# Some Dynamics of Socioeconomic Relationships: Well-Being, Social Capital, Economic Freedom, Economic Growth, and Entrepreneurship

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**ABSTRACT**

We provide an overview of the relationships between entrepreneurship, well-being, social capital, economic freedom, and economic growth. Though relationships between two or three of these concepts have been studied on their own, we contribute to these literatures by combining the analysis of these variables into a single empirical framework, and to study the bi-directional relationships between all five variables, with an emphasis on dynamic panel specifications. To do so, we built a panel dataset which pools data from a variety of sources from the years 1980-2010 for the US states. We identify several relationships robust across our various specifications. Among our findings is a positive effect of entrepreneurship on well-being, and counterintuitively, we find negative effects of our entrepreneurship indicators on economic growth.

*Keywords:* Entrepreneurship, Well-being, Social capital, Economic freedom, Economic growth

JEL Codes: L26, I31, L14, P48, O40

**Introduction**

In this paper, we explore the relationships between well-being, social capital, economic freedom, economic growth, and entrepreneurship. While the academic literature has used some of these variables in conjunction with one another at times (as discussed below), ours is the first paper to bring them under one empirical framework, and to model the bi-directional relationships between each. While this paper is primarily empirical in its approach, the multi-directional relationships we examine are each grounded in both theory and empirics. Here, we study both the determinants of entrepreneurship, and how entrepreneurship affects the other social and economic variables under consideration. Entrepreneurial activity may both impact and be impacted by institutions, trust (here: social capital), happiness, and GDP. The bulk of the entrepreneurship literature, particularly in the field of economics, has focused on either the economic outcomes of entrepreneurship (Reynolds et al. 1999, Zacharakis et al. 2000, Acs 2006, Carree and Thurik 2010), or the factors that make an individual more likely to engage in entrepreneurial activity (Kaiser 1990, Hessels, van Gelderen, Thurik 2008). Yet there is strong evidence to suggest that entrepreneurs both affect and are affected by broader social forces.

We construct a series of models that include both economic and such social forces, and examine the bi-directional causality between them. We include each of our five key variables of interest as both dependent and independent variables. We have constructed a panel dataset which pools data from a variety of sources over the years 1980-2010 for the US states, applying a broad array of specifications, with our headline results centering on those employing dynamic panels. In reporting results, an emphasis is placed on robustness. Due to the nature of our specifications, our method is superior to cross-sections or contemporaneous panels in measuring medium and long run effects.

Of our key variables, the strongest determinants of entrepreneurship are economic freedom, which has a positive relationship, and economic growth, which is positively related to business starts and flows, but negatively related to business failure. The strongest determinant of well-being is entrepreneurship, which enters with a positive sign. The strongest determinants of economic freedom are economic growth, which is positively related to economic freedom, and entrepreneurship, which is negatively related to economic freedom. Somewhat counterintuitively, the strongest determinants of economic growth – entrepreneurship and economic freedom – both enter the regression with a negative sign. There is not any distinguishable relationship between trust and any of our key variables of interest.

This paper contributes to the larger literature on the origins of institutions, especially economic freedom (Powell 2019; Lawson et al. 2018). One can conceptualize, as does Williamson (2000), that there is a certain amount of continuity from cultural variables such as social capital, to the institutional environment to entrepreneurship and finally to economic outcomes. At the same time, one can imagine that each of these variables possessing bi-directional effects. One motivation for this paper is to create a framework where seeing Williamsonian relationships potentially play out at the subnational level. Ultimately, however, this is not what we observe. Instead, although we are able to connect many of the variables to one another, our findings do not fit any simple narrative of social causation.

Because we are contributing to a variety of literatures, we provide a full-scale literature review in the next section, which includes further discussion regarding how this paper fits into the existing literature. Section three contains information on our data and methodology. Section four provides our results and a discussion of those results. The final section draws implications and concludes.

**Literature Review**

In this paper, we are bringing together several different strands of literature into a single empirical framework. We consider the relationships between entrepreneurship, well-being, social capital, economic freedom, and economic growth. Because we cycle through five different dependent variables in our study, literatures on the interrelations between each of the five are relevant to our analysis. This leaves us with ten dyadic relationships to examine. We break this literature review into the four different sections which follow.

***Well-being***

Let us first consider the relationship in the literature between well-being and our other variables of interest. Well-being has been a key object of study in the psychology literature for many years, and encompasses a variety of different concepts (see Seligman 2012 for a recent overview of this literature). Beginning with Easterlin's 1973 paper, economists have also taken an interest in the subject, with the most popular strand of this literature arguing whether or not income and/or economic growth and well-being are related.[1] Easterlin (1973, 1995, 2005) finds when looking across countries that GDP and average subjective well-being are unrelated. However, he does find that *within* a given country, individuals with higher incomes tend to be happier (this result is confirmed by Layard 1980, among others). This has come to be known as the Easterlin Paradox, and has been extensively studied in the literature. Layard (2005), for example, suggests that people are concerned with relative rather than absolute incomes. He also suggests that happiness rises with income at low levels of income, but that individuals reach a satiation point, beyond which income does not contribute to happiness (Layard 2003; see also Veenhoven 1991 and Clark et al. 2008). Stevenson and Wolfers (2008), Sacks et al. (2013), and

[1] Because many economists use survey answers that measure how happy a person is, either at the moment or with his life as a whole, this literature often uses the terms well-being and happiness interchangeably. Admittedly, the concept of well-being encompasses a wider array of emotions and experiences, but we focus on happiness data for which is readily available.

Stevenson and Wolfers (2013) survey the mixed literature examining the relationship between income and subjective well-being, and subject it to further testing using multiple datasets and a wide array of countries. They find robust evidence for a strong, positive relationship between income and subjective well-being, and find no evidence of a satiation point. Bartolini et al. (2013) look at the relationship between income and well-being across US states over the period 1975-2004 and come to a similar conclusion. While the relationship between economic growth and well-being is somewhat mixed, recent literature using larger panels of countries or more years than earlier studies tends to find more positive than negative or null relationships.

Recently, economists have moved beyond examining the relationship between well-being and income, and have begun examining the relationship between well-being and a variety of other economic variables. It should be noted at this point that the primary methodology by which economists (and other social scientists) measure well-being is survey-based. Because survey questions generally pertain specifically to happiness, we will use the terms well-being and happiness interchangeably throughout the remainder of the paper. A recent strand of literature examines the relationship between happiness and economic freedom. This follows an earlier literature that examined the relationship between happiness and institutions more generally (see Frey and Stutzer 2000). Most of these studies examine the relationship between economic freedom and happiness in a cross-national context (Graafland and Compen 2015; Spruk and Kešeljević 2016), but a few papers have begun examining this relationship in the U.S. context. Belasen and Hafer (2012, 2013) use cross-sectional methods, and find that while there is no relationship between *levels* of well-being and economic freedom, *increases* in economic freedom have a positive and significant impact on state-level well-being. Jackson (2017) further explores this relationship using panel methods, and finds a strong positive relationship between economic freedom and happiness, regardless of whether he uses individuals or state averages as the unit of measurement.

Economists have also found that economic freedom is positively correlated with social trust, which is often used as a proxy for social capital (Berggren and Jordahl 2006; Graafland and Compen 2015). They have also found a relationship between social trust and subjective well-being (Uslaner 2002; Helliwell 2003, 2006). Indeed, Putnam (2000) suggests that there has been a marked decline in social capital in recent years, leading to diminished societal well-being (see also Helliwell and Putnam 2004). Using a panel of European countries over an extended period of time, Bartolini et al. (2016) find that social capital is a strong predictor of happiness in the long- and medium-run, though they find that economic growth is a strong predictor of happiness in the short term (confirming findings by Easterlin and Angelescu 2011; Easterlin et al. 2010). In their long-term regression, they find that social capital has more than twice the impact of GDP on social happiness. Helliwell et al. (2016) show that higher levels of social capital make people more resilient to adverse shocks, such as unemployment and health events. In a recent review of the empirical literature, Helliwell (2006) reports consistent and substantial effects of both specific and general trust on happiness and broader measures of life satisfaction. Similarly, Bjørnskov (2008) finds a strong positive relationship between social trust and average happiness when looking across the 48 contiguous states, and after controlling for a variety of potentially confounding variables.

Fewer papers have examined the specific connection between well-being and entrepreneurship. Naude et al. (2014) present initial evidence on the effect of entrepreneurship (measured in terms of business ownership and startup rates) on national happiness, as well as the effect of happiness on entrepreneurial activity. They find that entrepreneurs improve national happiness up to a point, after which the relationship turns slightly negative. They also find that happier societies tend to have more opportunity-driven entrepreneurship.[2] They build on earlier literature that looks at the relationship

[2] This is in contrast to necessity-driven entrepreneurship, which characterizes much entrepreneurial activities in developing countries. Those who become entrepreneurs due to lack of alternative options tend to experience lower levels of happiness (Binder and Coad 2013; Seva et al. 2016).

between entrepreneurship and the narrower measure of job satisfaction (Andersson 2008; Blanchflower 2004; Lange 2012). They also build on the literature examining the ways by which entrepreneurs increase the happiness of others, such as by providing them with goods and services (Csíkszentmihályi 2003; Goetz et al. 2007, Bolle et al. 2009), or by providing meaningful employment opportunities (Clark and Oswald 1994; Clark 2010). The studies that do examine the particular relationship between entrepreneurship and subjective well-being are mixed, with some finding positive relationships (Blanchflower 2004; Benz and Frey 2008), some finding no difference between happiness levels of self-employed and those in other types of employment (Nordenmark et al. 2012), and some finding a negative relationship between subjective well-being and self-employment (Jamal 1997; Noorderhaven et al. 2004).

***Entrepreneurship***

In the last section, we discussed the relationship between entrepreneurship and well-being, so this section will only require us to examine the three remaining dyadic relationships. Both theoretically and empirically, the entrepreneur is seen as an important contributor to economic growth; the literature in support of this connection is enormous. Because the relationship between entrepreneurship, measured various ways, and economic growth is so robust, we point the reader to recent reviews of the literature (Audretsch et al. 2006; Carree and Thurik 2006; Powell 2008). As for the impact of economic growth on entrepreneurial activity, this relationship has been studied much less extensively. While some scholars examine the differences in entrepreneurial activity among countries at different levels of economic development (Acs and Varga 2005, Naudé 2008), studies examining the explicit impact of economic growth on entrepreneurship are rare. Many find a U-shaped relationship between the level of economic development and entrepreneurial activity, since those in poorer countries will be driven to entrepreneurship out of necessity, and those in richer countries will be driven to entrepreneurship out of opportunity (see Wennekers et al. 2010 for an overview of this literature).

