The Negative Impact of Barriers to Entry on Income Inequality

By Dallin Overstreet[1]

Abstract: Barriers to entry such as fees, licensing, or educational requirements, make it more difficult to start businesses in many countries. Problematically, many barriers to entry are due to regulatory capture and only serve to benefit incumbent firms and businesses. These regulations created and enforced by the government often make it difficult for low-income individuals to start new businesses or new careers in many industries. By discouraging or even denying individuals access to higher paying occupations, barriers to entry tend to increase income inequality. In this analysis, I estimate empirically the effect that barriers to entry have on income inequality. I use data produced by the World Bank's Doing Business Index to determine how easy it is to start a business in each country. The Gini coefficient is a measure of the amount of income inequality in a country and is used to determine the effect that entry regulations have on income inequality. The dataset contains observations from 2012 to 2019 for 180 countries. Results show a 1-point increase in the ease of starting a business score translates to a 1.05-point decrease in the Gini coefficient. Similarly, a one-standard deviation increase in the starting a business score equates to a 13.4-point decrease in the Gini coefficient. Thus, I conclude barriers to entry have a negative impact on income inequality and tend to cause more inequality in countries in which they are instituted.

Introduction

Barriers to entry, including educational requirements, occupational licensing, start-up fees, and other government regulations, often make it difficult for new companies or individuals to enter any given market. There exist both natural and artificial barriers to entry. Natural barriers to entry may include high set up costs, high research and development costs, or ownership of a key scarce resource for the industry. Artificial barriers to entry could include government regulation like educational and licensing requirements, or exclusive contracts or patents.

[1] Dallin Overstreet is a Senior Financial Analyst at the Arizona Department of Economic Security. He holds a Bachelor's degree in Economics and a Master of Public Policy.

These entry regulations can make it difficult and costly for newcomers to enter a market, especially for low-wage earners. While some artificial barriers to entry imposed by government may be justifiable, many have been shown to be overly burdensome for entry-level occupations such as a cosmetologist or barber. For example, according to a 2014 study in the United States a person must have about 300 days in experience or education, as well as pay a fee of around $150 before being able to work as a cosmetologist (de Rugy 2014). Similarly, a barber must have about 250 days of experience or education and pay a $125 licensing fee before opening shop. While one could argue these regulations are needed to ensure public safety or public health, it is easy to see these types of barriers to entry disproportionately affect low-income individuals looking to start new businesses or jobs, which could lead to increased income inequality in society.

Individuals who want to enter a certain market must either go through the required steps and licensing, or risk operating illegally and hoping they are not caught in the act. Operating illegally would still have negative effects on the business even if the individual is not discovered, forcing the business to operate in back channels to avoid detection from regulators as well as other licensed business owners. Operating unlicensed may also discourage would-be customers who may view the operator as unqualified or under-trained. This advantage gives licensed providers an opportunity to demand higher prices for their services, leaving the scraps for those operating unlicensed. A study by Gittleman and Kleiner (2016) shows this relationship, with licensed providers earning higher wages compared to unlicensed providers. Obviously, skirting past the licensing and fee requirements doesn't open the same market to service providers. Thus, low-wage entrepreneurs are at a serious disadvantage when considering the requirements and fees blocking their path to a more profitable career.

To make matters worse for low-income entrepreneurs, many of these artificial barriers to entry only serve to protect the special interests of incumbent firms in those regulated industries. This process in which an incumbent firm in an industry lobbies and obtains favorable regulations from the government is known as regulatory capture. When this is the reason for a new entry regulation, both would-be competitors and consumers are negatively affected only to serve the narrow interest of the incumbent firm. This relationship between incumbent firms and regulators has been observed often (e.g., Dal Bo 2006; Stigler 1971). According to James Buchanan and Robert Tollison (1984), advocates of public choice theory, politics and government are often viewed through a romantic and illusory lens, with both scholars and every day citizens believing that elected officials and bureaucrats only do that which is in the interest of the public. Public choice theory is the use of economic tools to analyze some of the more traditional issues dealt with in political science. It seeks to understand political behavior and why self-interested agents such as voters, politicians, or bureaucrats

behave in certain ways. Many public choice scholars have demonstrated that government officials and politics should be analyzed through the same lens as those in the private sector, each pursuing her own self-interested ends.

