

# **The Role of Institutions of Private Property Rights and Money in Entrepreneurial Discovery**

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**Abstract:** This paper examines the influence of private property rights and monies on entrepreneurial discovery. A framework is presented and tested, which views these two institutions as key determinants of entrepreneurial discovery. Using several measures as proxies for their influence, two variables, minimum wage legislation and percentage government employment, support the idea that private property rights and monies are associated with entrepreneurial discovery as indicated by business starts, failures, patents and bankruptcy.

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# **The Role of Institutions of Private Property Rights and Money in Entrepreneurial Discovery**

## **Introduction**

The purpose of this paper is to study whether the strength of institutions of private property rights and monies may be used to explain levels of “entrepreneurial discovery.” The term “entrepreneurial discovery” is used to emphasize the application of a framework rooted in the works of Friedrich A. Hayek, Ludwig von Mises, and Israel M. Kirzner. The framework presented views the above two institutions, private property and monies, as key determinants of entrepreneurial discovery.

Using several measures as proxies for their influence two variables are found that support the framework - minimum wage and percentage government employment. The former is used as a proxy for greater freedom to enter the work force and the latter offers a measure of the extent to which people in a particular state are engaged in activities not driven by the private property rights arguments. Indicators of entrepreneurship are business starts, failures, patents, and bankruptcies.

The paper is organized into five sections. The first section defines entrepreneurial discovery and its relation to both private property rights and monies, according to the theoretical foundation presented. The second and third sections make explicit the hypotheses tested in the paper and describe the methodology used for the testing. The fourth section presents analysis and results. A final section offers concluding remarks.

## **Entrepreneurial Discovery**

The term “entrepreneurial discovery” is used in this paper to emphasize entrepreneurship as the driving force of market activity. The framework is rooted in Ludwig Mises’ works on entrepreneurship and Friedrich A. Hayek’s work on knowledge discovery. Drawing also from Israel M. Kirzner’s work on entrepreneurship, this section illustrates how the works of Hayek and Mises provide a framework where institutions of private property and monies are regarded as key facilitators of entrepreneurial discovery.

## **Mises on Entrepreneurship**

Mises’ notion of entrepreneurship carries three distinct features. First, he views entrepreneurship as a function that is not confined to a particular group or segment of society. Rather, it is a term that encompasses a function applying to decision-making, universally. Mises writes, “Economics in speaking of entrepreneurs, has in view not men, but a definite function. This function is not a particular feature of a special group or class of men: it is inherent in every action and burdens every actor” (Mises 1996, 252-3).

The second feature is his definition of the entrepreneurial function. Mises equates entrepreneurship with economic decision-making under conditions of uncertainty. According to Mises, this follows deductively from the fact that all economic decision-making takes place in time (Mises 1996, 253).

The third feature is his belief that the entrepreneurial function is the ultimate source of change and progress. This is in sharp contrast to neoclassical economics, where the search for explanations about entrepreneurial behavior are assumed away by characterizing decision-making as mechanical, timeless and risk free (i.e., the Walrasian auctioneer). Explanations of the market process, according to Mises, have to start with an understanding of what drives and facilitates entrepreneurial decision-making. Mises' focus is on the influence of several broadly defined institutions on entrepreneurial decision-making.

In light of the work of Mises, private property rights and monies are viewed as key institutional prerequisites for entrepreneurial activity (and, thus, also for progress to occur). The former refers to the right to own private property. At the extreme, such rights assert that a person can do whatever he or she wishes with their own property, as long as the actions do not infringe upon others. According to Mises, this right is a fundamental requirement for entrepreneurial action. In Mises' view, private property stimulates such action by assuring the existence of market conditions where entrepreneurial actions are directly connected to the individual entrepreneur's economic well-being. As such, it provides, "...people a reason to act responsible and to take on initiatives (Mises 1935)."

