

**Risky (Small) Business:**

## **1. Introduction**

The contributions small businesses make to the American economy are arguably negligible at the individual level, but they have an undeniable aggregate impact. Firms that meet the U.S. Small Business Bureau's definition of a small business (meaning they do not exceed industry-specific employment and annual receipt thresholds) not only employ 48% of all American workers, but the goods and services they produce contribute 44% of the nation's GDP (U.S. Small Business Administration, Small Business Profile (2016) U.S. Small Business Administration (2019

managers (who possess similar control over business operations to SBOs, but do not have ownership in businesses).

The second category of literature in this field details how there are varying levels of risk-lovingness within small-business owners themselves. The literature on the subject does not use specific or uniform definitions for the different types of SBOs; the taxonomic levels vary greatly between papers (Smith and Miner (1983), Kunkel (2001)). While researchers occasionally evaluate business owners based on traits such as their experience, as in Armstrong and Hird (2009) who find that new business owners are more risk-loving than older business owners, many papers in the field use the widely cited Carland et al. (1984) definitions for entrepreneurs and small business owners to differentiate the types of SBOs. Wagener et al. (2008), Stewart et al. (1999), and Carland et al. (1995) all use this definition

To do this, I collected data on nearly one hundred small businesses by asking them to complete a survey that evaluated their level of risk aversion and

In the first question, respondents were presented with two choices. They could (1) pick the certain option, which is to win ten dollars or (2) pick the uncertain option, which is to put their hand into a

The next portion of the survey asked respondents to answer personal, ownership, and firm specific questions. For privacy and uniformity purposes, most questions were multiple-choice. Multiple-choice answers were transformed from qualitative to quantitative data. For example, respondents were asked how they feel about taking risks in their personal lives by answering a multiple-choice question that had three options: they could identify as risk-averse, risk-neutral, or risk-loving. Respondents who selected that they were risk-averse were assigned a value of zero for this question, respondents who selected that they were risk neutral were assigned an one, and respondents who selected that they were risk-loving were assigned a two. This numeric categorization strategy was used for most multiple-choice questions.

For some multiple-choice questions, response categories were merged, forming new variables. For example, the categorical race variable was simplified into the binary variable *White* that clustered all the non-white, Hispanic/Latino respondents together so that they could be measured against white, not Hispanic/Latino SBOs.

For questions that required more specific and less personal details, respondents provided short numeric answers that were made uniform. For example, respondents who answered the question regarding how much ownership they had in their business with a percent had their response converted to a decimal.

### **2.2.3 Business Scenarios**













### 2.2.3 Demographic Variables:

Some questions in the demographic portion of the survey collected information regarding personal, non-business-related information about the respondent. *Gender* is a binary variable that takes the value of one if the respondent is a female and a value of zero if they are a male. Men and women were nearly equally represented in the survey with women making up 52% of the pool.

*Age* is a categorical variable that takes an integer value of zero to six. Respondents under the age of fifteen were assigned a zero, respondents between the ages of sixteen and nineteen were assigned a one, respondents between the ages of twenty and twenty-four were assigned a two, respondents between the ages of twenty-five and thirty-four were assigned a three, respondents between the ages of thirty-five and forty-four were assigned a four, respondents between the ages of forty-five and fifty-four were assigned a five, respondents between the ages of fifty-five and sixty-four were assigned a six, respondents between the ages of sixty-five and seventy-four were assigned a seven, respondents between the ages of seventy-five and eighty-four were assigned an eight, respondents between the ages of eighty-five and ninety-four were assigned a nine, respondents between the ages of ninety-five and one hundred were assigned a ten.



previously owned by a member of their family and a value of zero if it had not. Only 10.5% of surveyed businesses are historically family-owned, but 27.1% of surveyed businesses were previously owned. *PreOwnedBus* is a binary variable that takes a value of one if the number of years the respondent has owned their business for is equal to the number of years their business has been in operation for, and takes a value of zero if the two are not equal.