With respect to barriers to entry, the implications of Public Choice Theory may be observed through a self-interested regulator who is lobbied to create new entry regulations that favor an incumbent firm or firms. These new entry regulations benefit special interests by allowing producers to limit competition, restrict supply, potentially reduce quality, raise prices, and maximize their profits at the expense of consumers and would-be entrants (e.g., Carroll and Gaston 1981; McLaughlin et al. 2014). The self-interested regulator may receive something like new contributors to his or her reelection campaign in return for enacting new barriers to entry that benefit those special interests.

Some of the effects of this type of corrupt behavior by self-interested regulators are well researched, but the effects of unnecessary barriers to entry due to regulatory capture on income inequality in a country is less understood. Director's Law, developed by Aaron Director, is a theory that claims the middle class in a society should be those who receive the primary benefit from public expenditures (Stigler 1970). According to Stigler, Director's Law reasons that because government has coercive power to take resources from its citizens, the portion of society able to secure control over the state's "machinery" will use it to improve its own position. Stigler says this dominant group should be the middle-income class. However, Stigler suggests in the long run, the middle class will build a coalition with the poor. As redistributive taxes and programs are expanded, the amount that can be taken from upper income classes will increase, providing the incentive to the middle- and lower-income classes to join forces and benefit together. An empirical study by Chambers et al. (2019) sought to quantify this theory by studying the number of procedures required to start a new business and its relationship with income inequality in any given country. This study found that an increase in the number of procedures required to start a new business by one standard deviation was associated with a 7.2% increase in the total share of a nation's income going to the top decile of earners.

These two studies, as well as many others, have conflicting results (e.g., Olson 1965; Stigler 1971; Peltzman 1976). The study by Chambers et al. (2019) was one of the first studies to perform an empirical study on this topic. Prior to this study, empirical data on business startup regulations was unavailable. However, with the availability of the World Bank's Doing Business dataset, empirical research on this topic is now possible.

This paper will add to the findings by Chambers et al. and further empirically establish the relationship between business startup regulations and income inequality. While Chambers et al. specifically studied the impact of the number of procedures required

to start a new business on income inequality, I focus on a broader measure of an individual's ability to start a business and its impact on the Gini coefficient, which is a measure of income inequality. We use the World Bank's Doing Business dataset, using the 'Score-Starting A Business" statistic. This measure considers the number of procedures required to start a business, the time it takes to start a business due to those regulations, and the average cost as a percentage of income per capita due to regulations. Using this more general measure of the ease of starting a business, we believe we will obtain a more accurate representation of all barriers to entry may entail, as the number of procedures it takes to start a business may be only one type of entry regulation.

In order to avoid issues with endogeneity and reverse causality that may be present in our analysis, we follow Chambers et al. (2019) in following La Porta et al. (1998) and Djankov et al. (2006) by instrumenting our variable for starting a business score with the country's absolute global latitude. Absolute global latitude is a good instrument for our starting a business score because, as Djankov et al. (2006) says, it helps define many "substantive and procedural aspects" of regulations present in each country. Due to the fact that this geographic indicator was established many years prior, I reasonably conclude that no direct association between it and income inequality exists in the time period we are analyzing. Supplementing our baseline analysis with this two-stage instrumental variable analysis helps to establish a causal relationship by removing any endogenous factors present in our data. Conducting our analysis in this manner, we will show a relationship between barriers to entry and income inequality.

Income Inequality

Many scholars have sought to understand the cause of income inequality in countries across the globe. While there may be many indicators that influence income inequality, this paper bases its independent variables on past studies on the subject. I utilize similar variables to Chambers et al. (2019), but will differ on several to help minimize the possibility of multicollinearity.