The institutional environment within which entrepreneurs act, however, can substantially impact the relationship between entrepreneurial activity and economic growth. Baumol (1990) was one of the first to make this connection, and argued that while entrepreneurs are universally present in every society, if the payoffs to rent seeking are higher than the payoffs to innovation, a substantial number of entrepreneurs will be induced to engage in unproductive or destructive types of activities. Using state-level data, and a variety of different measures of entrepreneurship, Sobel (2008) confirms Baumol's hypothesis. That is, he finds that states with lower levels of economic freedom are more likely to see those with entrepreneurial tendencies devoting their energies to political activities; those with higher levels of economic freedom are more likely to devote their energies to creating goods and services valued by the wider public. This is consistent with other literature that has found a strong positive relationship between economic freedom and entrepreneurial activity (Nyström 2008; Bjørnskov and Foss 2013; Stansel and Tuszynski 2018). Ovaska and Sobel (2005), Kreft and Sobel (2005), and Sobel et al. (2007) have found that entrepreneurship is the mechanism by which economic freedom promotes economic growth. The positive relationship between economic freedom and entrepreneurial activity is robust across studies.

It is not only the institutional environment which has been found to impact entrepreneurial activity, but also the social environment. Within the empirical literature, social trust is often used as one conceptualization of social capital, though it is recognized that the concept of social capital encompasses many more aspects of social interaction. As explored by Fukuyama, "if people who have to work together in an enterprise trust one another […] doing business costs less" (1995: 27). Although the empirical literature on the broader relationship between trust and entrepreneurship is small, researchers tend to find that areas with higher levels of trust – whether individual or generalized – tend to see higher levels of entrepreneurship. Turkina and Thai (2013), for example, find that networking, interpersonal trust, and institutional trust all play a strong role in determining the success of immigrant

entrepreneurship in a cross-country context. Kwon et al. (2013) examine the US states and find a strong positive relationship between generalized social trust and self-employment, and a similarly positive relationship between broader measures of community involvement and self-employment. Others find similar positive relationships (Aldrich and Martinez, 2010; Thornton and Flynn, 2003). Still, there is some disagreement. Molina-Morales and Martinez-Fernandez (2009) suggest that there is a curvilinear relationship between trust and entrepreneurial activity, and Maurer and Ebers (2006) suggest that social capital can stifle innovation and entrepreneurial tendencies in some circumstances.

***Social Capital***

Since we have already covered the relationships between social capital and entrepreneurship, and social capital and well-being, only two relationships remain to be reviewed in this sub-section. We'll turn first to the relationship between social capital and economic freedom, then to the relationship between social capital and economic growth.

As Jackson et al. (2015) explain, there are several ways to think about the relationship between economic freedom and social capital. Economic freedom may be positively related to social capital if people mobilize their social capital to facilitate exchange. There may also be a positive relationship if economic freedom creates the conditions under which individuals are able to take more income and leisure, therefore dedicate more time to building and maintaining their social networks. However, economic freedom might also create the conditions by which traditional forms of association are undermined, therefore leading to a negative relationship between social capital and economic freedom. Still, if the forms of association that are undermined include various rent-seeking organizations, the undermining of social capital in this case might not be such a serious problem. While Jackson et al. found essentially no relationship between economic freedom and social capital, Jackson (2017) found a negative result that was driven largely by the labor market component of economic freedom. He attributes this finding to the decline in participation in organized labor of recent years. Jackson and his

co-authors build on earlier work by Berggren and Jordahl (2006), who in a cross-country study find social capital and economic freedom to be positively related.

The relationship between social capital and economic growth has also received substantial attention. Early studies, which relied on a variety of different measurements of social capital, found mixed results. Helliwell and Putnam (1995) found that Italian regions with more developed "civic communit[ies]" grew faster over the 1950-1990 period. However, Helliwell (1996) found no relationship between trust and per capita economic growth when using a panel of Canadian provinces and U.S. regions. Knack and Keefer (1997) look at 29 developed countries using different time periods and find a strong positive relationship between trust and economic progress, and between norms of civic cooperation and economic progress. Recent contributions are similarly mixed, with some finding positive relationships (Bjørnskov 2012, Forte, Peiró-Palomino, and Tortosa-Ausina 2015), some finding a negative relationship (Schneider et al. 2000; Beugelsdijk and Van Schaik 2005), and some finding evidence of nonlinearities in the social capital-growth relationship (Peiró-Polomino 2016).

***Economic Freedom***

The final relationship to examine is that between economic growth and economic freedom (other effects of economic freedom have been covered earlier in this section). This literature has overwhelmingly found a strong positive relationship. Not only has economic freedom consistently shown a strong, positive relationship with per capita income, but also higher economic freedom has been shown to be associated with higher growth rates (Heckelman 2000; Cole 2003; Powell 2003; De Haan et al. 2006; Compton et al. 2011; Hall and Lawson 2014).

This literature review is not meant to be comprehensive, but rather to provide an overview of related works. Though the review has largely covered the dyadic relationships between two of our variables of interest, we should note that other papers have included three or more of these variables in a single set of empirical tests. Naude et al. (2014), for example, include measures of entrepreneurship,

happiness, income, and rule of law in their empirical model. Kuckertz et al. (2015) include entrepreneurship, well-being, and economic freedom into a single model. Our innovation in this paper is to examine the bi-directional relationships between all five variables. Given the large literature just discussed, which examines many of these relationships, examining all five within one framework may seem perhaps superfluous. However, we see significant merit in our approach. While any model necessarily captures some relevant characteristics of the world and omits others, our series of models allow us to more comprehensively examine the relationship between these variables than models found in earlier literature. The reality of these relationships is complicated, and our model attempts to sort through the complicated reality and provide greater insight into the relationship between these social and economic forces. As a result of examining these relationships at the cross-state (rather than the cross-country) level, fewer variables potentially confounding our analysis remain. This allows us to ask a more complicated set of questions, and place greater faith in our results.

**Data and Method**

We attempt to give an overview of the relationships between entrepreneurship, well-being, social capital, economic freedom, and economic growth. To do this we have collected a panel dataset which pools data from a variety of sources from the years 1980-2010 for US states. We measure well-being and social capital using geocoded data from the General Social Survey (GSS) conducted by the NORC at the University of Chicago. The national GSS survey asks the question "Taken all together, how would you say things are these days—would you say that you are very happy, pretty happy, or not too happy?"[3] We have coded the responses so that responses of "very happy" are assigned a 3, "pretty happy" are assigned a 2, and "not too happy" are assigned a 1. We match individual responses to their state of residence and then calculate the average happiness score in each US state for each year.

[3] This question is labeled "happy" in the GSS codebook.

We measure social capital using the trust questions in the GSS. The dominant question used to measure social trust is "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?"[4] We coded responses of "Most people can be trusted" as a one and all other responses as a zero. A second social trust question was used in the GSS for select responses between 1983 and 1987. This question asked more simply "Do you think most people can be trusted?" We coded responses of "Yes" with a one and all other responses with a zero. Using these two responses, we then calculate the percentage of respondents in each state for each year who responded that most people can be trusted.

Our entrepreneurship data comes from the US Census Bureau's Business Dynamics Statistics database. From this we capture the establishment entry rate and the establishment exit rate. Establishment entry and exit rates are simply entries or exits divided by the total number of establishments. We also create a new variable on establishment flow, which is equal to the establishment entry rate minus the exit rate. Our data for economic freedom comes from the 2016 edition of the Economic Freedom of North America Index (EFNA), which runs on a zero-to-ten scale and is produced by the Fraser Institute (Stansel et al. 2016). While there are other subnational economic freedom indices in circulation, the EFNA is the one most used in academic research, and importantly for our purposes here, has yearly data coverage from 1981 to present. In its present build (while using only subnational data), it is comprised of measures of government spending, taxation, labor market regulation. Finally, economic growth is approximated by the growth rate of personal income per capita, which comes from the Bureau of Labor and Statistics.

Our assembled dataset spans the years 1980-2010 which gives us a rich and long panel. Yet the dataset is not without its drawbacks. Most notably, the GSS data has many holes and gaps. The GSS was not conducted in 1981 and 1992. Besides those years, it was conducted annually up to 1994, but

[4] This question is labeled "trust" in the GSS codebook.

starting in that year, it has been conducted only on even numbered years. These limitations reduce our ability to make use of annual observations in our analysis. Instead, we group available years into 4 year periods and use the averages over these four year periods as the dependent variables in our analysis. We retain the last (non-missing) observation in each grouping for use as independent variables.

We estimate models alternating each of the variables for entrepreneurship, well-being, social capital, economic freedom, and economic growth as the dependent variable. The equations we estimate take the form given in equation (1) below:

$$\overline{Y}_{i,t+1}^{j} = \alpha Y_{i,t}^{-j} + \beta X_{i,t} + \mu_i + \gamma_t + \varepsilon_{i,t} \quad (1)$$

where $\overline{Y}_{i,t+1}^{j}$ is the four year average of dependent variable j for state i over the t+1 grouping. $Y_{i,t}^{-j}$ is a vector of dependent variables for state i, which are the last (non-missing) observations from the grouping for time grouping t, including all dependent variables except the j$^{th}$. Likewise, $X_{i,t}$ is a vector of independent control variables which are composed of the last non-missing observation from grouping t. The $\mu_i$ denotes state fixed effects, the $\gamma_t$ denote year fixed effects, and the $\varepsilon_{i,t}$ are the error terms.

We also estimate a dynamic version of equation (1) as specified in equation 2 below:

$$\overline{Y}_{i,t+1}^{j} = \alpha Y_{i,t} + \beta X_{i,t} + \mu_i + \gamma_t + \varepsilon_{i,t} \quad (2)$$

where all similar terms are as previously defined. The only difference is that $Y_{i,t}$ in equation (2) includes the last (non-missing) observation for state i of the j$^{th}$ dependent variable.

Due to the fact that the dependent variable in all estimated equations are four year averages, and that all right hand side variables are taken from the last year before the four year grouping, concerns of reverse causation in our empirical models are minimized. Our use of fixed effects at both the state and period level also mitigate concerns about omitted variable bias. We attempt to control for further sources of potential endogeneity through implementation of the System Generalized Method of Moments (SGMM) estimation.

We estimate our models using both conventional panel methods and SGMM. The SGMM methodology was developed by Arellano and Bover (1995) and Blundell and Bond (1998). The methodology uses lagged values of independent and dependent variables in both levels and differences to create a set of instrumental variables from within the dataset. These instruments control for endogeneity and also avoid dynamic panel bias. However, it has now been widely documented that the large number of instruments created in the procedure often leads to overfitting of endogeneous variables (Roodman, 2009). Instrument proliferation can also lead the Hansen-J statistic, the preferred over-identification test statistic, to be falsely inflated resulting in erroneous p-values of 1. We follow Roodman (2009) in restricting the number of lags used to create instruments in all of our SGMM regression. We also provide results after collapsing the instrument matrix, which further reduces the number of instruments used in our SGMM regressions.

The empirical methodology found in this paper allows us to make strong if imperfect claims to causality, especially results from specifications employing SGMM. Clearly, other methods such as randomized controlled trials are superior to what we are able to achieve here in terms of identification, but these kinds of methods have their own deficiencies (Acemoglu 2010; Deaton and Cartwright 2018), and there is more to empirical work than identification (Ruhm 2019). We remain comfortable in referring to our findings as causal effects, although we do note that clever identification strategies would be possible improvements on or extensions to our findings.

