

AN EMPIRICAL STUDY ON THE RELATIONSHIP BETWEEN THE STATE OF THE ECONOMY AND SMALL FIRM CHARACTERISTICS: U.S. CASE

Halil Dincer KAYA

*Northeastern State University, 3100 E. New Orleans St., Broken Arrow, Oklahoma, United States
kaya@nsuok.edu*

Abstract

This study examines the relation between small businesses' characteristics and their owners' views on the economy. The main question here is this: "What kind of small firms are more optimistic on the economy?" To achieve this objective, this study uses the "United States Small Business Friendliness Survey" by Kauffman Foundation and Thumtack.com. The nonparametric tests show that, in the states where business owners have a more positive view on the national economy, firms tend to be larger, but at the same time they tend to have more local sales when compared to the other states. This study also shows that, in these states, firms' age and industry (except for "Business" industry) are not significantly different from firms in other states. On the other hand, the nonparametric tests for "state economy" show that, in the states where business owners have more a positive view on the state economy, firms are smaller, their operational area is smaller and they have more local sales when compared to the other states. This study also shows that, in the states where business owners have a more positive view on the state economy, while firms' age is not significantly different from firms in other states, three firm industry classifications are significantly different from firms in other states. The study concludes that the state economy and the national economy have differing effects on small businesses.

Keywords: State economy, national economy, small business, small firm, firm characteristics

1. INTRODUCTION

This study examines the relation between small businesses' characteristics and their owners' views on the economy. The study first differentiates between the U.S. states where business owners are more optimistic on the economy and the states where owners are less optimistic on the economy. Then, it examines how operational area, local sales, age of the firm, size of the firm, and the industry of the firm differ in these two groups of states. The main question here is this: "What kind of small firms are more optimistic on the economy?"

Previous research shows that there is a significant relation between the state of the economy and entrepreneurship. There are two opposing hypotheses on the issue. The "Recession Push" hypothesis states that entrepreneurship is countercyclical, meaning that in good economic times, there is less activity, and in bad times, there is more activity. This hypothesis states that when the economy is expanding, increased employment opportunities in "salaried" sector leads to a decrease in entrepreneurial activity (because more people choose "salaried" jobs).

Fairlie (2013) supports the “Recession Push” hypothesis in the context of the 2008-2009 “Great Recession”. Mueller (2002) also support this hypothesis. Evans and Leighton (1989) and Constant and Zimmermann (2004) also support this hypothesis by arguing that, during recessions, people are pushed into self-employment because of weak labor market opportunities. Congregado et al. (2012) discuss both hypotheses and the studies that support each hypothesis.

The “Prosperity Pull” hypothesis, on the other hand, argues that entrepreneurship is pro-cyclical, meaning that in good economic times, there is more activity, and in bad times, there is less activity. This hypothesis states that during good economic times, the risks are lower for the entrepreneur and because of that entrepreneurial activity increases during these periods. The first argument supporting this hypothesis is that, if the business fails, the entrepreneur can easily find a paid job. Second, as Kim and Cho (2009) and Parker (2009) explain, during these times, new business opportunities will increase because market demand will be higher and venture capital will be more easily available. Holtz-Eakin, et al. (1994), Blanchflower and Oswald (1998), and Cagetti and De Nardi (2006) also discuss the relation between financing constraints in bad economic times and entrepreneurship. There are many other papers that examine the relation between entrepreneurs’ access to finance and entrepreneurship and most of these papers support the “Prosperity Pull” hypothesis. The argument is this: When the economy is doing better, entrepreneurs have better access to finance, meaning that “entrepreneurship” is pro-cyclical.

This current study examines the issue from a different perspective. While the above mentioned papers examine the relation between the state of the economy and entrepreneurial activity, this study examines the relation between entrepreneurs’ perception on the economy and their firms’ characteristics. The study attempts to answer the following question: “What kind of small firms are more optimistic on the economy?” The findings in this study will help policymakers to devise strategies that would support these types of firms first, in case of an economic recession. If certain businesses are generally more pessimistic on the economy, in case of an economic downturn, they would be the first to give up.