With the exception of Stigler (1970) and Chambers et al. (2019), the link between income inequality and barriers to entry is not very well established. While Chambers et al. (2019) established the number of procedures required to start a new business is positively correlated with an increase in income inequality, there are more types of barriers to entry than just procedures required. I attempt to show a more composite representation of barriers to entry are responsible for an increase in income inequality.

Many scholars have established a connection between the amount of trade conducted by a country and the level of income inequality present in society. Meschi and Vivarelli

(2009) found that when developing countries are more open to trade with high income countries, income inequality can be negatively impacted. Aradhyula et al. (2007) had similar results, but expanded on these findings. These authors found that trade openness increased income inequality in their overall sample. But after splitting their data into two groups, they discovered that trade openness may increase income inequality in developing countries, but also reduce it in developed countries.

Kuznets (1955) also identified one of the most generally known determinant of income inequality in his research. Kuznets found that income inequality and economic development were closely tied together, with income inequality rising as countries become more developed and decreasing as countries become richer. Barro (2000) verified the implications of the Kuznet's Curve and empirically showed Kuznet's findings were a "clear empirical regularity". However, he also found the change in inequality across countries and over time is not explained entirely by this relationship between inequality and economic development. Barro (2000) found human capital, the rule of law, and trade openness were also good predictors of income inequality in a society.

The level of freedom in any country has been shown to influence the amount of income inequality present in society. John Carter (2007) found that economic freedom and income inequality are positively and statistically significantly correlated. Apergis et al (2013) also determined that economic freedom and income inequality are strongly linked and there may exist a reverse causality present between the two variables. The researchers discovered as income inequality rises, countries may implement more redistributive policies causing economic freedom to decline. As economic freedom decreases, income inequality can rise even more, creating a vicious cycle.

The demographics of a country also has been shown to have an effect on income inequality. David Lam (1997) found the age structure of a population can have a large effect on the measure of income inequality. An increase in the fertility rate was also shown to have an impact on income inequality. This would mean the younger a country's population is, the more likely the age of its citizens will have an effect on income inequality.

Corruption has also been shown to have a strong effect on income inequality in a country. Gupta et al. (2002) concluded that a one standard deviation increase in corruption increases the Gini coefficient by about 11 points, showing a massive increase in income inequality. Their findings also show that corruption increases poverty overall. However, Dobson and Ramlogan-Dobson (2010) found in stark contrast to Gupta et al. (2002) lower corruption was associated with higher income inequality, at least in Latin America. The authors concluded the corruption-inequality

correlation may change where there is a large informal sector, as there exists in Latin America.

This collection of scholarly work indicates trade openness, economic development, human capital, economic freedom, age, and corruption are all important predictors of income inequality. Thus, these indicators are utilized as control variables in this analysis in order to determine the relationship between barriers to entry and income inequality.

Data

For this analysis, I use an income inequality measure produced by the World Bank called the Gini Coefficient. According to the World Bank, the "Gini index measures the extent to which the distribution of income…. within an economy deviates from a perfectly equal distribution" ("GINI Index 2020). The Gini Coefficient is a statistic that has been used extensively in prior research on income inequality and is a reliable measure. The World Bank's World Development Indicators from which my data for the Gini Coefficient is taken is compiled from officially recognized international sources. It is a reliable source of data and has been used extensively in other scholarly research. The dataset spans from the year 2012 to 2019 for 180 different countries.

The measure for barriers to entry in this paper is pulled from the World Bank's Doing Business dataset. This collection of data includes measures that determine the easiness of doing business in various countries, including the number of regulatory procedures required to start a business, the cost, and the time it takes to do so. This dataset includes measurements for 211 countries spanning from 2012 to 2019. The data for procedural startup steps is defined as any interaction between an entrepreneur and other outside parties required to start a new business legally. The data representing the cost to start a business shows how much it costs for an entrepreneur to file paperwork and obtain necessary licensing and permits in order to operate legally. The data for the time it takes to start a business represents the time it takes to file paperwork and meet all the requirements to start a business legally. The measure used in this analysis bases its score on these three indicators for each country for each year the data is available. Thus, this measurement is more inclusive of the various ways a barrier to entry can be constructed. For example, in 2019 New Zealand and Georgia scored a 100 and a 99.6 for their starting a business score, respectively. Both countries only require one procedure to start a business, but the cost to start a business in Georgia is about 2.1% of income per capita in Georgia compared to 0.2% in New Zealand. Thus, New Zealand has a better starting a business score.

