 10.94 percent for the low-education group.

Table 9. Business and Family Conflicts

	Education Levels			
Question	Low<=13 (n=64)	High>13 (n=130)	t-value	p
How often do you think that business goals and family goals are in conflict? (On a scale of 1 to 5, where 1 = Never and 5 = very often)	2.48	2.79	-1.52	0.131

While this data is suggestive of the possibility that high-education business owners may see the issues of work/family balance more clearly, before this conclusion can be reached, further research is needed.

Table 9 presents data related to the previous issues of work/family balance and the amount of conflict that business owners might see between business and family goals. The respondents were asked, "How often do you think that business goals and family goals are in conflict?" On a scale of 1 to 5, where 1 is "never" and 5 is "very often," the study finds no statistically significant difference between the low and high-education groups. The mean response for the low-education group is 2.48 and for 2.79 for the high-education group.

While there is some evidence of differences with regard to attitudes toward work/family issues, the overall picture and lack of statistical significance must lead to the confirmation of Hypothesis 7 that education makes difference in the relative priorities of business and family to Korean-American business owners.

As Hypothesis 8, it was predicted that overall satisfaction with business and with family will be greater for business owners with more education.

Table 10 summarizes the data that address the questions of whether education leads to greater income, career options, and gives people more tools with which to cope with business and family issues, then one should expect to see that business owners with greater education have greater amounts of satisfaction with their businesses and their families. To examine this, the survey posed 10 questions about overall satisfaction with family life, business, and life generally that are presented in Table 10.

On a five-point scale with 1 being very dissatisfied and 5 being very satisfied, the survey asked "How satisfied are you with the overall quality of your life?" The low-education group had a mean response of 3.58 and the high-education group 3.72. When asked, "How satisfied are you with your role in the family business?" the low-education group had a mean response of 3.97 and the high-education group had a mean response of 3.91. When asked "How satisfied are you with your marriage?" the low-education group had a mean response of 3.75 and the high-education group had a mean response of 3.95. When asked, "All in all, how satisfied are you with your family life?" the low-education group had a mean response of 3.84 and the high-education group had a mean response of 4.07. None of these differences are statistically significant.

Table 10. Overall Satisfaction with Business and Family

	Education Levels			
Questions	Low<=13 (n=64)	High>13 (n=130)	t-value	p
For the following questions: 1=Very dissatisfied 5=Very satisfied				
How satisfied are you with the overall quality of your life?	3.58	3.72	-0.93	0.35
How satisfied are you with your role in the family business?	3.97	3.91	0.34	0.74
How satisfied are you with your marriage?	3.75	3.95	-1.06	0.29
All in all, how satisfied are you with your family life?	3.84	4.07	-1.46	0.15
For the following questions 1=Strongly disagree 5=Strongly agree				
In most ways my life is close to ideal.	3.13	3.07	0.29	0.78
So far I have gotten the important things I want in life	3.41	3.45	-0.21	0.83
If I could live my life over, I would change almost nothing	2.66	2.93	-1.29	0.20
Generally speaking, I am very satisfied with the business.	3.41	3.49	-0.42	0.67
I am generally satisfied with the kind of work I do in this business	3.55	3.68	-0.68	0.50
I frequently think of quitting this business.	2.75	2.77	-0.08	0.93

On a five-point scale with 1 being strongly disagree and 5 being strong agree, the survey gave respondents a series of

statements. When asked to agree or disagree with the statement "In most ways my life is close to ideal" the low-education gave a mean rating of 3.13 while the high-education group gave the mean rating of 3.07. In reaction to "So far I have gotten the important things I want in life," the low-education group had a mean response of 3.41 and the high-education group 3.45. In response to the statement, "If I could change my life over, I would change almost nothing," the low-education group had a mean response of 2.66 and the high-education group had a mean response of 2.93.

When given the statement, "Generally speaking, I am very satisfied with my business," the low-education gave an overall indication of agreement with a mean response of 3.41 and the high education did the same with a mean response of 3.49. In response to the statement, "I am generally satisfied with the kind of work I do in this business, "the low-education had a mean response of 3.55 and the high-education group had a mean response of 3.68. Finally, when asked if they agreed or disagreed with the statement, "I frequently think of quitting this business," both groups disagreed with the low-education group having a mean response of 2.75 and the high-education group having a mean response of 2.77.