Control variables in our study include a Gini coefficient of income inequality, education, and the citizen ideology index. These variables were chosen to represent the primary other dimensions by which states vary over time that are not already captured in our variables of interest. Ideology has been shown to influence happiness (Jackson, 2019a; Jackson, 2019b) and economic growth (Bjørnskov, 2005). Income inequality is often included as a control for social capital (Jackson et al., 2015; Jackson, 2017), trust (Berggren and Jordahl. 2006) and happiness (Jackson, 2019a; Jackson, 2019b). Education is often

used as a control for economic growth (Compton et al. 2011), social capital (Jackson et al., 2015; Jackson, 2017), and happiness (Jackson, 2019a; Jackson, 2019b). The data for the Gini coefficient is that of Frank (2009)[5]. The citizen ideology index we use is the revised 1960-2013 citizen ideology series based on Berry et. al. (1998), which has recently been updated to include data up to the year 2013.[6] The ideology measure provides a value for each state between zero and one hundred, with smaller values representing ideology that is more conservative and larger values representing more progressive ideology. The education data (here, the percentage of adults over age twenty-five with a bachelor's degree) is taken by decade from Census, with yearly data interpolated.

For our analysis, we divided each variable into 4 year groups in order to calculate averages for use as dependent variables, and to isolate the last (non-missing) value for use as an independent variable. The first grouping contains the years 1980-1982. This first grouping contains only 3 years, but is only used to create the first set of independent variables, as the average across this grouping is not used anywhere in the analysis. The remaining groups pool the years 1983-1986, 1987-1990, 1991-1994, 1995-1998, 1999-2002, 2003-2006, and 2007-2010. This gives the panel a total of 8 time periods.

Table 1 provides summary statistics of four-year averages which make up the dependent variables this study seeks to explain. The variables *starts* and *fails* are the establishment entry rate and exit rate, respectively. The variable *flow* is *starts* minus *fails*. Both of the variables *happy* and *pertrust* are derived from GSS survey responses. The economic freedom variable is labeled *efna* and the growth rate of personal income per capita is the variable *growth*.

[5] The Frank (2009) data can be downloaded at downloadable at http://www.shsu.edu/eco_mwf/inequality.html
[6] The Berry et. al. ideology measures can be downloaded at https://rcfording.wordpress.com/state-ideology-data/

**Table 1 - Summary Statistics - Dependent Variables 4 Year Averages**

| VARIABLES | (1) N | (2) mean | (3) sd | (4) min | (5) max |
|---|---|---|---|---|---|
| starts | 350 | 12.20 | 2.084 | 7.925 | 21.23 |
| fails | 350 | 10.42 | 1.355 | 7.600 | 17.17 |
| flow | 350 | 1.777 | 1.390 | -1.350 | 6.575 |
| happy | 281 | 2.196 | 0.101 | 1.851 | 2.708 |
| pertrust | 281 | 0.375 | 0.127 | 0 | 0.752 |
| efna | 350 | 6.721 | 0.693 | 4.393 | 8.393 |
| growth | 350 | 0.0151 | 0.0142 | -0.0387 | 0.0551 |

Table 2 gives summary statistics of the independent variables which are taken as the last non-missing observation in a four year grouping. Each of the dependent variables from Table 1 also has a representation as an independent variable with a lower case *l* preceding the variable name. The remaining variables are the controls: *lgini* is the gini coefficient on income inequality, *leduc* is our education variable, and *lciti6013* is the citizen measure of ideology. These controls are not our focus, but robust relationships for these variables acting as independent variables will be reported as well.

**Table 2 - Summary Statistics - Independent Variables**

| VARIABLES | (1) N | (2) mean | (3) sd | (4) min | (5) max |
|---|---|---|---|---|---|
| lstarts | 350 | 13.09 | 2.540 | 9.400 | 28.70 |
| lfails | 350 | 10.67 | 1.386 | 7.600 | 17.20 |
| lflow | 350 | 2.417 | 2.177 | -2.500 | 20.10 |
| lhappy | 275 | 2.193 | 0.136 | 1.643 | 2.750 |
| lpertrust | 241 | 0.350 | 0.145 | 0 | 0.714 |
| lefna | 350 | 6.688 | 0.739 | 4.134 | 8.409 |
| lgrowth | 350 | 0.0147 | 0.0232 | -0.0484 | 0.0821 |
| lgini | 350 | 14.58 | 4.296 | 6.059 | 32.96 |
| leduc | 350 | 21.39 | 4.973 | 10.78 | 36.68 |
| lciti6013 | 350 | 48.48 | 15.63 | 8.450 | 95.97 |

**Results and Discussion**

For each of our five variables of interest, we ran a total of eighteen regressions, divided between two tables. The first table of results runs three specifications for each of our entrepreneurship variables: conventional panel methods employing time and state fixed effects, SGMM with a restricted set of instruments, and SGMM with a further collapsed instrument matrix. These three specifications are repeated for the three definitions of entrepreneurship - business start rate, business failure rate, and their difference (business start rate minus business start rate denoted "flow"), for a total of nine regressions.

These nine regressions are repeated with the inclusion of the lagged dependent variable on the RHS in the second table. The first, fourth, and seventh specifications of the second table – the baseline dynamic panel specifications – are our primary focuses, with other specifications functioning as an extensive set of robustness checks. SGMM specifications which do not achieve the correct results[7] in the AR(1), AR(2), or Hansen tests are set aside in our analysis and conclusions, but their results are reported in the tables. The empirical magnitudes of the effects found will be discussed at the end of this section. Due to the cumbersome nature of the large number of regressions found in this paper, we highly encourage the reader to refer to the tables continuously rather attempting to read this section on its own. Additionally, please reference Figure 1 at the conclusion of this section for a summary of our interpretation of the results.

Tables 3A and 3B report results for the causes of entrepreneurship. Regressions (3), (9), (14), (15), and (18) are set aside for failing one of the three diagnostic tests. The most effective predictor of entrepreneurship, even upon controlling for lagged entrepreneurship, is lagged economic growth. It is a statistically significant predictor of entrepreneurship in all OLS specifications. While it positively predicts

[7] The SGMM specifications with desirable statistical properties will reject AR(1), fail to reject AR(2), and fail to reject the Hansen test.

business starts and total flow, it negatively predicts business failure. Its performance in the SGMM specifications is uneven when the lagged dependent variable is omitted, as in Regressions (2), (5), and (6), but it is positive and statistically significant in two of the three SGMM specifications in the dynamic panel, Regressions (11) and (12), but not (17). Among the other primary variables of interest, economic freedom performs best in predicting entrepreneurship. It is positive and statistically significant in Regression (13), and positive and weakly significant in Regressions (1), (4), and (10); each of these specifications uses fixed effects. In no regression is it negative and statistically significant.

## Table 3A - Panel-Four Year Averages, Entrepreneurship on LHS

| | (1) F.E. F.starts | (2) SGMM F.starts | (3) SGMM F.starts | (4) F.E. F.fails | (5) SGMM F.fails | (6) SGMM F.fails | (7) F.E. F.flow | (8) SGMM F.flow | (9) SGMM F.flow |
|---|---|---|---|---|---|---|---|---|---|
| lhappy | 0.487* | 1.116 | -2.321 | 0.019 | -0.913 | -0.032 | 0.468 | 2.029** | -2.289 |
| | (0.259) | (1.415) | (6.056) | (0.342) | (0.907) | (3.607) | (0.395) | (1.006) | (4.173) |
| lpertrust | 0.129 | 3.891*** | 10.688* | 0.839* | 2.655** | 4.694 | -0.710** | 1.236 | 5.994 |
| | (0.369) | (1.505) | (5.533) | (0.451) | (1.156) | (2.903) | (0.304) | (0.830) | (4.748) |
| lefna | 0.287* | -0.111 | 1.177 | 0.400* | -0.147 | -0.183 | -0.113 | 0.036 | 1.360** |
| | (0.161) | (0.442) | (0.799) | (0.214) | (0.310) | (0.505) | (0.238) | (0.227) | (0.592) |
| lgrowth | 13.196*** | -0.720 | -16.705 | -12.335*** | 7.098 | 9.469 | 25.530*** | -7.818 | -26.174* |
| | (2.571) | (7.802) | (20.839) | (2.675) | (4.989) | (13.370) | (3.685) | (5.639) | (14.437) |
| lgini | -0.011 | -0.049 | 0.013 | -0.006 | 0.079* | 0.033 | -0.005 | -0.128*** | -0.020 |
| | (0.043) | (0.066) | (0.164) | (0.037) | (0.040) | (0.107) | (0.046) | (0.039) | (0.129) |
| leduc | 0.105** | -0.060 | -0.296*** | 0.192** | -0.056* | -0.072 | -0.087 | -0.003 | -0.225*** |
| | (0.046) | (0.042) | (0.091) | (0.072) | (0.031) | (0.058) | (0.074) | (0.021) | (0.079) |
| lciti6013 | 0.018** | -0.028* | 0.007 | -0.001 | -0.012 | -0.015 | 0.019** | -0.016** | 0.022 |
| | (0.007) | (0.015) | (0.031) | (0.007) | (0.009) | (0.020) | (0.008) | (0.008) | (0.029) |
| Observations | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 |
| Number of fipsstat | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| Within | 0.878 | | | 0.758 | | | 0.747 | | |
| Between | 0.101 | | | 0.0716 | | | 0.0769 | | |
| Overall | 0.327 | | | 0.274 | | | 0.406 | | |
| # Instruments | | 69 | 15 | | 69 | 15 | | 69 | 15 |
| AR(1) | | 0.0224 | 0.0325 | | 0.00601 | 0.00247 | | 3.23e-06 | 0.00554 |
| AR(2) | | 0.191 | 0.170 | | 0.267 | 0.579 | | 0.356 | 0.0688 |
| Hansen | | 0.946 | 0.00809 | | 0.978 | 0.0174 | | 0.914 | 0.0371 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

