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The Unseen Cost of Lowering Labor Market Flexibility on Higher Education Market: Evidence from Cross-sectional Data from OECD

Abstract

This paper attempts to determine the unseen consequences of lowering labor market flexibility and its impact on individuals' demand for higher education by using standard OLS multiple regression analysis and cross-sectional data. I examine the independent variables that are theorized to increase the percentage of college diplomas attained in the market. Independent variables are chosen based on what has been studied in the prior literature. This study finds that labor market flexibility has a positive correlation with the percentage of adult population who have a higher education diploma. The results of this study suggest that individuals' demand for higher education is a multifaceted issue that is not close to being fully explained.

Keywords: labor market flexibility, higher education

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Introduction

Many developed countries presently have the tendency of implementing policies that harm labor market flexibility in the name of protecting workers from market verdicts. Policies such as raising the minimum wage, requiring mandatory severance pay, restrictions on hiring additional workers, and implementing firing restriction are some examples. These policies are put into place with the intention of increasing job security and the welfare of employees. However, policy makers fail to consider the unintended consequences of government intervention in the labor market, which alters incentives to both employers and employees. This harms the labor market process and ultimately harms employees. Even though their intentions may be noble, the end result likely differs from the initial intended purpose. The benefits of such public policies are easily noticed and are used as a reason to enforce the policy, but the costs of the policy are hidden and ignored. This logic of seen and unseen consequences of government action is well explained by Frederic Bastiat's infamous parable of "The Broken Window". Bastiat (1850) states that if a baker with a broken window paid a glazier to fix the window instead of buying shoes, this would artificially increase the income of the glazier. However, this ignores the cost borne to the shoemaker and all the other future beneficiaries of his transactions from the chain reaction of the market. Government intervention in the labor market in the form of reducing the labor market flexibility is not exempt from the law of unintended consequences. Therefore, the artificially raised job security and employee welfare comes with a cost that is borne by the public in the form of less investment in human capital.

Many researchers have studied the unseen effect of low labor market flexibility in terms of employment rate. However, the impact of low labor market flexibility on education is a relatively unexplored line of research. Our understanding about this issue is limited and uncertain, even though the discussion of whether to increase worker protection or not is becoming increasingly politically charged. Thus, the purpose of this study is to explore the unintended consequences in the higher education market resulting from low labor market flexibility.

Thesis Statement

The link between the effect of labor market flexibility and education in the labor market is signaling. If low labor market flexibility forces businesses to be more selective in the hiring process in response to the rise in firing costs, then individual job seekers' competition in gaining competitive signals, information regarding the value of their labor services, will become more intense. Additionally, because employers will wish to avoid unnecessary firing costs when workers do not perform as expected, they will prefer workers who offer more certainty in future job performance. This preference will sharpen the screening

process as well as making it more rigorous. The signal and the level of certainty in the screening process, in this case, are determined by one's educational attainment. Based on this chain of reasoning, I have constructed a hypothesis that low labor market flexibility artificially raises individuals' demand for higher education in order to obtain a signal that overcomes higher screening rigor.

Based on this idea, I suggest theoretical evidence to support the hypothesis and empirically test it to verify the correlation between labor market flexibility and demand for higher education. If the hypothesis is correct, then a negative relationship between labor freedom and the proportion of higher education diplomas produced is expected.

Literature Review

Labor market flexibility is defined as, "the ability of businesses to contract freely for labor and dismiss redundant workers when they are no longer needed, [which] is a vital mechanism for enhancing productivity and sustaining overall economic growth" (*Heritage Foundation*). This labor market flexibility is determined by a government's labor market policies. Flexible labor markets have the characteristics of higher employment rates and higher participation rate in the labor force (Tella&MacCulloch, 2003). Also, flexible labor markets allow individuals to earn commensurate wages for the skills that they have. Since individual skills vary, wage inequality tends to increase in a flexible labor market (Kahn, 2012).