Monies also take an important role in entrepreneurial action. Monies allow entrepreneurs to anticipate and calculate profit/loss scenarios, based on individual subjective judgments and past prices. According to Mises "...every single step of entrepreneurial activities is subject to scrutiny by monetary calculation" (Mises 1996, 229). Without pricing, it is, according to Mises, "impossible" for the human mind to calculate/process relatively complex "profit or loss" scenarios of production (Mises 1935, 96). In the absence of monies, entrepreneurs would be forced to make resource allocation decisions about production processes, "that are relatively short and the expense and income entailed can be easily gauged (Mises 1935)." Mises goes as far as to say that the economy would always remain in a "primitive" state of development in the absence of a monetary system.

A prerequisite for calculation is the presence of an appraisalment process, which Mises describes as the process where the aggregate effects of individual valuations are transformed into objective prices that represent market participants' anticipations of expected facts (Mises 1996, 332). Interference with this process, often by government, will result in less transparent prices and thus, sub-optimal calculation. The formation of transparent pricing requires market activity where market participants have a free will to reveal their preferences for particular goods at particular prices. For this effort, the assumption is that economic freedoms allow entrepreneurs to better calculate profit/loss scenarios than in a situation defined by government intervention and rules, such as controls on market entry, closed shops for labor unions, and minimum wages.

### **The Contributions of Hayek to Mises' Entrepreneurial Framework**

Key elements of Hayek's work reinforce Mises' account of entrepreneurship. Most important, it adds nuance to Mises' account of the process by which entrepreneurial activity moves an economy toward equilibrium. Hayek makes two key contributions in this regard. The first arises from his treatment of disequilibrium as a knowledge problem. More specifically, Hayek describes disequilibrium as a state where there remains undiscovered knowledge. Therefore, explanations of market progress hinge upon

explanations of how knowledge is acquired by market participants. Hayek writes, "...if we want to make the assertion that, under certain conditions, people will approach (the equilibrium state), we must explain by what process they will acquire the necessary knowledge (Hayek 1948, 46 (quoted in (Kirzner 1997)))." Hayek describes this process as a "trial and error" discovery procedure (Hayek 1979a). He uses the term "trial and error" to emphasize that progress occurs as new knowledge emerges from both successful and failed entrepreneurial attempts. He writes that this procedure leads to the discovery of previously unknown facts that, without the discovery, "...would not be known to anyone, or at least would not be utilized" (Hayek 1979a, 179). The end point of the discovery procedure is represented in the hypothetical scenario of equilibrium, which is the point at which all facts have been discovered and are being utilized in an economy.

Hayek's work also reinforces the role that Mises attributes to the availability of monies as a medium of exchange. Monies (or some other generally acceptable medium of exchange) are necessary for appraisalment. As already noted, Mises defines appraisalment as a process where the aggregate effects of individual valuations are transformed into objective prices that represent the market participants' aggregate anticipations of expected facts (Mises 1996). Hayek adds nuance to the resulting prices, by referring to prices as carriers of knowledge (see, [Hayek 1979b]). Hayek views prices as capable of absorbing both scientific and private knowledge. Private knowledge refers to knowledge of particular circumstances. It is dispersed across space and resides in the individual. Price formation incorporates Hayek's notion of private knowledge in that it involves actions that reveals people's preferences (i.e., they reveal their private knowledge via market participation) for particular goods and services (both first and secondary order).

According to Hayek, it is the ability of a society to utilize private knowledge that determines a society's economic order (Hayek 1979b, 236). Hayek states the importance of the price system as follows:

"...there always are many facts which the individual conductor of a business ought to know in order to be able to make the right decisions but which we can never know directly. But among the alternative possibilities for coping with these difficulties – either conveying to a central directing authority all the relevant information possessed by the different individuals, or communicating to the separate individuals as much as possible of the information that is relevant for their decisions – we have found a solution for the second task only: the market and the competitive determination of prices have provided a procedure, by which it is possible to convey to the individual managers of productive units as much information in condensed form as they need in order to fit their plans into the order of the rest of the system." (Hayek 1979b, 236)

### **Kirzner on Entrepreneurial Discovery**

Kirzner coined the term entrepreneurial discovery (see: Kirzner 1980, Kirzner 1997), by integrating and extending upon the work of Hayek and Mises. His resulting framework shares many of the above assertions, including (a) that the entrepreneur ought to be placed at the center of economic analysis, (b) that there are certain institutional prerequisites for entrepreneurial activity to take place, and (c) that prices function as carriers of knowledge. These assertions are made explicit in Kirzner's view of the

economy as moving toward equilibrium as a result of exploitation by entrepreneurs of unexploited opportunities. Consistent with Hayek, these opportunities are communicated via prices. Consistent with Mises, they also provide entrepreneurs with a reason to act.