Apart from the two main variables of interest, I use various control variables that are frequently used in the literature, as mentioned before. These variables include trade

openness, a freedom score, educational attainment, log GDP, the % of the population under 15, and a corruption perception index. The measure for trade openness comes from the World Bank and is calculated as the sum of exports and imports expressed as a fraction of GDP. My data for freedom comes from the Freedom House's ratings of freedom in each country. The freedom score consists of separate statistics that are measured on a country's amount of civil liberties as well as political rights. This score can range from 0-100, with a higher score indicating more freedom. The data for educational attainment is pulled from the OECD and unfortunately only includes data for countries within the OECD. The data used here specifically includes measurements for the percentage of the population that have obtained at least some college education. While the use of this data severely limits the amount of data in one iteration of the analysis, it is a great indicator for income inequality and should be included in the analysis. The data for GDP again is pulled from the World Bank's data. I have taken the natural log of each nation's GDP as is usually done in most analyses including GDP as a control variable. The data used that shows the percentage of the population under 15 years of age was collected from the World Bank as well. Finally, the corruption perception index data is collected from Transparency International. This index scores and ranks countries based on how corrupt a country's public sector is perceived to be by experts and business executives. According to Transparency International, this CPI measure is the most widely used indicator of corruption worldwide. Summary statistics for each of these variables are provided below in Table 1.

Table 1

Variable	Description	Mean	Standard Deviation	Minimum	Maximum
Gini	Gini coefficient	37.87	7.82	24.00	63.40
Ease of Starting a Business Score	A score determined by accounting for the number of procedures required, cost, and time to start a business	80.89	12.74	17.73	99.34
Trade Openness	Sum of exports and imports (the % of GDP)	25.25	33.12	2.74	304.28
Freedom Score	A score determined by levels of political and civil rights and liberties	64.18	26.34	3.00	100.00
log(GDP)	Adjusted Real GDP - Economic Development	10.82	0.93	8.40	13.31
% of Population Under 15	% of Population Under 15	27.24	10.77	12.70	50.26
Corruption Index	Corruption Perception Index of a Country's Public Sector	44.76	18.79	11.00	92.00
% of Population with Some College	% of Population with Some College Education	33.19	11.64	5.58	57.89
Absolute Latitude	Absolute Latitude location of a country	28.64	17.73	0.02	64.96

Baseline Model and Results

In order to determine the effect of barriers to entry on income inequality, the analysis regresses the Gini coefficient on the ease of starting a business score, time fixed effects, and several combinations of the control variables which were outlined before:

(1)

$$Gini_{it} = \alpha + \delta_t + \beta(\text{Business Score})_{it} + X_{it}\beta + u_{it} ,$$

Where i the cross-sectional country index, t is the time index, δ_t is the time fixed effects, Business $Score_{it}$ is the ease of starting a business score, X_{it} is a matrix of control variables, u_{it} is the error term. The regression results for Eq. (1) are reported in Table 2 with robust standard errors.

