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The Entrepreneurial Decision: A Two-System Survey of D.C. Food-Truck Owners

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January 2015
Economic Survey Research

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By Tim Kane[1]

INTRODUCTION

With continued weakness in the U.S. economy in recent years, the status of entrepreneurship is increasingly seen as vital to recovery (Acs and Armington 2004, Kane 2010, Leming *et al.* 2010, Haltiwanger *et al.* 2013). However, the decline in rates of entrepreneurship over the past four decades raises important research questions (Kane 2012). What motivates an individual worker to choose entrepreneurship over employment? What can a government do to assist entrepreneurs, and what can it do to remove barriers to nascent entrepreneurs?

This paper aims to empirically understand the entrepreneur's decision between creating a business or choosing employment at an existing firm. We utilize a two-part field survey of small business owners in the food truck industry. Food truck entrepreneurs are a compelling class of entrepreneurs as the industry has become increasingly popular with consumers and symbolic of the non-technology startup scene. Not only do food trucks offer an initial step into the restaurant business, but their rising popularity in Washington, D.C. led to a backlash among established restaurants and a controversial regulatory battle in recent years. The fact that food trucks faced inspections at twice the rate of fixed location restaurants raised awareness among the public of the barriers faced by nascent entrepreneurs.

In the empirical literature examining the entrepreneur-employee decision, there are a few studies that inspect in further detail the motives and barriers to entrepreneurial entry. The Global Entrepreneurship Monitor (GEM) conducts an annual survey in the United States that explores entrepreneurial activity and attitudes, covering both existing and nascent entrepreneurs but questions tend to be in the low-information format of "agree/no-reply." Indeed, much of the survey research on entrepreneurship uses an unconstrained choice set such as the 1-5 Likert-scale which has been shown to yield weak differentiation among choices in many cases.

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Most surveys on entrepreneurial motivation report that being one's own boss is the dominant explanation. In the European Commission's 2012 Flash Eurobarometer survey on entrepreneurship, respondents from the general population in both the EU and the U.S. indicated that "*Personal independence/self-fulfillment*" was by far the most important reason, with "*Freedom to choose place and time of working*" a strong secondary reason. Interestingly, half of Americans aspire to self-employment over corporate employment, compared to a third of Europeans. Quince *et al.* (2003) found that among high-tech CEOs, the top motivation for entrepreneurs was "*Saw a strong future in this work*" followed closely by "*To be my own boss*" and "*To do something worthwhile.*" The contrast in these two studies reveals a distinction among entrepreneurial types, with some individuals choosing entrepreneurship as an opportunity and others choosing it by necessity. GEM makes this distinction central in its analysis (Acs 2006).

In terms of barriers, the Eurobarometer found that a large majority of the general public—67 percent in the US—could not give a specific reason for not actually starting a business; 15 percent responded that financing was the largest disincentive. This implies that aspiration is not sufficient motivation for all nascent entrepreneurs to actually create a new firm, let alone a metric for actual opportunity. However, Eurobarometer respondents did articulate an awareness of risks, topped by concerns about bankruptcy, home loss, and unstable income. Lower concerns were job security, personal failure, and a lack of energy. The general consensus of empirical studies on government policies that affect entrepreneurship (Klapper *et al.* 2006) is that "regulations that protect intellectual property and develop financial markets tend to have favorable effects while excessive bureaucratic regulation of entry or labor tends to have adverse effects."

Data from the Panel Study of Entrepreneurial Dynamics (PSED), which surveys entrepreneurs before and after their businesses are started, is used by a number of studies to overcome a potential flaw known as survivorship bias. Cassar (2007) finds that "*Independence,*" "*Self-realization,*" and "*Financial success*" are the leading career reasons for both nascent and actual entrepreneurs. Cassar also concludes that financial motives are the most positively correlated with growth intentions, whereas independence has a negative correlation. Zanakis *et al.* (2011) finds that financial motive actually corresponds negatively with startup likelihood among nascent entrepreneurs because they frequently abandon their businesses in favor of better financial opportunities elsewhere.