In addition, Kirzner has also expanded on the works of Hayek and Mises, by developing several terms that encompass tenets of Hayek's and Mises'. These terms include "alertness," "sheer ignorance" and "boldness" (Kirzner, 1993, 1997). Alertness is the most fundamental quality of the entrepreneur. It refers to the ability of an entrepreneur to notice profitable opportunities that no prior actor has recognized. Sheer ignorance is the basis of error. It refers to knowing a given piece of information but also of not knowing that one does not know it. Sheer ignorance is revealed through price discrepancies in the market place. Finally, boldness refers to the willingness to act on a profitable opportunity. Kirzner writes: "...without boldness...one shrinks back from undertaking entrepreneurial ventures (Kirzner and Sautet 2006)."

### **Hypotheses**

As noted, the objective of this paper is to examine whether the strength of institutions of private property and monies may be used to explain levels of "entrepreneurial discovery." Two hypotheses are proposed. The first hypothesis deals with the presumed role of prices in revealing opportunities for entrepreneurs. Explicitly stated, price transparency is hypothesized to be positively related to levels of entrepreneurial discovery, on the grounds that such transparency facilitates the discovery of unexhausted profitable opportunities. Conversely, the counter presumption is that low levels of price transparency weakens entrepreneurial discovery, given that the pricing system will provide entrepreneurs with lower quality information about profitable opportunities. Considering the higher level of uncertainty and risk that goes along with a less transparent price system, it is expected that entrepreneurs exhibit not only less *boldness* under conditions of low level price transparency (i.e., due to the higher risk involved), but also that entrepreneurial discoveries will fail more frequently.

The second hypothesis relates to the private property argument. Property rights allow for people to be entrepreneurial. As such, it is hypothesized that the strength in private property rights is positively related to entrepreneurial discovery. In accordance with the above description of private property rights, these differences in strength are exhibited by the extent to which people have the right to use and acquire private property for purposes of seeking out their interests. Several possible examples may be identified where these rights are compromised and interfered with. Two such examples include differences in tax structures (i.e., different fractions of property acquired is routed back to the entrepreneur) and differences in the powers of state governments surrounding issues of eminent domain.

### **Methodology**

#### **From A Priorism to Stochastic Approaches**

Since the above framework is rooted in a foundation that has evolved, using the deductive praxeological method, stochastic methods may be argued to be inconsistent with the above theories. Economics, according to those who favor the praxeological method, is about understanding the essence of human action, which implies a focus on

identifying the axioms of human action and explaining how these are linked to particular contexts (Stalebrink Under review). It is not about quantities (Yeager (1997: 155). Yeager, however, notes the possibility of making a transition from a priorism to stochastic analysis (Yeager, 1997: 154). Yeager (1997: 157) quotes Herbert Simon when writing that hypothesis testing is better than speculation. This paper share Yeager's stochastic direction.

### **Unit of Analysis**

The state (that is, states in the US) is the level of analysis. While states are not often considered regions, the states can be a viable unit of analysis in that they have considerable power to legislate, and thus influence, entrepreneurial activity. According to the 10<sup>th</sup> Amendment of the US Constitution:

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

### **Dependent and Independent Variables**

At the state level, a number of variables can be used to assess entrepreneurial discovery. For this study, business starts, business failure, patents, and bankruptcies are the dependent variables. These indicate the energy that goes into entrepreneurial discovery, considering both the initiative and failure. Lags and change over time in any of these business measures are also included to encompass aspects of business success and failure as the time-based learning process as argued by Mises.

