Organizations, institutions, and inequality

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Evidence of inequality is pervasive in social life, from race-based microaggressions at work to disparities in the growth rates of national economies. Every social science has something to say about inequality. Scholars who tell you they study inequality might be examining the experience of low-wage work (anthropology) or the rise of CEO compensation (management); occupational sex segregation in the California civil service (sociology) or the dispersion of incomes within Danish firms (strategy); tax policies on inheritances (economics) or how child-rearing practices influence childrens' job choices (psychology). Since the birth of the Occupy movement in 2011 and the publication of Thomas Piketty's *Capital in the 21st Century*, however, attention has focused on inequality understood as the uneven spread of incomes within national economies and the gap between the top 1% and the rest. This chapter focuses on the role of organizations and institutions in creating national income inequality.

Organization theory has a distinctive contribution to make to understanding income inequality (Baron, 1984; Bapuji and Neville, 2015). The distribution of income in industrialized societies happens primarily through organizational processes. Who gets hired, how they are evaluated, how they are paid, and how they are promoted or fired happen in organizations through the employment relation. Organizational structures are therefore the fulcrum for the distribution of individual rewards. To know who gets what, we need to know how employing organizations are structured. In particular, I argue here that organizational size plays a paradoxical role in the creation of income inequality: economies with big organizations tend to have low income inequality, and vice versa (Davis and Cobb, 2010).

Institutions play a central part in shaping organizations and the employment relation (Cobb, 2016). Organizations come to be structured as they are due to economy-wide institutions that govern labor markets, product markets, financial markets, educational systems, and the social safety net. Institutions provide the raw materials and the conditions of possibility for creating organizations, which explains why firms look so different around the world. Just as skyscrapers require structural steel and elevators powered by electricity, formal organizations require a set of institutional preconditions (cf.

Stinchcombe, 1965). More specifically, the kinds of organizations an economy gets depend on the kinds of economic institutions in place: stock markets are essential for creating public corporations, and smartphones are required for ride-hailing apps staffed by independent contractors. This is where the explanatory heavy lifting for income inequality takes place, by explaining how economic institutions and technological raw materials shape the demography of organizations and their employment practices.

This chapter argues that the drive-train of economic inequality runs from national institutions, to organizational structures, to the distribution of individual rewards. To explain economy-wide inequality we need to understand how institutions shape the organizations that allocate income and wealth, a topic that has received less attention than it merits in organizational scholarship. For the purpose of this chapter, I will focus on just one dimension of organizations: their size, and specifically the number of people they employ. Size is perhaps the single most basic feature of organizations, yet there is surprisingly little scholarship on how organizational size varies around the world, how size is influenced by institutions, and how the size of an economy's organizations is connected to the unequal distribution of incomes. This is an area ripe for comparative institutional research.

In this chapter, I first describe the wide variety of processes and outcomes that come under the heading of "inequality," and then narrow the focus to the distribution of income at the level of the national economy. I briefly summarize how sociologists have studied inequality, and how organizations have taken on a role as the central explanatory mechanisms for inequality. I explain how inequality at the national level is measured, and summarize the many social ills that are correlated with high inequality. Next is a discussion of how organizations cause inequality through how they hire, pay, evaluate, promote, and fire employees. This leads to a question: why do organizations look the way they do (e.g., why are some bigger than others), and how is it linked to national institutions? I propose a "drive train of inequality": national institutions shape the kinds of organizations that thrive in an economy, and these organizations in turn shape the distribution of incomes. I then close with a description of some of

the forces changing national institutions and the researchable questions these raise for changes in organizations and, thus, inequality.

What do we mean by "inequality"?

Scholars who study economic inequality typically focus on a few specific outcomes. These include:

> **Poverty**: why are some people or groups in society poor? Why do some countries have higher poverty rates than others?
>
> **Mobility**: how do some people become (or stay) rich? Why do some societies have higher class mobility than others?
>
> **Global inequality**: why are some nations consistently richer than others? What accounts for different trajectories of GDP growth (that is, divergences in the "wealth of nations")?
>
> **Comparative inequality**: why do some nations have greater internal inequality of income (or wealth)? What accounts for national trends in income distributions?

More recently, scholars have sought to examine income distributions at the global level, finding that the middle income groups of low-income countries (particularly China) have fared well in recent times; the middle-income groups of high-income groups have fared poorly; and the global 1% has done surpassingly well over the past generation relative to the rest of the population (Milanovic, 2016). (Those who seek to obfuscate inequality might also refer to "equality of opportunity," which unlike poverty rates or income disparaties is impossible to measure and serves more as a rhetorical device than an empirically tractable concept.)

Economic inequality can be analyzed using different conceptual tools. Inequality can be examined within different units of analysis, from groups to the global economy. Economists such as Thomas Piketty focus

on **inequality within or across countries**, that is, how wealth and income are distributed within society as a whole. But organizational researchers have also examined **pay dispersion within firms** or other organizations (e.g., Pfeffer and Langton, 1988), or the distribution of rewards among top management team members, or the ratio of CEO pay to the average pay of workers.