In this paper, we offer unique survey evidence about both motivations and barriers based on a field survey of 30 food truck entrepreneurs in Washington, D.C. that was administered during the summer of 2013. The survey utilizes two rating systems in order to emphasize the limitations of traditional survey structures as well as new insights. This study's forced ranking system yielded more sharply distinct valuations than the Likert-scale system. The paper confirms certain findings from past literature as well. More specifically, the survey works to identify the most and least significant factors for entrepreneurial business-owners.

THE SURVEY

There were a total of 186 unique truck businesses that operated across Washington, D.C. during the summer of 2013 according to one dedicated website that keeps count (foodtruckfiesta.com), and most were run independently. Our random survey of food truck operators screened potential respondents to identify owner-entrepreneurs for inclusion, excluding non-owner employees. The criteria for the respondents were that they were owners or part-owners of at least one food-truck business, and that they had a large role in the formation of the business. With 30 respondents confirmed as entrepreneurs, our survey covered 16 percent of the reported food truck industry in the D.C. metropolitan area.

The design of the survey focused on three broad questions. First, what are the personal motivations for entrepreneurship? Second, what are the policy barriers to entrepreneurship? Third, what are the personal barriers? A list of responses was presented along with a 5-point Agree-Disagree scale. The scale portion of the survey is comparable to the PSED and Quince *et al.* which was to confirm comparability. A new aspect of this survey that does not seem to be used in the earlier entrepreneurial motivation literature is a separate ranking system. Respondents were asked to rank—and subsequently weight—their top three choices from the personal motivations and policy barriers sections. With the rankings, this study is able to compare how the scale approach may miss intensity of entrepreneurial feelings. Finally, the survey asked four questions regarding the entrepreneur's business demographic.

RESULTS

By asking the respondents to first scale and then to rank their responses, we are able to analyze two separate impressions of the exact same underlying opinions. All 30 respondents participated in the scale, while 27 participated in the ranking part of the survey.

The scale was weighted in the traditional manner, with "*Disagree strongly*" denoted with 1 point and "*Agree strongly*" given 5 points. Stronger agreement is measured by a higher average score. The Rank scores were weighted with 3 points for the top response, 2 points for the second, and a single point for the third highest. Results from the scale were quite inconclusive about many of the response factors, with several clustered in the between "*Neutral*" and "*Agree,*" otherwise indicated by the range from 3.0 to 3.5 on the 5-point scale.

Personal Motivations. Our results confirm a general finding in the literature that the most important reason for becoming an entrepreneur rather than an employee of an existing firm, as indicated by the scale, is "*Independence/Being your own boss*." Out of the 30 respondents, "*Independence*" received an average rating of 4.53; with only two people rating it "3," and none less. This factor is by far both the most important and consistent in affecting the entrepreneurial decision. The "*Independence*" results from the scale were highly consistent with the ranking system, which tallied a total of 58 weighted points, far ahead of the other personal motivations factors. All but two respondents marked "*Independence*" as one of their top three motivations. "*Increased average income*" is the second highest response, with an average rating of 3.7 and the

second lowest variance in the personal motivations category. It got high marks in rankings as well.

Among the factors that fell between *"Neutral"* and *"Agree"* in the personal motivations category were *"Job stability"* and *"Family tradition."* With high variance and middle-tier ratings, the two factors remain inconclusive about their importance. We allowed individuals to add their own fill-in response, which elicited four independent mentions of "Passion" and one of "Creativity" as a motivation.

One surprise in the survey was that our respondents did not identify as necessity entrepreneurs. Most respondents disagree that *"Hard to find regular job"* was a motive, a response that averaged 2.3 in scaled responses. This factor received the lowest average score by a large margin, with eleven "1" (strongly disagree) responses and only four responses in agreement. It also received only 4 total weighted points in the ranking system. The results show that the large majority of the food truck entrepreneurs did not start their business out of employment necessity.