The independent variables, which measures the ability to own private property and set prices without government interference (i.e., a component that reduces price transparency), represents a challenge. Broadly, these are considered economic freedoms. The economic freedom data used to represent these concepts comes from the Fraser Institute in Canada and the National Center for Policy Analysis in the United States. At a macro level, four economic freedom indicators capture the notion of rights to seek one's own interest. All come from the category called labor market freedom.

The first is economic freedom vis-à-vis occupational licensing. While not a direct measure of either the right to own private property or limited restrictions on pricing, economic freedom on occupational licensing should capture the right to "property" without state or associational restrictions or rent seeking.

The second indicator is union density, which represents the freedom to move in and out of businesses and labor markets, without union restrictions such as seniority. It should relate to entrepreneurial discovery as indicated by business starts, failures, patents, and bankruptcies. This indicator should also get at price transparency in that a strong union presence is likely to lead to interference with the appraisal process of profits and loses. Perhaps most important is the power of unions to establish central salary bargaining. Given the proposed framework, an inverse relation is expected between entrepreneurial discovery and union density. That is, high level of union density is expected to adversely affect entrepreneurial discovery.

The third independent variable is government employment as a percentage of total state employment. This indicator offers a measure of the extent to which people in a particular state are engaged in activities that are not driven by private property rights arguments.

Rather, economic decisions are made about public property. Worded differently, if an individual's economic decision leads to organizational success (e.g., profit), he/she is not necessarily rewarded with additions to his/her private property. An inverse relation is therefore expected between entrepreneurial discovery and government employment.

The fourth variable is minimum wage. In the context of labor market freedom, states with "low" minimum wages relative to GDP are likely have more economic freedom in that this represents greater freedom to enter the work force. This variable is also an indicator of price transparency in that minimum wage requirements directly interfere with the appraisal process for calculating profits and losses. An inverse relation is therefore expected between entrepreneurial discovery and the level of the minimum wage requirement. The higher the minimum wage requirement, the lower the level of entrepreneurial discovery.

All four Fraser variables are indexed to state GDP. (Fraser, 2005: 7-8). The index goes from 0 to 10 (Fraser, 2005: 6), with higher scores indicating more economic freedom.

The business starts and failures data are from 1995 (Dun and Bradstreet). Since more recent data on starts and failures are not readily available (the Dun and Bradstreet data are proprietary until released), the labor market freedom data must come from the same period and data from the years 1989, 1993, 1994 and 1995. These years are utilized to examine static, lagged effects, and change over time.

The dependent or enterprise variables are scaled to population so that each is a per capita measure. On the independent or labor market side, GDP is used to scale each variable, such that a 10 indicates complete economic freedom while a 0 shows essentially none. Consider minimum wages where a low minimum wage relative to GDP represents greater freedom to enter the work force. A \$7 minimum wage in a wealthy state is less imposing than a \$7 wage in a poor one. Similarly, the percentage that government employment is of total state employment follows this interpretation where a high percentage (theoretically, beyond the provisions of public goods and protect, Fraser, 2005:8) of government employment is associated with low labor market freedom.

## **Model**

An ordinary least squares regression (OLS) model is used to offer preliminary insight to the above hypotheses. This model has business starts, failures, patents, and bankruptcies as the dependent variables and the labor market freedom variables as independent variable.

## **Data Analysis Results**

The findings first report basic descriptive statistics for the Labor Market Freedom and Entrepreneurial Activity variables. They then discuss bivariate correlations to address questions such as multicollinearity and whether the items in the dependent variables appear to assess separate dimensions of labor market freedom. The four dependent variables - business starts, business failures, patents and bankruptcies - are conceptualized as two sets. In the first, business starts and business failures are viewed as informal entrepreneurial trials and errors. A firm starts and it may fail. In the second set, patents and bankruptcies are viewed as formal success and failures. The sets, as in set theory, may overlap as; for example, a failure could also be a bankruptcy.