## Table 3B - Dynamic Panel-Four Year Averages, Entrepreneurship on LHS

| VARIABLES | (10) F.E. F.starts | (11) SGMM F.starts | (12) SGMM F.starts | (13) F.E. F.fails | (14) SGMM F.fails | (15) SGMM F.fails | (16) F.E. F.flow | (17) SGMM F.flow | (18) SGMM F.flow |
|---|---|---|---|---|---|---|---|---|---|
| lstarts | 0.055** | 0.654*** | 0.847*** | | | | | | |
| | (0.025) | (0.116) | (0.160) | | | | | | |
| lfails | | | | 0.158** | 0.371*** | 0.354*** | | | |
| | | | | (0.071) | (0.054) | (0.077) | | | |
| lflow | | | | | | | 0.066** | 0.082* | -0.187 |
| | | | | | | | (0.025) | (0.050) | (0.141) |
| lhappy | 0.551** | 0.278 | 2.519 | 0.112 | -0.848 | 0.953 | 0.506 | 1.702* | 4.656** |
| | (0.239) | (1.167) | (2.947) | (0.308) | (0.785) | (2.865) | (0.367) | (0.923) | (2.150) |
| lpertrust | 0.224 | 1.270 | 3.440 | 0.821* | 2.132** | 1.711 | -0.587* | 0.602 | -0.556 |
| | (0.395) | (0.887) | (2.798) | (0.409) | (1.009) | (2.232) | (0.295) | (0.785) | (2.910) |
| lefna | 0.254* | 0.073 | 0.257 | 0.495** | -0.142 | -1.136*** | -0.192 | 0.040 | 1.117* |
| | (0.151) | (0.226) | (0.521) | (0.215) | (0.236) | (0.334) | (0.236) | (0.219) | (0.606) |
| lgrowth | 12.673*** | 8.708** | 19.826** | -10.623*** | 10.766** | 24.371** | 24.180*** | -6.299 | 0.484 |
| | (2.588) | (4.041) | (9.498) | (3.235) | (4.195) | (9.521) | (3.919) | (4.990) | (10.308) |
| lgini | -0.015 | -0.120*** | -0.269*** | -0.001 | 0.064* | -0.031 | -0.012 | -0.133*** | -0.198* |
| | (0.041) | (0.042) | (0.094) | (0.035) | (0.034) | (0.073) | (0.044) | (0.036) | (0.105) |
| leduc | 0.113** | -0.012 | 0.084 | 0.161** | -0.061*** | 0.045 | -0.064 | 0.003 | -0.142** |
| | (0.043) | (0.023) | (0.075) | (0.067) | (0.024) | (0.050) | (0.070) | (0.021) | (0.066) |
| lciti6013 | 0.018** | -0.004 | -0.007 | 0.002 | -0.003 | -0.021 | 0.018** | -0.012* | 0.032 |
| | (0.007) | (0.008) | (0.023) | (0.007) | (0.008) | (0.022) | (0.008) | (0.007) | (0.028) |
| Observations | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 |
| Number of fipsstat | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| Within | 0.880 | | | 0.770 | | | 0.755 | | |
| Between | 0.153 | | | 0.156 | | | 0.124 | | |
| Overall | 0.376 | | | 0.372 | | | 0.465 | | |
| # Instruments | | 79 | 17 | | 79 | 17 | | 79 | 17 |
| AR(1) | | 0.0460 | 0.0490 | | 0.000710 | 0.000643 | | 2.25e-06 | 0.000269 |
| AR(2) | | 0.422 | 0.442 | | 0.0439 | 0.308 | | 0.168 | 0.0113 |
| Hansen | | 0.990 | 0.574 | | 0.997 | 0.0156 | | 0.988 | 0.0121 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Also of note are the effects of trust on entrepreneurship, which are uneven. It is positive and statistically significant in Regressions (2) and (5) and weakly significant and positive in Regressions (4) and (13). However, it is negative and statistically significant in Regression (7), and negative and weakly significant in Regression (16). Among the control variables, the Gini coefficient has a negative and statistically significant effect in Regressions (8), (11), (12), and (17), although this is slightly contradicted by Regression (5). Education has positive effects in Regressions (1), (4), (10), and (13), but this too is contradicted by Regression (5). Progressive ideology is predictive of entrepreneurship in Regressions (1), (7), (10), and (16), but this is contradicted by Regressions (8) and (16). Overall, the determinants of entrepreneurship best supported by the data are economic growth and economic freedom, with negative effects of inequality also of note.

Tables 4A and 4B present results for well-being. Regressions (21), (27), (30), and (33) are eliminated from consideration due to failing their diagnostic tests. Few variables are very predictive of well-being. The exceptions are the entrepreneurship variables where both business starts and flow are found to positively affect happiness, with statistically significant relationships of entrepreneurship found in Regressions (19), (20), (23), (28), (29), and (34). Borderline results are found in Regressions (26) and (32). Negative point estimates were found in Regressions (22), (31), and (36), but all of these are statistically insignificant. No statistically significant effects of trust on well-being are found, while one positive and statistically significant result of economic freedom on well-being is found in Regression (36). Weakly significant effects of growth are found in (23) and (24). Of the control variables, negative effects of the Gini coefficient are seen in Regressions (20), (23), (24), (29), (32), and (35). Education is negative and statistically significant in one specification, Regression (36), while ideology never achieves statistical significance. Of the relationships examined here, positive effects of entrepreneurship on well-being and negative effects of inequality are found, with little else readily apparent.

## Table 4A - Panel-Four Year Averages, Well-Being on LHS

| VARIABLES | (19) F.E. F.happy | (20) SGMM F.happy | (21) SGMM F.happy | (22) F.E. F.happy | (23) SGMM F.happy | (24) SGMM F.happy | (25) F.E. F.happy | (26) SGMM F.happy | (27) SGMM F.happy |
|---|---|---|---|---|---|---|---|---|---|
| lstarts | 0.010*** | 0.009*** | 0.008 | | | | | | |
| | (0.002) | (0.003) | (0.013) | | | | | | |
| lfails | | | | -0.007 | 0.013** | 0.010 | | | |
| | | | | (0.011) | (0.005) | (0.012) | | | |
| lflow | | | | | | | 0.007*** | 0.004* | -0.005 |
| | | | | | | | (0.003) | (0.003) | (0.011) |
| lpertrust | -0.036 | -0.058 | 0.246 | -0.060 | -0.065 | -0.099 | -0.042 | -0.031 | 0.077 |
| | (0.050) | (0.077) | (0.281) | (0.053) | (0.074) | (0.182) | (0.052) | (0.074) | (0.292) |
| lefna | -0.052 | -0.004 | 0.059 | -0.049 | 0.010 | 0.019 | -0.054 | 0.007 | 0.132** |
| | (0.039) | (0.017) | (0.044) | (0.040) | (0.016) | (0.033) | (0.039) | (0.019) | (0.058) |
| lgrowth | 0.082 | 0.886 | 0.119 | 0.110 | 1.057* | 1.127* | 0.021 | 0.755 | 0.129 |
| | (0.486) | (0.580) | (0.993) | (0.522) | (0.563) | (0.585) | (0.495) | (0.596) | (0.976) |
| lgini | -0.001 | -0.009* | -0.006 | -0.000 | -0.010** | -0.011** | -0.001 | -0.008* | -0.006 |
| | (0.007) | (0.005) | (0.007) | (0.007) | (0.004) | (0.005) | (0.007) | (0.005) | (0.007) |
| leduc | 0.002 | 0.003 | -0.003 | 0.002 | 0.001 | -0.001 | 0.003 | 0.002 | -0.013** |
| | (0.008) | (0.002) | (0.006) | (0.009) | (0.003) | (0.005) | (0.009) | (0.002) | (0.006) |
| lciti6013 | -0.001 | 0.000 | -0.001 | -0.001 | 0.001 | 0.001 | -0.001 | -0.000 | 0.003 |
| | (0.001) | (0.001) | (0.002) | (0.002) | (0.001) | (0.002) | (0.001) | (0.001) | (0.003) |
| Observations | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 |
| Number of fipsstat | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| Within | 0.160 | | | 0.139 | | | 0.156 | | |
| Between | 0.0155 | | | 0.0777 | | | 0.0482 | | |
| Overall | 0.0567 | | | 0.0825 | | | 0.0730 | | |
| # Instruments | | 69 | 15 | | 69 | 15 | | 69 | 15 |
| AR(1) | | 0.00324 | 0.00677 | | 0.00265 | 0.00272 | | 0.00317 | 0.00229 |
| AR(2) | | 0.577 | 0.0966 | | 0.427 | 0.400 | | 0.500 | 0.0542 |
| Hansen | | 0.947 | 0.570 | | 0.984 | 0.224 | | 0.978 | 0.707 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

## Table 4B - Dynamic Panel-Four Year Averages, Well-Being on LHS

| VARIABLES | (28) F.E. F.happy | (29) SGMM F.happy | (30) SGMM F.happy | (31) F.E. F.happy | (32) SGMM F.happy | (33) SGMM F.happy | (34) F.E. F.happy | (35) SGMM F.happy | (36) SGMM F.happy |
|---|---|---|---|---|---|---|---|---|---|
| lstarts | 0.011*** | 0.009*** | 0.010 | | | | | | |
| | (0.003) | (0.003) | (0.014) | | | | | | |
| lfails | | | | -0.006 | 0.011* | 0.014 | | | |
| | | | | (0.011) | (0.006) | (0.015) | | | |
| lflow | | | | | | | 0.008** | 0.004 | -0.007 |
| | | | | | | | (0.003) | (0.003) | (0.011) |
| lhappy | 0.095 | 0.123 | -0.011 | 0.074 | 0.082 | 0.235 | 0.085 | 0.094 | -0.237 |
| | (0.090) | (0.113) | (0.209) | (0.087) | (0.131) | (0.334) | (0.089) | (0.117) | (0.266) |
| lpertrust | -0.052 | -0.086 | 0.125 | -0.074 | -0.061 | -0.227 | -0.058 | -0.051 | 0.115 |
| | (0.049) | (0.055) | (0.179) | (0.052) | (0.056) | (0.245) | (0.050) | (0.056) | (0.287) |
| lefna | -0.046 | -0.007 | 0.053 | -0.043 | 0.002 | 0.004 | -0.048 | 0.005 | 0.120** |
| | (0.035) | (0.017) | (0.040) | (0.035) | (0.014) | (0.043) | (0.035) | (0.017) | (0.058) |
| lgrowth | -0.065 | 0.767 | 0.337 | 0.022 | 0.850 | 1.615** | -0.108 | 0.633 | -0.159 |
| | (0.559) | (0.522) | (0.663) | (0.579) | (0.530) | (0.741) | (0.572) | (0.526) | (0.892) |
| lgini | -0.001 | -0.008* | -0.007 | -0.001 | -0.009** | -0.015** | -0.001 | -0.008** | -0.002 |
| | (0.006) | (0.004) | (0.005) | (0.006) | (0.004) | (0.006) | (0.006) | (0.004) | (0.007) |
| leduc | 0.002 | 0.003 | -0.002 | 0.002 | 0.001 | 0.003 | 0.003 | 0.002 | -0.016** |
| | (0.008) | (0.002) | (0.007) | (0.008) | (0.003) | (0.008) | (0.008) | (0.002) | (0.006) |
| lciti6013 | -0.001 | -0.000 | -0.000 | -0.001 | 0.001 | 0.000 | -0.001 | -0.000 | 0.003 |
| | (0.002) | (0.001) | (0.002) | (0.002) | (0.001) | (0.002) | (0.002) | (0.001) | (0.002) |
| Observations | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 |
| Number of fipsstat | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| Within | 0.175 | | | 0.148 | | | 0.168 | | |
| Between | 0.0334 | | | 0.124 | | | 0.0868 | | |
| Overall | 0.0805 | | | 0.115 | | | 0.104 | | |
| # Instruments | | 79 | 17 | | 79 | 17 | | 79 | 17 |
| AR(1) | | 0.00845 | 0.00411 | | 0.0129 | 0.115 | | 0.00953 | 0.0231 |
| AR(2) | | 0.364 | 0.0971 | | 0.284 | 0.336 | | 0.322 | 0.177 |
| Hansen | | 0.999 | 0.660 | | 1 | 0.446 | | 1 | 0.896 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Very few causal relationships of note are apparent in Tables 5A and 5B, which provide results for the causes of trust. Regressions (38), (41), (42), (48), and (51) are disregarded for failing a diagnostic test. In all usable specifications, none of the variables of interest are statistically significant. The only consistency in the data is a negative point estimate for economic freedom, but it is difficult to place credence in simply that. Among the control variables, progressive political ideology is positively related to trust in Regressions (39), (45), (47), (50), and (53). This is the only relationship we find to hold in the data.