The second contribution here is differentiating between entrepreneurs’ perception on national economy and their perception on local (or state) economy. What kind of firms are more optimistic on the national economy? What kind of firms are more optimistic on the state economy? This differentiation will allow both state policymakers and federal policymakers to benefit from this research.

The paper proceeds as follows: Section 2 goes over the previous literature. Section 3 explains the data and the methodology. Section 4 shows the results. Section 5 concludes.

2. LITERATURE REVIEW

While several studies support the “Prosperity Pull” hypothesis, others support the “Recession Push” hypothesis. As these studies show, there is no consensus on how macro-economy affects entrepreneurship.

Evans and Leighton (1989) and Constant and Zimmermann (2004) support the “Recession Push” hypothesis. These studies argue that, during recessions, unemployed laid-off workers or the unemployed are pushed into self-employment because of weak labor market opportunities. Evans and Leighton (1989) argues that “fluctuations in business conditions and tax rates have affected the self-employment rate”. Self-employment is pro-cyclical, although not strongly so. Evans and Leighton (1989) contend that increases in effective federal income during the late 1970s increased self-employment rates while decreases during the Reagan years decreased self-employment rates.

Constant and Zimmermann (2004) study transitions between the states of employment, unemployment and self-employment. The authors provide a link between these transitions and the business cycle, as measured by the GNP growth rates. Constant and Zimmermann (2004) contend that “the conditional probabilities of entry into self-employment are more than twice as high from the status of unemployment as from the status of employment. Self-employment is also an important channel back to regular employment”. According to the authors, business cycle strongly affects the employment transition matrix”.

Fairlie (2013) also supports the “Recession Push” hypothesis. Fairlie (2013) examines how the “Great Recession” affected business formation. According to the author, “On the one hand, recessions decrease potential business income and wealth, but on the other hand they restrict opportunities in the wage/salary sector leaving the net effect on entrepreneurship ambiguous”. His regression estimates indicate that local labor market conditions are a major determinant of entrepreneurship. He finds that higher local unemployment rates increase the probability that individuals start businesses. He also finds that home ownership and local home values have positive effects on business creation. The author concludes that “the positive influences of slack labor markets outweigh the negative influences resulting in higher levels of business creation”.

Moore and Mueller (2002) partially supports the “Recession Push” hypothesis. They explain that some workers may be ‘pushed’ into self-employment as a response to inadequate opportunities in the paid sector. They test the “Recession Push” hypothesis by examining transitions from paid work to self-employment. Moore and Mueller (2002) find that “(i) longer spells of joblessness favor self-employment, (ii) workers who collect unemployment benefits between jobs are less likely to become self-employed than are workers who did not, (iii) workers who left their previous, paid jobs involuntarily - i.e., due to layoff - were more likely to become self-employed than those who left voluntarily, but less likely than workers who specified personal reasons for leaving, and (iv) self-

employment decisions are independent of the health of the labor market as measured by the unemployment rate”.

While all of the above mentioned studies support the “Recession Push” hypothesis, several other papers support the “Prosperity Pull” hypothesis. Shane (2011) states that the Great Recession had a negative impact on U.S. entrepreneurship. According to Shane (2011), this is evidenced by the fact that, at the end of the recession, the United States had fewer businesses and self-employed people than it had before the downturn began. Shane (2011) states that “while some measures indicate that a big part of this decline came from the increased closure of existing businesses, the largest effect came from a decline in new business formation, particularly for businesses with employees, the more economically substantial type of business”.

Rampini (2004) also supports the “Prosperity Pull” hypothesis. The author created a real business cycle model, and in this model, the risk associated with entrepreneurial activity implies that the amount of such activity should be pro-cyclical. Rampini (2004) concludes that entrepreneurship is pro-cyclical, even if agents have access to financial intermediaries.