*Figure 4: Summary Statistics*

The initial regression equation was as follows:

$$\begin{aligned} \log\text{GammaRisk} = & b_0 + b_1\text{Age} + b_2\text{Gender} + b_3\text{IncSource} + b_4\text{White} + b_5\text{EducationYears} + b_6 \\ & \text{HighSchoolDegree} + b_7\text{OwnedBusinessAge} + b_8\text{OperationBusinessAge} + b_9\text{PreOwnedFamily} + \\ & b_{10}\text{Married} + b_{11} \end{aligned}$$









$$b_9 \textit{OperationBusinessAge} + b_{10} \textit{PreOwnedFamily} + b_{11} \textit{PreOwnedBus} + b_{12} \textit{RiskPersonal} + b_{13} \textit{RiskBusiness}$$

Regression results are displayed in figure six, column three. Again, the variable *Uncertain* is

	1.064	1.054	-.174
EducationYears	(.891)	(.847)	(1.154)
	-.065	-	-.145
OwnedBusinessAge	(.294)	-	(.358)
	.032	-	.149
OperationBusinessAge	(.104)	-	(.128)
	-5.641	-4.577	-.667
PreOwnedFamily	(7.223)	(5.900)	(8.854)
	-2.720	-3.164	-7.728
PreOwnedBusiness	(4.136)	(3.584)	(5.488)
	-5.667	-8.185*	.154
RiskPersonal_1	(8.000)	(4.286)	(10.030)
	-15.629*	-12.716*	
RiskPersonal_2	(7.894)	(4.657)	

better.

Ultimately, it must be noted that there are several points of weaknesses within my research that were out of my control. Respect and regard for privacy limited the types of questions I could ask. The small sample size puts the impact of the findings in question. Mathematical constraints in the construction of the risk aversion and

## Bibliography

- Ahmed, S.U. "nAch, Risk-Taking Propensity, Locus of Control and entrepreneurship." *Personality and Individual Differences* 6, no. 6 (1985): 781-782. [https://doi.org/10.1016/0191-8869\(85\)90092-3](https://doi.org/10.1016/0191-8869(85)90092-3).
- Ang, James S., Lin, James Wuh, and Tyler, Floyd. "Evidence on the Lack of Separation between Business and Personal Risks among Small Businesses," *Journal of Small Business Finance* 4 no. 2 (1995): 197-210. <https://digitalcommons.pepperdine.edu/jef/vol4/iss2/7>
- Armstrong, Steven J., Hird, Andrew. "Cognitive Style and Entrepreneurial Drive of New and Mature Business Owner-Managers" *Journal of Business and Psychology* 24, no. 4 (2009): 419–430. <https://doi.org/10.1007/s10869-009-9114-4>
- Carland, James W, III, Carland, James W, Jr., Carland, Jo Ann C., Pearce, James W. "Risk Taking Propensity Among Entrepreneurs, Small Business Owners and Managers" *Journal of Business and Entrepreneurship* 7, no. 1 (1995): 15-23.
- Carland, James W., Hoy, Frank, Boulton, William R., Carland Jo Anne C. "Differentiating Entrepreneurs from Small Business Owners: A Conceptualization." *The Academy of Management Review* 9, no. 2 (1984): 354-359. <http://www.jstor.org/stable/258448>
- Coleman, Susan and Cohn, Richard. "The 'Lack of Separation' Revisited: Small Business Owners and Risk." *The Journal of Entrepreneurial Finance* 6, no (2001): 104-114. <https://digitalcommons.pepperdine.edu/jef/vol6/iss1/7>
- JP Morgan Chase & Co. "A large share of small businesses are young businesses." [www.jpmorganchase.com/institute/research/small-business/small-business-dashboard/longevity](http://www.jpmorganchase.com/institute/research/small-business/small-business-dashboard/longevity). Accessed 18 Dec. 2021.
- Kunkel, Scott ; # ! vy,è it@ ,nc

U.S. Small Business Administration. "Table of size standards." Accessed May 6, 2021.  
<https://www.sba.gov/document/support--table-size-standards>.

U.S. Small Business Association Office of Advocacy. "Small Businesses Generate 44 Percent Of U.S. Economic Activity." News release. January 30, 2019. Accessed March 12, 2021.

U.S. Small Business Association Office of Advocacy. "Small Business Profile." Infographic. 2016. Accessed March 12, 2021.

Wagener, S.L, Gorgievski-Dui      st      Ó                      C                                      %

Survey Instrument

Section 1 of 4

Section 2 of 4

### Survey Part 1: Risk Aversion

For this part of the survey you will be presented with a series of binary choice questions. For each question, you will be asked to choose between two options.