Dispersion itself can be conceptualized in different ways. Piketty and others have drawn attention to **concentration**: how much accrues to, say, the top 10% or the top 1%. This is most commonly examined in terms of **income** (how much the top individuals or households earn in a given year). In the US, 21.2% of the nation's income went to the top 1% in 2014, compared with just 8% in 1980. As noted by President Obama, the top 25 hedge fund managers in America take home more income than all of the kindergarten teachers in the country combined. **Wealth** is even more concentrated than income. The six heirs of the Walmart fortune had a net worth greater than that of the bottom 42% of the population combined. Stated differently, the net worth of the Walton family was more than one million times greater than that of the median US family.

Researchers also examine **economy-wide distributions**. Like concentration, distributions can be examined in terms of income or wealth, at one point in time or over an extended period. Below we describe the Gini Coefficient, a measure that allows comparisons across societies and over time. As with income and wealth concentration, the Gini measure has been going up almost continuously since 1980 in the US, but not everywhere.

Scholars of inequality also examine **social divides**. It is frequently reported than women earn on average only 80% of what men earn in the US, a gap that has only modestly declined over the past 30 years. Racial differences are also stark: in 2013, the net worth of the median African-American family was just $11,000, compared to $141,900 for the median white family, following a catastrophic drop during the Great Recession.

This brief tour of the landscape highlights that "inequality" is like a multi-dimensional Rubik's Cube. People who study inequality in the abstract can be examining radically different topics on the ground, from national differences in the concentration of wealth in the top 1% to pay differences among men and women within the same occupation (e.g., Chan and Anteby, 2016).

Sociologists who study inequality have generally aimed to explain income differences: why do some people earn more than others? While economists such as Piketty aim to explain aggregates such as economy-wide inequality in terms of other aggregates (say, the rate of GDP growth relative to the rate of return on investments), sociological research evolved from an initial focus on individual attainment, to examinations of the organizational structures and practices that allocated rewards to individuals, to a more recent focus on economy-wide institutions that shape these organizational structures and practices.

The first wave of stratification research in sociology in the 1960s and 1970s relied heavily on survey research methods to explain individual attainment. Survey respondents might be asked about their income, occupation, race, sex, education, and fathers' and mothers' educational background. Income (or socio-economic status, a composite of income and occupational factors) was modeled as a function of individual characteristics and parental attainments, which represented intergenerational mobility. Blau and Duncan's *The American Occupational Structure* (1967), a landmark in sociology, perhaps represents the high water mark of this approach. Although massively influential within sociology, this approach had its critics. Baron and Bielby (1980) pointed out a critical fact: it is arrangements within the firm that allocate incomes and occupational outcomes, and these were largely absent from the models of Duncan and followers. Who gets hired, and how they move up, are critical, and these happen within organizations. Throwing a dummy variable for "female" into a regression modeling income might very well yield a statistically significant coefficient, but it will not explain exactly how and why women end up earning less. "Concepts, methods, and findings are unlikely to be cumulative without systematic

comparative analyses that identify the crucial dimensions of organizations along which reward structures and sorting processes vary" (Baron, 1984: 41).

Thus, beginning in the 1980s, a second wave of stratification research asked, "What explains variation in hiring practices and career ladders in organizations?" Rather than examining individuals as autonomous actors, this structural approach sought to examine the features of organizations that underlay unequal rewards. For instance, one reason that women might earn less than similarly-qualified men is that women were systematically channeled into segregated jobs categorized as "women's work," or if men and women held the same jobs, they might be geographically segregated such that direct comparisons were unlikely (Bielby and Baron, 1986). This core insight led to a large body of work illuminating the organizational practices most directly responsible for income inequality and mobility. Features of firms such as their size, growth, demography, technology, unionization, and business environments were linked to their hiring, pay, and promotion practices (Baron, 1984). It was not individual "race" or "sex" per se, but the existence of job ladders, or different approaches to affirmative action that helped explain who got ahead in society. One of the limitations of this line of work is that it was surprisingly difficult to gain access to data across a large sample of organizations comparing promotion practices across the organization. "Job ladder" is an evocative metaphor, but to actually track organization-wide patterns of pay and upward mobility was largely a dream; most research ended up being, in effect, detailed case studies of particular organizations (e.g., a state civil service corps; a large bank; see Baron and Newman, 1990).

A third wave of inequality research aimed to locate the processes at work further back. Why do some firms have elaborate formal practices around equal opportunity, others have a "diversity" office with little formal authority, and others have nothing at all? Most broadly, how do institutional configurations shape income and mobility within and across organizations? Much of this work in the 1990s sought to explain how corporate employers responded to legal mandates around equal opportunity (e.g.,

Edelman, 1992; Dobbin et al., 1993). Subsequent studies dug into the outcomes to examine which programs actually worked to increase the representation of women and minorities at higher levels of the organization (e.g., Dobbin, 2009). What distinguished some of this later work was the availability of comprehensive time-series data at the establishment level from the US Equal Employment Opportunity Commission. Although creating maps of career ladders within organizations still remains beyond the horizon, these data allowed scholars to understand, for instance, which affirmative action practices actually resulted in women and minorities subsequently achieving positions in upper management.

