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ECONOMIC MOBILITY, BUSINESS DYNAMISM, AND BARRIERS TO ENTREPRENEURSHIP:

A PRELIMINARY EXAMINATION

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Key Findings:

- Entrepreneurship and economic mobility have both been discussed in the academic literature, but the *environment for entrepreneurship* warrants closer examination.
- While the United States, compared to other countries, scores quite highly on the regulation component of economic freedom, it does not score nearly as high on some of the crucial components of regulation (such as impartial public bureaucracy and private sector credit).
- I find strong correlations between the environment for entrepreneurship and economic mobility across countries, especially regarding business and labor market regulations.
- Business dynamism strongly correlates to both relative and absolute mobility within the United States.
- It is my hope that this is a starting point to the discussion about entrepreneurship, the barriers to entrepreneurship, and economic mobility.

INTRODUCTION

Determining the causes of mobility is one of the more interesting and crucial topics facing society today. Even though the populace still sees "the American Dream" as obtainable,[1] there is certainly room for improvement. Throughout the world, too, the ability to better one's life is something to strive towards. In a previous paper, I addressed the need for focusing on the rule of law and protection of property rights as being crucial for income and social mobility.[2] To some extent, it can be seen as a necessary (but likely insufficient) condition for growth and prosperity. If a competent rule of law is not established within a society, then other aspects that might be important for mobility (like education, family, culture, or regulatory environment) will not have their full potential effect.

In this paper, I will focus on the regulatory environment within the United States, as well as across countries. If we think of the different theoretical aspects of institutional quality, obviously each component would not impact mobility to the same extent. The regulatory environment, or what I will call for the purposes of this paper the "environment for entrepreneurship," seems to be one of the more important for impacting mobility. There are a few reasons for this. For an entrepreneur, the easier it is to start a business (even a small or single-employee firm), the more likely they are to do so and increase their own well-being. But this also has an impact on their potential employees and customers. Their customers benefit from their services, and their employees also benefit as they would not leave their current job to join the new company if it were not an overall better opportunity.

The environment for entrepreneurship is crucial because a job is the most important vehicle to climb the income ladder. It represents most people's main source of income, according to a 2021 survey conducted by the Archbridge Institute.[3] The same survey showed that people also think that a strong labor market and economic growth are the main preconditions to enable greater mobility. In that sense, if we don't have a healthy environment for entrepreneurship, we likely will not have the conditions necessary for more job creation.

One of the major aspects of market economies is finding new ways to productively allocate resources to more productive uses. Entrepreneurs take on the risk of allocating these resources in new manners that *may or may not* pan out. Given the relationship between entrepreneurship and economic growth, it is clear why a dynamic entrepreneurial environment is important for economies. As has been discussed much in the literature, overall business dynamism appears to be decreasing in the United States. While this is important and worthy of research, I will instead focus on the *differences* between states and countries in their entrepreneurial environments and potential impacts on income mobility. Here, I examine the literature that assesses the relationship between mobility and the regulatory environment. In an attempt to prod future researchers to focus on this topic, I then provide some simple correlations between the environment for entrepreneurship and mobility. These results are not meant to be the final say on the matter, but instead a preliminary examination of the most basic evidence relating mobility and the barriers to entrepreneurship.

LITERATURE REVIEW

Unlike the research on mobility and legal systems, there is a noticeably larger body of literature on the relationship between entrepreneurship, the entrepreneurial environment, and income and social mobility. For instance, Christopher Boudreaux[4] finds that the institutional environment (which includes the regulatory environment) relates to entrepreneurship and is the main channel through which institutional quality impacts mobility.

If entrepreneurship is important for mobility, it is likely through entrepreneurship's impact on economic growth. There is a clear connection from entrepreneurship to economic development, both at a state and cross-country level. Kreft and Sobel[5] argue that entrepreneurial activity is the driving force behind why economic freedom leads to economic growth. For instance, Reynolds, Hay, and Camp[6] find that one-third of the difference in national growth rates comes from differences in entrepreneurial activity, while Zacharakis, Bygrave, and Shepherd[7] find that half of the differences in growth can be attributed to entrepreneurship. Hall and Sobel,[8] using regional data, argue that entrepreneurship is the mechanism through which institutions impact growth. Sobel[9] empirically estimates the theory put forth by Baumol[10] to make the claim that specifically productive entrepreneurship is an essential source of economic growth. In this paper, I provide some introductory evidence linking the barriers to entrepreneurship and mobility.

There is also some empirical literature studying the relationship between various topics that correlate to entrepreneurship. Kreft and Sobel (in a previously cited paper) find that increases in a state's economic freedom are highly correlated with entrepreneurial activity in that state. However, Powell and Weber[11] find no dependable correlation between a state's economic freedom and three of five different measurements of entrepreneurship. In their study, economic freedom was highly correlated with only measures of business birth rates and patents per capita. Murphy and Weber[12] find a correlation between immigrant population and business failures ten years later. They use business failure as a measurement of entrepreneurship, following a working paper by Weber[13] who claimed that this measurement could properly measure Schumpeter's vision of entrepreneurship as creative destruction.

Within the United States, there has been much talk about the decline of business dynamism, which has been discussed at great lengths in a string of papers by Ufuk Akcigit and Sina Ates.[14] They specifically point to ten facts in their papers that help explain this decline, most of which are either directly or indirectly related to the environment for entrepreneurship. They can be summarized into two groups. The first group (facts one through five) deals with "market power" that can impact new or growing firms: market concentration has risen, average markups have increased, average profits have increased, and the labor share of output has gone down. Market concentration growth (which in turn increases markups and profits) is closely related to regulatory burdens that make it more difficult for firms to compete. Rules and regulations are often lobbied for *by incumbent firms* in order to stifle competition. Similarly, as market power is increased for firms, a greater share of output will go to the hands of capital owners rather than labor, as labor has relatively fewer options. Young and Lawson[15] find, for instance, that countries with greater levels of economic freedom (which includes a measure of regulatory burden) have a greater share of output going to labor. The second group (facts six through ten) can be broadly summarized as the decline of *productivity and activity*; labor productivity gap between frontier and laggard firms has risen, firm entry rate and share of young firms in economic activity have declined, job reallocation has slowed down, dispersion of firm growth has decreased, and productivity growth has fallen (except for temporary bursts in the mid-1990s into mid-2000s). Productivity gaps between frontier and growing firms is concerning, according to Andrews, Criscuolo, and Gal,[16] since *overall* productivity growth is slower in industries that experience this gap. Again, if regulatory

burdens are such that larger firms are able to squelch smaller firms' ability to grow, then we can expect to see this gap. This speaks to job reallocation as well, since if smaller firms have a harder time becoming larger firms, then there are fewer options for workers to leave for better opportunities.