## Correlation Matrices

### *Dependent Variables*

The above framework would predict that both business starts and failures are part of the entrepreneurial discovery process. In the pair wise correlations below, the Pearson's product moment coefficient for starts and failures is .42 ( $p < .05$ ). This correlation is high enough to support the notion of an "energetic" process where starts and failures are interrelated, but not so closely related that they would appear to measure the same dimension of labor market freedom. Similarly, business starts and patents are correlated at .55 ( $p < .05$ ) and the start-bankruptcy pair has a coefficient of .27 ( $p = .06$ ). The only negative correlation is between patents and bankruptcies (-.03), too close to 0 to make any inferences. Overall, the correlations are moderate at best and only two out of the six are statistically significant. This suggests that the measures tend to be independent of one another and capture various facets of entrepreneurial discovery.

#### Dependent Variables, 1995, except Patents (1996)

	Business starts	Business failures	Patents	Bankruptcies
Business starts	1			
Business failures	.42*	1		
Patents	.55*	.21	1	
Bankruptcies	.27	.17	-.03	1

\*Significant at the .05 level

#### Independent Variables, 1995 only (all are standardized to state GDP); Correlations among the independent variables. The variable denoting "Rust Belt" states is dichotomous and is excluded from the table.

	Min. wage	Govt. empl.	Occup. Licensing	Union density	Sharkansky index
Min. wage	1				
Govt. empl.	-.22	1			
Occup. Licensing	.11	-.02	1		
Union density	.005	.22		1	

\* Significant at the .05 level

With respect to the four independent variables representing labor market freedom, one would hope that they capture different dimensions. Since these four variables are weakly correlated, the expectation that each measure taps a different aspect of labor market freedom is relatively well supported by the data.

**Correlation Matrix for Dependent and Independent Variables**

	Bus starts	Bus failures	Patents	Bankruptcies
Min. wage	.20	.023	-.10	.35*
Govt. empl	.33*	.13	.44**	.15
Occup. Licensing	.05	-.10	.16	-.087
Union density	.09	.15	.06	.19

\* Significant at the .05 level

In viewing this correlation matrix for the dependent variables with the independent variables, patents and bankruptcies, that is, formal successes and failures, yield the best correlations with the measures of labor market freedom. The Fraser index for percentage government employment has a significant .44 correlation for patents. For bankruptcies, the minimum wage index correlates at .35. Taking the trial and error indicators of entrepreneurship, namely, starts and failures, only starts have a correlation with labor market freedom and then only with the index for percentage government employment at .33.

**Summary of Findings**

OLS analysis, 1995 for starts, failures and bankruptcies and 1996, patents; Fraser Labor Market Freedom, static, 1-year lag, 2-year lag, 3-year lag and 6-year lag

OLS results	Business starts	Business failures	Patents	Bankruptcies
Minimum wage	+ / + / + / 0	0 / 0 / 0 / 0	0 / 0 / 0 / 0	+ / + / + / 0
Government employment	+ / 0 / 0 / 0	0 / 0 / 0 / 0	+ / + / + / +	0 / 0 / 0 / 0
Union density	0 / + / + / 0	0 / 0 / 0 / 0	0 / + / + / 0	0 / 0 / 0 / 0
Occupational licensing	0 / 0 / 0 / 0	0 / 0 / 0 / 0	0 / 0 / 0 / 0	0 / 0 / 0 / 0

+ indicates statistically significant; 0 not statistically significant (1995/1994/1993/1989)

This summary will be elaborated in the following paragraphs. Overall, minimum wage legislation is the best predictor of the entrepreneurial measures with six of sixteen anticipated measures. Close behind is government employment, with five of sixteen. Union density has four of sixteen.

*Enterprise as trial and error, business starts and failures*

The analyses of business starts and failures are static (1995 or 1996 with 1995) or lagged (1994, 1993 and 1989), and assessed in terms of changes over time. The dependent or entrepreneurial discovery variables are from 1995, except for patents (1996). The static analysis applies multivariate regression (OLS) models with 1995 independent or labor market freedom variables to explain the dependent variables.