The most recent work in this domain takes a broader view of the institutions that shape organizational employment practices and asks, for instance, "How do cities' politics, norms, business cultures, and elite networks influence occupational segregation and attainment?" Why is the glass ceiling higher in Minneapolis than in Phoenix (Stephens, 2016)? Local "business culture" turns out to be crucial in shaping how outposts of the same firm are organized in different parts of the country. Stainback et al. (2010: 241) point out that "the relative power of culturally legitimate actors (corporate executives, human resource managers, men, credentialed employees) can vary with the national, institutional, and market environment of the firm."

At the broadest level, this work intersects with theories about "varieties of capitalism" from political science (Hall and Soskice, 2001; Amable, 2003). The varieties-of-capitalism approach asks, How do national institutions shape what a "firm" is? How do different national institutions channel what kinds of firms arise and survive, and how do different kinds of firms shape individual economic outcomes? It becomes clear from reading this work that the vast majority of the published research on organizations and inequality focuses on very particular kinds of organizations: large, American, publicly traded corporations. This is an important group, but hardly representative of what "organizations" are or do. If we want to understand cross-national patterns of inequality and how they relate to organizations, we need to take a broader institutionalist view.

This chapter will focus on inequality at the economy-wide level. What accounts for the compression or dispersion of incomes in national economies? And what does it have to do with organizations and institutions? I will argue that the proper level of analysis to explain income distributions in national economies is at the institutional level. The configuration of institutions in a country's economy shape the kinds of enterprises that arise, and these enterprises in turn shape who gets what.

How do we measure inequality?

The Gini Coefficient is the most widely-used measure of national income inequality. The Gini index measures the extent to which the distribution of income deviates from a perfectly equal distribution. Imagine lining up people's annual incomes on a grid from the lowest on the left to the highest on the right on an X axis. On the Y axis, plot the cumulative amount of income. If you draw a line through all of these points, it gives you the "Lorenz curve." If all incomes were equal, the Lorenz curve would be a 45 degree line. The more unequal the distribution of incomes, however, the lower the Lorenz curve sags downward. The Gini coefficient represents the percentage of the area that lies between a country's Lorenz curve and the line of perfectly equality. It varies between 0 (perfect equality) and 1 (perfect inequality, in which one person gathers all the income). One of the advantages of the Gini measure is that it is purely about distribution, and not about levels of income. It is therefore comparable across levels of economic size and growth: countries can be rich and relatively equal (Norway), poor and unequal (South Africa), poor and equal (Belarus), rich and unequal (Singapore), or combinations in between.

Although the Gini measure is conceptually straightforward, it is not always easy to gather the data to calculate it. Scandinavian countries often have detailed individual and household data on incomes going back decades; Latin American countries are considerably less fastidious. A basic requirement for calculating the Gini is to have good data on individual or household incomes: either a large random

sample or, ideally, a complete census. The idea of sampling households to learn about their incomes is a 20th century innovation that is not universally adopted, making it difficult to do long-term studies using the Gini. Comprehensive income tax data can provide a complete census, but the availability of tax data varies widely around the world: the US did not have a routine federal income tax until 1913, and the records are not always available in a form that lends itself to computer analysis. It turns out that even having data available on inequality is related to a country's variety of capitalism.[1]

Measured by the Gini coefficient, inequality varies widely across countries and over time. The Scandinavian countries habitually occupy the low end, with relatively low levels of inequality. Latin American countries and some parts of sub-Saharan Africa occupy the top end. But levels of inequality change over time. Sweden has substantially increased in inequality over the past 35 years, albeit from a very low base. In contrast, France has actually declined in inequality during the same period. Policies around labor markets and in income transfers can raise or lower inequality.

One of the most striking things is just what an outlier the United States is. One recent review of the evidence notes that "nowhere is the US more exceptional than in its level of economic inequality" (Fisher and Smeeding, 2016). The US has the highest level of inequality in disposable income among rich countries, and has for decades. Moreover, inequality has been increasing in the US almost continuously since 1980. The rich are richer in the US, and the poor are poorer than in other countries. For instance, "The poor in Norway (i.e., 10th percentile) enjoy more than twice the real incomes of the poor at our 10th decile." The US also has by far the most unequal distribution of wealth among industrialized countries. This in turn correlates with a lower level of mobility over time, as the rich are good at provisioning their children for economic success and pulling up the ladder behind them. As with its idiosyncratic corporate sector, the US is an outlier when it comes to inequality. These two are, I will

[1] Scholars interested in cross-national data on inequality can find links here: http://worldinequality.org/

argue, connected.

Is inequality bad?

Why do we care about inequality? Other than prurient interest in the lives of the wealthy, or concerns about the lives of those in poverty, is there something about inequality in itself that merits concern?

