

MICRO INTRAPRENEURSHIP

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ABSTRACT

Before the advent of science, the human DNA had to change if man was to survive, advance from the middle to the top of the food chain and achieve through physical ability. Science reintroduced human capital, the genesis of wealth by way of a cognitive revolution. Combined capitalism, democracy and rule of law (CDR) is a mechanism for converting said wealth into tangible goods and services through micro intrapreneurship that can be made consequential of a particular negative income tax that requires employment and interaction with commercial activities. Transfer welfare payments that create dead capital can be redirected to investments in living wage supplements for the support of micro intrapreneurship.

Keywords: Institutional interactions; Political economy; Capital Formation; Democracy; Rule of Law.

Introduction

The purpose of this paper is to discuss a mechanism for engaging human capital ideas of imagination and creativity via a negative income tax requiring employment and interaction with commercial activities that employers need to have performed. Entrepreneurship is the process of starting a business, typically a startup company offering an innovative product, process or service. Entrepreneurship is practiced by an entrepreneur. Intrapreneurship is inside entrepreneurship practiced by an intrapreneur within a large firm without incurring the associated risks. Intrapreneurs have the resources and capabilities of the firm at their disposal. It may help us to understand entrepreneurship even better if we identify micro entrepreneurship separately from entrepreneurship. With that in mind we recognize entrepreneurship as corporate outcomes of innovation that appear as new products and services. There are also the reduced costs and higher profits from the implementation of improved methods. Much of this kind of entrepreneurship is now globalized via today's high technology manufacturing and transportation industries. On the other hand, micro entrepreneurship is localized activity which is of great

interest, partly because it is connected to the aforementioned corporate outcomes and partly because of the success of small business outcomes made possible by microloans.

The remainder of this paper is organized as follows. First, the status of economics and its role in advancing economic growth is reviewed. Next, the wealth generation process as accounted for by a new CDR model is explained. Next, the negative income tax is connected to employment and the micro intrapreneurial process. Concluding remarks contain suggestions for future research. Because of the absence of explicit definitions in the extant literature for concepts such as capitalist, capitalism, entrepreneurship and other consequential terminologies, defining nomenclature are given at the end of the paper.

Economics: Descriptive or Prescriptive

Prior to the advent of science, human beings had to experience an evolutionary genetic modification in DNA in order to acquire new skills for survival and adaptation (Harari, 2015). The arrival of formal science and a cognitive revolution made it possible to leverage tools and physical and chemical material transformation methodologies to acquire new skills and create new outcomes. Prior to the industrial revolution, with the exception of feudal lords, and beneficiaries of the 17th century Amsterdam stock exchange, the Dutch and English East India Companies, and certain skilled artisans, all people were poor. As best as one can tell, the frameworks for capitalism, democracy and rule of law: Magna Carta of 1215, the English King Charles II 1662 royal chart for the study of science, and the New York 1811 limited liability law created the perfect storm for the start of the industrial revolution around 1776-1840. Following the industrial revolution, ten percent of the world became rich and continued along that growth path. At the same time there is the vexing problem that ninety percent remain poor. If the field of economics is responsible for the rich outcomes it must bear ill will to the unfortunate ninety per percent. Otherwise, would it not by now have done more for the ninety percent? Is it possible that economics is entirely growth descriptive and can only tell us how we got to where we are?

For economics to be growth prescriptive it must tell us where wealth comes from. Extant economics tells us that wealth comes from land, labor and capital and that wealth derives from some aggregate production function such as $Q=f(K,L)$, where K is capital stock and L is human labor (Solow, 1956). Well, if wealth comes from factories, then one might well ask, where do factories come from? To answer that question we must understand the genesis of the source of wealth. If one could suspend belief in the production function only temporarily, it would not take long to realize that all wealth comes from the ideas of imagination and creativity of the mind. To begin with, there is no such thing as an aggregate production function. A production function maps physical units of inputs to physical units of outputs from a single machine. Therefore, there can be no such thing as a macroeconomic function when the inputs are different types of items.

Also, there is the fallacy of composition that we can simply jump from microeconomic conceptions to an understanding of production by society as a whole (Cohen and Harcourt, 2003).