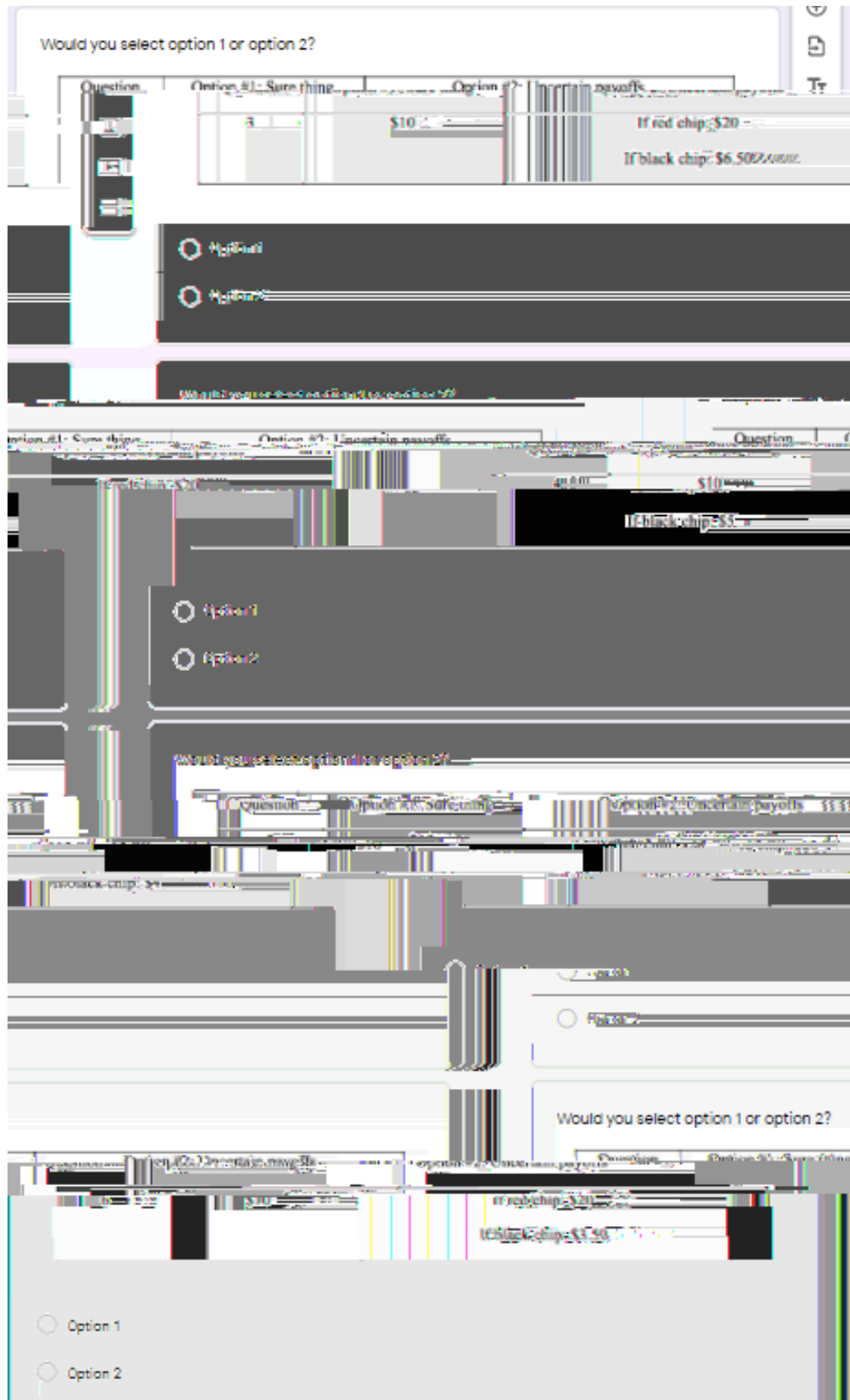
Would you select option 1 or option 2?

Question	Option #1: Sure thing	Option #2: Uncertain payoffs
2	\$10	If red chip: \$20 If black chip: \$8

Option 1

Option 2







Section 3 of 4

## Demographic Information

Description (optional)

---

---

### Personal Information

What is your gender?

Male

Female

Other

How old are you?

18-19

20-24

25-34

35-44

45-54

55-64



In your personal life, how do you consider yourself in terms of how you feel about taking risks?

Risk averse  
 Risk neutral  
 Risk loving

**Firm Information**

Description (optional)

How long have you owned your business for? Please respond in years.