## Table 5A - Panel-Four Year Averages, Trust on LHS

| | (37) | (38) | (39) | (40) | (41) | (42) | (43) | (44) | (45) |
|---|---|---|---|---|---|---|---|---|---|
| | F.E. | SGMM | SGMM | F.E. | SGMM | SGMM | F.E. | SGMM | SGMM |
| VARIABLES | F.pertrust | F.pertrust | F.pertrust | F.pertrust | F.pertrust | F.pertrust | F.pertrust | F.pertrust | F.pertrust |
| lstarts | -0.002 | 0.009 | -0.017 | | | | | | |
| | (0.004) | (0.006) | (0.018) | | | | | | |
| lfails | | | | 0.005 | 0.005 | -0.011 | | | |
| | | | | (0.008) | (0.008) | (0.010) | | | |
| lflow | | | | | | | -0.002 | 0.007 | -0.009 |
| | | | | | | | (0.003) | (0.006) | (0.020) |
| lhappy | -0.072 | 0.051 | -0.119 | -0.066 | 0.040 | 0.048 | -0.070 | 0.032 | -0.174 |
| | (0.056) | (0.121) | (0.217) | (0.055) | (0.124) | (0.374) | (0.057) | (0.119) | (0.272) |
| lefna | -0.025 | -0.027 | -0.063 | -0.024 | -0.040 | -0.067 | -0.024 | -0.035 | -0.105 |
| | (0.025) | (0.028) | (0.068) | (0.026) | (0.028) | (0.057) | (0.025) | (0.029) | (0.084) |
| lgrowth | 0.054 | 0.102 | -0.687 | 0.093 | 0.183 | -0.387 | 0.083 | 0.041 | -0.322 |
| | (0.539) | (0.480) | (0.865) | (0.549) | (0.446) | (0.569) | (0.546) | (0.441) | (0.658) |
| lgini | -0.004 | -0.006 | 0.004 | -0.004 | -0.005 | -0.000 | -0.004 | -0.006 | 0.003 |
| | (0.003) | (0.004) | (0.008) | (0.003) | (0.004) | (0.005) | (0.003) | (0.004) | (0.008) |
| leduc | 0.003 | 0.002 | -0.011 | 0.002 | 0.001 | -0.004 | 0.002 | 0.002 | -0.004 |
| | (0.007) | (0.004) | (0.013) | (0.007) | (0.004) | (0.006) | (0.007) | (0.004) | (0.013) |
| lciti6013 | -0.000 | 0.003** | 0.007** | -0.000 | 0.003** | 0.005** | -0.000 | 0.003* | 0.006* |
| | (0.002) | (0.001) | (0.003) | (0.002) | (0.001) | (0.003) | (0.002) | (0.001) | (0.004) |
| Observations | 254 | 254 | 254 | 254 | 254 | 254 | 254 | 254 | 254 |
| Number of fipsstat | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| Within | 0.182 | | | 0.182 | | | 0.182 | | |
| Between | 0.0175 | | | 0.00239 | | | 0.0113 | | |
| Overall | 0.106 | | | 0.0813 | | | 0.0982 | | |
| # Instruments | | 71 | 15 | | 71 | 15 | | 71 | 15 |
| AR(1) | | 0.00340 | 0.0320 | | 0.00764 | 0.0301 | | 0.00411 | 0.0146 |
| AR(2) | | 0.0245 | 0.125 | | 0.0209 | 0.0749 | | 0.0249 | 0.136 |
| Hansen | | 0.993 | 0.450 | | 0.994 | 0.245 | | 0.983 | 0.350 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

## Table 5B - Dynamic Panel-Four Year Averages, Trust on LHS

| VARIABLES | (46) F.E. F.pertrust | (47) SGMM F.pertrust | (48) SGMM F.pertrust | (49) F.E. F.pertrust | (50) SGMM F.pertrust | (51) SGMM F.pertrust | (52) F.E. F.pertrust | (53) SGMM F.pertrust | (54) SGMM F.pertrust |
|---|---|---|---|---|---|---|---|---|---|
| lstarts | -0.004 | 0.007 | -0.015 | | | | | | |
| | (0.004) | (0.005) | (0.018) | | | | | | |
| lfails | | | | 0.001 | 0.002 | -0.009 | | | |
| | | | | (0.010) | (0.008) | (0.011) | | | |
| lflow | | | | | | | -0.003 | 0.005 | -0.001 |
| | | | | | | | (0.004) | (0.005) | (0.015) |
| lhappy | -0.073 | 0.005 | -0.161 | -0.066 | -0.016 | -0.047 | -0.070 | -0.017 | -0.211 |
| | (0.059) | (0.114) | (0.233) | (0.058) | (0.107) | (0.440) | (0.059) | (0.115) | (0.275) |
| lpertrust | 0.003 | 0.278*** | 0.075 | 0.011 | 0.330*** | -0.001 | 0.006 | 0.320*** | 0.155 |
| | (0.063) | (0.095) | (0.310) | (0.063) | (0.096) | (0.312) | (0.063) | (0.102) | (0.361) |
| lefna | -0.043 | -0.021 | -0.085 | -0.045 | -0.025 | -0.066 | -0.043 | -0.028 | -0.135** |
| | (0.028) | (0.023) | (0.056) | (0.029) | (0.021) | (0.054) | (0.028) | (0.023) | (0.064) |
| lgrowth | 0.174 | -0.116 | -0.673 | 0.133 | -0.227 | -0.414 | 0.187 | -0.208 | -0.619 |
| | (0.585) | (0.507) | (1.138) | (0.586) | (0.478) | (1.118) | (0.587) | (0.492) | (0.999) |
| lgini | -0.004 | -0.003 | 0.003 | -0.004 | -0.002 | -0.001 | -0.004 | -0.003 | 0.004 |
| | (0.003) | (0.003) | (0.008) | (0.003) | (0.003) | (0.008) | (0.003) | (0.003) | (0.008) |
| leduc | 0.003 | 0.001 | -0.008 | 0.003 | 0.000 | -0.004 | 0.003 | 0.002 | -0.001 |
| | (0.008) | (0.003) | (0.011) | (0.008) | (0.003) | (0.007) | (0.008) | (0.003) | (0.008) |
| lciti6013 | -0.001 | 0.003** | 0.007** | -0.001 | 0.003** | 0.006** | -0.001 | 0.002** | 0.005 |
| | (0.002) | (0.001) | (0.003) | (0.002) | (0.001) | (0.003) | (0.002) | (0.001) | (0.003) |
| Observations | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 |
| Number of fipsstat | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| Within | 0.0775 | | | 0.0739 | | | 0.0764 | | |
| Between | 0.0210 | | | 0.0311 | | | 0.0180 | | |
| Overall | 0.0492 | | | 0.0543 | | | 0.0440 | | |
| # Instruments | | 79 | 17 | | 79 | 17 | | 79 | 17 |
| AR(1) | | 0.00436 | 0.155 | | 0.00406 | 0.0481 | | 0.00346 | 0.113 |
| AR(2) | | 0.590 | 0.200 | | 0.595 | 0.0846 | | 0.734 | 0.368 |
| Hansen | | 0.995 | 0.503 | | 0.998 | 0.255 | | 0.996 | 0.443 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Tables 6A and 6B present the causes of economic freedom. Only a few SGMM specifications appear to be valid. For diagnostic reasons, Regressions (57), (59), (60), (65), (66), (68), (69), (71), and (72) are disregarded. No dynamic panel employing SGMM appeared statistically valid. The most persistent effect found is the effect of economic growth on economic freedom, which is found in Regressions (55), (58), (61), (64), (67), and (70), with a weakly significant effect also found in (56). The sole usable specification that does not contain a positive, statistically significant result is Regression (62), which has a point estimate similar to the others. The strongest other relationship was a negative effect of entrepreneurship on economic freedom, which is found in Regressions (58), (62), and (67). Weakly significant effects of well-being on economic freedom are found in (56), (62), and (63), and one specification suggesting a positive effect of trust on economic freedom found in (63). Of the control

variables, positive effects of education on economic freedom are found in (56) and (62), while negative effects of progressive political ideology are found in Regressions (56), (62), and (63); however, these results should be downplayed since none are found in a dynamic panel specification. In interpreting all of these results, it should be kept in mind that the subnational data used in the *Economic Freedom of North America*, in practice, emphasizes the size of government much more so than other economic freedom indices, which may help explain the results here, especially the effects of growth on economic freedom.

## Table 6A - Panel-Four Year Averages, Economic Freedom on LHS

| VARIABLES | (55) F.E. F.efna | (56) SGMM F.efna | (57) SGMM F.efna | (58) F.E. F.efna | (59) SGMM F.efna | (60) SGMM F.efna | (61) F.E. F.efna | (62) SGMM F.efna | (63) SGMM F.efna |
|---|---|---|---|---|---|---|---|---|---|
| lstarts | 0.011 | -0.015 | -0.062 | | | | | | |
| | (0.011) | (0.031) | (0.089) | | | | | | |
| lfails | | | | -0.072*** | 0.065** | 0.084 | | | |
| | | | | (0.018) | (0.032) | (0.058) | | | |
| lflow | | | | | | | 0.018 | -0.052** | -0.096 |
| | | | | | | | (0.011) | (0.024) | (0.078) |
| lhappy | -0.065 | -0.989* | -3.515** | -0.114 | -0.302 | -2.641 | -0.065 | -0.827* | -3.416* |
| | (0.103) | (0.528) | (1.716) | (0.098) | (0.414) | (1.932) | (0.102) | (0.478) | (1.877) |
| lpertrust | -0.023 | 0.239 | 3.521 | -0.036 | -0.154 | 2.144 | -0.009 | 0.211 | 3.182* |
| | (0.092) | (0.630) | (2.154) | (0.092) | (0.660) | (1.477) | (0.091) | (0.683) | (1.705) |
| lgrowth | 3.482*** | 4.669* | -5.114 | 2.731*** | 5.343** | 1.791 | 3.189*** | 3.967 | -3.440 |
| | (0.866) | (2.586) | (7.896) | (0.948) | (2.704) | (8.331) | (0.882) | (2.835) | (7.068) |
| lgini | 0.010 | 0.001 | 0.057 | 0.008 | -0.000 | 0.023 | 0.009 | 0.004 | 0.059 |
| | (0.012) | (0.025) | (0.048) | (0.011) | (0.027) | (0.051) | (0.011) | (0.028) | (0.056) |
| leduc | 0.002 | 0.046** | 0.025 | 0.015 | 0.047** | 0.060 | 0.006 | 0.045** | 0.021 |
| | (0.030) | (0.019) | (0.040) | (0.027) | (0.019) | (0.044) | (0.029) | (0.019) | (0.040) |
| lciti6013 | -0.001 | -0.013*** | -0.033** | -0.002 | -0.012*** | -0.030** | -0.001 | -0.016*** | -0.030** |
| | (0.003) | (0.004) | (0.014) | (0.003) | (0.005) | (0.012) | (0.003) | (0.005) | (0.013) |
| Observations | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 |
| Number of fipsstat | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| Within | 0.581 | | | 0.615 | | | 0.592 | | |
| Between | 0.0349 | | | 0.00795 | | | 0.0403 | | |
| Overall | 0.0872 | | | 0.0713 | | | 0.0949 | | |
| # Instruments | | 69 | 15 | | 69 | 15 | | 69 | 15 |
| AR(1) | | 0.0788 | 0.116 | | 0.205 | 0.150 | | 0.0862 | 0.0842 |
| AR(2) | | 0.300 | 0.821 | | 0.610 | 0.643 | | 0.244 | 0.836 |
| Hansen | | 0.975 | 0.852 | | 0.942 | 0.809 | | 0.968 | 0.967 |