As Akcigit and Ates point out, in "unleveled sectors" the stronger firm has a greater productivity level and will therefore receive greater market share, which allows them to expend more on research and development. This increase in research and development can perhaps further exacerbate this gap between the productive and less productive (or growing) firms.

However, there is much debate explaining the causes of this decline in business dynamism. I will briefly mention a few theories. Gordon,[17] for starters, claims that the economy is mostly out of "low-hanging fruit," making innovation harder to achieve. This is similar to a new Vollrath[18] book on stagnant economies. Economies that have already experienced greater levels of growth and innovation have a harder time continuing to grow at the same level. Shifts in demographics, particularly as the baby boomer generation retires, is also seen as a potential culprit.[19] "Mom and pop" stores have become less profitable, which can help explain the decline in business growth.[20] This could be due to the regulatory environment, but it's also a consequence of rising incomes. As incomes rise, the opportunity cost of embarking on a risky endeavor (like a small business) also rises.

The declining business dynamism in the United States is even more troubling when you consider the fact (as pointed out by Hathaway and Litan[21] in a Brookings Institute paper) that business failure rates *have not dropped*, but new firm formation has. This means that firms are closing at similar rates but are not being replaced by as many new ones. The aforementioned Brookings Institute paper shows that this decline is occurring in every state (and all but one metropolitan area), so even places that are associated with growth and activity like Dallas and Nashville are still suffering from the same lack of dynamism. While not the purpose of this study, their paper argues that increasing immigration via permanent work visas (as immigrants are found to be almost twice as likely to start a business as natives) is one clear path towards reversing the course.

This is of course not to say that these theories are incorrect by any stretch, but instead that the regulatory environment is another aspect that should be further examined in this vein. Previous work in this field includes studies by Haltiwanger and others,[22] who show that stricter hiring and firing regulations have an impact on job reallocation. Similarly, Bessen[23] finds that political rent-seeking is associated with rising corporate profit margins.

ANALYSIS: CROSS-COUNTRY

Barriers to Entrepreneurship Data

I measure "barriers to entrepreneurship" (or the regulatory environment) using the fifth area from the Fraser Institute's *Economic Freedom of the World* index. Regulation is scored from 0 to 10, with higher scores corresponding to less restrictive regulatory policies. This index is the average of three subcomponents: credit market regulations, labor market regulations, and business regulations. Scores for credit market regulations are calculated by averaging three variables related to ownership of banks, private sector credit (compared to government borrowing), and controls on interest rates. Labor market scores are similarly comprised of six variables that deal with regulations on wages, hiring, firing, and hours, as well as measures of conscription

and mandated costs of worker dismissal. Finally, business regulation scores deal with rules against starting a business and has six measurements: administrative requirements, bureaucracy costs, starting a business, impartial public administration, licensing restrictions, and cost of tax compliance.

I use the entire regulation measure, three subcomponents, and three of the within-component variables that seem particularly important to mobility. In particular, I use starting a business, impartial public administration, and private sector credit for the within-component variables. Starting a business is a direct measure of one's ability to create a better opportunity for oneself, which could impact mobility. Impartial public administration proxies the ability of the government to support (or at least not impede) on one's ability to do what they see is best for oneself and one's family. For many to start their own business, they need relatively easy access to credit, hence the inclusion of private sector credit.

Mobility Data

Following work that I have done with Vincent Geloso, as well as a recent essay published on the rule of law and mobility, I use the intergenerational income mobility measurement from the World Bank's Global Database on Intergenerational Mobility (GDIM). This measure estimates the relationship between a child's income and that of their parents.

Summary Statistics

Summary statistics for the regulation variables and mobility data are found below in Table 1. Brazil scores the worst on regulation, followed by Bolivia, the Democratic Republic of Congo, and Egypt, with each having scores of less than 5.5 (out of 10). Singapore, New Zealand, and the United States receive the highest scores on regulation, with each scoring higher than 8.6. Malaysia, Canada, Denmark, and Australia also receive high scores, with each being greater than 8.5.

Table 1 | SUMMARY STATISTICS (CROSS COUNTRY)

Variables	N	Mean	Std. Dev.	Min	Max
Intergenerational Income Mobility	74	0.516	0.251	0.113	1.095
Regulation Index	74	7.406	0.875	4.805	9.006
Credit Market Regulation	74	8.595	1.206	5.019	10
Labor Market Regulation	74	6.566	1.186	3.832	8.977
Business Regulation	73	7.057	1.095	4.232	9.337
Starting a Business	74	9.451	0.460	7.261	9.981
Impartial Public Administration	74	6.542	2.324	1.378	9.925
Private Sector Credit	74	8.451	2.067	0.293	10

However, within the three major categories of "regulation," there are some interesting scores. For credit market regulation scores, we still see Brazil, Egypt, and the Democratic Republic of Congo at the bottom, along with Timor-Leste. On the other hand, six countries receive a "perfect" score on credit market regulations (10 out of 10): Bosnia & Herzegovina, Canada, Cyprus, Denmark, Mongolia, and Singapore.