Research demonstrates that inequality is associated with a wide variety of social ills. Wilkinson and Pickett (2009) show strong correlations between the Gini index and negative social outcomes at the national level, including rates of infant mortality, homicide, mental illness, drug use, and incarceration. Many of these relations also hold within smaller geographic units, such as among the 50 American states. If you had to choose a country to be born into from behind a veil of ignorance, by which you would be randomly assigned to birth parents, a good heuristic would be to choose the country with the lowest income inequality. Countries with low inequality tend to score high on many of the most important quality-of-life measures. On this basis, you might choose one of the more equitable Scandinavian or Western European countries over one of the more pathological English-speaking countries.

Yet it is extremely difficult to show a causal relation between economic inequality and other outcomes. That is, we cannot easily say that inequality in itself *causes*, say, higher rates of infant mortality or mental illness. The fact that so many social pathologies are correlated with inequality hints at the problem: many bad things tend to go together, and locating the "effective ingredient" in what causes what is nearly impossible. In a world with a surplus of research funding and a shortage of ethics, we could imagine creating field experiments in which different economies were endowed with different levels of inequality in order to examine whether inequality led to social pathologies. We might also compare countries that are similar on many dimensions but differ in their level of inequality. The US and Canada share many similarities in terms of language, history, culture, ethnic diversity, and level of

economic development. Yet Canada has far lower income inequality than the US, and also experiences lower levels of almost every social pathology (other than Nickelback). Whether it is inequality or other factors that lead to these differences (universal health insurance? low-cost higher education? widespread politeness?) is impossible to tell.

On the other hand, some popular defenses of inequality are also insupportable on these grounds. One moral rationale for inequality is that it promotes economic growth and job creation. According to this account, growth happens when entrepreneurs take bold risks that have a chance to pay off big, and it is this chance at a big payoff that motivates economic innovation. If we want more Larry Pages and Mark Zuckerbergs, we need to hold out the opportunity for fabulous riches. Not only is greed good; envy is good too, because of its motivating power. This story is popular among the billionaire demographic (e.g., Paul Graham of Y Combinator), but has little basis in reality. Colombia's highly unequal economy is not well-known for its (legal) entrepreneurship; Denmark, on the other hand, has one of the most entrepreneurial economies on Earth, in spite of (or perhaps because of) its low level of inequality and a comprehensive social safety net. Rapaciousness may not be the primary motivation of innovators. Moreover, there is no evidence that inequality increases rates of growth at the national level: if anything, rich economies tend to be more equal than poor economies.

Although it is intuitively plausible that inequality would have negative consequences for individuals, it is quite difficult to provide persuasive causal evidence. On the other hand, its influence on democracy is evident. We might leave the last word on this to Angus Deaton, winner of the 2015 Nobel Prize in economics:

> "The political equality that is required by democracy is always under threat from economic inequality, and the more extreme the economic inequality, the greater the threat to democracy. If democracy is compromised, there is a direct loss of wellbeing because people have good

reason to value their ability to participate in political life, and the loss of that ability is instrumental in threatening other harm." He goes on: "The very wealthy have little need for state-provided education or health care… They have even less reason to support health insurance for everyone, or to worry about the low quality of public schools that plagues much of the country. They will oppose any regulation of banks that restricts profits, even if it helps those who cannot cover their mortgages or protects the public against predatory lending, deceptive advertising, or even a repetition of the financial crash. To worry about these consequences of extreme inequality has nothing to do with being envious of the rich and everything to do with the fear that rapidly growing top incomes are a threat to the wellbeing of everyone else" (Deaton, 2013).

Do organizations cause inequality?

Scholars have offered a number of competing explanations of inequality at a national level. Simon Kuznets (1955) famously proposed that inequality varied with the level of industrialization in an inverse U-curve fashion. That is, during the early stages of industrialization, inequality rose as the demand for new skills increased compensation for some industrial laborers, while perhaps decreasing the pay for those left behind in agriculture. As industry advanced, however, inequality declined. This idea is echoed in contemporary accounts of "skill biased technological change," which attributes recent increases in inequality to the high wages paid to those with tech skills that are demanded by the new information economy. Piketty proposes an alternative interpretation that hinges on the relative magnitude of economic growth and returns to investment. When the rate of economic growth is greater than investment returns, the concentration of wealth declines. When investment returns outstrip economic growth, wealth becomes ever more concentrated.

Cobb (2016) reviews several alternative accounts that have been proposed for societal income

inequality, including skill-biased technological change (new technologies raise the productivity and pay of workers having relevant skills while potentially lowering the pay of workers without the new skills); globalization (low-skilled jobs migrate to low-pay countries, reducing wages at the low end in developed countries); unionization (declining rates of unionization reduce the bargaining power of labor and reduce wages for less-skilled workers); and public policy (increasing minimum wages reduces overall inequality; income transfers reduce after-tax inequality). Although each has merit, none is sufficient to explain the diverse patterns of change in inequality in countries around the world since 1980. Moreover, accounts at a purely aggregate level give little sense of the mechanisms that lead to greater or lesser inequality. It is one thing to know that eating salt increases blood pressure; it is quite another to know exactly how this happens. This is where organization theory fits in.