Labor market policies are implemented to create employee protection for permanent jobs, and many researchers have found empirical evidence that low labor market flexibility leads to higher incidences of long-term unemployment (Booth et al. 2002; Nickell&Layard, 1999). The number of long-term jobs decreases in the labor market if job security rises as a result of employers becoming more reluctant to hire due to the rising cost of firing employees. This impacts the job market by creating a higher rate of temporary employment (Kahn, 2007). Therefore, the market inflexibility eventually results in the substitution of temporary for permanent employment (Kahn, 2010). Then the question is, what factors directly influence businesses to alter their behaviors so as to cause job substitution?

Lowering labor market flexibility increases job security, which eventually raises the cost of firing employees. Businesses are organizations that maximize profit by reducing the risk of uncertainty of their investment. Bettis and Mahajan (1985) show empirical evidence that a trade-off exists between risk and profitability when firms evaluate an investment. This trade-off in investments applies to the hiring process as well. According to Spence (1973), hiring is a risk-taking investment that carries the uncertainty of one's productivity. In other

words, if a projected return on hiring is high, an employer is more likely to bear higher uncertainty than if the projected return to the hiring is low. But, if the cost of uncertainty increases, the demand for hiring decreases, and the employer tries to eliminate the uncertainty as much as possible. Therefore, raising the firing cost by public policy makes businesses more concerned and cautious about the possibility of making a wrong investment. Thus, businesses naturally move toward hiring temporary employment instead of permanent employment because of its relatively low opportunity cost. Also, the high cost of uncertainty for long-term employment that is caused by low labor market flexibility makes employers become more selective in the hiring process. This is often referred to as “screening”.

Screening is an identification of a laborer’s quality; it enables individuals to receive proper responses to their signals, and it also eases the matching problem in the market (Stiglitz, 1975). Sometimes businesses fail at screening, and this creates the cost of firing that is associated with the price of uncertainty. When this cost grows, holding the return to hiring constant, it can be reasonably assumed that businesses become more selective in the screening process to minimize the cost. Businesses assess signals of potential employees to reduce the uncertainty of their hiring investment (Spence, 1973). Thus, when the employer becomes more selective, job applicants with relatively worse signals than other job applicants have a lower probability of getting the job since they bear higher uncertainty in regards to their productivity. Therefore, job seekers compete with each other to obtain better signals than others.

An asymmetrical information problem always exists in the market between buyers and sellers, and sellers give out signals in order to alleviate the problem by giving some information to buyers (Akerlof 1970). In the labor market, job seekers give out their signals for their labor to get purchased from employers, and employers evaluate those signals in order to reduce the risk of investment and to offer an adequate wage schedule. Cohen and Pfeffer (1986), in a study of organizational hiring standards, found a very strong positive correlation between employers’ selectivity and laborers’ education level. This indicates that education level is a signal that plays a large part in the employers’ selection decisions. There is a higher opportunity cost associated with hiring highly educated workers, which makes employers more cautious in making a hiring decision.

Investments in human capital, such as education, allow individuals to have more job opportunities in the market than the workers who do not invest in human capital. The rising marketability that results from human capital investment increases the price of the person’s labor due to the competition among businesses trying to capture highly productive workers (Becker, 1962; Schultz, 1961). Individuals are able to obtain good signals through investments that can be earned

at a certain cost. Spence (1973) defines the incurred expense to earn such a signal as the signal cost, and states that individuals try to maximize the difference between signal costs and future offered wages. Then, it is not too difficult to see that the difference between the two increases after education. In other words, businesses pay more to obtain highly educated workers.