The United States has the least stringent labor market regulations, followed by Nigeria, New Zealand, and Uganda, with each scoring higher than 8.5. Bolivia, Brazil, Madagascar, and South Korea have the strictest labor market regulations, each with scores of less than 5. For business regulations, Bolivia and Brazil (again) rank towards the bottom, followed by Bangladesh and Bosnia & Herzegovina. (Bosnia & Herzegovina are an interesting case in the sense that they received a perfect score on credit market regulation but one of the worst on business regulations.) Singapore, Finland, New Zealand, and Switzerland have the highest business regulation scores.

The three main subcomponents used in this analysis (starting a business, impartial public administration, and private sector credit) also reveal some noteworthy scores. Four countries (New Zealand, Canada, Singapore, and Australia) come within one-tenth of a point for a perfect score on starting a business. Note, though, that even the "worst" scoring country received a score of over 7. The United States ranked tenth with respect to this component. With impartial public administration, though, there is greater variation. The worst scoring countries here (Bangladesh, Pakistan, and Bosnia & Herzegovina) all receive scores of less than 2.2. Predictably, countries like Denmark, Germany, and Switzerland receive scores of greater than 9.7. The United States received a score of only 7.9, which ranks 29th within the sample. Finally, private sector credit also has a large bit of variation. Timor-Leste and Kenya have the two worst scores in this subcomponent; twenty-three countries in the sample, however, have perfect scores. Furthermore, another fourteen countries score above a 9. The United States again scored low here, with only a score of 6.96. This was the 14th lowest score in the sample, ranking close to Ghana, Argentina, and Sri Lanka.

With respect to income mobility, Colombia, Ecuador, Uganda, and Guatemala each have child-parent elasticities over one, making them the most income persistent. Denmark and Finland have the greatest income mobility (lowest relationship between child and parental income). The United States ranks very middle of the pack here, with an intergenerational income elasticity of 0.538, roughly the same as developed countries like Italy, Chile, and Slovakia, but also developing countries like Jordan and India.

Findings

I begin with assessing the relationship between intergenerational income mobility and regulation (along with its three major subcomponents). There is a clear and quite strong negative relationship between income *immobility* and the overall measure of regulation (***Figure 1***). The simple correlation between the two reveal that 23% of the variation in mobility can be explained by regulation. The same can be said of the first (of three) major components of regulation: credit market regulation (***Figure 2***). The r-squared is almost equivalent (0.24), meaning that roughly 1/4th of the variance in mobility can be explained by regulatory variables. Labor market regulation, though, has a (perhaps) surprisingly weak relationship with mobility (***Figure 3***). While the relationship is indeed *negative*, the r-squared is only 0.06. Even when performing a simple bivariate regression between the two, the coefficient on labor market regulation is only significant at the 10% level. Business regulations has the strongest relationship of the three components, with an r-squared of 0.31 (***Figure 4***). This is higher than each component, as well as the aggregated regulation variable. This speaks to the ability of how non-restrictive licensing, impartial government branches, and ease of starting a business can make it easier for those at the bottom of the income ladder to improve their lives.