Table 1a: Personal Motivations Scale

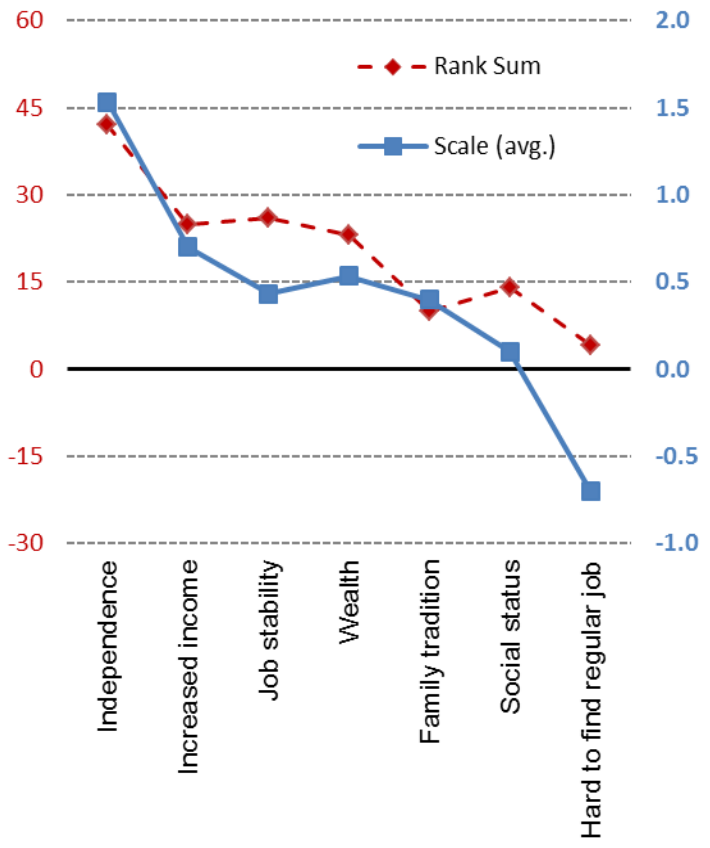
Why did you choose to become an entrepreneur, and not an employee?	**1 Disagree strongly**	**2 Disagree**	**3 Neutral**	**4 Agree**	**5 Agree Strongly**	**Mean**	**S.D.**	**N**
Independence/Being your own boss	0	0	2	10	18	**4.53**	0.63	30
Increased average income	2	1	7	14	6	**3.70**	1.06	30
Possibility of becoming rich	2	2	10	10	6	**3.53**	1.11	30
Job stability	5	2	5	11	7	**3.43**	1.38	30
Family tradition	3	3	9	9	6	**3.40**	1.22	30
High social status as entrepreneur	3	3	16	4	4	**3.10**	1.09	30
Hard to find regular job	11	4	11	3	1	**2.30**	1.18	30
(Passion)	0	0	0	0	4		0.00	4
(Creativity)	0	0	0	0	1		0.00	1

Table 1b: Personal Motivations Rank

Why did you choose to become an entrepreneur, and not an employee?	**1 Most Important (Weight = 3)**	**2 Very Important (Weight = 2)**	**3 Important (Weight = 1)**	**Sum**
Independence/Being your own boss	5	7	13	**42**
Job stability	7	1	3	**26**
Increased average income	2	8	3	**25**
Possibility of becoming rich	4	5	1	**23**
High social status as entrepreneur	4	1	0	**14**
Family culture/commitment	2	1	2	**10**
(Passion)	0	1	3	**5**
Hard to find regular job	1	0	1	**4**
(Creativity)	0	1	0	**2**

The two survey methods are directly compared in Figure 1. Note that the right-side vertical axis has been rescaled so that the "neutral" value is set to zero, rather than 3 as reported in the tables and traditional Likert values. As a result, the only response with a an average response that is "Disagree" appears as a negative value; instead of 2.3 it is shown as a negative 0.7.

Figure 1: Personal Motivations, Scale-Rank Comparison



Policy Barriers. In answering "What discourages others from working as entrepreneurs?" the clearest answer was "Financing," which averaged 4.40 in the scaled response, with minimal variance. All but two of the respondents rated it as a "4" or "5." This result is not consistent with the rankings method, which tallied weighted ranks at 36 (the third highest ranking of barriers).