Businesses do not pay more to highly educated workers solely because they have a degree, but because their marginal revenue of labor is greater than that of the workers who do not hold college degree. Wage inequality and the education premium on wages, which is the wage gap between laborers with a college degree and without, have risen over time. This increase is explained by the growing demand for highly skilled labor (Juhn et al. 1993). Higher education is a signal of being a highly skilled laborer, and it has been compensated well in the market. However, not everyone who desires higher education can receive it. According to Chevalier et al. (2004), some people simply lack the ability to succeed in college. The research indicates that education does indeed play a large part in wage inequality. However, what education is really doing in wage inequality is reflecting worker's pre-existing ability relative to their potential enhanced productivity. Thus, having a college diploma is interpreted in the market as holding better capability compared to those who do not have a college diploma. This gives an incentive to people to obtain an education in order to earn such signals.

Furthermore, Arrow (1973) says employers cannot measure job seekers' ability directly. Thus, they use filters to measure ability, and these filters are on-the-job and college-filtering. These two filters are substitutable, and Arrow states that if the employers can filter the employees accurately through on-the-job filtering, the value of college-filtering decreases. However, the increasing supply of college graduates in the job market decreases the relative quality of non-collegiate job seekers. This, in turn, raises the opportunity cost of on-the-job filtering. The rising cost of on-the-job filtering makes employers use college-filtering instead. Thus, it can be assumed that low labor market flexibility raises the firing cost and makes employers look at job seekers' educational attainment as a signal. Therefore, employers' willingness to use educational attainment as a filtering process for job applicants can increase individuals' demand for higher education. However, there are many other factors besides employers preferring college-filtering that could influence individuals' demand for diplomas. One possible factor is technological advancements.

As discussed above, screening is a very beneficial tool for job seekers and employers since it increases the likelihood of job matching. However, severe screening that is caused by forces outside of the market, such as government intervention, can artificially increase the demand for diplomas and the output of college graduates. This leads to employers becoming more selective in order to

minimize uncertainty, which in turn increases job seekers' demand for obtaining more competitive signals. However, there are many other factors besides lowering labor market flexibility that might increase individuals' demand for higher education. Government subsidies on education and increased demand for highly educated workers due to technological advances are two possible factors.

An individual's decision to invest in human capital wholly depends on the differences between signal costs and the return to signaling, and this is called an internal rate of return on investment. When this rate is less than zero, rational individuals do not invest in human capital (Mincer, 1984). Government subsidies on education reduce the private cost of one's education while it raises the public's burden (Winston & Yen, 1995). Moreover, as Friedman (1963) states, these education subsidies for the general public tend to encourage over-investment in human capital. This happens because it gives individuals incentives to get higher education if the private return exceeds private cost. This occurs even if the total costs exceed the total returns. This is because education subsidies enable individuals to transfer their cost to future earnings and taxpayers.

Furthermore, increasing the demand for highly educated workers in the labor market leads to the same outcome as government subsidies. The education premium has been growing constantly since 1980, and this is represented in the increasing wage gap between high skilled and low skilled labor (Goldin & Katz, 2009). Juhn et al (1993) explains that this wage gap is caused by skill-biased technological change. Demand for highly skilled labor increases in skill-biased economies, which raises the price of labor by different businesses bidding up the wage to capture such labor. This is shown in increasing wage inequality among workers who have different educational attainment, which signals how highly the worker is skilled. Therefore, it is not difficult to see that the increasing return on education will raise individuals' demand for higher education. However, I consider this as a healthy increase in the total number of college graduates, since this effect is driven by market processes linked to technology advances, while other factors, such as lowering of labor market flexibility and government subsidies for education, are created by forces outside of the market. Market forces are preferred over non-market forces. This is because market forces reflect voluntary preferences through the price of goods and services. This helps different parties in trade to do precise economic calculation with the given information in prices, and this brings mutual benefits to these parties, if they engaged in trade voluntarily. Furthermore, since the voluntary preference is reflected, the market becomes more flexible and adaptable to unexpected information that could happen.

Therefore, after reviewing the previous scholarly articles, I hypothesize that lowering the labor market flexibility causes artificially increased percent of college diplomas in the job market, and government subsidies on education play a

role of supplementing the effect of low labor market flexibility on education by transferring the private cost to the taxpayers. However, since the increase in the number of college graduates can be a response to the increasing education premium, there is also a natural growth of diplomas.