Figure 1 | REGULATION AND INCOME MOBILITY

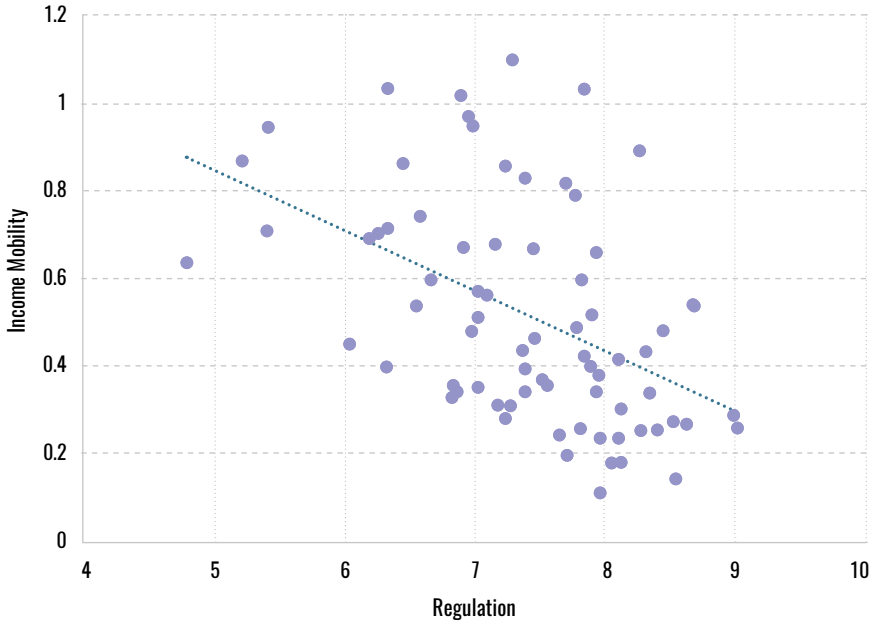


Figure 2 | CREDIT MARKET REGULATION AND INCOME MOBILITY

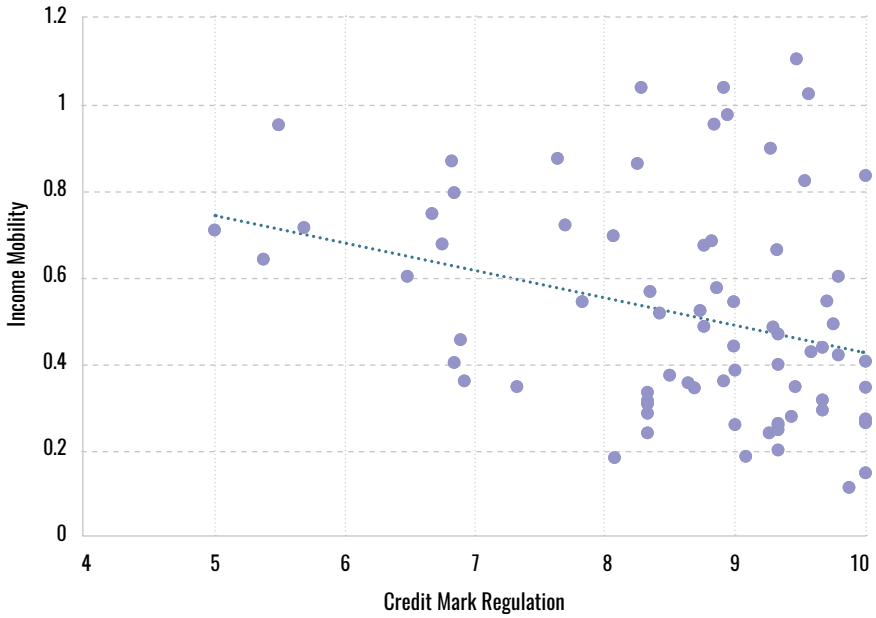


Figure 3 | LABOR MARKET REGULATION AND INCOME MOBILITY

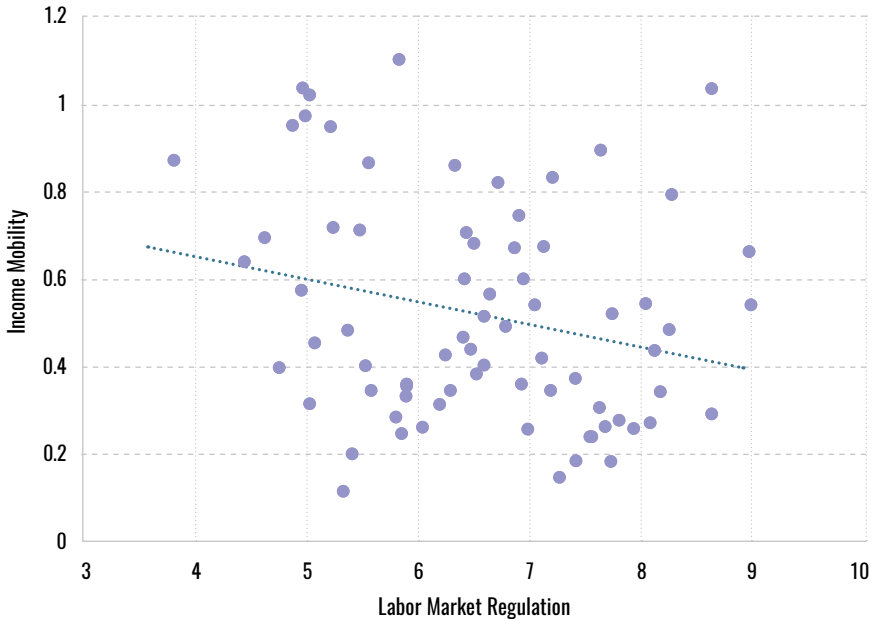
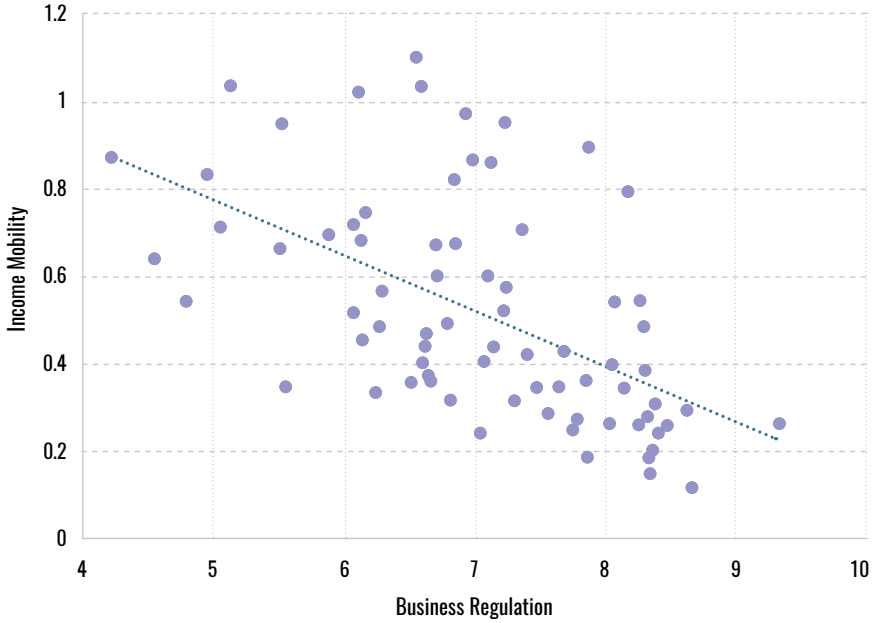


Figure 4 | BUSINESS REGULATION AND INCOME MOBILITY



I now return to simple bivariate correlative relationships between mobility and three key subcomponents of regulation. I start with the ease of starting a business (***Figure 5***), which has an r-squared of 0.23. There is a quite strong relationship, and this theoretically makes sense. Making it easier to start a business has obvious implications for would-be entrepreneurs and their own mobility. But there are also implications for their would-be employees, where the increase in new businesses provide for more (and better) opportunities for employees. However, due to the lack of variation in this variable I caution against taking anything too strong from this relationship. Of the countries available, even the lowest score on this variable is over 7. Impartial bureaucracy also has a strong relationship to mobility, having an r-squared of 0.24 (***Figure 6***). Access to private sector credit is also negatively related to mobility (***Figure 7***).