Table 2. Baseline Time Fixed Effects Model

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ease of Starting a Business Score	-0.1836***	-0.1827***	-0.1926***	-0.1855***	-0.1158***	-0.1095***	-0.0695
	(0.0257)	(0.0225)	(0.0241)	(0.0238)	(0.0229)	(0.0233)	(0.0736)
Trade Openness		-0.0171***	-0.0206**	-0.0291***	-0.0083	-0.0082	0.0112*
		(0.0075)	(0.0074)	(0.0088)	(0.007)	(0.007)	(0.0058)
Freedom Score			0.06136***	0.0638***	0.0847***	0.0912***	0.0709***
			(0.0149)	(0.0139)	(0.0108)	(0.0123)	(0.0205)
log(GDP)				-0.9779**	0.6273*	0.5674*	2.3161***
				(0.3327)	(0.3457)	(0.3361)	(0.5138)
% of Population Under 15					0.3436***	0.3425***	0.9847***
					(0.0299)	(0.0291)	(0.067)
Corruption Index						-0.0338	-0.1945***
						(0.0374)	(0.028)
% of Population with Some College							-0.0767*
							(0.0396)
R^2	0.0832	0.0767	0.0993	0.1109	0.2128	0.2209	0.5638
Observations	1054	1030	1030	1030	1030	1019	318

The dependent variable is the Gini coefficient, which represents the level of income inequality in any given country

The intercept and time period fixed effects were estimated in each model, but not reported in this matrix

Robust standard errors are reported; *, **, *** denote 10, 5, and 1% statistically significance levels, respectively

The freedom score, GDP, and the percentage of the population under 15 are all statistically significant in each iteration of my regression. The remaining control variables vary from statistically significant at the 1% level to being statistically insignificant in other iterations. However, the signs of each control variable generally stay in line with what has been shown in the literature.

The results of my analysis show a higher freedom score is generally associated with a slightly higher Gini coefficient, meaning more freedom may lead to slightly higher income inequality. This is in line with the before mentioned findings by Carter (2007) and Apergis et al (2013). Interestingly, I also find as the percentage of the population under 15 rises, income inequality increases rather quickly. Specifically, a 1 percentage point increase in the percentage of the population under 15 leads to a 0.9847-point increase in the Gini coefficient. This finding is further empirical evidence of what Lam (1997) hypothesized. The sign on both iterations of the corruption index are negative, which could lend further credibility to the findings by Dobson and Ramlogan-Dobson (2010), however there is likely multicollinearity affecting the estimate for this variable, leading to inaccurate estimates. The percentage of the population with some college experience was statistically significant at the 10% in the sole iteration it was included in, showing as a country's populace gains more education, income inequality generally falls, supporting the findings by Barro (2000). I believe multicollinearity may again be affecting the coefficient on this variable, although the sign on the coefficient is correct.

Examining the effect my main variable of interest has on income inequality, in all but one iteration of my regression the coefficient is statistically significant at the 1% level and negative. The coefficient ranges between about -0.19 to -0.07. The average of the coefficients between the 7 different iterations is about -0.15, meaning a 1-point increase in the ease of starting a business score on average leads to a 0.15-point decrease in the Gini coefficient. When considering the differences between the ease of starting a business score, a one-standard deviation decrease in the starting a business score would equate to a 1.9-point rise in the Gini coefficient (12.74*0.15 = 1.9). This supports the findings by Chambers et al. (2019) and further establishes the fact that barriers to entry increase income inequality.

In order to ensure no endogenous relationship or reverse causality exists between the ease of starting a business and income inequality, a similar regression is run, this time estimating the values using a two-stage least squares method. While according to the results on Table 2 the business score does have a negative relationship with the Gini coefficient, income inequality may also influence the business score. For example, if income inequality is high and the benefits of barriers to entry are accrued only to the wealthiest in each country, then those individuals may push for even more barriers to entry. This would cause the ease of starting a business score to decrease, yet again

affecting income inequality. For this reason, I use a two-stage least squares method to help rule out this reverse causality relationship that may be occurring.

Two-Stage Least Squares Method and Results

I re-run the model in Eq (1) by using the two-stage least squares method. Since geography is correlated with many different historical, economic, and political occurrences and outcomes, I choose to instrument the ease of starting a business variable with data for the absolute latitude of each country. Latitude is a measurement used to mark the north-south position of a location on Earth and can range from 90 degrees to -90 degrees, with 0 degrees being located on the equator. Many scholars have found that economic growth and development are correlated positively with absolute latitude, meaning that countries located further from the equator tend to have higher levels of economic development and growth (e.g. Parker 2000; Easterly & Levine 2003; Spolaore & Wacziarg 2013). Absolute latitude makes for an attractive instrument in this model because it is strongly correlated with the ease of starting a business score, while at the same time should not be a strong predictor of current income inequality within each nation. Unsurprisingly, when running the first stage of my two-stage analysis, absolute latitude is positively correlated with the ease of starting a business score and statistically significant at the 1% significance level.