Methodology

The OECD member country is the unit of analysis as I examine 28 countries for testing the impact of low labor market flexibility on the demand for higher education. The study uses standard OLS multiple regression analysis, which is expressed as:

$$Y_i = b_0 + b_1\alpha_i + b_2\delta_i + b_3\mu_i + \varepsilon_i$$

Where Y_i predicted percentage of college diplomas in country i , b is a partial slope measuring the impact that each term has on Y_i , α_i is a measure of labor freedom in country i , δ_i is a ratio of high-skilled to low-skilled workers' average earnings, μ_i represents public spending on tertiary education as a percent of total GDP, and ε_i is an error term accounting for omitted variable bias.

For the dependent variable, I use the percentage of the adult population that has attained tertiary education, is 25 to 64 years old, and resides within an OECD country. These data are reported through Education at a Glance (2013) which is published by the OECD and originally from 2010. OECD compiled the data from the National Labour Force Surveys of OECD, the Eurostat databases, and the UNESCO institute of Statistics database.

The primary independent variable is the labor freedom index of OECD countries from the 2013 index of economic freedom provided by the Heritage Foundation. This index is a composition of six different factors that are weighted equally. These factors are: the ratio of minimum wage to the average added value per worker, the hindrances of hiring additional workers, the rigidity of hours, the difficulty of firing redundant employees, the legally mandated notice period, and the mandatory severance pay. These are the factors that increase the cost of uncertainty of hiring by harming labor market flexibility, if these are artificially enforced on the labor market by public policies. Therefore, using this index as the primary independent variable in the empirical test of finding a relationship between the percentage of the adult population that has attained tertiary education and labor market flexibility will produce appropriate data regarding the correlation of these two factors. These factors are compiled from World Bank, *Doing Business 2013*; Economist Intelligence Unit, *Country Commerce*, 2009–2012; U.S. Department of Commerce, *Country Commercial Guide*, 2009–2012; and the official government publications of each country.

Furthermore, in order to test the correlation between the dependent and independent variables as precisely as possible, I control for public spending on tertiary education (percent of total GDP, taken from the Education at a Glance,

OECD 2013). I also control for the effect of the earnings premium from education by using the ratio of high-skilled to low-skilled workers' average earnings (the relative earnings of all adults with incomes from employment by educational attainment, taken from Education at a Glance, OECD 2013). These are used as control variables because as government spending on education increases, individuals' private cost of attaining education decreases. Also, as the earning premium of higher education rises, individuals will be more likely to pursue higher education, because the relative return on education has increased.

The theoretical model can be expanded into an empirical model. Taking each of the variables from the theoretical model and adding them in as separate terms yields the following equation for percent of the adult population who, at least, had college education at 2011 for country i :

$$AT_i = \beta_0 + \beta_1 FREE + \beta_2 RATIO + \beta_3 SPEND + \epsilon$$

Where AT_i is the percent of the adult population who has attained tertiary education for country i at 2011, $FREE$ is the labor freedom index for 2013, $RATIO$ is the ratio of high-skilled to low-skilled workers' average earnings for 2011, $SPEND$ is the public spending on tertiary education as a percent of total GDP for 2010, and ϵ is an error term.

Table 1, listed below, includes the dependent variable and the independent variables with control variables used in the model, along with their means and standard deviations.

Table 1

Variables	Mean	Standard Deviation
Percent of the adult population who has attained tertiary education	32.691	9.739
Labor market freedom index	66.214	17.648
Ratio of high-skilled to low-skilled workers' average earnings	1.746	.462

Public spending on tertiary education as a percent of total GDP	1.378	.5026
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Findings

Table 2, listed below, details the results of the regression model. In this model, I report unstandardized and standardized coefficients, significance levels, and the r^2 value. The unstandardized coefficient is the partial slope of the regression plane. It gives the amount of change in the dependent variable from a one-unit change in the independent variable, all else constant. The standardized coefficients use a conversion to standard units, z-scores, and thus reflect the number of standard deviations the dependent variable will change from a standard deviation change in the independent variable. The r^2 value in the model is the percentage of variation in the dependent variable that can be explained by the variance in the independent variable also found in the model.