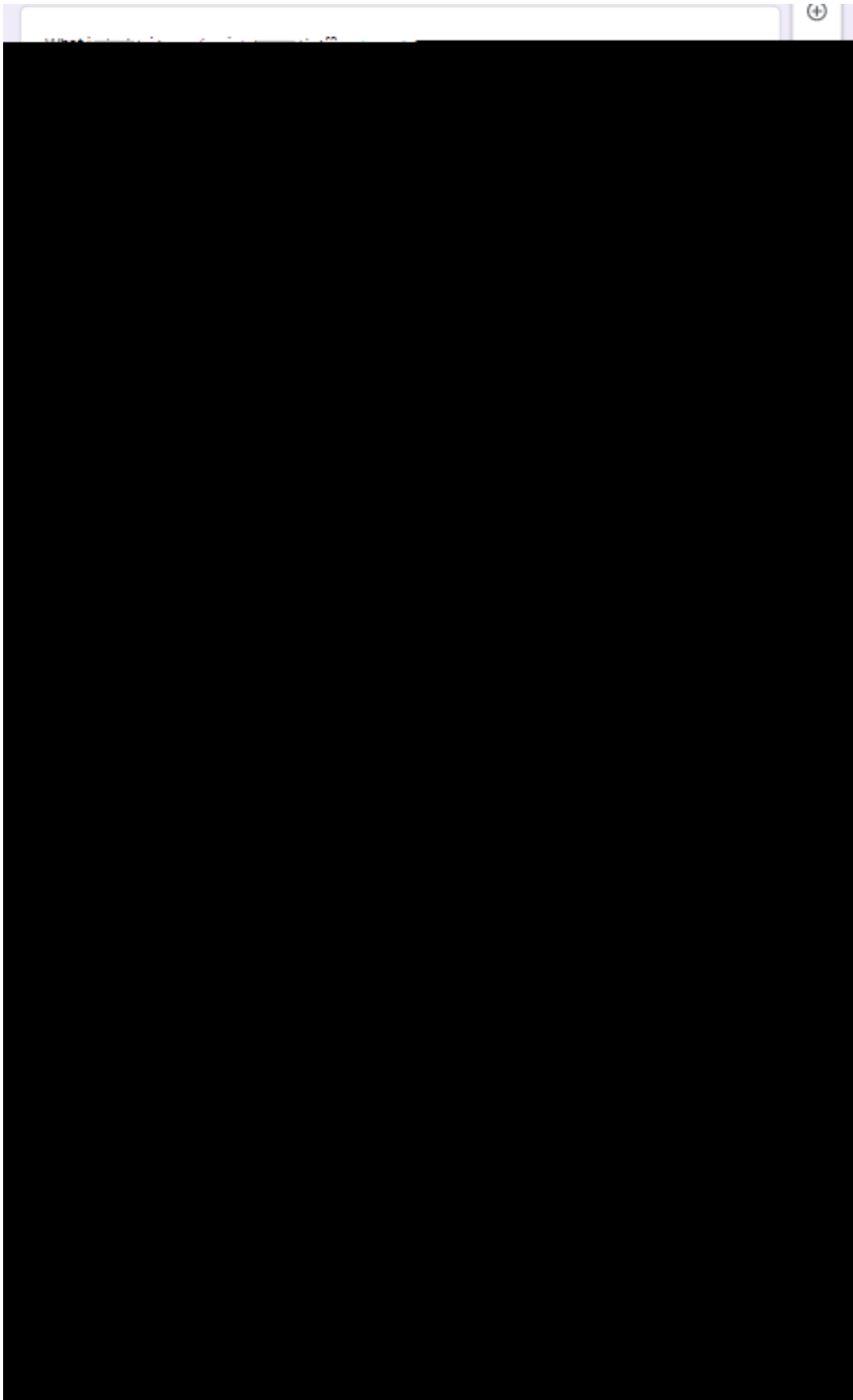
Short answer text

How long have you owned your business for? Please respond in years.

Short answer text

What is the primary decision maker(s) for everyday operations at your business? Please check all that apply.

You  
 Other business owners





Section 4 of 4

1. There is a piece of equipment available for you to immediately rent/lease for your business. If you purchase this piece of equipment, there are ONLY two ways it could affect your business's profit:

Possibility 1: Renting/leasing this piece of equipment leads you to earn LARGER annual profits than you currently earn with the equipment because you would be able to use it more often.

Possibility 2: Renting/leasing this piece of equipment leads you to earn SMALLER annual profits than you currently earn with the equipment because you would be able to use it less often.

2. How would you respond to this situation?

Yes, I would rent/lease the equipment.

No, I would not rent/lease this equipment.

Other...

3. If you chose the "Yes" option, how often would you use the equipment?

More often than I currently use the equipment.

Less often than I currently use the equipment.

4. If you chose the "No" option, how often would you use the equipment?

More often than I currently use the equipment.

Less often than I currently use the equipment.

5. How often would you use the equipment?

More often than I currently use the equipment.

Less often than I currently use the equipment.