For the business starts regression model, the p score for the model as a whole closely approaches statistical significance (F=2.57, p=.051). Keeping in mind the p value of .051, (where p = .05 desirable) two of the economic freedom-labor market freedom variables, those for minimum wage and percentage government employment, are associated in the

positive direction proposed by the above framework. That is, as labor market freedom moves upward toward greater freedom, states tend to experience more entrepreneurial discovery, in this case, business starts. For minimum wages, the regression coefficient is also positive ( $b=.030$ ) and statistically significant ( $p=.048$ ). Government employment as a percentage of total employment also has the expected relationship with business starts. More starts ( $b=.076$ ,  $p=.008$ ) are found when the percentage of government employee is low relative to total employment. When business starts are modeled with a one-year lag (1994), the model as a whole is statistically significant ( $F=3.66$ ,  $p=.012$ ) and, in this case, minimum wage and union density are positive and statistically significant. For the one-year lag, as compared to the static model, union density appears and government employment disappears as significant factors.

The lagged perspective may eventually prove valuable, although for the two year lag (1993), the number of significant explanatory variables stays at two out of four. Both minimum wage and union density are statistically significant, as is the model itself. For 1989, a six year lag, the OLS model is statistically significant ( $F=2.60$ ,  $p=.049$ ), although none of the individual independent variables meet the .05 test. The decline in the number of statistically significant coefficients -from two in 1995 and 1994 to none in 1989- suggests that the impact of minimum wage, government employment, and union density decrease over time. The further out these economic freedom indicators are from business starts, the smaller their impact.

To continue exploring the notion of this decrease, the change in the independent variable and the dependent variables (i.e., business starts and failures) was examined for three change periods: short, mid, and long range. For these two dependent variables, their changes over the 1990-1995 period were associated with the 1993 to 1995 changes (short) in the four independent variables. A mid range period related 1990-1995 changes in entrepreneurship to changes in the economic freedom indexes over the 1989-1993 period. Finally, the 1990-1995 changes in entrepreneurship were related to changes in the four economic freedom measures from 1989 to 1995 (a long term period). If the explanatory power of the independent variables decreases systematically over time, then the shorter change periods should show less decrease than the longer ones. However, no clear pattern of decrease emerged in the regression models. In the short term, 1993-1995, the Fraser index for percentage government employment meets the .05 level for business starts. The same is true for the long period, 1989 to 1995.

It is possible that change is not a decrease indicator as might be the case with lag. Change that is sufficiently and systematically prolonged may capture distinctive political periods. For example, Fraser's 2005 report (in this case using a Presidential election perspective which may reflect behavior at the state level) examines from 1981 to 2002 and finds increasing economic freedom during the Reagan administrations, 1981 to 1989. That freedom then decreases during Bush's presidency, 1990-1994 because, according to Fraser, of Bush's tax increases. Economic freedoms again moved upward again during the Presidencies of Bill Clinton and George W. Bush. One possible reason for the increase between 1994 and the late 1990s is the increasing impact of global capital markets and the greater attention to neoclassical liberalism and its emphasis on markets over governments. Clinton did try to "end welfare as we know it." More exploration is

needed on the timing of the decay in the entrepreneurship-labor market freedom relationship and its relationship to political trends.

### *Business Failures*

If business starts and failures are part of an entrepreneurial trial and error process, the two measures should be related as suggested by their .42 correlation coefficient. However, the four economic freedom measures that help explain business starts are unable to explain business failures. None of the independent variables found to be significant in any of the models exploring business starts were statistically significant in any of the analyses of business failures. In fact, it is the only set of OLS models of entrepreneurial discovery to lack any statistical significance. In other words, business failures, when predicted by economic freedom, appear to be random.

### *Formal Success and Failure*

The general idea that economic freedom, under the above theoretical framework, generates both success and failure may be recouped when success and failure are examined from a more formal perspective of business success and failure. Here, patents are viewed as formal successes and bankruptcies as formal failures; both are linked to government involvement in the labor market. While only the business starts findings followed the expectations of success and failure being a product of economic freedom, both patents and bankruptcies support the notion that entrepreneurship encompasses both success and failure. The caveat is that patents show more statistical significance than bankruptcies, although bankruptcies only miss the .05 level by a small margin.