A literature survey by Parker (2009) discusses evidence from the U.S. that new firm formation is pro-cyclical. He also points to the effect of falling wages in recessions, which may lower the opportunity costs for starting a business and encourage marginal types of entrepreneurship. At the same time, low-quality businesses may be removed in recessions, exerting a countervailing force on the total number of business owners.

Another study that supports the “Prosperity Pull” hypothesis is Koellinger and Thurik (2012). Using a cross-country panel of 22 OECD countries for the period 1972-2007, Koellinger and Thurik (2012) show that entrepreneurship Granger-causes the cycles of the world economy. They also show that the entrepreneurial cycle is positively affected by the national unemployment cycle. They contend that an upswing in the unemployment cycle leads to a subsequent upswing in the entrepreneurship cycle.

Brünjes and Diez (2013) partially supports the “Prosperity Pull” hypothesis. They examine the effect of growing non-farm wage employment on entrepreneurship in rural Vietnam. They distinguish between opportunity and necessity entrepreneurs. Their results show that better access to non-farm wage employment increases the likelihood of becoming an opportunity entrepreneur but has no effect on necessity entrepreneurship. They argue that the growing non-farm economy is likely to accelerate the emergence of opportunity entrepreneurship in rural areas. According to the authors, “necessity entrepreneurs are suffering from a lack of individual and household assets which pushes them into entrepreneurship regardless of non-farm job opportunities in the surrounding area”. The authors support the “Prosperity Pull” hypothesis for opportunity-driven entrepreneurship but not for necessity-driven entrepreneurship.

Figuroa-Armijos, Dabson and Johnson (2012) partially supports the “Prosperity Pull” hypothesis. The authors state that “economic recessions increase costs, risk, stress, uncertainty, and business failures while decreasing the availability of employment. Individuals who seek to become self-employed in recessionary times, whether out of need or for opportunity reasons, face difficult and unique circumstances”. They examine the effects that living in rural America and changes in the economy have on the probability of individuals engaging in necessity or opportunity entrepreneurial activities both before the recession (2005–2007) and during the recession (2008–2010). According to the authors, “the recession marked a shift in the motivation of individuals in rural America to become self-employed. There is a clear decline in opportunity entrepreneurship and an increase in necessity entrepreneurship. In all rural and mixed-rural counties, college education positively predicts opportunity entrepreneurship, whereas individuals with incomes below \$50,000 or working in a part-time job are more likely to engage in entrepreneurship driven by need”.

Yu, Orazem, and Jolly (2014) discuss the two competing views of the role of business cycles on self-employment. They discuss the research supporting the two views plus the research that shows no correlation between self-employment and unemployment rate. They show that, graduates entering the labor market during adverse economic conditions lowers the probability of starting a business for eleven years after graduation. According to the authors, individuals were less likely to self-finance their ventures, consistent with evidence that graduating in a recession persistently lowers labor market earnings over a long time frame. They support the “Prosperity Pull” hypothesis.

Blanchflower (2000) reports a negative relationship between the self-employment rate and the unemployment rate in most OECD countries. The author could find “no evidence that increases in the self-employment rate increased the real growth rate of the economy; in fact, there was even evidence of the opposite”.

Williams and Vorley (2015) examine how changes to the institutional environment in a crisis-hit economy (i.e. Greece) impact entrepreneurial activity. They show that “changes to institutions have served to limit entrepreneurial activity rather than enhance it, and that this has worsened in the midst of the crisis”. The authors argue that “this will detrimentally impact Greece's ability to navigate out of the crisis and regain competitiveness in the longer term”.

Gatewood, Patel and Shaver (2015) show that motivations for business ownership may be very different in developed economies versus developing economies.

Fritsch et al. (2014) investigate East Germany and show how institutional change (i.e. the transition from a socialist system to a western type market economy) relates to the re-emergence of entrepreneurship in East Germany. The authors contend that although the self-employment levels caught up those of West Germany, there is also “a considerable correspondence of the regional levels of self-employment before, during and after

the socialist period, suggesting the existence of a long-lasting regional entrepreneurship culture that can be regarded as an informal institution. The authors explain this by the existing hypothesis that states that informal institutions change much more slowly than formal institutions.

