The entrepreneurial aptitude of prison inmates and the potential benefit of self-employment training programs

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THE ENTREPRENEURIAL APTITUDE OF PRISON INMATES AND THE POTENTIAL BENEFIT OF SELF-EMPLOYMENT TRAINING PROGRAMS

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ABSTRACT

Using newly collected data, and building upon previous research, this study compared a sample of prison inmates with various other entrepreneurial and non-entrepreneurial groups with regard to entrepreneurial aptitude, as measured by the Miner MSCS-T test. Results show inmates scoring higher than "normative" entrepreneurs, "slow-growth" entrepreneurs and "manager-scientists," but lower than "high-growth" entrepreneurs. Also, inmates score the same regardless of type of crime, first-time versus repeat conviction, or enrollment or not in small business/self-employment training programs. The implications of these findings, including the potential benefits of post-prison self-employment and of training programs for inmates, are discussed.

INTRODUCTION

A major focus of attention and policy in this country today is the very large prison inmate population, and the substantial level of recidivism which works to maintain this population. Growing at a 7% annual rate since 1990 (in comparison with a total population annual growth rate of 0.91%), the total American prison population reached two million in 2000, with a new jail or prison being built somewhere in the United States on the average of once a week. (www.cia.gov.; www.cjcj.org.). (Minority inmates constitute 62% of the state and federal prison population, yet only 22% of the total American population (www.geocities.com.).) Recidivism, the cycle in which ex-convicts return to crime and subsequent prison sentences, further exacerbates the problem. Researchers have found that 70% of young convicts return to prison within six years (Seligman, 1989), parole violations are up 39% since 1990 (Willing, 1999), and the rate of ex-convicts returning to crime may be even higher, since such studies only measure actual convictions rather than crimes committed (Grossman, 1985).

Within a business research context, it is particularly interesting to note the relationship between post-prison employment and the rate of recidivism. Unemployed ex-convicts are three to
five times more likely to commit another crime than are those who are employed (Jackson, 1990). Yet it is especially difficult for ex-convicts to obtain employment, as their criminal records are viewed upon negatively by most hiring employers. For those ex-convicts who are minorities, the opportunities for employment are even lower.

It follows that social policy programs which would reduce the levels of unemployment among ex-convicts, and thus reduce recidivism, would be of benefit to society at large, since recidivism imposes major costs to society both objectively (the financial costs of both the crimes and the resulting incarcerations) and subjectively (higher crime rates impose quality-of-life tolls upon society). And because the objective of increasing ex-convicts' employment by others faces such high hurdles, the alternative of fostering self-employment for ex-convicts is an important consideration and the basis for this article.

More specifically, this article considers the possibility that some prison inmates may have high levels of entrepreneurial aptitude or propensity, and thus may be able to avoid recidivism via success in self-employment endeavors rather than through employment by others after leaving prison. Furthermore, if such entrepreneurial aptitude exists, then self-employment training programs for selected inmates soon to leave prison (or for recently released inmates) would constitute sound social policy and be of benefit to society. Prior studies have shown such programs to be effective in facilitating the reemployment of the unemployed (primarily laid-off workers) (Benus, 1994). Such programs generally involve training in basic small business skills, both for start-up and ongoing operations.

In recent years, representatives from the U.S. Small Business Administration, from many colleges and universities, and from other agencies and organizations have been invited into jails and prisons to talk about small business and self-employment or to offer business courses for college credit. Very often, these representatives come away highly impressed with the level of understanding that inmates have regarding the nuances of running one's own business, including such critical factors as having sufficient start-up capital, developing a business plan, and the importance of cash flow in addition to profitability (Sonfield, 1992).

Thus, subjective/anecdotal analysis seems to indicate that at least some prison inmates may have high entrepreneurial aptitude. However, conclusions drawn from non-empirical analyses are not strong enough on which to base social policy recommendations. For this reason, the authors have conducted more objective empirical research to determine whether these subjective conclusions can be confirmed.

PRIOR RESEARCH

While much research has been conducted in the fields of entrepreneurship, small business, and criminology, and the bodies of reporting literature in these areas are substantial, there has been extremely minimal analysis of entrepreneurial aptitude among prison inmates, or of the social policy implications of this topic. A search of the literature indicates only the work of Sonfield, Barbato and Lussier, investigating the question of whether prison inmates possess high levels of entrepreneurial...
aptitude (Sonfield, 1992; Sonfield & Barbato, 1994; Sonfield & Barbato, 1995; Sonfield, Lussier & Barbato, 1999).