Surprisingly, the model shows that an increase in labor freedom by one index point leads to an increase of .218 percentage points in the adult population who has attained tertiary education. This correlation is not consistent with the hypothesis. The hypothesis states that labor market flexibility and the percent of college or higher education diplomas will have a negative correlation. However, empirical testing shows evidence that the labor market flexibility is positively and significantly associated with the percent of college graduates. The model indicates that if the labor market becomes more flexible, the percentage of college graduates in adult population increases, with a 95% confidence level.

Furthermore, in the model, the relationship between relative earnings as a control variable and the percentage of college diplomas is not consistent with the prior literature. However, the effect of public expenditure for education on the dependent variable is consistent with the literature, even though it is not significant. In the model, as the relative earnings for highly educated workers increases, the percentage of college graduates in the adult population decreases, but this variable failed to hold at the 90% confidence level.

Another surprising finding from this study is that the model only accounts for 27% of the variation in the percentage of the adult population who attained a tertiary education across OECD countries. Variations in all three different independent variables are only able to explain 27% of the variations in the dependent variable. 73% of the variation in the percentage of the adult population who attained a tertiary education is left unexplained by the different explanatory factors.

Thus, it seems evident that individuals' demand for higher education is a multifaceted issue with many other explanatory factors. Therefore, the model

suffers from omitted variable bias. One type of omitted variable in my model is other variables that influence individuals' demand for higher education. This omitted variable bias results in the model explaining only a small portion of the variation in the percentage of the adult population who attained a tertiary education across OECD countries.

Table 2

Variables	Model
Labor freedom	.218** (.395)
Ratio of high-skilled to low-skilled workers' average earnings	-6.698 (-.318)
Public spending on tertiary education as a percent of total GDP	2.919 (.151)
R Square	.270

Significance Measures:

*p < .10 (90% confidence level)

**p < .05 (95% confidence level)

***p < .01 (99% confidence level)

Analysis

The model shows a positive relationship between the primary independent variable and the dependent variable. This indicates that a more flexible labor market gives an incentive to individuals to pursue more education. Prior literature suggests that businesses reinforce screening in the hiring process when the cost of uncertainty increases. The original hypothesis states that the cost of risk increases due to labor market inflexibility that creates firing restrictions, and since employers become more selective in their hiring, individuals have a greater incentive to pursue higher education in order to obtain a good signal to compete for jobs. However, the model provides evidence that labor market flexibility is actually positively associated with individuals' demands for higher education.

Rational individuals make a decision whether to invest in human capital or not based on their assessment of the internal rate of return on their investment (Mincer, 1984). This interpretation approach to the results suggests the possibility of an internal rate of return on human capital education, such as higher education, under the flexible labor market is higher than under the restricted labor market. In

other words, attaining a higher education diploma creates a greater benefit to the individuals in a more flexible labor market.

A flexible labor market, which has less employment protection, produces low long-term unemployment while it increases short-term unemployment (Nickell, 1997). This indicates that individuals have a higher possibility of getting hired for permanent jobs in a flexible market. However, because there is less employment protection, which leads to lower firing cost, employers are freer to fire employees when they realize their employees' productivity is lower than they expected. This exposes individuals to a higher risk of getting fired, which, in turn, raises their demands for higher education as a form of individual protection or insurance against unemployment. This is because people that have a college degree can find employment more easily if they are fired, and they are also less likely to be fired in the first place.