I now run our two-stage least squares model of Eq (1) with absolute latitude as our instrument for the ease of starting a business score while the remaining variables remain the same. The results of this regression are included in Table 3 below. Unsurprisingly, the signs on each of the coefficients for each iteration of the regression and for each variable generally stayed the same as with the results on Table 2. The magnitude of the effect each variable exudes on the Gini coefficient also stays relatively consistent with findings on Table 2, except for the variable of interest, the ease of starting a business score. In each iteration of my two-stage least squares model, the ease of starting a business score is now statistically significant and the coefficients are much larger than before. The average coefficient on the ease of starting a business score is now -1.05, notably larger than our prior estimate of -0.15. Thus, a 1-point increase in the ease of starting a business score translates to a 1.05-point decrease in the Gini coefficient. A one-standard deviation decrease in the starting a business score would now equate to a 13.4-point rise in the Gini coefficient (12.74*1.05 = 13.4).

Table 3. Two-Stage Least Squares Method Time Fixed Effects Model

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ease of Starting a Business Score	-1.1314***	-1.137***	-1.177***	-1.2084***	-1.1017***	-1.0271***	-0.5812***
	(0.0607)	(0.0537)	(0.0552)	(0.0568)	(0.068)	(0.0663)	(0.1791)
Trade Openness		-0.0191***	-0.0228***	-0.019***	-0.0152**	-0.0116*	0.0092**
		(0.0058)	(0.0062)	(0.0065)	(0.0064)	(0.0062)	(0.0046)
Freedom Score			0.0719***	0.0713***	0.0758***	0.0874***	0.0367
			(0.0108)	(0.009)	(0.0092)	(0.0107)	(0.0245)
log(GDP)				0.4379	0.6923**	0.8005**	1.538***
				(0.2779)	(0.2993)	(0.316)	(0.5532)
% of Population Under 15					0.0787**	0.0807**	0.8143***
					(0.0373)	(0.0363)	(0.0991)
Corruption Index						-0.0367	-0.146***
						(0.0315)	(0.0318)
% of Population with Some College							-0.0586**
							(0.0304)
Observations	1046	1022	1022	1022	1022	1013	318

The dependent variable is the Gini coefficient, which represents the level of income inequality in any given country

The intercept and time period fixed effects were estimated in each model, but not reported in this matrix

Robust standard errors are reported; *, **, *** denote 10, 5, and 1% statistically significance levels, respectively

Validity of Findings

The data in this paper spans the time period from 2012 to 2019 for each variable. I believe that I have chosen a valid instrument based on previous scholarly work as mentioned before, which justifies our model. Absolute latitude is uncorrelated with the error term in my model and meets the criteria for a sound instrumental variable. For the first six iterations of my model, the number of observations is above 1,000, allowing a sufficient amount of data and variation between countries to be examined in my analysis. In the final iteration, the observations drop to 318, a strong sample of OECD nations is maintained while still producing similar results as before. My results are also closely in line with those of Chambers et al. (2019), providing further confirmation that these results and techniques are valid.

Ruling out multicollinearity is also necessary in order to determine if estimates are accurate. I calculate variance inflation factors (VIF) for my data for each iteration of the regression. VIF provides an index that calculates the degree to which the variance of a regression coefficient is increased due to collinearity. According to Alin (2010), if the VIF score for a variable is between 5-10, this indicates weak multicollinearity. A VIF score between 30-100 indicates moderate to strong multicollinearity. After calculating VIF scores for each iteration of my model, multicollinearity is most likely not an issue in the first six of seven iterations. The highest VIF score in these iterations belongs to the corruption perception index in the 6th iteration at 3.33, well under the 5-10 mark of weak multicollinearity. In this iteration my variable of interest, the ease of starting a business score, had a VIF score of 2.76. This shows that in each of the first six iterations, the coefficient estimates are not biased due to excessive multicollinearity. In the seventh iteration of my model, the corruption perception index scores a 4.49 VIF score while the ease of starting a business score has a VIF score of 2.08. While both scores are under 5, the corruption perception index score is much closer to 5, indicating the possibility of some multicollinearity that may be affecting coefficients. This may be responsible for the sudden change in statistical significance of the ease of starting a business score. However, due to the low levels of multicollinearity present in the first six iterations and the mostly stable coefficient on the ease of starting a business score, it is likely the estimates are accurate.