Since the work of Jim Baron and Jeff Pfeffer in the 1980s, organizational scholars have tended to see the organization and its practices as the most direct source of income inequality. A recent annual review opened with the statement, "Contemporary stratification scholars are unlikely to deny the claim that organizations are the primary site of the production and allocation of inequality in modern societies" (Stainback et al, 2010: 226). Most individuals earn most of their income through jobs with organizations. To understand the spread of incomes in society, we need to know how those people came to occupy those jobs, and why jobs pay what they do. Thus, the most immediate cause of income inequality is the social organization of the economy. How do different kinds of people come to be hired for jobs? How is employment allocated within and among formal organizations, and what is the "shape" of those organizations?

The implication of this line of reasoning is that if we want to explain income inequality at a national level, we should look to the demography of organizations, that is, the prevalence of organizations with different kinds of structures and strategies.

The post-War American economy illustrates the link between the shape of the corporate sector and income inequality. Davis and Cobb (2010) define "employment concentration" as the proportion of a country's labor force employed by the largest corporate employers (the biggest 10, 25, 50, or 100 domestic corporations). This measure is a simple way to assess the tendency toward large size, perhaps the most basic indicator of organizational structure. Davis and Cobb find that employment concentration has varied greatly since 1950, reaching a peak around 1970, when the 25 largest US corporations employed the equivalent of 10% of the civilian labor force. Inequality also varied widely over this period. But what is most remarkable is the correlation between these two, at about -.9. That is, as corporate size increased, inequality went down almost in lockstep, and vice versa. The dominance of large and growing firms in the 1950s and 1960s reduced inequality; the disaggregation of large corporations in the 1980s and 1990s increased it. Similar tendencies held around the world: the countries with the lowest inequality (e.g., Sweden, Denmark, Switzerland) were often the home of huge firms, while countries with high inequality (Colombia, South Africa, Honduras) hosted tiny domestic firms.

This finding is paradoxical: bigger firms generally have more levels of hierarchy, greater inequality internally, and higher-paid top executives than small firms (see Simon, 1957), yet an economy composed of larger firms has lower inequality than an economy composed of smaller firms. Why? Two reasons: first, organizations beyond a small size tend to adopt systems of compensation that attach pay to positions in relation to each other. In the most extreme case, jobs are evaluated and paid according to set schemes (e.g., the Hay System) that may be detached from market prices. Second, the boundaries of the firm define relevant social comparisons and create pressures for equity. Faculty in institutions with salary transparency routinely compare their pay to the person down the hall but not to colleagues at the private institution up the road. We often hear about how a CEO's compensation compares to the average worker; how often do we hear comparisons between the CEOs of Coke and Pepsi, or between

branch managers at Bank of America and Home Depot?

Income inequality in society is most directly attributable to the organizational demography of the economy. Moreover, if we want to understand the prevalence of different kinds of organizations at different times and in different countries, we need to understand the institutions that underlie them. Institutions provide the soil in which organizations grow, and changes in institutions lead to changes in organizations which in turn shape the distribution of incomes. When American corporations valued size and growth as their primary objectives, organizations grew almost without limit, gathering more employees under the same organizational umbrella and typically paying them according to rationalized processes that reduced pay dispersion. During the 1960s, GM grew by 100,000 employees, AT&T grew by 200,000, and ITT grew by 260,000. Not coincidentally, this growing concentration of employment corresponded with the greatest compression in incomes in American history. When the "shareholder value" fad overtook the sector in the 1980s, corporations went on an ongoing spree of layoffs and outsourcing, drastically shrinking many of the largest corporate employers. Low-wage big box stores replaced high-wage manufacturers as the biggest employers, and inequality soared. In the next section, I sketch an account for how to attack this task.

How do national institutions shape organizations?

One of the striking things about our knowledge of organizations and inequality is just how heavily it is based on small samples of large American organizations -- often Fortune 500 corporations -- from the post-War period. It is as if our understanding of biology depended entirely on species observed on the Galapagos Islands. We know about internal labor markets, the provision of benefits such as health insurance and pensions, the effect of industry-based labor unions -- features that are sometimes utterly idiosyncratic to a particular place, time, and form of organization. Fast food chains do not have elaborate internal labor markets. French corporations do not need to provide health insurance. Chinese

firms do not face free-standing industrial labor unions.

Corporations and other business organizations vary widely around the world. Consider one of the most basic aspects: size, as measured by employment. One might imagine that organizational size corresponds to country size, and that big countries grow big firms, while small countries grow small firms. This turns out to be incorrect: the biggest domestic company in Colombia (population 48 million) is Grupo Exito, a supermarket chain with 63,000 employees, while the biggest company in Denmark (population 5.6 million) is ISS, with 522,000 employees (albeit not all in Denmark). Walmart is the biggest private employer in the US, with 1.4 million domestic workers. It is also the biggest private employer in Canada and Mexico, but has abandoned Germany and South Korea because its business practices evidently did not fit local customs. The ability to grow and sustain a big organization evidently depends on local conditions.