Another problem with the aggregate production function is that K is capital stock and the function does not explain where K comes from. It turns out that K has to be a reinvestment of prior income from the conversion of human capital to income, and the production function does not in any way account for that particular original human capital. Likewise, in the production function, L is labor in which human capital is confounded with human physicality. It is not adequate to simply say that labor may be unskilled or skilled. Skills are not related to human brawn. Skills are related to human intelligence and intelligence is human capital. If human capital knowledge is learned from an entrepreneur then it is capital stock and is part of K. That is, skill is capital stock. The human being has the ability to convert skill in a seamless fluidic adaptation to a machine such that the capability of the machine is automatically expanded.

CDR Institutional Structure and the Genesis of Wealth

This leads us to consider the new Ridley (2017) aggregate growth function $G=f(C,D,R)$, where G is living standard as measured by per capita real gross domestic product adjusted for purchasing power parity, C is the degree a capitalism (capital formation) as measured by total market capitalization, D is degree of democracy and R is degree of rule of law. Market capitalization includes the total value of all outstanding stocks. It is the discounted value of all future earnings. It reflects entrepreneurial human capital and all capital stock (machinery, technology, skills, knowledge taught to others and programmed into computers and stored in various recording devices), less depreciation and obsolescence. Ridley (2017) shows the relationship between G and the CDRindex for 79 countries that represent practically the entire world. The CDR regression model and corresponding vexillographical chart are reproduced in the appendix. It turns out that the fitted CDR function is $CDRindex = 1.53C + 0.14D + 0.23R - 1.21C \cdot D \cdot R$, where $G = CDRindex(\text{highest } G - \text{lowest } G) + \text{lowest } G$, highest $G = \$83,066$ and lowest $G = \$1,112$. CDR explains 83% of the variation in G with a straight line. This establishes that after adjusting for country factors of production, the conversion of C to G is constant across the world. That is, the CDR model is global invariant. The conversion of C to G must obey the laws of natural science that are the same everywhere. The genesis of wealth is the human mind and wealth is realized when R attracts C and D deploys C effectively. What makes one country more productive than another is its ability to attract more C. In addition to the excellent statistical fit to all of the world's available data, the residuals from the CDR model (not shown) are completely random, establishing that there are no other omitted variables that would explain any systematic variations in G. The 17% percent of unexplained variation in G includes random unpredictable

events such as natural disasters like hurricanes and earth quakes. It also reflects the fact that only publicly traded stocks are included in the model. There are no data available for the study of non-publicly traded private business operations that contribute to G.

Another tempting fallacy is to assume that wealth comes from natural resources. It turns out that natural resources contribute only 6% to economic growth. We might suspect this from knowledge of mercantilism that created no wealth and only shifted some wealth from many victims to a few aggressors. And, this is confirmed by the regression in the appendix and observing those rich countries that possess no natural resources. For examples consider Japan, Singapore, Hong Kong, Bermuda and Cayman Islands. The intangibles C, D and R when combined contribute about 13 times as much as natural resources. The true resource is the mind and the knowledge of what to do with natural resources. One is also reminded of the dangers of the Dutch disease (Auty, 1993, Ebrahim-zadeh, 2003, Girvan, 1971, Humphreys, 2005, Ross, 2001, Sachs and Warner, 2001, Sala-i-Martin and Subramanian, 2003, Wadho, 2014), also known as the natural resource curse.

Ideas, Wealth and Surplus Wealth

The process of wealth generation is depicted in Figure 1. See also Ridley (2016), Ridley, Davis and Korovyakovskya (2017) and Korovyakovskaya and Ridley (2017) on the pedagogy of entrepreneurship education. Capital C begins as exogenous human capital with the capitalist. Smith, 1776, 2010 and Rand, 1961, 1990 suggest that a capitalist will apply their personal effort so as to maximize their benefit. And, by an invisible hand (Smith, 1776), such application will benefit society more than if it had been intended for society. Smith's only other book was on the theory of moral sentiments (Smith, 1759, 2006). Therefore, one should not assume any immorality or prevarication implied by the pursuit of self-interest. There is nothing inherently rapacious about capitalism or the capitalist. After all, we are talking about capitalism with the expressed protection of democracy and rule of law. Even in the face of immediate disaster it is best for one to help one's self first if one is to be able to help others next and ultimately. The upshot of this argument is that all rational human beings are capitalists. This is distinctly different from corruption which is eschewed by potential providers of capital (Brosnan and de Waal, 2014, Barclay and Stoller, 2014, Brandstätter and Königstein, 2001, Güth, Schmittberger and Schwartz, 1982, Jensen, Call and Tomasello, 2007). As far as the economy is concerned, corruption, like depreciation and obsolescence, generates dead capital. Even in the presence of perfect CDR, entrepreneurship is human capital (Skousen, 1990, Casalegno, Pellicelli, Civera, 2017) that at a minimum, must replace depreciation and obsolescence if growth is to continue.