## Table 6B - Dynamic Panel-Four Year Averages, Economic Freedom on LHS

| VARIABLES | (64) F.E. F.efna | (65) SGMM F.efna | (66) SGMM F.efna | (67) F.E. F.efna | (68) SGMM F.efna | (69) SGMM F.efna | (70) F.E. F.efna | (71) SGMM F.efna | (72) SGMM F.efna |
|---|---|---|---|---|---|---|---|---|---|
| lstarts | 0.002 | 0.012 | 0.011 | | | | | | |
| | (0.006) | (0.012) | (0.027) | | | | | | |
| lfails | | | | -0.042*** | 0.047*** | 0.071*** | | | |
| | | | | (0.015) | (0.011) | (0.023) | | | |
| lflow | | | | | | | 0.008 | -0.015* | -0.069** |
| | | | | | | | (0.006) | (0.009) | (0.034) |
| lhappy | 0.003 | -0.320 | -0.656* | -0.024 | -0.178 | -1.081* | 0.005 | -0.226 | -1.336** |
| | (0.062) | (0.197) | (0.399) | (0.052) | (0.206) | (0.559) | (0.060) | (0.182) | (0.604) |
| lpertrust | -0.082 | -0.004 | 0.271 | -0.081 | -0.147 | -0.006 | -0.071 | 0.078 | 0.868 |
| | (0.059) | (0.179) | (0.367) | (0.059) | (0.182) | (0.460) | (0.059) | (0.179) | (0.573) |
| lefna | 0.536*** | 0.845*** | 0.715*** | 0.513*** | 0.837*** | 0.734*** | 0.528*** | 0.843*** | 0.586*** |
| | (0.041) | (0.064) | (0.118) | (0.046) | (0.056) | (0.149) | (0.043) | (0.052) | (0.152) |
| lgrowth | 2.512*** | 4.445*** | 6.113*** | 2.080*** | 4.858*** | 6.395*** | 2.371*** | 3.964*** | 3.507 |
| | (0.664) | (0.929) | (1.964) | (0.713) | (0.984) | (2.181) | (0.666) | (1.019) | (2.470) |
| lgini | -0.003 | -0.025*** | -0.032** | -0.004 | -0.026*** | -0.029* | -0.003 | -0.022*** | -0.000 |
| | (0.008) | (0.007) | (0.014) | (0.007) | (0.007) | (0.017) | (0.007) | (0.007) | (0.022) |
| leduc | 0.012 | 0.014* | 0.029** | 0.019 | 0.012 | 0.022 | 0.014 | 0.011* | 0.009 |
| | (0.017) | (0.007) | (0.014) | (0.015) | (0.008) | (0.016) | (0.017) | (0.006) | (0.015) |
| lciti6013 | 0.000 | -0.003* | -0.008** | -0.001 | -0.002 | -0.004 | -0.000 | -0.004** | -0.009* |
| | (0.002) | (0.002) | (0.004) | (0.002) | (0.002) | (0.004) | (0.002) | (0.002) | (0.005) |
| Observations | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 |
| Number of fipsstat | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| Within | 0.784 | | | 0.796 | | | 0.786 | | |
| Between | 0.957 | | | 0.926 | | | 0.948 | | |
| Overall | 0.907 | | | 0.876 | | | 0.898 | | |
| # Instruments | | 79 | 17 | | 79 | 17 | | 79 | 17 |
| AR(1) | | 3.85e-05 | 0.000467 | | 5.20e-05 | 0.00405 | | 2.39e-05 | 0.00366 |
| AR(2) | | 0.00923 | 0.104 | | 0.0139 | 0.145 | | 0.00779 | 0.539 |
| Hansen | | 0.989 | 0.000503 | | 0.996 | 0.0271 | | 0.993 | 0.697 |

Tables 7A and 7B present results for the causes of economic growth. Regressions (75), (83), (84), (86), and (89) are disregarded due to their diagnostic failures. The strongest result found, counterintuitively, is the *negative* effect of economic freedom on growth, contradicting the large literature which finds positive effects of economic freedom, as mentioned in the literature review. All point estimates for economic freedom are negative, with statistical significance achieved in Regressions (73), (76), (79), (80), (82), (85), and (90), with a weaker result in Regression (77). It is possible that the channel this is acting through is demand side, since as mentioned above the data source is primarily fiscal,[8] but the empirical result should not be disregarded simply because of this possibility. Also counterintuitively, negative effects of entrepreneurship on growth are found in Regressions (76), (80),

[8] If it is fiscal, the interpretation is quite ambiguous. See Murphy (2016).

(90), with some weak additional support in (85), although Regression (77) contradicts this point. Negative effects of happiness are found in Regressions (78) and (81), with weak support also found in Regression (90); this may perhaps be interpreted in terms of Cowen (2017), where it is argued that complacent (if happy) cultures have become drags on economic growth rates. One specification finds a positive, statistically significant result of trust on growth, but this is not robust. Among the control variables, negative effects of the Gini coefficient are found in Regressions (74), (77), and (80), but this is not reproduced in any of the usable dynamic panel specifications.

## Table 7A - Panel-Four Year Averages, Growth on LHS

| | (73) | (74) | (75) | (76) | (77) | (78) | (79) | (80) | (81) |
|---|---|---|---|---|---|---|---|---|---|
| | F.E. | SGMM | SGMM | F.E. | SGMM | SGMM | F.E. | SGMM | SGMM |
| VARIABLES | F.growth | F.growth | F.growth | F.growth | F.growth | F.growth | F.growth | F.growth | F.growth |
| lstarts | -0.000 | -0.000 | -0.002 | | | | | | |
| | (0.000) | (0.001) | (0.002) | | | | | | |
| lfails | | | | -0.002** | 0.001** | 0.000 | | | |
| | | | | (0.001) | (0.001) | (0.001) | | | |
| lflow | | | | | | | 0.000 | -0.002** | -0.004* |
| | | | | | | | (0.000) | (0.001) | (0.002) |
| lhappy | -0.003 | -0.014 | -0.039 | -0.004 | -0.008 | -0.088** | -0.002 | -0.016 | -0.070*** |
| | (0.006) | (0.011) | (0.029) | (0.007) | (0.012) | (0.036) | (0.006) | (0.010) | (0.026) |
| lpertrust | -0.003 | 0.001 | 0.079** | -0.002 | -0.005 | 0.070** | -0.002 | 0.008 | 0.045 |
| | (0.005) | (0.009) | (0.033) | (0.005) | (0.008) | (0.035) | (0.005) | (0.010) | (0.035) |
| lefna | -0.005** | -0.004 | 0.005 | -0.007*** | -0.004* | 0.005 | -0.006** | -0.006*** | -0.019 |
| | (0.003) | (0.003) | (0.008) | (0.003) | (0.002) | (0.008) | (0.003) | (0.002) | (0.013) |
| lgini | -0.000 | -0.002*** | -0.001 | -0.000 | -0.002*** | -0.001 | -0.000 | -0.001*** | -0.000 |
| | (0.000) | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) |
| leduc | -0.001 | 0.000 | -0.001 | -0.001 | 0.000 | -0.001 | -0.001 | 0.000 | 0.000 |
| | (0.001) | (0.000) | (0.001) | (0.001) | (0.000) | (0.001) | (0.001) | (0.000) | (0.001) |
| lciti6013 | 0.000 | -0.000 | -0.000 | -0.000 | -0.000 | -0.000 | -0.000 | -0.000* | -0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Observations | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 |
| Number of fipsstat | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| Within | 0.591 | | | 0.605 | | | 0.591 | | |
| Between | 0.175 | | | 0.204 | | | 0.166 | | |
| Overall | 0.367 | | | 0.411 | | | 0.381 | | |
| # Instruments | | 69 | 15 | | 69 | 15 | | 69 | 15 |
| AR(1) | | 9.81e-05 | 0.0131 | | 0.000274 | 0.0176 | | 0.000778 | 0.0740 |
| AR(2) | | 0.248 | 0.227 | | 0.618 | 0.179 | | 0.593 | 0.944 |
| Hansen | | 0.934 | 0.0479 | | 0.938 | 0.295 | | 0.930 | 0.456 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

## Table 7B - Dynamic Panel-Four Year Averages, Growth on LHS

| VARIABLES | (82) F.E. F.growth | (83) SGMM F.growth | (84) SGMM F.growth | (85) F.E. F.growth | (86) SGMM F.growth | (87) SGMM F.growth | (88) F.E. F.growth | (89) SGMM F.growth | (90) SGMM F.growth |
|---|---|---|---|---|---|---|---|---|---|
| lstarts | -0.000 | -0.000 | -0.000 | | | | | | |
| | (0.000) | (0.001) | (0.001) | | | | | | |
| lfails | | | | -0.002* | 0.002** | 0.002* | | | |
| | | | | (0.001) | (0.001) | (0.001) | | | |
| lflow | | | | | | | -0.000 | -0.001*** | -0.003** |
| | | | | | | | (0.000) | (0.000) | (0.001) |
| lhappy | -0.005 | -0.015 | -0.009 | -0.005 | -0.011 | -0.024 | -0.004 | -0.014 | -0.044* |
| | (0.006) | (0.010) | (0.020) | (0.006) | (0.011) | (0.024) | (0.006) | (0.010) | (0.024) |
| lpertrust | -0.002 | -0.008 | 0.007 | -0.001 | -0.015 | -0.013 | -0.001 | -0.002 | 0.024 |
| | (0.005) | (0.009) | (0.020) | (0.005) | (0.009) | (0.023) | (0.005) | (0.009) | (0.028) |
| lefna | -0.007*** | -0.005* | -0.004 | -0.008*** | -0.005* | -0.005 | -0.007*** | -0.005** | -0.013** |
| | (0.002) | (0.003) | (0.004) | (0.002) | (0.002) | (0.006) | (0.003) | (0.002) | (0.006) |
| lgrowth | 0.150*** | 0.162*** | 0.233** | 0.128*** | 0.188*** | 0.290*** | 0.146*** | 0.145*** | 0.146 |
| | (0.040) | (0.044) | (0.097) | (0.042) | (0.044) | (0.104) | (0.040) | (0.047) | (0.090) |
| lgini | -0.001 | -0.002*** | -0.003*** | -0.001 | -0.002*** | -0.003*** | -0.001 | -0.002*** | -0.001 |
| | (0.000) | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) |
| leduc | -0.000 | 0.001** | 0.001 | 0.000 | 0.001* | 0.001* | -0.000 | 0.001* | 0.001 |
| | (0.001) | (0.000) | (0.001) | (0.001) | (0.000) | (0.001) | (0.001) | (0.000) | (0.001) |
| lciti6013 | 0.000 | -0.000 | -0.000 | 0.000 | -0.000 | -0.000 | 0.000 | -0.000 | -0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Observations | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 |
| Number of fipsstat | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| Within | 0.620 | | | 0.626 | | | 0.618 | | |
| Between | 0.305 | | | 0.243 | | | 0.278 | | |
| Overall | 0.460 | | | 0.438 | | | 0.457 | | |
| # Instruments | | 79 | 17 | | 79 | 17 | | 79 | 17 |
| AR(1) | | 2.08e-05 | 0.000166 | | 3.82e-05 | 0.000118 | | 4.59e-05 | 0.00586 |
| AR(2) | | 0.00371 | 0.0226 | | 0.00955 | 0.0773 | | 0.00813 | 0.510 |
| Hansen | | 0.993 | 0.00119 | | 0.994 | 0.00542 | | 0.996 | 0.235 |