Some of the previous papers focus on “informal entrepreneurship”. Welter, Smallbone, and Pobel (2015) examine informal entrepreneurship. According to the authors, “since what is legal can vary considerably between countries, studies of entrepreneurship which exclude informal activity must be considered partial”. The authors argue that the distinction between formal and informal is not very clear. They conclude that while informal economic activity is often more prominent in developing countries and transition economies, it also exists in developed countries.

Siqueira, Webb and Bruton (2016) argue that firms’ decision to be informal or formal depends on industry conditions (i.e. the cost of registering and the risk reduction motive). They examine Brazilian businesses and find that “firm informality is positively associated with dynamism, yet negatively associated with munificence and concentration”.

Lee and Hung (2014) examine how the Chinese shan-zhai mobile phones have evolved from an informal economy to a formal one. The authors “emphasize three strategies—framing, aggregating, and bridging—Chinese entrepreneurs employed to mobilize support, garner resources, and increase their amount and level of legitimacy”.

3. DATA AND METHODOLOGY

This study uses a national survey by Kauffman Foundation and Thumtack.com in 2013. It is called “United States Small Business Friendliness Survey”. This survey asks small business owners their opinions on different issues including national economy and state economy. The survey also collects data on firm characteristics like operational area, firm age, firm size, and firm industry.

All of the variables in this current study are explained below. These variables for each state are computed using the individuals’ responses. The two “economy rating” variables are:

“Ratingofnationaleconomy”: “How would you rate the situation of the national economy over the past 12 months?”

(very bad: 0, somewhat bad: 1, neither good nor bad: 2, somewhat good: 3, very good: 4)

“Ratingofstateeconomy”: How would you rate the situation of your state economy in comparison to the national economy?

(substantially worse: 0, a little worse: 1, the same: 2, a little better: 3, substantially better: 4)

The firm characteristic variables are:

- “Operstates1”: operating in a single state
- “Operstates2-5”: operating in two to five states
- “Operstate>5”: operating in more than five states
- “Mostlocal”: more than 90% of sales are within 50 miles of the firm
- “Ageofbus<1”: firm is established less than a year ago
- “Ageofbus1-2”: firm is established one or two years ago
- “Ageofbus3-4”: firm is established three or four years ago
- “Ageofbus>4”: firm is established more than four years ago
- “Employees1”: firm has only one employee
- “Employees2-20”: firm has two to twenty employees
- “Employees21-50”: firm has twenty-one to fifty employees
- “Employees51-100”: firm has fifty-one to one hundred employees
- “Employees>100”: firm has more than one hundred employees

There are also “firm industry” variables. These are “business”, “care”, “events”, “instruction”, “vehicle”, “health”, “home”, “technology”, and “writing”.

For each firm characteristic variable, this study computes the percentage values for each state. For example, in Wyoming, what percentage of firms has only one employee? If fifty percent of the small businesses has only one employee, Wyoming’s “Operstates1” score is 50. Therefore, each state in the survey has a percentage value for each of these variables.

The original dataset includes states with only a few observations. Therefore, the states with insufficient data are eliminated. In the final sample, there are 41 U.S. states. These states are Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Virginia, Washington, and Wisconsin.

TABLE 1 - SHOWS THE SUMMARY STATISTICS FOR THE VARIABLES (FOR 41 STATES).