With regard to the literature on entrepreneurial aptitude, a large body of research has been conducted since the 1960s (some examples, chronologically: Gasse, 1982; Aldrich & Zimmer, 1986; Begley & Boyd, 1987; Bird & Jelinek, 1988; Davidson, 1989; Johnson, 1990; Guth, 1991; Cooper & Gascón, 1992; Block & MacMillan, 1993; Naffziger, 1995; and Miner, 1997). In spite of this large record of research, there is still little consensus as to whether psychological characteristics are associated with entrepreneurial aptitude and entrepreneurial success. For every writer who concludes in favor of this association, another reaches the opposing conclusion. Such a mixed current opinion certainly warrants additional research such as that reported here.

**METHODOLOGY**

**Design and Sample**

The sample consisted of 59 male inmates from three different prisons in three states: New York (n = 29), Maryland (n = 12), and Massachusetts (n = 18). The Maryland and Massachusetts inmates were taking a self-employment/small business course and all class members completed the survey instrument during class time; the New York inmates were not taking any course and about 50% of those asked volunteered to complete the instrument. The mean age of the total sample was 29, with a standard deviation of 8.2 years.

Although a larger sample size would have been preferable, prison authorities tend to be very resistant to external investigations of any nature, and these three instances of cooperation from prison authorities resulted from a much larger number of requests. Thus, the limitations of the relatively small sample must be noted.

The inmate sample was compared with a group of 135 "normative" entrepreneurs (a sample of individuals who had started their own business ventures) (Miner, 1986), a group of 50 entrepreneurs of "fast-growth" firms (a sample of entrepreneurs whose ventures were performing at a high rate of growth and profitability), a group of 47 entrepreneurs of "slow-growth" firms (a sample of entrepreneurs whose ventures were performing at a low rate of growth and profitability), and a group of 37 "manager-scientists" - managers of science-oriented entrepreneurial firms, but who were not the founders/entrepreneurs of their firms (Smith & Miner, 1985). ("Fast-growth" and slow-growth" were not quantitatively defined by Smith and Miner.) Thus, the comparison groups actually were owners and/or managers of their own businesses. Such owner/managers tend to have higher entrepreneurial aptitude than the general population (Brandstatter, 1997), and thus provide logical comparison groups for the inmate sample. It should be noted that the data on these comparison groups were specifically provided by Miner to allow subsequent researchers to have a comparative base from which to make comparisons with later sample groups, often more specific in character (gender, minority, etc.). Thus, while these comparison data may have been collected earlier than the inmate data, the comparison is appropriate.
Hypotheses

Based on the findings of earlier research in this area by Sonfield, Barbato and Lussier (1994, 1995, 1999), several hypotheses were tested:

**H1:** The prison inmates have the same entrepreneurial aptitude as the "normative" group of entrepreneurs, both in total MSCS-T scores and in subscale scores.

**H2:** The prison inmates have a higher entrepreneurial aptitude than the group of entrepreneurs of "slow-growth" firms.

**H3:** The prison inmates have a lower entrepreneurial aptitude than the group of entrepreneurs of "fast-growth" firms.

Hypotheses 1 through 3 are based upon, and are consistent with, prior research in this area, i.e. the specific findings of Sonfield and Barbato (1994, 1995).

**H4:** The prison inmates have a higher entrepreneurial aptitude than the group of "manager-scientists."

Hypothesis 4 is based upon the fact that "manager-scientists" are, by definition, not entrepreneurs and thus should not be expected to possess as high a level of entrepreneurial aptitude as individuals who are engaged in entrepreneurial activities (Brandstatter, 1997).

**H5:** The prison inmates enrolled in self-employment/small business courses have a higher entrepreneurial aptitude than inmates not enrolled.

Hypothesis 5 follows from the proposition that prison inmates with higher entrepreneurial aptitude are more likely to enroll in self-employment/small business courses.

**H6:** The prison inmates' entrepreneurial aptitude is the same regardless of type of crime committed.

**H7:** The prison inmates' entrepreneurial aptitude is the same regardless of first-time or repeat offender status.

Since there are no prior research data relating to hypotheses 6 and 7, the null hypothesis is tested.

Given the very limited previous research with regard to the entrepreneurial aptitude of prison inmates, there are of necessity equally limited theoretical bases for these seven hypotheses. Still, since the purpose of this current research is to continue an initial probe into the subject, the appropriateness of the hypotheses is supported.
Measures

The Miner Sentence Completion Scale-Form T is a projective testing instrument which has been shown in many studies to validly measure motivational factors associated with entrepreneurial success. Furthermore, validity of this instrument has been established among various criteria of entrepreneurial firm growth, and the subscales also differentiate between entrepreneurs and managers (Bellu, 1988, 1992; Bellu, Davidson & Goldfarb, 1990; Miner, 1997; Smith, Bracker & Miner, 1987; Smith & Miner, 1985). Five gauges of such motivation are measured: a need for self-achievement, a preference for avoiding unnecessary risks, a desire for feedback on the results of one's efforts, an aspiration for personal innovation, and a desire to think about and plan for the future. Respondents are asked to develop sentences from 40 stems, 8 of which measure each of the five motivational factors. Examples of the stems are:

| Inventing something new . . . |
| Uncertainty . . . |
| Saving money for an education . . . |
| Performance rating systems . . . |

Using a comprehensive scoring guide (Miner, 1986), the projective responses to the stems are scored with regard to the five motivational factors listed above. Each of the five subscale scores can range from +8 to -8, and total scores from +40 to -40, although actual scores tend to be much more narrowly distributed. (As each stem response can be scored positive, neutral or negative, relative to the motivational factor being measured, negative subscale scores can sometimes result.)