Figure 5 | STARTING A BUSINESS AND INCOME MOBILITY

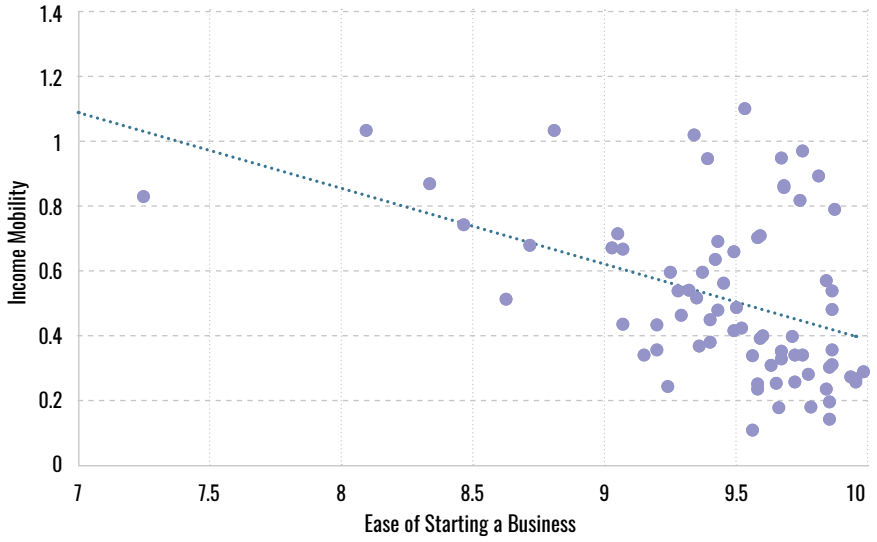


Figure 6 | IMPARTIAL BUREAUCRACY AND INCOME MOBILITY

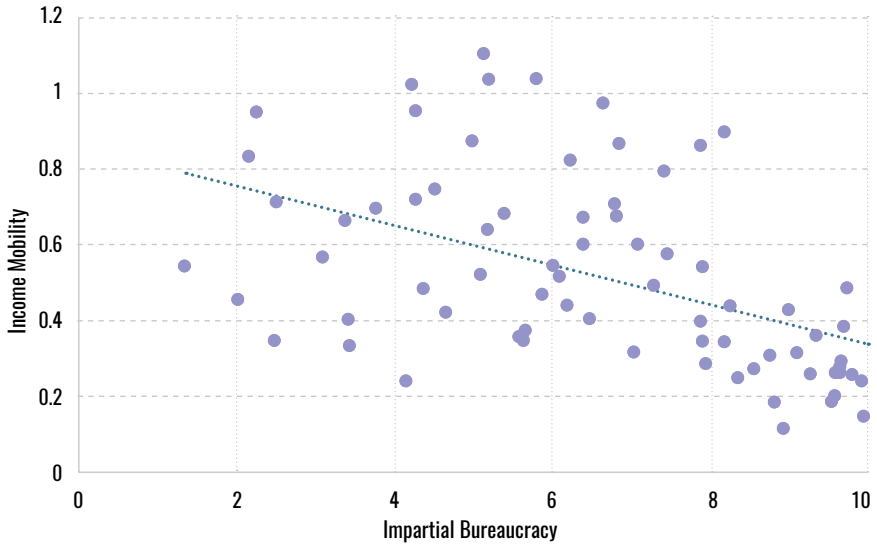
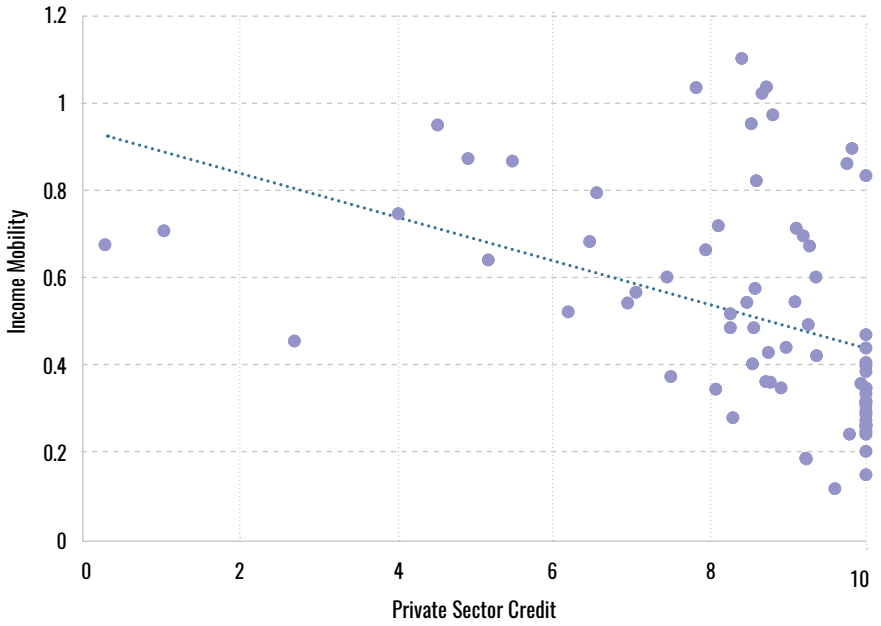


Figure 7 | PRIVATE SECTOR CREDIT AND INCOME MOBILITY



While these figures do not provide any indication of causality, there is at least some suggestive evidence that these variables (and variables like them) can be important future explanatory factors of mobility and entrepreneurship.

ANALYSIS: STATE-LEVEL

Sub-Barriers to Entrepreneurship Data

I use data from the Institute for Justice's most recent edition of *License to Work*. Their report has data on the number of low-income occupational licensing, the average fees associated with obtaining a license, and the average calendar days it takes to obtain a license. In their own ways, each measures the different burdens that are put on those who are attempting to enter a certain field. Since the focus is on lower-income occupations, this is especially relevant for upward-income mobility.

Given the focus on the apparent decline in dynamism within the United States, I want to focus on state-level factors as well. In doing so, I use a measure of business dynamism from the Economic Innovation Group.[24] As mentioned earlier in the literature review, dynamism appears to be declining in the United States overall; however, it is clear that this trend is not equal in each area. This index attempts to measure the level of dynamism across all fifty states. The index is a weighted average of seven variables that measure the health and dynamic features of a local economy. "Business churn" is the share of firms that opened in the past year plus the share of firms that closed. "Change in firms," though, looks at the increase (or in some cases, decrease) in total number of employer firms. "Jobs in new companies" gauges the share of total employment that comes from firms that started in the past year. "Jobs in incumbent firms" is defined as share of state employment that comes from firms that are at least sixteen years old, as a way of measuring the control older firms have in the local economy. "Labor market churn" proxies the degree in which the economy can

reallocate one key resource (labor). These variables also include measures of "labor force participation" and "net state migration." Higher scores, ranging from 0 to 100, in the index indicate greater dynamism. I use their most recent year: 2014. In particular for the purposes of this paper, I look at business dynamism as a whole and three components: percentage of jobs in new firms, percentage of jobs in incumbent firms, and labor force participation rate.