Although the scale and ranking results were inconsistent in terms of order of importance for "*License requirements*" and "*Business regulations*," these two barriers were both of relatively high significance: respectively, they averaged 3.7 and 3.8 with nearly equal variances in the scale approach. However, the ranking system indicated

both are more important than financing. This result is a surprising shift in the ordering of importance based on a different survey methodology of the same opinions.

The remaining external barriers, "*Income taxes,*" "*Paperwork,*" and "*Taxes on sales*" were considered minor barriers according the scaled responses. Each averaged above 3 but below 3.4. However, the ranking system reveals a much different weight as these tax barriers are considered far less significant, tallying one-half to one-fourth as important as the top barriers. Some possible explanations for this relative insignificance include the possibility that the majority of the food truck owners are not near the top income bracket, and therefore are not as affected by progressive income taxation. Another, and likely, reason is the possibility that food-truck owners pass on sales taxes to consumers, minimizing that factor's role as a barrier.

Table 2a: Policy Barriers Scale

What discourages others from working as entrepreneurs?	**1 Disagree strongly**	**2 Disagree**	**3 Neutral**	**4 Agree**	**5 Agree Strongly**	**Mean**	**S.D.**	**N**
Financing	0	0	2	11	12	**4.40**	0.65	25
Business regulations	1	3	6	11	9	**3.80**	1.10	30
License requirements	1	4	5	13	7	**3.70**	1.09	30
Taxes on sales	3	4	8	10	5	**3.33**	1.21	30
Paperwork (tax forms etc.)	1	7	9	9	4	**3.27**	1.08	30
Income taxes	2	6	9	11	2	**3.17**	1.05	30

Table 2b: Policy Barriers Rank

What discourages others from working as entrepreneurs?	**1 Most Important (Weight = 3)**	**2 Very Important (Weight = 2)**	**3 Important (Weight = 1)**	**Sum**
License requirements	3	11	5	**36**
Business regulations	5	9	1	**34**
Financing	2	2	14	**24**
Sales taxes	5	0	1	**16**
Income taxes	1	3	1	**10**
Paperwork (tax forms etc.)	2	0	2	**8**

Personal Barriers. The final question asked about what personal barriers were concerns before the food truck business was started, and for this we only used the scale system. The only personal barrier that emerged as important was a concern over time commitment, but even that scored a mild 3.5 on average. "*Lower average income*" and "*Prospect of bankruptcy*" were both relatively neutral, averaging 3.27 and 3.03, respectively. For these two variables, each "1" and "5" received no more than 3 respondents, which demonstrates the lack of strong feeling about them. Less concern

was given to the responses "*Hard to find regular job*" and "*Possible social stigma of failure.*"

Table 3: Personal Barriers Scale

What worried you about starting this business before you began?	1 Disagree strongly	2 Disagree	3 Neutral	4 Agree	5 Agree Strongly	Mean	S.D.	N
Too much effort/time	4	3	4	12	7	**3.50**	1.33	30
Lower average income	1	6	10	10	3	**3.27**	1.01	30
Prospect of bankruptcy	3	7	9	8	3	**3.03**	1.16	30
Possible social stigma of failure	3	11	8	8	0	**2.70**	0.99	30

Business Demographic. Ideally the study would be able determine which businesses can be considered "successful" using profits, but the survey did ask such intrusive questions. For the purpose of analysis, this paper will refer to businesses that have been operating for at least 24 months as "survivors."

The 27 entrepreneurs that responded to the demographic questions at the end of the survey revealed that the majority of the businesses—17 to be precise—have indeed existed for at least 24 months. Moreover, 7 of the respondents have owned the business for 36 months or longer. An interesting result is that of the 17 "surviving" business-owners, only four of them have never owned a business beforehand. Additionally, among the 10 remaining entrepreneurs who have not reached "surviving" status, seven of them indicated they have never previously started their own businesses. This seems to imply that a "surviving" entrepreneur has owned a previous business with relatively high probability, a result consistent with the argument that serial entrepreneurs tend to be more successful than new entrepreneurs.