Table 1 lists the five largest employers headquartered in Dominica, China, the US, Denmark, Brazil, and Bangladesh. Not surprisingly, Dominica's largest employers are tiny, and China's are huge. But compare Denmark's relatively vast corporations with those of Brazil (population 200 million) and Bangladesh (population 157 million). Or consider the types of organizations that make up the largest employers. In the US, they are dominated by retailers. In other countries, it tends to be resources, banking, and heavy manufacturing. Most striking of all, however, is the sheer variation in terms of size and industry, and what that implies for the variation in pay distributions.

Even within the same industry, corporate size varies widely around the world. Toyota, Volkswagen, and General Motors manufacture the same number of cars (roughly 10 million apiece in 2015) in the same price range. But Toyota employed 344,000 people, Volkswagen employed 593,000, and GM employed only 215,000.

Dominica	# Emp	China	# Emp	US	# Emp	Denmark	# Emp	Brazil	# Emp	Bangladesh	# Emp
J ASTAPHAN & CO.	350	PETROCHINA COMPANY LIMITED	534652	WAL-MART STORES	2200000	ISS A/S	522258	ITAU UNIBANCO HOLDINGS	93175	JANATA BANK	14413
HHV WHITCHURCH AND CO	220	AVIATION INDUSTRY CORP	500000	US POSTAL SERVICE	488000	AP MOLLER-MAERSK	89209	PETROLEO BRASILEIRO	80908	ZAHINTEX INDUSTRIES	13400
DOMINICA ELECTRICITY SERVICES	219	AGRICULTURAL BANK OF CHINA	493583	KROGER CO	400000	NOVO NORDISK	51059	VALE S.A.	76531	BANGLADESH EXPORT IMPORT CO	7852
NATIONAL BANK OF DOMINICA	149	INDUSTRIAL & COMMERCIAL BANK OF CHINA	462282	HOME DEPOT INC	371000	CARLSBERG A/S	46832	MARFRIG GLOBAL FOODS S.A.	45243	PUBALI BANK	7645

FINE FOODS INC.	130	CHINA CONSTRUCTION BANK	372321	TARGET CORP	347000	LUNDBECKFONDEN	32135	TELEFONICA BRASIL S.A.	26598	ADVANCED CHEMICAL INDUSTRIES LIMITED	6930

Table 1: Largest domestic employers, 2015

Or consider corporate governance, that is, how the board of directors is structured and staffed. Generations of corporate governance researchers have published tens of thousands of papers on the boards of public corporations -- how big they are, how they are staffed, how many insiders and outsiders, how these connect to performance -- and if there is any domain in which researchers should have figured out global best practices, it is here. Yet consider the boards of leading firms in the global automotive industry: "In the US, the board of General Motors includes the CEO and ten outsiders, who are mostly retired CEOs of other companies. In Japan, the board of Toyota includes 21 directors, most of whom are current or former Toyota executives. Under German law, half of the supervisory board is elected by employees to represent labor, as are 10 of the 20 board members at Daimler. China's Geely Automotive board, in contrast, includes eight executive and six non-executive directors" (Davis, 2016a).

Why do firms vary so widely around the world, even in the same industry? Consider an analogy. In the pre-modern period, the kinds of buildings one encountered reflected locally-available materials and geography. In the Cotswolds one might see cottages made of stone; in Kentucky, the preferred building material was logs; in Japan, bamboo. Available materials constrained the kinds of structures that were possible; vernacular styles and local needs shaped what they looked like. The tallest structure in any given country might be a cathedral made of marble. Technological advances in the 19th century such as the industrial production of plate glass, structural steel, and reinforced concrete allowed low-cost construction on a grand scale; electrification and elevators in the early 20th century enabled a new age of skyscrapers. Organizational structures are also built from available raw materials. Stinchcombe (1965) noted that different historical eras produced different kinds of organizations, just as the 18th century produced log cabins and the 20th century produced skyscrapers. But what is the equivalent of steel and glass for business organizations? The "varieties of capitalism" program in political science suggests some possibilities (Hall and Soskice, 2001; Amable, 2003).

National economies include institutions that guide each of five broad domains that shape the kinds of

firms they get. The first dimension is *product market competition*: how are rivalries or collaborations among producers regulated? The US has a long history of antitrust regulation aimed at preventing monopolies or oligopolies from charging high prices to American consumers, which limited the size of firms, while South Korea was more oriented toward growing national champions to compete on a global market, encouraging grand scale. The second dimension is *labor market regulation*: how is the employment relation organized, and what obligations does it include? American firms generally operate under employment-at-will, allowing firms to hire and fire workers with few limitations, while many Chinese firms are expected to provide an "iron rice bowl" of relatively permanent employment. The third dimension is *capital market structure*: how do firms fund their operations, and how is ownership organized? American corporations were distinctively reliant on stock markets to raise capital, whereas half the world's economies do not have a local stock market, and half of those that do have domestic stock markets only created them in the past generation. In such economies, banks or wealthy families rather than markets often play a crucial role in financing business. The fourth is *education systems*: how are workers prepared for jobs? The US emphasizes general education and college preparation, while Germany has a strong system of technical training that supports high-end manufacturing. The fifth is *social welfare provision*: how are things like health care, unemployment security, and retirement income provided? Since the 1950s, American corporations have been the primary source of health insurance and retirement security for employees and their families, creating costly obligations for firms, whereas Denmark has an elaborate system of social welfare provision for all citizens independent of employment.