### *Patents (1996 Data)*

When the results of the static model are considered (1996 dependent with 1995 independent variables), the OLS model is significant ( $F=3.31$ ,  $p=.018$ ) with the Fraser index for percentage government employees the only factor within the .05 level ( $p=.002$ ). The lag back to 1994 provides the same results, with the percentage government employees associated with a  $p$  value of .5. Lagging back to 1993, the percentage government employees is no longer a significant factor but union density emerges at the .05 level. When lagged to 1989, the OLS model remains significant ( $F=4.05$ ,  $p=.007$ ) and the percentage government employees re-enters ( $p=.044$ ). Cumulatively, these findings indicate that having small (in a relative sense) government sector employment is important to entrepreneurial starts and patents. The difference is that the lag for patents does not show decay as is the case with business starts.

### *Bankruptcies*

Of the four economic freedom variables, for the static model for 1995 ( $F=2.701$ ,  $p=.042$ ), only minimum wage is statistically significant ( $p=.04$ ). A lag back to 1994 shows evidence of a fade. Minimum wage remains significant, but the model itself only approximates statistical significance ( $p=.052$ ). An almost complete fade continues for the 1993 and 1989 lag. Either the model (1989) or the variables (1993) are insignificant.

## **Patterns**

What patterns emerge for this analysis? In viewing the Summary of Findings table, minimum wage legislation shows statistically significant p values for six out of a possible sixteen chances as seen the table below. It is followed by government employment with five, and union density with four.

With respect to business starts, minimum wage legislation dominates. Only in the six year lag does minimum wage legislation not show for business starts. This finding implies that starting a business may vary with rather limited minimum wage legislation. Again, looking to business starts, union density is important in two of the four periods. Both minimum wage and union density may relate to business starts in that labor is not expensive. This finding does not answer the question of burden on labor.

For patents, the key Fraser index is percentage government employment (four out of four periods), meaning the lower the percentage of government employment within a state generates more patents. Union density also enters with two of four periods.

For bankruptcies, only minimum wage legislation enters the OLS model. While limits on minimum wages might assist business starts, it goes with more bankruptcies.

Decay sets in by 1989 for all of the business measures except patents. Even looking six years back, a low percentage of government employees relates to patents.

## **Conclusion and Future Research**

This paper has examined the influence of private property rights and monies on levels of entrepreneurial discovery. Using several measures as proxies for their influence two variables are found that support the framework - minimum wage and percentage government employment. The former represents greater freedom to enter the work force and is also an indicator of price transparency in that minimum wage requirements directly interfere with the appraisal process. The latter indicator offers a measure of the extent to which people in a particular state are engaged in activities that are not driven by private property rights arguments. The analysis supports the expected relationship by indicating that, as labor market freedom increases, states tend to experience more entrepreneurial discovery, in this case, business starts.

The results also indicate that entrepreneurial activity is as likely to fail as it is to succeed, although indicators of success, business starts, and patents outshine measures of failure, namely business failure. Economic freedom as posed by the Fraser index for labor market freedom does relate to business starts and patents.

The findings contrast with many other theories, including those surrounding traditional public administration and public policy, aimed to increase successes. Both of these assume that sufficient information can be collected centrally by governments to increase the probability of success to a point where success is more common.

At least with this preliminary analysis, the perspective offered by the above framework on economic freedom holds for selected measures of business success and failure. More analysis is needed to test the model's robustness. For instance, are there other factors that are shaping the relationship between economic freedom and enterprise?

Other models with more distinct regional boundaries may also be needed. The challenge is to identify the qualities of region that are important to entrepreneurial discovery. This study produces support for the state as a level of analysis. Is it possible that states are supplanting regions as generators of business ideas? Taking only states does not include traditional regional science issues of agglomeration and spillover effects. These factors need to be integrated in any study using states.

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