Implications

My findings show barriers to entry, including the time, cost, and procedures required to start a business, are highly correlated with income inequality. I have shown the harder it is to start a business, the worse income inequality is across the many nations included in this analysis. Lower income entrepreneurs could essentially be barred from starting a new business in these situations because the cost to do so is too high. This

would lead to an increase in income inequality, which is supported by my findings. These findings should encourage regulators to resist the push to impose new barriers to entry for entrepreneurs looking to start new businesses.

However, as mentioned before, many of the regulators that make these types of decisions to impose new barriers to entry are being strongly encouraged by special interests looking to benefit from increased regulations. Weeding out these types of corrupt deals should be a priority for reformers and policymakers who want to decrease income inequality in society. Strong changes should be made to the entire system so the "rules to the game" can be changed and not left in the hands of corrupt regulators, as suggested by Public Choice theory (Mueller 2003). Otherwise, if decisions on how to regulate are left in the hands of the same regulators, corruption will continue and unnecessary barriers to entry will still be erected.

Ethics Considerations

When examining regulatory capture and the imposition of unnecessary barriers to entry on entrepreneurs, I cannot defend the practice. When trying to justify these actions through utilitarianism, I find these actions do not produce the greatest good for the greatest number of individuals involved (Sen et al. 1982). Unsurprisingly, regulators and the special interests lobbying the government officials are those that benefit from these exchanges, leaving the rest of the populace worse off. My analysis shows this, demonstrating income inequality rises as it becomes more difficult to start a new business. According to utilitarianism, an action can only be morally justified if its net benefit is greater than net harm. Thus, based on this analysis the imposition of these types of barriers to entry cannot be justified.

When viewing regulatory capture and unnecessary barriers to entry from the view of the Kantian Categorical Imperative, we also run into issues. Applying the behavior of both regulators and special interests to everyone would produce a contradiction. If regulators were to be bribed by every interest, there would be no regulations governing society. Regulations would only be determined by the highest bidder or the availability of a regulator for special interests to capture. Furthermore, applying Kant's "ends principle" yet again shows the immorality of such practices. Special interests are using regulators and society as a means to their own ends rather than treating them as ends in themselves (Taylor 2011). This type of relationship between regulators and special interests clearly is unethical.

Conclusion

As I have shown, there is strong evidence entry regulations are harmful, especially to lower income entrepreneurs. Income inequality is being exacerbated by barriers to entry, imposing unnecessary costs on individuals through occupational licensing, procedures, and other additional costs. These regulations only seem to serve the special interests of existing, well-established firms as well as the often-corrupt regulators who are captured. This study expands on the limited existing empirical work on entry regulations and income inequality and further confirms the results found by Chambers et al. (2019). I expand on the results found by Chambers et al. (2019) by using a more general statistic for entry regulations rather than just one form of barriers to entry. By doing so, I show all types of barriers to entry have a negative effect on income inequality. The analysis in this paper has provided robust results, using both a standard regression model as well as a two-stage least squares method. Both models produced estimates showing a negative and statistically significant relationship between the ease to start a business score and the Gini coefficient. In this study, a 1-point increase in the ease of starting a business score translates to a 1.05-point decrease in the Gini coefficient. A one-standard deviation decrease in the starting a business score would equate to a 13.4-point rise in the Gini coefficient. Thus, barriers to entry do tend to increase income inequality in a society.

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