Table 4: Demographic Questions (answers in months)

	Mean	S.D.	N
Age?	**37.5**	15.4	27
How many other companies have you started?	**1.5**	1.9	26
When is the last time you worked as an employee?	**58.5**	73.0	24
How long have you been running this business as your primary occupation?	**38.8**	60.9	27

DISCUSSION

This study of food truck entrepreneurs reveals some surprising results with major policy implications. By continuing a well-established approach of surveying entrepreneurs using a 5-point scale to assess motivations and policy barriers, we confirmed results found in the literature. However, by adding a unique second ranking

stage to the survey, the analysis here finds new attitudes about entrepreneurial barriers that are different and more differentiated than previously reported.

For the majority of the food-truck owners, "*Independence*" was the primary reason for choosing the entrepreneurial career path, a finding consistent with most existing literature, including Cassar (2007) and the Flash Eurobarometer (2012). With "*Increased income*" as the second most important motivation, this study also confirms the conclusion of Quince *et al.* that "*Autonomy and material advancement*" are key motivations for starting a business.

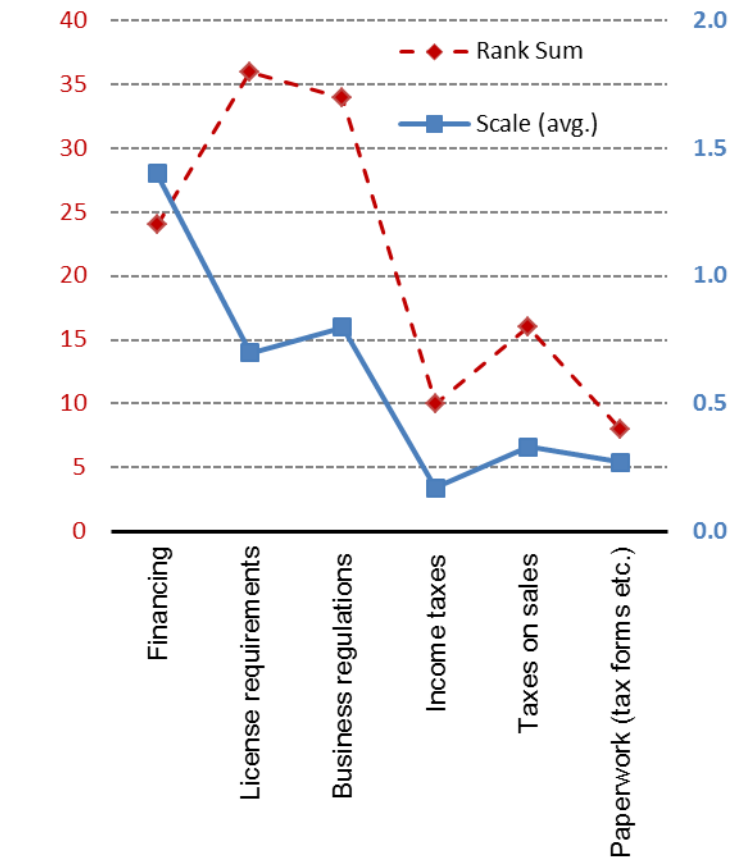
Zanakis *et al.* (2012) argue that those motivated by financial gains "do not make the transition to operating businesses" because they abandon their start-up when "more lucrative job opportunities come along." Cassar, like Zanakis *et al.*, analyzed the PSED data but concluded that "*Financial Success*" was indeed positively related with both nascent and actual entrepreneurship. This survey's findings on "*Increased income*" and "*Possibility of becoming rich*" confirm the latter. Note that multiple motivations are grouped into a single financial category by both Cassar and Zanais *et al.*, whereas this survey makes a distinction between income and wealth potential. Of the 30 respondents, 13 rated the two factors of equal level, and 12 rated the two factors with only one level separation. We find a similarly close relationship in the ranked results.