In an inflexible labor market, individuals compete with each other to be hired. However, in a flexible labor market, people may compete to not to get fired. In these two different labor market situations, people's focal points shift and their incentives change. Productivity is expected to be a main factor in the evaluation of employees' job performance, and if one's productivity is not worth more than his or her offered wage, the probability of the employee getting fired is higher than that of others whose productivity is worth more than their wage. Thus, individuals would be more concerned about increasing their productivity in a flexible labor market as a form of insurance.

The human capital theory suggests that education and job training raise employees' productivity through knowledge or skills acquisition, which are directly related to job performance (Becker, 2009). This indicates that individuals can choose between pursuing higher education or pursuing early job training by getting a job sooner than those who are getting higher education. The problem of productivity can be alleviated through human capital investment. However, Ramirez's (1993) study on job mismatch in the Spanish labor market suggests empirical evidence that education level and required job training have a negative relationship. This means that individuals have to decide between these two different options in response to a rising risk of getting fired due to their own low productivity.

In a flexible labor market, businesses have more freedom to fire their employees at their will and individuals are more likely to pursue a college education, according to the statistical findings. In light of these findings, we can reasonably assume that the total return on investments in higher education is greater than that of required job training. A higher education diploma is a combination of gaining a good signal and enhancing one's productivity and of insuring against unemployment (Arrow, 1973). However, required job training does not have the aspect of gaining a good signal that affects employers' hiring

decisions, because on the job training cannot exist before the employee is hired. Therefore, this suggests that in a flexible labor market there is a greater likelihood of individuals pursuing higher education rather than job training. Individuals do this in order to reduce the risk of not getting hired or of being fired and laid off, under the assumption that these two options have the same amount of impact on productivity.

Furthermore, highly educated workers usually have more occupational mobility compared to uneducated workers. Additionally, they are more likely to move to a higher occupation level if they feel they are overeducated for the current job (Ramirez, 1993; Sicherman, 1991). In other words, individuals with higher education levels have fewer obstacles up the corporate ladder or in changing occupations. A laborer having more occupational mobility than others in the labor market means that their labor is of higher value to other employers. This in turn brings more opportunities to the laborer (Schultz, 1961). This increases individuals' incentive to pursue higher education, because the gain from the investment in higher education is greater than the gain from more hours of required job training.

Based on these interpretations, we can reasonably assume that individuals will be more likely to choose higher education over more hours of required job training in response to the rising risk of getting fired. This is equivalent to taking out an insurance policy against unemployment. Moreover, individuals' preferences on investing in higher education become clearer in more flexible labor market situations. This is because a lower level of employment protection enables individuals to maximize the utility of their higher education diploma. It eliminates the restrictions that hinder businesses' profit-maximizing efforts, which induces more competition among businesses to capture more productive employees. In other words, the value of an individuals' internal rate of return on a higher education investment is greater in flexible labor markets than in an inflexible labor market. Thus, this line of reasoning explains the regression model that shows the positive relationship between labor market flexibility and percent of college degree attainments. However, the model does not test the causation of increasing the percent of people attaining college diplomas. Therefore, it could simply be the opposite causation with highly educated voters supporting governments that do not intervene in the labor market.

Moreover, the model shows that the relative earnings by educational attainment is negatively associated with the percent of higher education diplomas. This finding is not consistent with the prior literature, even though the variable is statistically insignificant. This result may be explained by the fact that the model is constructed with data that is taken from the same time period. In other words, if one country has high relative earnings on higher education, it means highly skilled workers are relatively scarce at the time. Conversely, if another country has low

relative earnings in higher education, it may mean highly skilled workers are relatively abundant. Thus, the negative correlation between relative earnings and the percent of higher education diplomas may simply be the result of a low supply of highly-educated labor relative to demand causing high wages for highly-educated labor. Since the high earnings premium from education could have been paired with low percentage of well-educated adult population in the economy, the statistical model could have produced the correlation result that is contrary to the literature. Thus, testing the relationship of the variables in a cause and effect framework with only a single time period may cause the unexpected finding.