Sub-Mobility Data

I combine this data from the Institute for Justice with the mobility data available from Chetty et al.[25] The Chetty et al. study includes measurements of absolute upward mobility and relative mobility. Their relative mobility measure is the slope from an OLS regression of child rank on parent rank. Here, higher scores would signify less mobility, suggesting a larger relationship between child rank and parent rank. Absolute mobility, on the other hand, is measured as the expected rank of a child who is born in the 25th percentile. Hence, higher scores correspond to greater mobility. Both data points are collected at the metropolitan statistical area (MSA) level and were estimated for those born 1980–1982. Given their birth years, the people here are now at prime working age.

Since the regulation data is only available at the state-level, I match up the mobility data (on an MSA level) with its primary state.

Summary Statistics

Two MSAs in Utah (Logan and Provo-Orem) have the lowest (or "best") relative mobility. Shreveport, Louisiana, and Milwaukee, Wisconsin, have the highest (or "worst") relative mobility. With respect to absolute mobility, St. Cloud, Minnesota, ranks first, while Memphis, Tennessee, is last.

Wyoming requires the fewest occupational licenses for lower-income jobs (26), followed by Vermont (31) South Dakota (32), and Montana (32). Washington and Louisiana are tied for the most (77), with California requiring just one fewer (76). Nebraska has the lowest average fees for obtaining a license ($76), with Nevada having the highest average fees ($861). It only takes (on average) 117 days to obtain an occupational license in Pennsylvania, which is the fewest in the country. In Hawaii, however, it takes over two and a half years (988 days).

New York and California score the lowest on the individual tax rate index, while three states received a score of 10 (out of 10): Florida, South Dakota, and Wyoming. Idaho had the fewest regulation restrictions, while California and New York have the most. West Virginia and Ohio have the least dynamic economies; Utah, Nevada, and Florida have the most dynamic economies.

Table 2 | SUMMARY STATISTICS (UNITED STATES)

Variables	N	Mean	Std. Dev.	Min	Max
Relative Income Mobility	380	0.334	0.056	0.170	0.434
Absolute Income Mobility	380	41.469	3.619	33.728	52.775
Number of Low-Income Occupational Licenses	380	54.976	14.813	26	77
Average Fees for Obtaining License	380	271.44	107.23	117	988
Average Calendar Days for Obtaining License	380	78.288	1.741	74.6	81.5
Business Dynamism Index	380	32.386	8.198	17.6	50.5
Percentage of Jobs in New Companies	380	2.021	0.380	1.4	3.0
Percentage of Jobs in Incumbent Firms	380	73.764	3.536	65.9	79.9
Labor Force Participation Rate	380	62.787	3.604	53.2	72.6

Findings

I start with the relationship between licensing burdens and mobility. Raw correlations between licensing burdens and mobility (relative *and* absolute) reveal no relationship. The best linear fit is practically a horizontal line in each case, suggesting little relationship. (To save space, I do not show the figures). While this is surely not to say that occupational licensing is unimportant, there are many things that can influence mobility (like social and human capital, larger regulatory factors, and labor market structures), the level of occupational licensing right now may not be a large enough factor to show up in the data. There is good reason to think that occupation licensing is still a factor in determining mobility, however. For instance, Timmons et al. (2018) found that areas that lessened their licensing restrictions from 1992 to 2012 were associated with higher economic mobility.[26]

I now move to the relationship between business dynamism and mobility, starting with relative mobility (where, again, higher scores correspond to *lower* mobility). In ***Figure 8***, I find a strong and negative correlation between the overall dynamism score and mobility. More dynamic state economies tend to have greater relative mobility. A similar pattern is revealed in ***Figure 9***, which shows the association between relative mobility and the percentage of jobs that come from new companies (those less than a year old). Areas that are more reliant on new companies for employment, suggesting a more dynamic and flexible labor market, tend to have greater relative mobility.