Although most of the entrepreneurs indicated financial motive as a significant motivation for their career choice, fear of "*Lower average income*" was surprisingly low in our survey (see table 3). Contrary to the Flash Eurobarometer's finding that fear was a dominant personal barrier, our survey identified the average score as a neutral 3.03 on the 5-point scale. Additionally, our survey found that perhaps the only significant personal barrier for the food-truck owners was "*Too much time/effort*" while the Flash Eurobarometer found this barrier as the second-to-least important fear of entrepreneurship.

The major surprise in this study that stands in contrast to earlier work comes from survey questions about external barriers facing entrepreneurs (see tables 2a and 2b). These are referred to in the paper as external and policy barriers, which were assessed with a 5-point scale in the first part of the survey, then with a top-three weighted ranking in the second part. The implication of the difference in the two survey approaches is potentially profound. Lay observers and even many experts would not consider the difference between the 5-point scale scores of 3.8, 3.7, and 3.3 to be significant. The casual interpretation of traditional entrepreneurial surveys is that financing is the main barrier, and all other responses are far less and relatively equally important; in short, regulations and taxes are perhaps annoyances but not fundamentally different or harmful. But this study's more precise survey approach using a rank-ordering of responses reveals such a casual interpretation to be erroneous. Instead of the 3.3 to 3.8 range, we see that the regulatory barriers received a summary weighted ranking of 36 and 34 (with higher scores equating to higher importance). These scores compare to the income and sales tax barriers rated at 16 and 10, respectively. The gaps in scaling versus ranking jumped from roughly 20 percent to 250 percent. What is revealed in this small survey is that regulatory barriers are much more harmful than taxes to entrepreneurship, and even more important than the conventional wisdom's assumption that financing is the key barrier.

Figure 1 contrasts the average entrepreneur's views on motivations as revealed by the two different surveys. The fact that ordering of the motivations is slightly reshuffled indicates that using simple scaling responses in traditional approaches may be incomplete. The reshuffling in Figure 2 about policy/external barriers is even more surprising, casting doubt on the importance of taxes while raising the alarm about the burden of regulations. Moreover, the ranking method clarifies the difference between the negative effect of regulatory policy and the relatively benign effect of regulatory paperwork.

Figure 2: Policy Barriers, Scale-Rank Comparison



To be clear, the first part of the food truck survey confirms that *"Financing"* is the top external barrier to starting a firm, but not when the choices were ranked (it then dropped to the third most important factor). One possible explanation follows the theory of Gartner *et al.* (2012), who also finds, using the PSED data, that larger or incorporated firms with higher projected sales serve as successful signals for attaining external funding. Considering the fact that a food truck typically operates with just a few people and is frequently owner-operated, many food-truck owners may face difficulties

acquiring much external financing. However, our survey did not ask about what type of funding the food-truck entrepreneurs attempted to acquire at startup, and therefore cannot effectively evaluate Gartner's theory on financing barriers or financing policy implications.

One aspect of entrepreneurship that is extant in previous literature is the concept of "necessity versus opportunity entrepreneurship" (Block *et al.*, 2009, Poschke, 2012). An interesting result of this study is the clear indication that "necessity entrepreneurship" was largely irrelevant to the food-truck owners: Out of 30 surveyed, only four either agreed or agreed strongly. With an average scale rating of 2.30, *"Hard to find regular job"* was one of only two factors in the whole study to fall below 3.00, and produced by far the lowest rating in the survey. Coupled with the lowest (regular) choice rank-sum of 4 points, the survey can confidently conclude that "necessity entrepreneurship" was the least important factor.

Although this paper both confirmed and revealed some valuable information on the entrepreneurial decision, the main contribution of the study is the use of the two systems in evaluating entrepreneurs' motivations and barriers. Whereas extant literature studying motivations and barriers typically uses only one type of surveying method, this paper's use of the rank-sum system offers a new and more distinct perspective. Future studies are needed to confirm the findings here in what is a limited sector of the economy with a small sample of existing entrepreneurs, but should also seek to achieve more nuanced relative importance of the various motivations and barriers facing entrepreneurs.

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