Table 1. Summary Statistics (All Variables in %)					
Variable	Mean	Median	Stdev	Min	Max
Ratingofnationaleconomy	1.34	1.34	0.14	1.06	1.65
Ratingofstateeconomy	2.05	2.04	0.44	1.13	3.00
Operstates1	64.77	67.07	12.83	33.33	85.39
Operstates2-5	27.64	26.53	13.28	8.24	66.67
Operstates>5	7.59	7.53	2.56	0.00	15.00
Mostlocal	87.66	88.24	6.02	65.00	100.00
Ageofbus<1	6.16	6.02	2.84	0.00	11.90
Ageofbus1-2	17.31	16.67	5.58	5.26	35.00
Ageofbus3-4	18.06	18.63	4.26	8.70	29.03
Ageofbus>4	58.46	57.50	7.74	45.74	84.21
Employees1	53.03	52.17	6.98	36.11	68.18
Employees2-20	45.49	45.23	6.70	31.82	63.16
Employees21-50	0.87	0.77	0.90	0.00	2.94
Employees51-100	0.21	0.00	0.37	0.00	1.61
Employees>100	0.40	0.00	0.90	0.00	5.00
Business	5.59	5.32	3.00	0.00	15.00
Care	4.48	3.88	3.05	0.00	17.39
Events	21.96	20.97	6.31	10.00	44.12
Instruction	7.04	7.26	3.32	0.00	15.00
Vehicle	2.47	2.60	1.67	0.00	5.65
Health	12.94	12.30	5.35	4.35	28.57
Home	35.03	35.42	5.54	21.74	45.00
Technology	9.73	9.52	4.97	0.00	30.00
Writing	0.77	0.47	0.91	0.00	3.66

In the empirical analyses, first the study divides these states into two groups based on the business owners' rating on the "national economy". Using the average value of the rating across the 41 states, two groups of states are created: The states where business owners have a more positive view on the "national economy" and the states where owners have a less positive view on the "national economy". Then, nonparametric tests are performed that compare the firm characteristics (i.e. operational area, firm age, firm size, and industry) across the two groups of states. Then, these 41 states are divided into two groups based on the business owners' rating on the "state economy". Again, using the average value of this rating across the 41 states, two groups of states are created: The states where business owners have a more positive view on the "state economy" and the states where owners have a less positive view on the "state economy". Then, nonparametric tests are performed that compare the firm characteristics (i.e. operational area, firm age, firm size, and industry) across these two groups of states.

4. EMPIRICAL RESULTS

Table 2 shows the results of the comparisons between the states where business owners have a high rating of the national economy and the states where business owners have a low rating of the national economy. Panel A shows that, in the states where business owners have a more positive view on the national economy, firms tend

to have more local sales when compared to the other states. While the percentage of the small firms that have mostly local sales is 89.23% in the states where owners are more optimistic on the national economy, the corresponding percentage is 85.85% in the other states (p-value of the difference=0.0716). On the other hand, when the other variables (i.e. "Operstates1", "Operstates2-5", and "Operstates>5") are compared, there is no significant difference between the two groups of states. Therefore, the two groups are different in terms of the percentage of local sales but not in terms of the number of states that operate in. Panel B shows that the two groups of states do not significantly differ in terms of their small businesses' age. None of the firm age variables ("ageofbus<1", "ageofbus1-2", "ageofbus3-4", "ageofbus>4") is significantly different across the two groups of states. Panel C shows that there are more medium-sized firms (i.e. "employees51-100") in the states where business owners have a more positive view on national economy. In these states, 0.33% of the small firms have between 51 and 100 employees. The corresponding percentage is 0.07% in the other states. The difference is statistically significant (p-value=0.0094). There is no significant difference between the two groups of states in the other "firm size" variables. In other words, there is no significant difference between the two groups in terms of small-sized or large-sized firms. Therefore, there is a relation between "optimism on economy" and the percentage of medium-sized firms.