The major insight of the varieties of capitalism program is that these economy-level institutional conditions decisively shape what firms can and will look like, and what kinds of industries are likely to thrive (or fail). A growth-oriented business created in the US today can expect to be funded by venture capitalists who hope the firm will eventually list on a stock market. It will hire workers who expect to get

health insurance and a 401(k), who can be fired at will, and whose preparation is likely to be fairly general and in need of some firm-specific training. This might be a great environment for a software or biotech company, but not so great for precision manufacturing, which requires highly skilled operatives with specialized training who might prefer the employment security of a family-owned firm.

The five institutional domains at the national level can be complementary and often form more or less coherent configurations, at least among highly successful economies. There are, in short, *varieties of capitalism* that are conducive for particular kinds of firms. Amable (2003) analyzed 21 OECD countries and uncovered five broad clusters of national institutional configurations, each of which typically provided a favorable climate for particular kinds of firms and industries.

In *market-based systems*, such as the US, UK, Canada and Australia, product competition and financial markets are predominant forces. World-leading research universities and vast capital markets make these systems fruitful for industries such as software, biotech, and electronics. The *social-democratic model* includes countries like Sweden, Finland and Denmark. Here, coordinated wage bargaining and robust social protection give comparative advantages in health-related industries and industries that draw on their natural resources, like paper and printing. The *Continental European* model describes France, Germany, Austria, Belgium, Ireland, Norway and, arguably, Switzerland and the Netherlands. This model is similar to the social-democratic model but less reliant on coordinated wage bargaining. The *Mediterranean model* applies in Italy, Spain, Portugal and Greece. These economies offer more employment protection and less social protection than Continental Europe, and the education system produces workers with lower skills and wages on average. These economies often specialize in light industry and lower-tech activities. Finally, the *Asian model* describes Japan and South Korea, where large corporations historically coordinated with the national government in an export-oriented system. This model includes employment protection and a limited welfare state, and provides advantages in computers, electronics and machines (Amable, 2003: 22).

To a remarkable degree, these different varieties of capitalism correspond both to the sizes of domestic corporations and to the level of inequality (see Figure 1). Social democratic countries have low levels of inequality and very large domestic corporations. Mediterranean countries have higher inequality and smaller corporations. Continental Europe is somewhere in the middle.