Overall, none of the questions that looked at the overall levels of satisfaction with life, family, and business showed any statistically significant differences between the low and high-education groups. In fact, the degree of similarity of the answers from both groups leads to clear rejection of Hypothesis 8.

Implication and Conclusions

Overall, this study finds the high-education Korean-American business owners have larger businesses that were built more quickly than the low-education group and that more of those businesses are professional-type businesses. The high-education group is also more likely to have been the founder of the business as opposed to taking over an existing business. This study finds that as to motivations and attitudes on a broad array of issues, there is little difference between the samples. The Korean-American entrepreneurs studied here have similar business and personal goals and share the same attitudes about their business knowledge and their own business success. On issues related to their families, including work/family balance, family goals, and overall satisfaction with their family the groups are nearly identical.

These finding argue that when one controls for ethnicity—at least among Korean-Americans—that education effects are significant as to the types of businesses one can enter but small with respect to attitude and personal issues. This lack of differences on the measures of attitude, family, and personal issues is perhaps reflective of the homogeneity of the sample culturally and a uniformity of values and background that they exhibit as members of one ethnic group. It would be interesting for future research to explore if there is a different pattern of education effects on entrepreneurs from broader and more diverse populations and among different ethnic groups who may have had a wider array of education experiences.

This study explored the education effects on various dimensions of immigrant entrepreneurship development and outcomes. But, many research questions related to the education effects remain unanswered. One interesting question is whether the similarity between low and high education groups is unique to the Korean American sample or can be generalized to other ethnic samples. It remains for future research to examine these similar questions with different ethnic groups. Another research question is related to the timing and place of receiving formal education. Conceptually, there are two different types of education rendered to those immigrants: (1) the formal education they received in their home countries; and (2) additional education they got in the United States as a host country. It will be interesting to see the differential effects of those two types of education on the vagaries of entrepreneurship development process and outcome variables.

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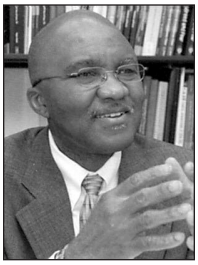
About the Authors

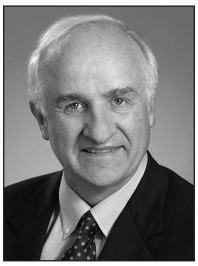
Myung-Soo Lee (Myung-soo.lee@baruch.cuny.edu) is Associate Dean for Academic Affairs and Professor of Marketing and International Business, Zicklin School of Business at Baruch College, City University of New York (CUNY). His present research interests deal with consumer information search and choice, family business and entrepreneurship issues, and interaction between entrepreneurship and marketing.

Alvin N. Puryear (anpuryear@aol.com) is a management consultant and serves on the Boards of Directors of the Bank of Tokyo-Mitsubishi UFJ Trust Company, American Capital Ltd, CIBT Travel Solutions, and American Capital Agency Corporation. Until September 2007, Dr. Puryear was the Lawrence N. Field Professor of Entrepreneurship and a professor of management at Baruch College of the CUNY. He taught and conducted research in the areas of business policy, human resource management, and entrepreneurial strategy. Dr. Puryear received a B.A. from Yale University and MBA and Ph.D. degrees from Columbia University.

Edward G. Rogoff (Edward.rogoff@baruch.cuny.edu) is a professor and chair of the Department of Management at Baruch College, CUNY. He was a previous academic director of the Lawrence N. Field Center for Entrepreneurship at Baruch College and has written extensively on entrepreneurship issues including minority entrepreneurship, later-life entrepreneurship, and entrepreneurship education.



Joseph Onochie (Joseph.onochie@baruch.cuny.edu) is an associate professor of finance at the Zicklin School of Business, Baruch College, CUNY, and academic director of the Executive MBA program. He has served as a consultant and advisor to financial services firms and holds numerous advanced degrees including a Ph.D. in financial economics.



George W. Haynes (Haynes@montana.edu) is a professor and extension specialist in the Department of Agricultural Economics and Economics at Montana State University. He has made substantial contributions to the family business finance, employee wellness, and health costs literature since earning his Ph.D. at Cornell University's Department of Consumer Economics and Housing in 1993.

Ramona Kay Zachary (Ramona.Zachary@baruch.cuny.edu) is Peter S. Jonas Distinguished Professor of Entrepreneurship, Department of Management, Zicklin School of Business, Baruch College. She teaches and conducts research about family businesses and the owning family's internal social and economic dynamics, family business viability over time, minority businesses, and gender issues within family firms.