In this study, to further strengthen the reliability of the MSCS-T scoring, all inmate test data were scored separately by two different trained and experienced scorers, and the means of the resulting 40 pairs of each respondent's scores were used. Variance between the two scorers' scores was very low (but not statistically tested).

In addition to the Miner MSCS-T scores, inmates responded to a variety of written survey questions concerning several personal attributes, including enrollment in self-employment/small business courses, type of crime committed, and first-time versus repeat offender status.

Analysis

To test H1, multivariate analysis of variance (MANOVA) was run using the five subscale and the total scores, with the normative sample and the inmate sample. MANOVA results may be different than multiple tests of mean score differences due to multiple interaction comparison procedures. However, MANOVA also provides univariate test results, which decreases the probability of Type I errors (finding differences that do not exist).

For H2, H3 and H4, one-sample t-tests were run for each hypothesis with the inmate total MSCS-T scores used as the dependent variable and the comparison groups being the inmate sample
versus the slow-growth entrepreneurs (for H2), versus the fast-growth entrepreneurs (for H3) and versus the managers-scientists (for H4).

To test H5, a t-test was run with the total MSCS-T scores as the dependent variable, with the comparison groups being those inmates enrolled in courses versus those inmates not enrolled in courses.

To test H6 and H7, t-tests were run with the total MSCS-T scores as the dependent variables and type of crime ("drug-related" or "other") and first or repeat offender as independent variables. Although not a hypothesis test, a MANOVA was run to determine whether there were any total or subscale score differences between the three prison inmate groups.

Table 1: Mean MSCS - Form T Scores

<table>
<thead>
<tr>
<th></th>
<th>I Prison Inmates (n = 59)</th>
<th>II Normative Data for Entrepreneurs (n = 135)</th>
<th>III Entrepreneurs Fast Growth Firms (n = 50)</th>
<th>IV Entrepreneurs Slow Growth Firms (n = 47)</th>
<th>V Manager-Scientists (n = 36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Score</td>
<td>8.83</td>
<td>6.81</td>
<td>11.32</td>
<td>0.32</td>
<td>2.08</td>
</tr>
<tr>
<td>Self Achievement</td>
<td>2.49</td>
<td>1.91</td>
<td>3.32</td>
<td>0.34</td>
<td>0.73</td>
</tr>
<tr>
<td>Avoiding Risks</td>
<td>1.58</td>
<td>0.94</td>
<td>1.44</td>
<td>(0.28)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Feedback of Results</td>
<td>1.42</td>
<td>(0.20)</td>
<td>0.50</td>
<td>(1.68)</td>
<td>(1.15)</td>
</tr>
<tr>
<td>Personal Innovation</td>
<td>3.01</td>
<td>2.99</td>
<td>4.06</td>
<td>1.64</td>
<td>2.24</td>
</tr>
<tr>
<td>Planning for the Future</td>
<td>0.46</td>
<td>1.17</td>
<td>2.10</td>
<td>0.30</td>
<td>0.68</td>
</tr>
</tbody>
</table>

MANOVA Test Significance Level

<table>
<thead>
<tr>
<th>Comparison</th>
<th>p.</th>
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<tbody>
<tr>
<td>Prison Inmates vs. &quot;Normative&quot; Entrepreneurs</td>
<td>.000</td>
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</table>

One Sample T - Tests Significance Levels

<table>
<thead>
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<th>Comparison</th>
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</tr>
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<tbody>
<tr>
<td>Prison Inmates vs. &quot;Slow Growth&quot; Entrepreneurs</td>
<td>.000</td>
</tr>
<tr>
<td>Prison Inmates vs. &quot;Fast Growth&quot; Entrepreneurs</td>
<td>.000</td>
</tr>
<tr>
<td>Prison Inmates vs. &quot;Manager-Scientists&quot;</td>
<td>.000</td>
</tr>
</tbody>
</table>

Sources: Prison Inmates: Current Study
Normative Data: Miner (1986)
Entrepreneurs, Fast Growth and Slow Growth: Smith & Miner (1985)
Manager-Scientists: Smith & Miner (1985)

RESULTS

The inmates in Maryland (n = 12) and in Massachusetts (n = 18) were enrolled in a course while the New York inmates (n = 29) were not enrolled in a course, but volunteered to complete the
survey instrument. There were no significant differences in the MSCS-T scores for any of the three states nor for those enrolled or not enrolled in a course. As previously discussed, this relatively small sample was the result of the general protectiveness of prison administrators, and the generalizability of the results is limited by the sample size.