Among our most robust results, we find positive effects of entrepreneurship on well-being, which confirms previous findings (Blanchflower 2004; Benz and Frey 2008; Naudé, Amorós, and Cristi 2014) but negative effects on economic freedom and economic growth. This latter result is contradictory to much of the existing literature, which tends to find a positive relationship between entrepreneurship and economic growth (Audretsch, Kielback, and Lehmann 2006; Powell 2008). We do not find any causal effects of subjective well-being or social trust. We find positive effects of economic freedom on entrepreneurship, consistent with Nyström (2008) and Bjørnskov and Foss (2013), but negative effects on economic growth. This latter finding is our most counterintuitive result, which runs counter to nearly all literature elsewhere (Heckelman 2000; Cole 2003; Powell 2003; De Haan et al.

2006). Previous studies using the subnational data, notably Compton et al. (2011), did not find this negative relationship.

We also find positive effects of economic growth on both entrepreneurship and economic freedom. Much of the cross-country literature on the relationship between entrepreneurship and economic growth finds a U-shaped relationship; countries at low levels of economic growth have higher levels of necessity-driven entrepreneurship, and countries at high levels of economic growth have higher levels of opportunity-driven entrepreneurship (Acs and Varga 2005; Winnekers et al. 2010). Because the U.S. is a relatively rich country, we would expect to see a positive relationship between these variables, since all states are likely to be on the upward-bound portion of the U-shaped curve.

Among the control variables, we find negative effects of inequality on entrepreneurship and well-being, and positive effects of a progressive political ideology on social trust. We do not find any causal effects of education. However, these are only the results which appear to be robust across the credible specifications.

The overall results for the paper are summarized in Figure 1. Only the strongest results of our investigation are included. Blanks denote either that no effect was found, or that the effects were too inconclusive or contradictory to report with any degree of confidence, although standard caveats about the absence of evidence and evidence of absence apply. We can describe these results in terms of the number of standard deviations the dependent variable moves in response to a one standard deviation increase in the independent variable, using a representative regression. These results are:

A positive effect of economic growth on entrepreneurship (from Regression 11, 0.10 s.d.), a positive effect of economic freedom on entrepreneurship (Regression 10, 0.09 s.d.), a negative effect of inequality on entrepreneurship (Regression 17, 0.41 s.d.), a positive effect of entrepreneurship on well-being (Regression 29, 0.23 s.d.), a negative effect of inequality on well-being (Regression 35, 0.34 s.d.), a positive effect of progressive political ideology on trust (Regression 47, 0.37), a negative effect of

entrepreneurship on economic freedom (Regression 67, 0.08 s.d.), a positive effect of economic growth on economic freedom (Regression 70, 0.08 s.d.), a negative effect of entrepreneurship on economic growth (Regression 90, 0.46 s.d.) and a negative effect of economic freedom on economic growth (Regression 85, 0.42 s.d.).

FIGURE 1. SUMMARY OF RESULTS

| | The Effect of: / On: | Entrepreneur-ship | Well-Being | Trust | Economic Freedom | Economic Growth |
|---|---|---|---|---|---|---|
| Primary Variables of Interest | Entrepreneurship | | + | | - | - |
| | Well-Being | | | | | |
| | Trust | | | | | |
| | Economic Freedom | + | | | | - |
| | Economic Growth | + | | | + | |
| Secondary Control Variables | Inequality | - | - | | | |
| | Education | | | | | |
| | Progressive Political Ideology | | | + | | |

**Conclusion**

In the dynamic panel context, we explore various relationships between several social scientific variables that have been examined at length elsewhere, but not together. Using a baseline fixed effects model, four-year averages as our unit of observation, in conjunction with two specifications of System GMM, three definitions of entrepreneurship, and with and without a lagged dependent variable, we find several relationships to hold for the United States at the subnational level. Our primary variables of interest – subjective well-being, social capital (trust), economic institutions (economic freedom), economic growth, and entrepreneurship – were supplemented with controls for education, inequality and political ideology. These controls were not our motivating interest, but their effects are among our reported headline results.

This exploratory study considers several social scientific variables simultaneously. As such, it is better able to speak to the interrelationships between the variables, all of which are found to be important in other studies. Using our methodology, we are able to assess medium and long runs dynamics among the variables in question, in contrast to conventional methodologies which assess contemporaneous and short run effects. We thereby measure effects that are more persistent and grounded than methodologies employing conventionally specified cross-sections or panels. Our specifications, especially in our dynamic panels, are also fairly well-identified. Findings that are robust under these specifications are summarized most clearly in Figure 1.

Among future extensions, investigating what drives differences between findings here and findings elsewhere seems to be of some importance, particularly our result that entrepreneurship and economic freedom have negative effects on growth. Extensions of our models and specifications to the international context would be the most natural course, though cross-country data for all variables used here may be difficult to collect. Ultimately, the analysis performed here is straightforward while yielding certain counterintuitive results.

**References**

Acemoglu, D. 2010. Theory, general equilibrium, and political economy in development economics. *Journal of economic perspectives, 24*(3): 17-32.

Acs, Z. J., and Varga, A. 2005. Entrepreneurship, agglomeration and technological change. *Small business economics*, *24*(3): 323-334.

Aldrich, H.E. and Martinez, M.A., 2010. Entrepreneurship as social construction: a multilevel evolutionary approach. In *Handbook of entrepreneurship research*. Springer New York: 387-427.

Andersson, P., 2008. Happiness and health: Well-being among the self-employed. *The Journal of Socio-Economics*, *37*(1): 213-236.

Arellano, M., & Bover, O. 1995. Another look at the instrumental variable estimation of error components models. *Journal of econometrics*, *68*(1), 29-51.

Audretsch, D.B., Keilbach, M.C. and Lehmann, E.E., 2006. *Entrepreneurship and economic growth*. Oxford University Press.

Bartolini, S., Bilancini, E. and Pugno, M., 2013. Did the decline in social connections depress Americans' happiness?. *Social Indicators Research*, *110*(3): 1033-1059.

Bartolini, S., Bilancini, E. and Sarracino, F., 2016. Social Capital Predicts Happiness Over Time. In *Policies for Happiness*, ed. S. Bartolini, E. Bilancini, P.L. Porta. Oxford University Press: 175-198.

Baumol, W.J., 1990. Entrepreneurship: Productive, unproductive, and destructive. *Journal of Political Economy*, 98(5): 893-921.

Belasen, A. R. and Hafer, R. W. 2012. Well-being and economic freedom: Evidence from the states. *Intelligence*, *40*(3): 306-316.

Belasen, A. R. and Hafer, R. W. 2013. Do changes in economic freedom affect well- being. *Journal of Regional Analysis and Policy*, *43*(1), 56-64.

Benz, M. and Frey, B.S. 2008. The value of doing what you like: Evidence from the self-employed in 23 countries. *Journal of Economic Behavior & Organization*, *68*(3): 445-455.

Berggren, N. and Jordahl, H., 2006. Free to trust: Economic freedom and social capital. *Kyklos*, *59*(2): 141-169.

Berry, W. D., Ringquist, E. J., Fording, R. C., & Hanson, R. L. 1998. Measuring citizen and government ideology in the American states, 1960-93. *American Journal of Political Science*, 327-348.

Beugelsdijk, S. and Van Schaik, T., 2005. Social capital and growth in European regions: an empirical test. *European Journal of Political Economy*, *21*(2): 301-324.

Binder, M. and Coad, A., 2013. Life satisfaction and self-employment: A matching approach. *Small Business Economics*, *40*(4): 1009-1033.

Bjørnskov, C. (2005). Does political ideology affect economic growth?. *Public Choice*, *123*(1-2), 133-146.

Bjørnskov, C., 2008. Social capital and happiness in the United States. *Applied Research in Quality of Life*, *3*(1): 43-62.

Bjørnskov, C., 2012. How does social trust affect economic growth?. *Southern Economic Journal*, *78*(4): 1346-1368.

Bjørnskov, C. and Foss, N., 2013. How strategic entrepreneurship and the institutional context drive economic growth. *Strategic Entrepreneurship Journal*, *7*(1): 50-69.

Blanchflower, D.G., 2004. *Self-employment: More may not be better* (No. w10286). National Bureau of Economic Research.

Blundell, R., & Bond, S. 1998. Initial conditions and moment restrictions in dynamic panel data models. *Journal of econometrics*, *87*(1), 115-143.

Bolle, F., Okhrin, Y. and Vogel, C., 2009. A note on interdependent happiness. *The Journal of Socio-Economics*, *38*(5): 713-721.

Carree, M. and Thurik, R., 2006. *Entrepreneurship and economic growth*. Edward Elgar Publishing.

Clark, A.E. and Oswald, A.J., 1994. Unhappiness and unemployment. *The Economic Journal*, *104*(424): 648-659.

Clark, A. 2010. Work, jobs, and well-being across the millennium. In E. Diener, J. Helliwell, & D. Kahneman (Eds.), *International differences in well-being*. Oxford: Oxford University Press: 436-464.

Cole, J.H., 2003. Contribution of Economic Freedom to World Economic Growth, 1980-99. *Cato Journal*, *23*: 189-198.

Compton, R.A., Giedeman, D.C. and Hoover, G.A., 2011. Panel evidence on economic freedom and growth in the United States. *European Journal of Political Economy*, *27*(3): 423-435.

Cowen, T. 2017. *The complacent class: the self-defeating quest for the American Dream*. New York: St. Martin's Press.

Csíkszentmihályi, M. 2003.*Good Business: Leadership, Flow and the Making of Meaning*. Kent: Coronet.

De Haan, J., Lundstrom, S., and Sturm, J.-E. 2006. Market-Oriented Institutions and Policies and Economic Growth: A Critical Survey. *Journal of Economic Surveys, 20*(2): 147-191.

Deaton, A. and Cartwright, N. 2018. Understanding and misunderstanding randomized controlled trials. *Social science & medicine 210*(August): 2-21.

Easterlin, R.A., 1973. Does money buy happiness?, *The Public Interest*, (30): 3.