Human capital less dead capital (due to corruption, depreciation and obsolescence) is converted via a C to G generation process. The conversion process employs people and the economy

grows. Some of this growth becomes real tangible wealth of goods and services. A fraction of G is reinvested. From time to time technology replaces people who then become at least temporarily unemployed. Such structural unemployment can coincide with higher national income. As income increases rich societies have elected to create welfare transfer payments to unemployed people. This does not contribute to employment and further growth. Instead, it becomes dead capital (see the below section on negative income tax for a discussion on alternatives).

The C to G conversion process also includes the development of machinery and the teaching of entrepreneurial technological knowhow to other people. Faria, et. al. (2016) found that institutional effects from learning and developing human capital can be highly significant. Just as division of labor creates surplus capital (Smith, 1976), this division of human capital creates surplus wealth. Machinery, computers, recording devices and knowhow stored in human minds, collectively constitute capital stock. Reinvestment involves the development and deployment of capital stock and must be distinguished from entrepreneurial capital. Entrepreneurial capital is exogenous and capital stock is endogenous. Human capital is all capital associated with the human brain. All human labor is associated with brawn. This operating definition of homogenous labor is consistent with the original theory of comparative advantage (Ricardo, 1817). When physical machine capital and labor (human capital + human physicality) meet, all relevant human capital is transferred to the machine capital such that the machine capacity might increase. Human capital that is irrelevant or made irrelevant through disuse or misuse is for all practical purposes dead capital. It is for this reason that a negative income tax is introduced below.

The role of chemical catalysts was first suggested by Berzelius (1779–1848). D and R provide a similar function in the economic catalysis that lowers the effort required to convert C into G. While R produces the stability and security that attracts C, D creates additional pathways via which human decision making can deploy capital effectively. D and R are heterogeneous exogenous catalysts. Heterogeneity permits these catalysts to exist in different structures from capital and raw materials, etc. At the end of an economic cycle, D and R are not used up like raw materials in a manufacturing process. They are not themselves converted into anything else. They remain intact, ready for continuous use in the next cycle. They are determined entirely by leadership decisions that actively guard against dictatorship and corruption. The only meaningful way for a country to raise its G is by raising its CDR index. This is accomplished by the democratic election of government and corporate officers by citizens and shareholders respectively, and by employee participation in capital projects, services and operations.



Figure 1. C to G generating process in the presence of D & R catalysis. Red signals failed D & R, green signals successful D & R.

Negative Income Tax and Micro Intrapreneurship

One of the problems with economic success is what to do about workers made indigent due to displacement by technology. No rich country wants to be defined by its poor. Many countries have instituted minimum wage laws. But, none of them has overturned the economic law of demand which stipulates that when the price of labor rises the quantity demanded falls, ceteris paribus. Minimum wage laws only serve to make the least qualified persons unemployable (Sowell, 2015). So, rich countries have instituted welfare for the unemployed. Still worse, to quote Friedman, 1921-2006 “Welfare programs involve some people spending other people’s money for objectives that are determined by still a third group of people. Nobody spends somebody else’s money as carefully as he spends his own. Nobody has the same dedication to achieving somebody else’s objectives that he displays when he pursues his own. Welfare is antithetical to Adam Smith’s (1776) invisible hand.” Friedman also saw the government welfare administration establishment as one that benefits its employees more than the intended beneficiaries. Even still worse, since the unemployed cannot contribute to the pool of human capital stock, they are reduced to dead capital. This adds insult to injury for all the people who helped to build efficient production systems in which they were previously employed.

Friedman's plan was simple. Replace the entire welfare establishment with a modified income tax return. If the income tax return shows an income that is above the minimum taxable income, the return is accompanied with a corresponding tax payment. If the income tax return shows an income that is below the minimum taxable income, the participant receives a corresponding payment from the government. This idea was praised by King (1967) "I am now convinced that the simplest approach will prove to be the most effective — the solution to poverty is to abolish it directly by a now widely discussed measure: the guaranteed income." While apparently simple, requiring only the existing systems for checking for eligibility, etc., it does not require any work to be performed. Even simpler is 'Universal Basic Income,' a flat amount that would be paid to all citizens regardless of their value to a potential employer. But, no work is required and once again there is no reduction of said dead capital.