H1 was not supported by the MANOVA results, as the Pillais, Hotellings and Wilks tests were all significant (p. = .000). There are significant differences between both the subscale and total scores of the prison inmates and the normative entrepreneurs, with the inmates having the higher entrepreneurial aptitude (total score m = 8.83 vs. m = 6.80). See Table 1 for a synopsis of the test results for H1 through H4.

H2 was supported, with the inmates having a higher entrepreneurial aptitude than the slow-growth entrepreneurs (total score m = 8.83 vs. m = 0.32, p. = .000).

H3 was supported, with the inmates having a lower entrepreneurial aptitude than the fast-growth entrepreneurs (total score m = 8.83 vs. m = 11.32, p. = .000).

H4 was supported, with the inmates having a higher entrepreneurial aptitude than the manager-scientists (total score m = 8.83 vs. m = 2.08, p. = .000).

H5 was not supported; there was no significant difference in the entrepreneurial aptitude of inmates taking and not taking small business/self-employment courses (total score "taking" m = 9.07 vs. "not taking" m = 8.59, p. = .718).

H6 was supported; inmate aptitude was the same regardless of type of crime (total score "drug-related" m = 9.68 vs. "other" m = 8.49, p. = .417).

H7 was supported; inmate aptitude was the same regardless of first vs. repeat offender (total score "first" m = 9.38 vs. "repeat" m = 8.08, p. = .332).

DISCUSSION

This research confirms the conclusions of previous studies of Sonfield and Barbato that some prison inmates possess high levels of entrepreneurial aptitude; more specifically at a level lower than "high-growth" entrepreneurs and higher than both "normative" and "low-growth" entrepreneurs (Sonfield & Barbato, 1994, 1995).

Furthermore, this research provides new conclusions, based on data not tested in the earlier studies. First, the tested prison inmates have higher entrepreneurial aptitude than non-entrepreneur "manager-scientists." Secondly, enrollment in a self-employment/small business course, or inmate attributes such as type of crime or first versus repeat offense, can not serve as predictors of such aptitude.

Again, it should also be noted that the statistical similarity of the inmate MSCS-T scores in each of the three prison sub-samples supports the reliability of this inmate data, which was collected over several years in three very different inmate populations in three states.

With regard to the broader issue of the validity of "entrepreneurial aptitude" and whether psychological characteristics are associated with such aptitude and with entrepreneurial success, this
study adds one more set of data and analytical findings to the body of knowledge, but it can not tip the balance of the cumulative consensus one way or the other.

CONCLUSIONS

As previously discussed, ex-convict recidivism is higher for those persons who are unable to obtain employment after leaving prison and imposes a high cost on society; and yet employment opportunities are especially limited for ex-convicts. Thus self-employment would be a viable alternative for ex-convicts, at least for those with above average entrepreneurial aptitude, since higher levels of entrepreneurial aptitude tend to correlate with business success (Bellu, 1988, 1992; Bellu, Davidson & Goldfarb, 1990; Smith, Bracker & Miner, 1987; Smith & Miner, 1985).

This current study indicates that some prison inmates have high levels of entrepreneurial aptitude, and thus the potential for entrepreneurial success. Furthermore, this aptitude appears to be broad among the tested inmates, and not dependent upon specific inmate attributes or exposure to small business or self-employment training (while entrepreneurial skills can be taught, entrepreneurial aptitude may be more intrinsic).

Since self-employment/entrepreneurial training has been shown to facilitate reemployment (Benus, 1994), it therefore follows that such training for certain prison inmates prior to their release would be a positive contribution to the reduction of recidivism and would be of benefit to our society. Inmates selected for training might be identified by interview and/or entrepreneurial aptitude testing. (This conclusion raises additional issues that are beyond the focus of this study. For example, the voting public is generally wary of spending monies in prisons beyond the most basic incarceration costs; thus self-employment training may be politically unpopular even if it were shown to lead to long-run savings in correctional costs to society. Furthermore, ex-convicts would have extra difficulties in raising business startup capital, and any social policy programs would have to address this issue as well.)

Further analysis and development of these issues, with larger sample sizes and using additional prison populations, is encouraged.
REFERENCES


http://cia.gov/cia/publications/factbook/geos/us.html#People

http://cjicj.org/jpi/apbnews120899.html

http://www.geocities.com/CapitalHill/1526/stats.html