Public Policy Implications

Government intervention in the labor market creates unintended consequences (Merton, 1936). The original hypothesis of this research assumed that one of the unintended consequences of low labor market flexibility, caused by the government implementing policies in the intention of raising employment protection, is artificially increasing the percentage of college degrees attained in the labor market. However, the regression model shows the exact opposite relationship in comparison to what I expected between the dependent and independent variables. This indicates that the unintentional consequences of such public policies are that an inflexible labor market artificially decreases the percentage of higher education diplomas produced, rather than increasing it. Thus, there is the possibility that a labor force will tend to be under-educated if labor market flexibility remains low.

The government policies that harm the flexibility of the labor market claim to protect all employees. However, paradoxically, the only beneficiaries from such policies are employees who cannot continue being employed by their own efforts because of their lack of ability to produce. While the government protects their job, individuals' incentive to pursue higher education drops due to the diploma losing its full potential, as it would have in an inflexible labor market. This causes an overall under-educated labor force relative to flexible labor markets in other OECD economies; moreover, Carnevale and Rose (2010) mention that an under-educated labor force will slow down the economic growth of a country. When the benefits of the policies are concentrated on a relatively small group of people who are not able to protect their job by themselves, the cost is diffused to the public who lose the full potential benefit that comes from the faster rate of economic growth (Olson, 2009).

Therefore, governments should aim to enhance labor market flexibility rather than harm it, in order to create wealth through their full potential by the economic growth, which leads to the rise of the individual quality of life. Also, Lucas (1988) states that endogenous forces of the market, which are investments in human capital and knowledge, bring economic growth. Therefore, providing a

right institutional strategy that can increase individuals' incentive to invest in such things is extremely important to be able to approach the full potential of the economy. In terms of labor market flexibility, this can be done by removing government policies that strengthen job security and bestowing freedom to businesses which enables them to hire or fire their employees on the basis of one's productivity. Such freedom to employers increases employees' risk of getting fired, and this increases employees' incentive to invest in human capital in order to survive in competitive labor market by raising their own productivity. Therefore, under flexible labor market conditions, the economy may become closer to its full potential of creating wealth by businesses becoming more effective in generating profits while, individuals maximize the utility of their educational attainments.

Conclusions

Using standard OLS multiple regression analysis, this study finds that labor market flexibility is positively associated with the percentage of the adult population who attained a tertiary education, which is the exact opposite of what the original hypothesis predicts. The model shows a positive relationship between these dependent and independent variables at the 95% confidence level, with r^2 value of 0.270.

This study, however, has many weaknesses. The limitation of cross-sectional data is that it only allows the study to seek correlations, rather than causations. Also, the limited number of cases made it extremely difficult to draw statistical significance from control variables in the regression model. Moreover, the study suffered from omitted variable bias since the model is only able to explain 27% of the variation in the dependent variable. Given that the OECD countries are the unit of analysis, the model was unable to test the relationship between dependent and independent variables across more countries. This excludes the cases of less developed nations. Despite these weaknesses, the correlation between the dependent and independent variables is shown by the regression to have statistical significance, and the result can be explained by prior literature. Thus, it can serve as a preliminary guide to policy making.

The purpose of this study is to further the understanding of the impact of lower labor market flexibility on individuals' demand for higher education. The research shows evidence of a positive correlation between labor market flexibility and the percent of college degrees attained in the labor market. However, because the model accounts for only 27% of the variations in the percent of higher education diplomas, future studies can examine the omitted variables as control variables in order to test the correlation between the dependent and independent variable in a more precise manner. Moreover, as discussed above, the impact of labor market flexibility on the percent of higher education diplomas can be

changed by the role of higher education, which is determined by a different combination of signaling and productivity. Thus, future studies can also examine higher education's generalized combination of signaling and productivity to test how individuals' demand for higher education changes in reaction to this different combination. But, more importantly, future research should aim to study the causal relationship between the dependent and independent variables to gain a deeper understanding that can help influence public policy.

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