Easterlin, R.A. 1995. Will Raising the Incomes of All Increase the Happiness of All? *Journal of Economic Behavior and Organization* 27(1): 35-48.

Easterlin, R.A., 2005. Feeding the illusion of growth and happiness: A reply to Hagerty and Veenhoven. *Social Indicators Research*, *74*(3): 429-443.

Easterlin, R.A., McVey, L.A., Switek, M., Sawangfa, O. and Zweig, J.S., 2010. The happiness–income paradox revisited. *Proceedings of the National Academy of Sciences*, *107*(52): 22463-22468.

Easterlin, R.A., Angelescu, L. and Zweig, J.S., 2011. The impact of modern economic growth on urban–rural differences in subjective well-being. *World development*, *39*(12): 2187-2198.

Forte, A., Peiró-Palomino, J. and Tortosa-Ausina, E., 2015. Does social capital matter for European regional growth?. *European Economic Review*, *77*: 47-64.

Frank, Mark. W. (2009). Inequality and Growth in the United States: Evidence from a New State-Level Panel of Income Inequality Measure. *Economic Inquiry*, 47(1), 55-68.

Frey, B.S. and Stutzer, A., 2000. Happiness, economy and institutions. *The Economic Journal*, *110*(466): 918-938.

Fukuyama, F., 1995. *Trust: The Social Virtues and The Creation Of Prosperity*. Free Press Paperbacks.

Goetz, M.C., Goetz, P.W. and Robinson, M.D., 2007. What's the use of being happy? Mood states, useful objects, and repetition priming effects. *Emotion*, *7*(3): 675-679.

Graafland, J. and Compen, B., 2015. Economic freedom and life satisfaction: Mediation by income per capita and generalized trust. *Journal of Happiness Studies*, *16*(3): 789-810.

Hall, J.C. and Lawson, R.A., 2014. Economic freedom of the world: an accounting of the literature. *Contemporary Economic Policy*, *32*(1): 1-19.

Heckelman, J.C., 2000. Economic freedom and economic growth: a short-run causal investigation. *Journal of Applied Economics*, *3*(1): 71-91.

Helliwell, J.F., 1996. *Do borders matter for social capital? Economic growth and civic culture in US states and Canadian provinces* (No. w5863). National bureau of economic research.

Helliwell, J.F., 2003. How's life? Combining individual and national variables to explain subjective well-being. *Economic modelling*, *20*(2): 331-360.

Helliwell, J.F., 2006. Well-Being, social capital and public policy: What's new?. *The Economic Journal*, *116*(510): C34-C45.

Helliwell, J.F. and Putnam, R.D., 2004. The social context of well-being. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 359: 1435-1446.

Helliwell, J.F. and Putnam, R.D., 1995. Economic growth and social capital in Italy. *Eastern Economic Journal*, *21*(3): 295-307.

Helliwell, J.F., Huang, H. and Wang, S., 2016. The distribution of world happiness. In *World Happiness*, ed. J. Helliwell, R. Layard, and J. Sachs: 8-48.

Jackson, J., Carden, A. and Compton, R.A., 2015. Economic freedom and social capital. *Applied Economics*, *47*(54): 5853-5867.

Jackson, J., 2016. Free to Be Happy: Economic Freedom and Happiness in US States. *Journal of Happiness Studies*, 18(4): 1207-1229.

Jackson, J., 2017. Economic freedom and social capital: pooled mean group evidence. *Applied Economics Letters*, *24*(6): 370-373.

Jackson, J. (2019). Happy partisans and extreme political views: The impact of national versus local representation on well-being. *European Journal of Political Economy*, *58*, 192-202.

Jackson, J. (2019). Presidential congruence and happiness: the role of extreme political views. *Applied Economics Letters*, 1-5. https://doi.org/10.1080/13504851.2019.1616061

Jamal, M., 1997. Job stress, satisfaction, and mental health: an empirical examination of self-employed and non-self-employed Canadians. *Journal of Small Business Management*, *35*(4): 48-57.

Knack, S. and Keefer, P., 1997. Does social capital have an economic payoff? A cross-country investigation. *The Quarterly journal of economics*, *112*(4): 1251-1288.

Kreft, S.F. and Sobel, R.S., 2005. Public policy, entrepreneurship, and economic freedom. *Cato Journal*, 25(3): 595-616.

Kuckertz, A., Berger, E.S. and Allmendinger, M.P., 2015. What drives entrepreneurship? A configurational analysis of the determinants of entrepreneurship in innovation-driven economies. *Business Administration Review,* 75(4): 273-288

Kwon, S.W., Heflin, C. and Ruef, M., 2013. Community social capital and entrepreneurship. *American Sociological Review*, *78*(6): 980-1008.

Layard, R. 2003. Happiness: Has Social Science a Clue Lionel Robbins Memorial Lectures 2002/3. Delivered on 3, 4, 5 March 2003 at the London School of Economics. http://cep.lse.ac.uk/events/lectures/layard/RL030303.pdf

Lange, T., 2012. Job satisfaction and self-employment: autonomy or personality?. *Small Business Economics*, *38*(2): 165-177.

Layard, R. 2005. Rethinking Public Economics: The Implications of Rivalry and Habit. In *Economics and Happiness*, edited by P.L. Porta and L. Bruni, Oxford University Press: 147-169.

Lawson, R., Murphy, R.H., and Powell, B. 2018. The determinants of economic freedom: A survey. Working Paper, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3266641

Maurer, I. and Ebers, M., 2006. Dynamics of social capital and their performance implications: Lessons from biotechnology start-ups. *Administrative Science Quarterly*, *51*(2): 262-292.

Molina-Morales, F.X. and Martínez-Fernández, M.T., 2009. Too much love in the neighborhood can hurt: How an excess of intensity and trust in relationships may produce negative effects on firms. *Strategic Management Journal*, *30*(9): 1013-1023.

Murphy, R. H. 2016. Beggaring thy neighbor at the state and local level. *Journal of Financial Economic Policy, 8*(4): 532-539.

Naudé, W. 2008. Entrepreneurship in economic development, Research Paper*, UNU-WIDER, United Nations University (UNU)*, No. 2008/20

Naudé, W., Amorós, J.E. and Cristi, O., 2014. "Surfeiting, the appetite may sicken": entrepreneurship and happiness. *Small Business Economics*, *42*(3): 523-540.

Noorderhaven, N., Thurik, R., Wennekers, S. and Stel, A.V., 2004. The role of dissatisfaction and per capita income in explaining self-employment across 15 European countries. *Entrepreneurship Theory and Practice*, *28*(5): 447-466.

Nordenmark, M., Vinberg, S. and Strandh, M., 2012. Job control and demands, work-life balance and wellbeing among self-employed men and women in Europe. *Vulnerable Groups & Inclusion*, *3*(1): 188-96.

Nyström, K., 2008. The institutions of economic freedom and entrepreneurship: evidence from panel data. *Public Choice*, 136(3): 269-282.

Ovaska, T. and Sobel, R.S., 2005. Entrepreneurship in post-socialist economies. *Journal of Private Enterprise*, *21*(1): 8-28.

Peiró-Palomino, J., 2016. Social capital and economic growth in Europe: Nonlinear trends and heterogeneous regional effects. *Oxford Bulletin of Economics and Statistics*, *78*(5): 717-751.

Powell, B., 2002. Economic freedom and growth: the case of the Celtic tiger. *Cato Journal*, *22*, p.431-448.

Powell, B., 2008. *Making poor nations rich: Entrepreneurship and the process of economic development*. Stanford University Press.

Powell, B. 2019. *Economic freedom and prosperity: The origins and maintenance of liberalization*. New York: Routledge

Putnam, R.D., 2000. *Bowling alone: America's declining social capital*. Palgrave Macmillan US.

Roodman, D. 2009. A note on the theme of too many instruments*. *Oxford Bulletin of Economics and statistics*, *71*(1), 135-158.

Ruhm, C. J. 2019. Shackling the identification police? *Southern economic journal 85*(4): 1016-1026.

Sacks, D. W., Stevenson, B., and Wolfers, J. 2013. "Subjective Well-Being, Income, and Growth." In *Development Challenges in a Postcrisis World*, C. Spulveda, A. Harrison, and J. Y. Lin, eds. Washington, DC: The World Bank. 283-315.

Seligman, M.E., 2012. *Flourish: A visionary new understanding of happiness and well-being*. Simon and Schuster.

Sevä, I.J., Vinberg, S., Nordenmark, M. and Strandh, M., 2016. Subjective well-being among the self-employed in Europe: macroeconomy, gender and immigrant status. *Small business economics*, *46*(2): 239-253.

Schneider, G., Plümper, T. and Baumann, S., 2000. Bringing Putnam to the European regions: on the relevance of social capital for economic growth. *European Urban and Regional Studies*, *7*(4): 307-317.

Sobel, R.S., 2008. Testing Baumol: Institutional quality and the productivity of entrepreneurship. *Journal of Business Venturing*, *23*(6): 641-655.

Sobel, R.S., Clark, J.R. and Lee, D.R., 2007. Freedom, barriers to entry, entrepreneurship, and economic progress. *The Review of Austrian Economics*, *20*(4): 221-236.

Spruk, R. and Kešeljević, A., 2016. Institutional origins of subjective well-being: Estimating the effects of economic freedom on national happiness. *Journal of happiness studies*, *17*(2): 659-712.

Stansel, D., Torra, J, and McMahon. F. 2016. *Economic Freedom of North America 2016.* Fraser Institute.

Stansel, D., Tuszynski, M.P. 2018. Targeted State Economic Development Incentives and Entrepreneurship. *Journal of Entrepreneurship and Public Policy, 7*(3): 235-247.

Stevenson, B. and Wolfers, J., 2008. *Economic growth and subjective well-being: reassessing the Easterlin paradox* (No. w14282). National Bureau of Economic Research.

Stevenson, B. and Wolfers, J. 2013. "Subjective Well-Being and Income: Is There Any Evidence of Satiation?" *American Economic Review, 103*(3): 598-604.

Thornton, P.H. and Flynn, K.H., 2003. Entrepreneurship, networks, and geographies. In *Handbook of entrepreneurship research*. Springer US: 401-433.

Tideman, S., Frijters, P. and Shields, M.A., 2008. Relative income, happiness, and utility: An explanation for the Easterlin paradox and other puzzles. *Journal of Economic literature*, *46*(1): 95-144.

Turkina, E. and Thi Thanh Thai, M., 2013. Social capital, networks, trust and immigrant entrepreneurship: a cross-country analysis. *Journal of Enterprising Communities: People and Places in the Global Economy*, *7*(2): 108-124.

Uslaner, E.M., 2002. *The moral foundations of trust*. Cambridge University Press.

Veenhoven, R. 1991. Is Happiness Relative? *Social Indicators Research* 24: (1-34).

Wennekers, S., Van Stel, A., Carree, M., & Thurik, R. 2010. The relationship between entrepreneurship and economic development: Is it U-shaped?. *Foundations and Trends® in Entrepreneurship*, *6*(3), 167-237.

Williamson, O. 2000. The New Institutional Economics: Taking stock, looking ahead. *Journal of Economic Literature 38*(3): 595-613.