TABLE 2 - HIGH VS LOW NATIONAL ECONOMY RATING

Variable	High-Score		Low-Score		Mann-W. p-value
	Mean	Med.	Mean	Med.	
Panel A. Operational Area					
Operstates1	65.73	67.59	63.67	67.07	0.2652
Operstates2-5	26.80	25.23	28.60	28.72	0.1733
Operstates>5	7.47	7.80	7.73	7.31	0.4844
Mostlocal	89.23	88.86	85.85	87.10	*0.0716
Panel B. Firm Age					
Ageofbus<1	6.10	6.16	6.24	5.91	0.4896
Ageofbus1-2	18.23	17.17	16.26	16.04	0.2695
Ageofbus3-4	18.09	19.09	18.03	17.65	0.1835
Ageofbus>4	57.58	57.07	59.48	57.50	0.2738
Panel C. Firm Size					
Employees1	53.63	51.93	52.33	53.65	0.4171
Employees2-20	44.71	45.48	46.39	44.72	0.4635
Employees21-50	0.90	0.85	0.84	0.57	0.3234
Employees51-100	0.33	0.08	0.07	0.00	***0.0094
Employees>100	0.43	0.00	0.38	0.00	0.3332
Panel D. Firm Industry					
Business	4.76	5.11	6.54	5.60	*0.0751
Care	4.56	3.83	4.38	4.47	0.4019
Events	22.01	21.03	21.90	20.41	0.3572
Instruction	6.49	6.25	7.67	7.45	0.1602
Vehicle	2.38	2.43	2.57	2.78	0.3617
Health	13.88	12.40	11.85	11.44	0.1634
Home	35.80	36.26	34.14	35.00	0.1700
Technology	9.47	9.52	10.04	8.87	0.4948
Writing	0.64	0.44	0.91	0.77	0.2560

Panel D looks at the “firm industry”. We are seeing that, there is no significant difference in the percentage of specific industries in each group, except for “Business” industry. Fewer firms (i.e. 4.76%) are in the “Business” industry in the states where business owners have a more positive view on national economy (versus 6.54% in the other states). Table 3 shows the results of the comparisons between the states where business owners have a high rating of the state economy and the states where business owners have a low rating of the state economy. Panel A shows that, in the states where business owners have a more positive view on state economy, firms tend to have more local sales when compared to the other states. In these states, 89.95% of the small firms have mostly local sales, while in the other states, 85.48% of the small firms have mostly local sales. The difference is statistically significant ($p\text{-value}=0.0019$). The panel also shows that there is a significant difference between the two groups of states in terms of the variable “operstates>5”. The panel shows that, in the states where business owners have a more positive view on state economy, there are fewer firms that operate in more than five states. In other words, in these states, the operational area of small firms is more limited. While 7.09% of the small firms in these states operate in more than five states, 8.07% of the small firms in the other states operate in more than five states ($p\text{-value of the difference}=0.0685$). Panel B shows that the states where owners have a more positive view on state economy and the other states do not significantly differ in terms of their small businesses’ age. None of the firm age variables (“ageofbus<1”, “ageofbus1-2”, “ageofbus3-4”, “ageofbus>4”) is significantly different across the two groups of states. Panel C shows that there is a significant difference between the two groups of states in terms of the percentage of firms with only a single employee. In the states where owners have a more positive view on state economy, there are fewer single employee firms. While 51.62% of the small firms in these states have a single employee, 54.36% of the small firms in the other states have a single employee ($p\text{-value of the difference}=0.0618$).

The panel also shows that there is a significant difference between the two groups of states in terms of the percentage of firms with 2 to 20 employees. In the states where owners have a more positive view on state economy, there are more firms with 2 to 20 employees. While 46.80% of the small firms in these states have two to twenty employees, 44.23% of the small firms in the other states have two to twenty employees ($p\text{-value of the difference}=0.0939$).

Panel D looks at the “firm industry”. In the states where owners have a more positive view on state economy, there are fewer firms in the “Events” industry and the “Technology” industry and there are more firms in the “Home” industry. While 20.42% of the small firms in these states are in the “Events” industry, 23.43% of the small firms in the other states are in the “Events” industry ($p\text{-value of the difference}=0.0983$). Similarly, while 8.52% of the small firms in these states are in the “Technology” industry, 10.89% of the small firms in the other states are in the “Technology” industry ($p\text{-value of the difference}=0.0703$). Finally, 37.77% of the small firms in these states are in the “Home” industry, while 32.42% of the small firms in the other states are in the “Home” industry ($p\text{-value of the difference}=0.0009$).