Figure 8 | BUSINESS DYNAMISM AND RELATIVE MOBILITY

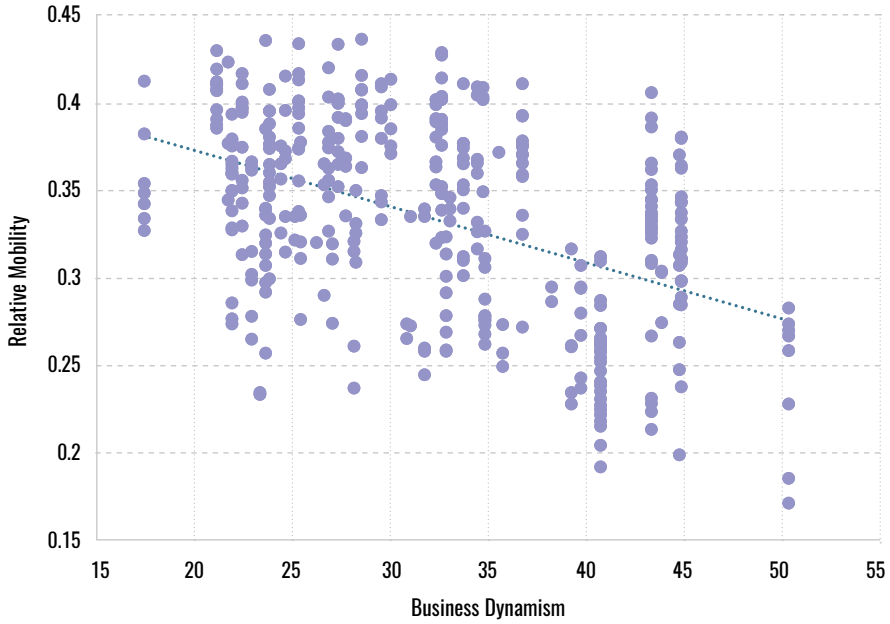
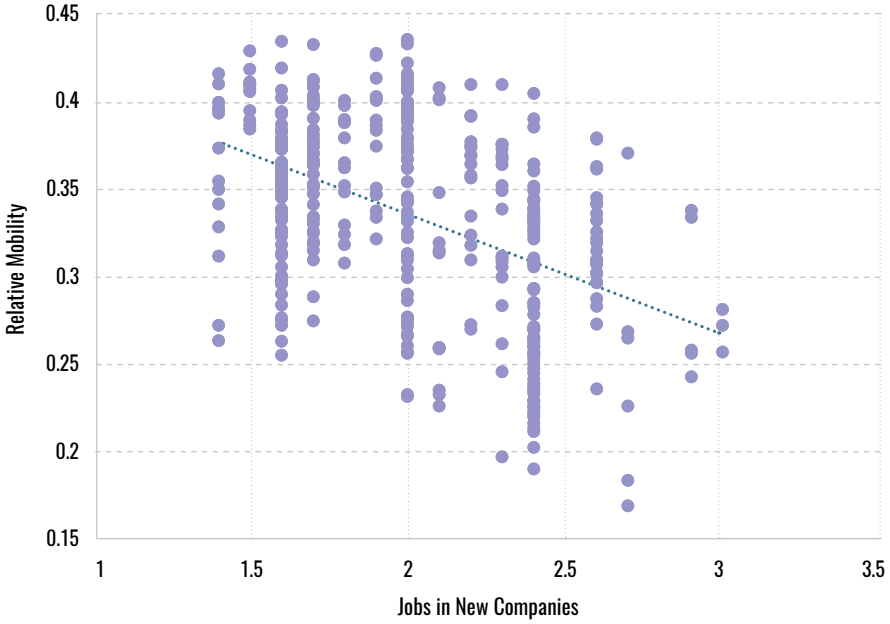


Figure 9 | JOBS IN NEW COMPANIES AND RELATIVE MOBILITY



On the flip side, areas with more reliance on incumbent, established firms (those 16 years or older) seem to have lower mobility scores (***Figure 10***). This could speak to the effect of the control that larger, older companies have on local economies. Finally, areas with greater participation in the labor force have lower relative mobility scores (***Figure 11***). A more active and vibrant labor market seems to be associated with greater income mobility.

Figure 10 | JOBS IN INCUMBENT FIRMS AND RELATIVE MOBILITY

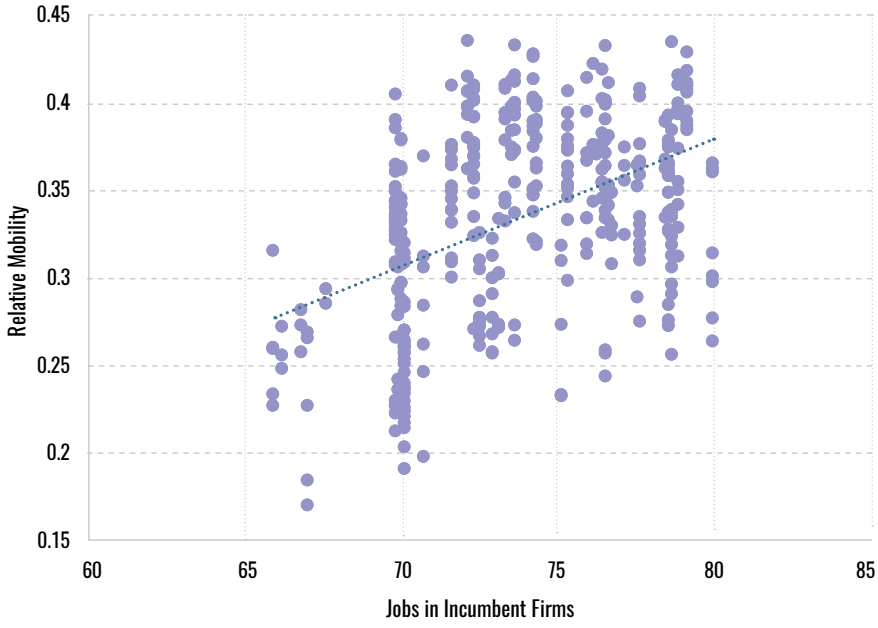


Figure 11 | LABOR FORCE PARTICIPATION RATE AND RELATIVE MOBILITY

Now, we turn our focus on dynamism and *absolute* mobility, where higher scores correspond to greater income mobility. These suggestive findings seem to be pretty much equivalent to that of those with relative mobility. More dynamic economies seem to have greater absolute mobility.