Wealth is independent of population. Everybody brings their own wealth into the world. One does this through one's own human capital that sustains one's self and maintains the living standard at the population average. If human capital is not to become dead capital, each able bodied person must be employed and thereby engaged in activities that convert C into G. A negative income tax that stipulates employment can accomplish this. Furthermore, experience and acquisition of capital stock from other people will occur naturally and normally. Unemployment due to a minimum wage law can only reduce wealth generation. If the government wishes to stipulate what it considers to be a living wage, it can supplement wages in the amount of the difference between the living wage and the wage that an employer is willing to pay. This will end unemployment for anybody wishing to work. In addition to its wealth generating effect, this alternative to welfare transfer payments is more humanitarian than welfare. To the extent that the employer is willing to pay some part of the wage, the negative income tax saves the government money. The net result has to be a higher average standard of living for society.

The only source of welfare transfer payments is income from C to G generation. Such transfers might otherwise have been reinvested in capital stock. Another way is to consider them as accelerating the depletion of capital stock. Either way, it represents the creation of dead capital. Minimum wage employees will tend to be low in knowhow. But, they may possess valuable human properties that are not attainable from machines. Examples of these might be creativity and interpersonal people to people customer communications skills. They may also be capable of many micro intrapreneurial contributions. The related ideas might be outside the purview of the high skilled employees and not ordinarily be noticed. One might say that the low skilled employee who is actually performing the work, even with a modicum of acuity, is quite likely to observe variances that at a very minimum can be brought to the attention of their supervisor. Low D low R will create a high noise environment in which micro intrapreneurial ideas go

unnoticed. A high D high R low noise environment (Gilder, 2013, Romer, 1990) will permit detection of micro intrapreneurial ideas. The bottom line outcome is that the negative income tax minimum wage supplement could pay for itself and some. The other payoff is the experience acquired by the worker that adds to capital stock and might induce the employee to pay the full amount of the specified living wage such that there is no more need for a wage supplement by the government.

Microloans and Micro Entrepreneurship

Microloans are mentioned here in passing because of their relationship to human capital. Microloans to individual business persons in developing countries are successful examples of what might be considered micro entrepreneurship. Hope International (1997-2017) turned from gifting food, materials, and cash to making microloans. The gifts were all based on the ideas of the givers. The gifts only created a dependency and dead capital. Microloans attracted people with business ideas of their own and pride in those ideas. That is, human capital of micro entrepreneurship. The loans have a stellar rate of repayment with interest that match the pride of the owners of the ideas. This observation is consistent with the CDR model in which wealth comes from ideas and the bearers of the ideas need a suitable environment to bring them to fruition.

Unlimited Wealth

Since the industrial revolution, the economies of ten percent of the world have grown, creating immense wealth. Since wealth is created from ideas of unlimited creation and imagination (Lotto, 2017) then wealth must be unlimited. One example is the United States of America (USA) that has risen through the atmosphere and into space travel. This is just one example of indicating the potential for unlimited wealth when CDR is implemented even for a period of time that is relatively short within the scope on human existence. If the entrepreneurial component of C is the main factor then micro intrapreneurship will further expand the possibilities. While all this is happening, ninety percent of the world continues in poverty. Of course, they need to raise their CDR.

Concluding Remarks

All wealth originates from the brain of the human being. It is represented in human capital ideas of imagination and creativity. A global invariant $G=f(C,D,R)$ model of capital democracy and rule of law accounts for almost all of standard of living. After adjusting for country factors of production, productivity is determined by the amount of capital that a country attracts. Rule of law attracts capital and democracy deploys it most effectively. Deployment involves the distribution of capital to multiple individual production units with production function $q=f(k,l)$,

where k is a fraction of total capital and l is corporeal labor, and the value of the q 's sum to an aggregated domestic income. Poor countries can raise their standard of living by raising their CDRindex. Democracy and Rule of law are catalysts, not used up like raw materials, and will always remain intact and available if that is what is desired. Entrepreneurship appears as quanta of innovation information that requires high democracy high rule of law low noise environment if it is to be detected. Micro intrapreneurship will require an even lower noise environment. The steady economic growth in Western Europe, Bermuda, Cayman Islands, the out of world experience of the USA space activity, the rapid post world war two rise of Japan, the recent rapid rise and success of Singapore and Hong Kong, and the promise of Botswana, Equatorial Guinea, Poland and Chile are evidence of the immense possibilities for intrapreneurial human capital, democracy and rule of law.