TABLE 3 - HIGH VS LOW STATE ECONOMY RATING

Variable	High-Score		Low-Score		Mann-W. p-value
	Mean	Med.	Mean	Med.	
Panel A. Operational Area					
Operstates1	65.64	67.05	63.95	68.48	0.4174
Operstates2-5	27.27	27.11	27.98	25.00	0.4688
Operstates>5	7.09	6.73	8.07	8.33	*0.0685
Mostlocal	89.95	89.61	85.48	86.85	***0.0019
Panel B. Firm Age					
Ageofbus<1	6.37	5.98	5.97	6.02	0.4173
Ageofbus1-2	17.55	17.17	17.08	16.04	0.4585
Ageofbus3-4	18.72	18.93	17.44	17.65	0.1395
Ageofbus>4	57.36	55.84	59.51	58.33	0.1338
Panel C. Firm Size					
Employees1	51.62	51.45	54.36	53.65	*0.0618
Employees2-20	46.80	45.71	44.23	44.72	*0.0939
Employees21-50	0.72	0.54	1.02	0.79	0.1947
Employees51-100	0.28	0.00	0.14	0.00	0.3108
Employees>100	0.58	0.00	0.24	0.00	0.4823
Panel D. Firm Industry					
Business	6.11	5.35	5.09	5.24	0.3477
Care	4.22	4.49	4.72	3.63	0.3920
Events	20.42	20.43	23.43	22.46	*0.0983
Instruction	7.05	6.84	7.03	7.26	0.4430
Vehicle	2.53	2.68	2.41	2.60	0.4121
Health	12.72	12.16	13.15	12.30	0.4481
Home	37.77	37.12	32.42	33.33	***0.0009
Technology	8.52	8.39	10.89	10.31	*0.0703
Writing	0.66	0.22	0.87	0.78	0.1566

5. CONCLUSIONS

This study examines the relation between small businesses' characteristics and their owners' views on the economy. The study attempts to answer the following two questions: How are firm characteristics different in states where small business owners have a more positive view on the "national economy" versus in other states? How are firm characteristics different in states where small business owners have a more positive view on the "state economy" versus in other states?

The study sheds a light on the interaction between owners' optimism on the economy and their firms' characteristics like age, industry, size, and operational area. The results here will guide policymakers during periods of declining national or state economies. Using the findings in this study, they will know the type of firms that they need to support more in troubling times.

In the analysis, the "United States Small Business Friendliness Survey" by Kauffman Foundation and Thumtack.com (i.e. the 2013 survey) is used. This survey asks small business owners about their views on the

national and the state economy. It also asks them questions about their firms' age, size, operational area, and industry.

First, the U.S. states are divided into two groups according to small business owners' views on the national economy. The first group includes the states that have a high rating of the national economy. The second group includes the states that have a low rating of the national economy. Then, the same is done for business owners' views on the state economy. Here, the first group includes the states that have a high rating of the state economy. The second group includes the states that have a low rating of the state economy.

The nonparametric tests show that, in the states where business owners have a more positive view on national economy, firms tend to be larger, but at the same time they tend to have more local sales when compared to the other states. The results also show that, in these states, firms' age and industry (except for "Business" industry) are not significantly different from firms in other states.

On the other hand, the nonparametric tests for "state economy" show that, in the states where business owners have more a positive view on state economy, firms are smaller, their operational area is smaller and they have more local sales when compared to the other states. The results also show that, in the states where business owners have a more positive view on state economy, while firms' age is not significantly different from firms in other states, three firm industry classifications are significantly different from firms in other states. The study concludes that state economy and national economy have differing effects on small businesses.

This current study advises policymakers to take precautions before troubling times by formulating policies that will support certain groups of firms more than others. They will need to use their resources more efficiently and this study will help them to allocate their resources more efficiently. Of course, as this study shows, declining national economy and declining state economy have different implications on small businesses. Therefore, any small business related policy should differentiate between the health of the national economy and the health of the state economy.