Figure 12 | BUSINESS DYNAMISM AND ABSOLUTE MOBILITY

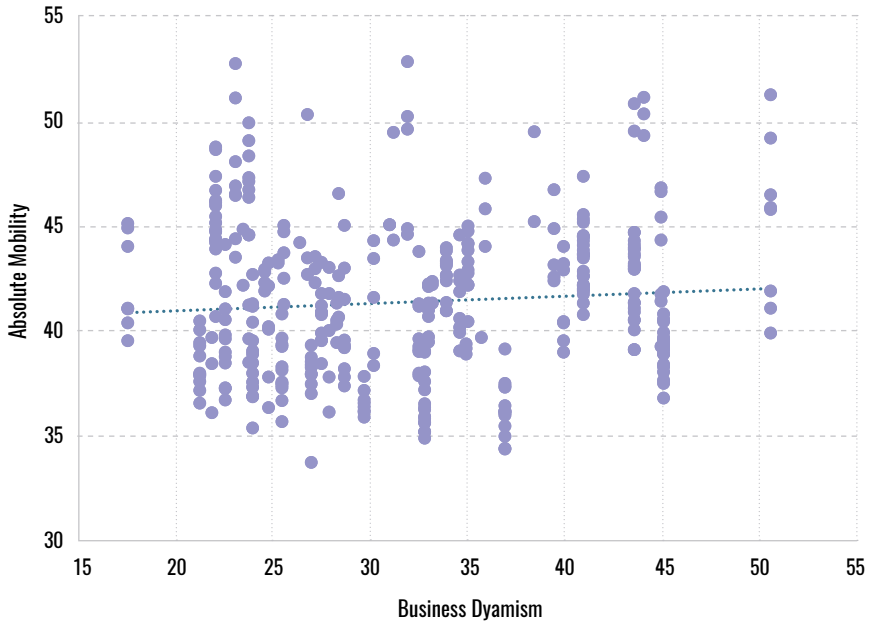


Figure 13 | JOBS IN NEW COMPANIES AND ABSOLUTE MOBILITY

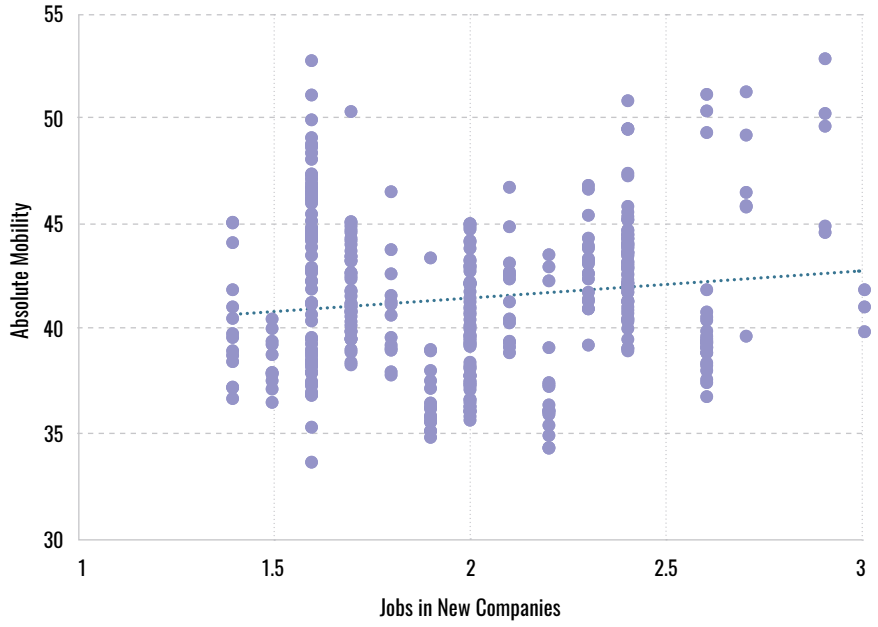


Figure 14 | JOBS IN INCUMBENT FIRMS AND ABSOLUTE MOBILITY

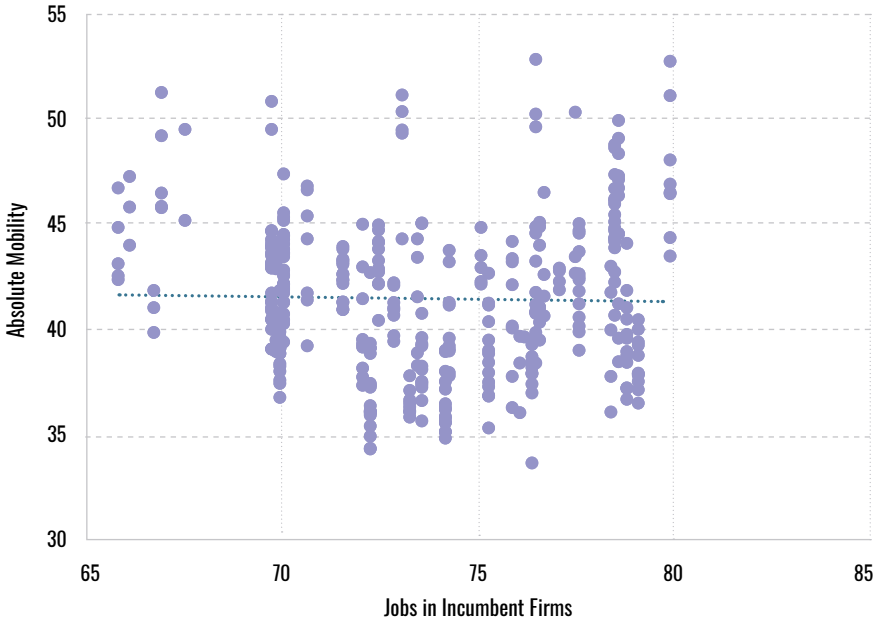


Figure 15 | LABOR FORCE PARTICIPATION RATE AND ABSOLUTE MOBILITY

CONCLUSION

My most recent paper for the Archbridge Institute focused on the role of legal systems and property rights protections in determining mobility. While this one instead analyzes the impact of regulatory burdens, or what I call the "environment for entrepreneurship," the connection between the two should be discussed. If entrepreneurs are easily able to start a business, but the most basic functions of property rights are not protected, then we might not expect mobility to occur. Simply put, the rule of law is necessary but potentially insufficient to impact mobility. Once a place gets its legal system "correct," then other margins pertaining to economic freedom can matter more. Places with low barriers to entrepreneurship but legal systems that are corrupt and partial will likely not flourish. The results here suggest that regulatory burdens matter, but not to the same extent as the rule of law and sound property rights protections. Barriers to entrepreneurship can impact mobility but perhaps more strongly in places with a sound rule-of-law system.

There are admittedly flaws in this study that need to be mentioned. I only show simple correlations between mobility and other variables, so there are the typical empirical shortcomings (reverse causality, omitted variable bias, etc.). The purpose of this paper is not to have a rigorous empirical approach to this topic but to give some motivation about the relationship and show some very preliminary evidence. It is my hope that this is a starting point to the discussion about entrepreneurship, the barriers to entrepreneurship, and economic mobility.

ENDNOTES

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