As countries become rich technology advances and replaces human labor. Some labor moves into higher level job functions, but some become structurally unemployed. This is exacerbated by minimum wage laws (Sowell, 2015). Welfare transfer payments as a solution ultimately makes dead capital out of people. A negative income tax can be used to subsidize employment by paying the difference between what societies consider a living wage and what an employer is willing to pay. The negative income tax can replace dead capital producing welfare transfer payments and convert them into an investment in human capital micro intrapreneurship that will pay for itself and some as work experience is gained. This experience combined with continuing education will be even more beneficial. Future research might provide a financial incentives theory for an employee to demonstrate newly acquired experiential skills, climb above the government subsidize entry level category, and impress an employer to pay the full amount of the living wage.

Nomenclature

<i>Endogenous</i>	Generated from within a system.
<i>Entrepreneurship</i>	The process of starting a business, typically a startup company offering an innovative product, process or service.
<i>Epistemology</i>	The investigation of what distinguishes justified belief from opinion.
<i>Exogenous</i>	Generated from outside a system.
<i>Capitalist</i>	A person who deploys his personal capital so as to maximize his benefit.
<i>Capitalism</i>	Mechanism for the collection and assembly of capital.
<i>Catalysis</i>	The creation of alternative pathways to enable a process.
<i>CDR index</i>	The vector inner product (dot product) of the global constant [1.53 0.14 0.23 -1.21] and the country [C D R C·D·R].
<i>Company</i>	The instrument of capitalism for the profitable investment of capital.
<i>Democracy</i>	Private work force idea participation and periodic election of public representatives (catalyst for the process of generating G from capital).
<i>Gross domestic product</i>	The monetary value of all the finished goods and services produced within a country's borders in a specific time period.
<i>Intrapreneurship</i>	The employee practice of entrepreneurial activity inside a large business without incurring the associated risk.
<i>Micro intrapreneurship</i>	The low skill employee practice of micro entrepreneurship in variance reduction, quality improvement or customer relations at a business by virtue of proximity to a task.
<i>Natural resource rents</i>	Surplus value of natural resources after all costs and normal returns are accounted for.
<i>Property rights</i>	Property is a legal expression of an economically meaningful consensus by people about assets, how they should be held, used and exchanged.
<i>Rule of Law</i>	Reverse of corruption (protection of shareholder and other property rights) (catalyst for the attraction of capital).
<i>Virtue</i>	Self-governing human property that promotes fairness and justice without the need for central government.