REFERENCES

- Blanchflower, D. G. (2000). Self-employment in OECD countries. *Labour economics*, 7(5), 471-505.
- Blanchflower, D. G., & Oswald, A. J. (1998). *Entrepreneurship and the youth labour market problem: a report for the OECD*. Report to OECD:Paris.
- Brünjes, J., & Diez, J. R. (2013). 'Recession push'and 'prosperity pull'entrepreneurship in a rural developing context. *Entrepreneurship & Regional Development*, 25(3-4), 251-271.
- Cagetti, M., & De Nardi, M. (2006). Entrepreneurship, frictions, and wealth. *Journal of political Economy*, 114(5), 835-870.
- Congregado, E., Golpe, A. A., & Parker, S. C. (2012). The dynamics of entrepreneurship: hysteresis, business cycles and government policy. *Empirical Economics*, 43(3), 1239-1261.

- Constant, A. F., & Zimmermann, K. F. (2004). Self-employment dynamics across the business cycle: migrants vs natives, *C.E.P.R. Discussion Paper*, Oxford University.
- Evans, D. S., & Leighton, L. S. (1989). The determinants of changes in US self-employment, 1968–1987. *Small Business Economics*, 1(2), 111-119.
- Fairlie, R. W. (2013). Entrepreneurship, economic conditions, and the great recession. *Journal of Economics & Management Strategy*, 22(2), 207-231.
- Figueroa-Armijos, M., Dabson, B., & Johnson, T. G. (2012). Rural entrepreneurship in a time of recession. *Entrepreneurship Research Journal*, 2(1).
- Fritsch, M., Bublitz, E., Sorgner, A., & Wyrwich, M. (2014). How much of a socialist legacy? The re-emergence of entrepreneurship in the East German transformation to a market economy. *Small Business Economics*, 43(2), 427-446.
- Gatewood, E. J., Patel, A., & Shaver, K. G. (2015). Career Reasons and Financial Performance of SMEs in a Developing Economy (Summary). *Frontiers of Entrepreneurship Research*, 35(5), 7.
- Holtz-Eakin, D., Joulfaian, D., & Rosen, H. S. (1994). Sticking it out: Entrepreneurial survival and liquidity constraints. *Journal of Political economy*, 102(1), 53-75.
- Kim, G., & Cho, J. (2009). Entry dynamics of self-employment in South Korea. *Entrepreneurship and regional development*, 21(3), 303-323.
- Koellinger, P. D., & Roy Thurik, A. (2012). Entrepreneurship and the business cycle. *Review of Economics and Statistics*, 94(4), 1143-1156.
- Lee, C. K., & Hung, S. C. (2014). Institutional Entrepreneurship in the Informal Economy: China's Shan-Zhai Mobile Phones. *Strategic Entrepreneurship Journal*, 8(1), 16-36.
- Moore, C. S., & Mueller, R. E. (2002). The transition from paid to self-employment in Canada: the importance of push factors. *Applied Economics*, 34(6), 791-801.
- Parker, S. C. (2009). *The economics of entrepreneurship*. Cambridge University Press.
- Rampini, A. A. (2004). Entrepreneurial activity, risk, and the business cycle. *Journal of Monetary Economics*, 51(3), 555-573.
- Shane, S. (2011). *The great recession's effect on entrepreneurship*. Economic Commentary Federal Reserve Bank of Cleveland.
- Siqueira, A. C. O., Webb, J. W., & Bruton, G. D. (2016). Informal entrepreneurship and industry conditions. *Entrepreneurship Theory and Practice*, 40(1), 177-200.
- Welter, F., Smallbone, D., & Pobol, A. (2015). Entrepreneurial activity in the informal economy: a missing piece of the entrepreneurship jigsaw puzzle. *Entrepreneurship & Regional Development*, 27(5-6), 292-306.
- Williams, N., & Vorley, T. (2015). The impact of institutional change on entrepreneurship in a crisis-hit economy: the case of Greece. *Entrepreneurship & Regional Development*, 27(1-2), 28-49.
- Yu, L., Orazem, P. F., & Jolly, R. W. (2014). Entrepreneurship over the business cycle. *Economics Letters*, 122(2), 105-110.