APPENDIX: The Source and Mechanism of Wealth

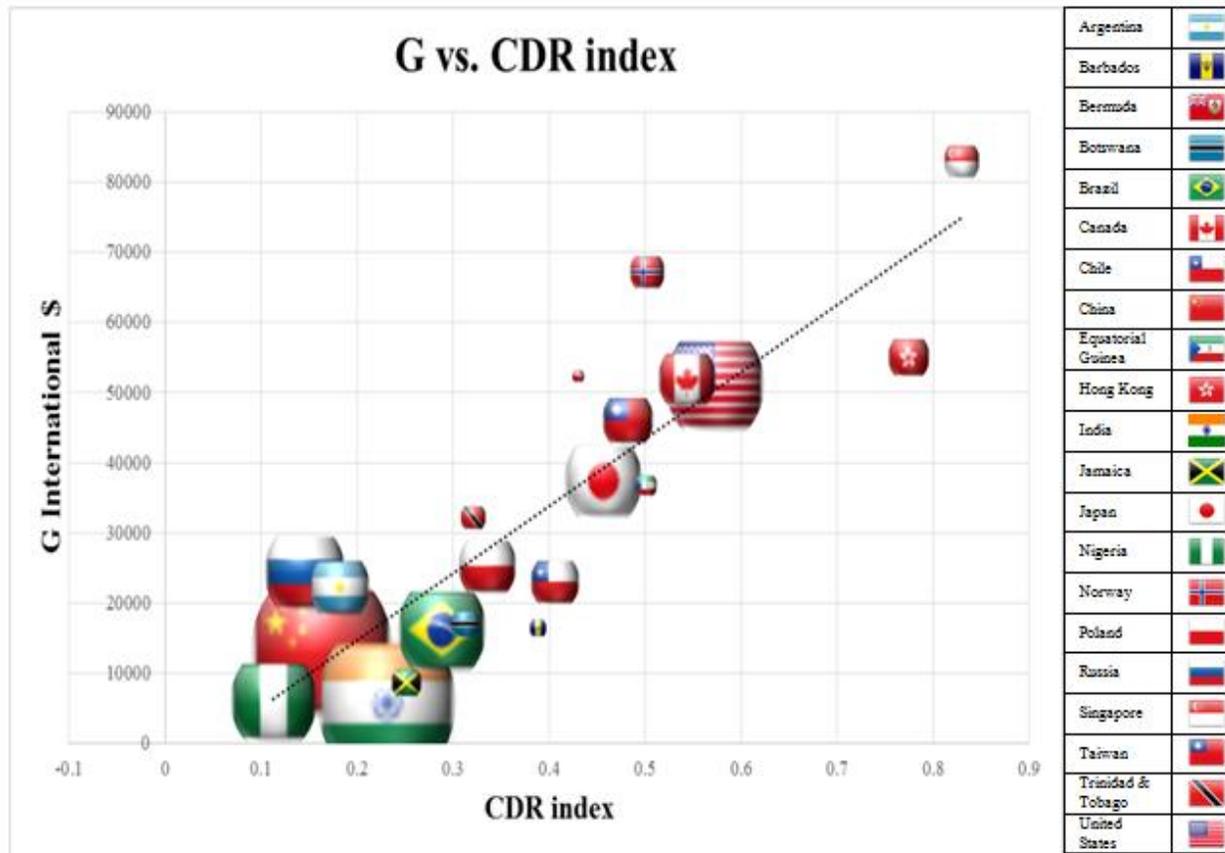


Figure 2. Year 2014 G vs CDR Index for 79 countries (line). Bubble size (21 countries) is the square root of population.

Standardized g model

The ordinary least squares g model is specified as follows:

$$g = \beta_0 + \beta_C C + \beta_D D + \beta_R R + \beta_{CDR} C \cdot D \cdot R + \beta_N N + \varepsilon$$

where, the intercept β_0 and the coefficients $\beta_C, \beta_D, \beta_R, \beta_{CDR}, \beta_N$ are all dimensionless, ε is a random, normally distributed error with a mean of zero and constant standard deviation, and where all model variables are standardized as follows:

$$g = \frac{G - \text{lowest } G}{\text{highest } G - \text{lowest } G}$$

$$G = \text{per capita real gross domestic product per capita (PPP)}$$

$$C(\text{Capitalism}) = \frac{\text{per capita capitalization} - \text{lowest per capita capitalization}}{\text{highest per capita capitalization} - \text{lowest per capita capitalization}}$$

$$D(\text{Democracy}) = \frac{\text{lowest democracy rank} - \text{democracy rank}}{\text{lowest democracy rank} - \text{highest democracy rank}}$$

$$R(\text{Rule of law}) = \frac{\text{lowest corruption rank} - \text{corruption rank}}{\text{lowest corruption rank} - \text{highest corruption rank}}$$

$$N(\text{Natural resources}) = \frac{\text{per capita total natural resource rents} - \text{lowest per capita total natural resource rents}}{\text{highest per capita total natural resource rents} - \text{lowest per capita per capita natural resource rents}}$$

These transformations standardize the variables and ensures upper and lower bounds on $0 \leq g, C, D, R, CDR, N \leq 1$.

The corresponding source data are listed in Appendix A. Democracy and corruption are rank ordered, where the highest = 1 and the lowest = the number of countries. G is measured in \$/capita/year.

$$\hat{g} = 1.53C + 0.14D + 0.23R - 1.21C \cdot D \cdot R + 0.38N$$

$$t = (6.60) \quad (1.69) \quad (2.60) \quad (4.40) \quad (5.59) \quad F \text{ ratio} = 81.$$

Partial correlations (contributions to R_{adj}^2):

$$59\% \quad 5\% \quad 10\% \quad 3\% \quad 6\% \quad R_{adj}^2 = 83\%.$$

where \hat{g} denotes estimated or fitted value and G can be estimated from

$$\hat{G} = \hat{g} (\text{highest } G - \text{lowest } G) + \text{lowest } G.$$

Highest $G=83,066$. Lowest $G=1,112$.

The $CDR_{index} = 1.53C + 0.14D + 0.23R - 1.21C \cdot D \cdot R$ comprises positive C , D and R effects and a negative component due to friction from democracy that reduces G from what it might otherwise be if there were perfect agreement amongst decision contributors. The contribution from N is negligible and can be dropped from the model.

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