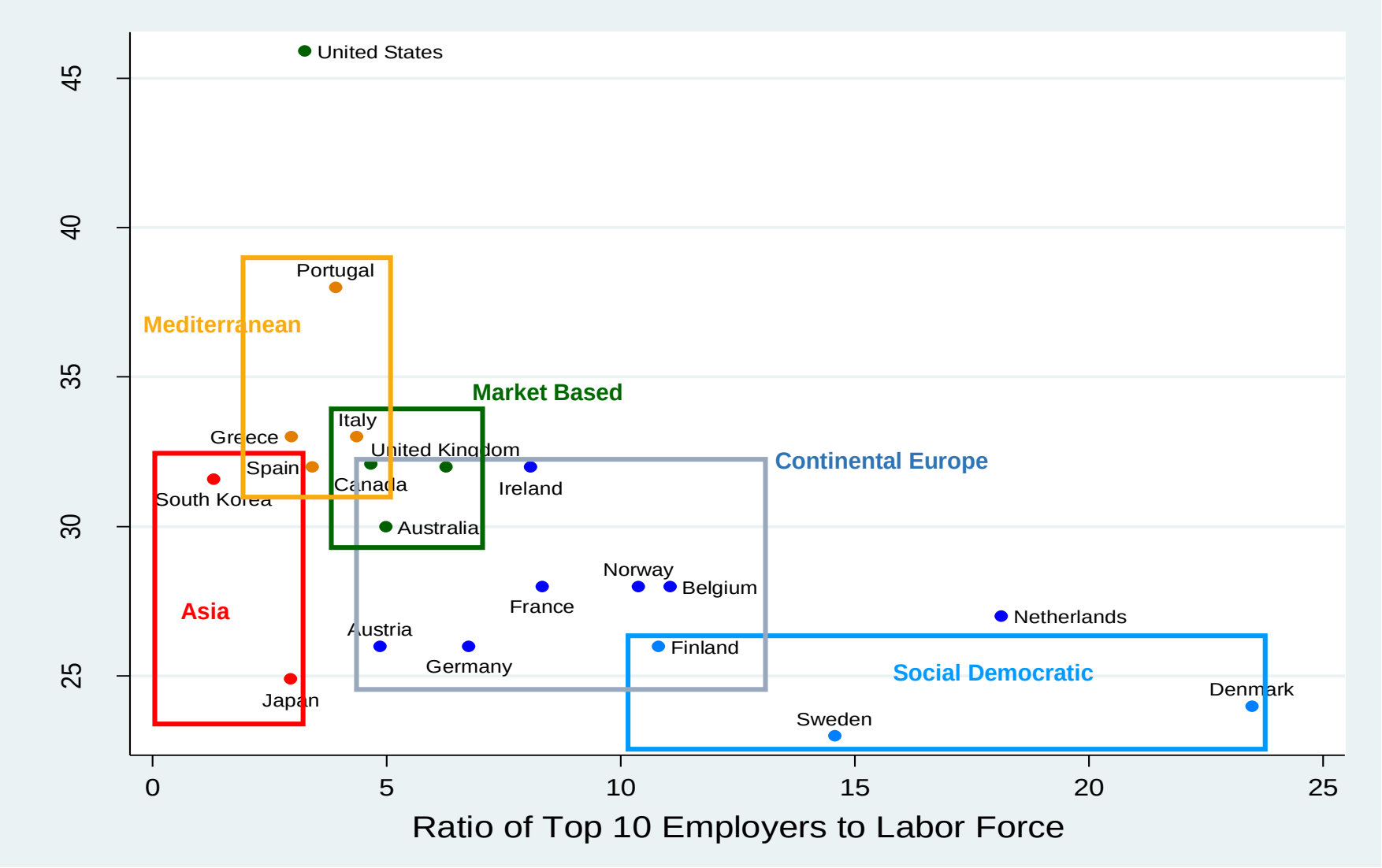

Figure 1: Employment concentration and inequality by varieties of capitalism

This suggests a "drive train of inequality": **national institutions shape the kinds of organizations that thrive in an economy, and these organizations in turn shape the distribution of incomes**. Thus, to understand inequality, one needs to understand how institutions shape the kinds of choices made around organizations. Moreover, to understand changes in inequality over time, we should look to changes in national-level economic institutions that shape the configuration of organizations in an economy.

What shapes national institutions?

Thus far I have aimed to establish that formal organizations are the proximal cause of income inequality through their hiring, pay, and promotion practices; that organizational size is a particularly important aspect of formal orgnizations; and that economic institutions at the societal level decisively shape organizational size and structure. To explain income inequality, we need to explain the distribution, size, and structure of employing organizations, and that requires mapping the institutions governing product markets, labor markets, financial markets, education, and social welfare provision.

At the risk of causing social science vertigo, it is important to note that national institutions are not static. The preceding account suggests that we can explain income inequality by examining how changes in institutions lead to changes in the prevalence of different kinds of organizations. This is beyond the scope of this chapter, but it does suggest a research agenda going forward.

Institutional scholarship in recent years often seems unmoored, as if it lacked an agenda beyond filling a gap in the prior literature, and research is driven more by the internal concerns of the discipline than by problems in the world. But not all gaps are worth filling. Explaining inequality, on the other hand, is an area where institutional theory can bring its insights to bear, by explaining how national-level institutions shape the kinds of organizations that are created and the distribution of rewards they offer. My concern is not original, and it is not new. Stinchcombe (1997) noted 20 years ago that modern

institutionalists (in contrast to predecessors like Commons and Schumpeter) imagine institutions as collective representations that generate themselves through some opaque process. We now have a bit more insight into the institutional manufacturing process, but we lack a strong agenda to explain the institutions that create the organizations that generate inequality.

The varieties of capitalism program provides a good starting point for the institutions worth studying. Inequality provides the why; organizational creation provides the how. One example of how this work might be done is Bruce Kogut's (2012) collaborative effort with roughly two dozen scholars to track how changes in financial markets led to changes in the structure of ownership and director networks around the world. The next step is to track how such changes connect with other institutional domains, and to the shape of firms, and to inequality.

In recent years we have witnessed substantial changes in all five domains that are certain to change the shape of business organization, and thus the level of inequality in different economies. Information and communication technologies have changed each of these domains, and each is worthy of investigation by organizational scholars (Davis, 2016b).

- In financing, market-based finance has become increasingly accessible around the world, and traditional distinctions between commercial banking (taking in deposits, making loans) and investment banking (underwriting securities) have evaporated as loans are frequently "securitized" (bundled together and sold as bonds to global investors). Moreover, platforms for peer-to-peer lending and crowdsourcing expand the range of possibilities for funding firms, with unknown long-term consequences for organizational structures. *How do changes in financing options change the goals, governance, and structure of employing organizations around the world?*
- In product markets, firms are increasingly subject to "Nikefication" in which design and

marketing are organizationally separated from production and distribution. Supply chains are increasingly dispersed and global; new entrantrs are able to scale up and down rapidly by renting rather than buying capacity, which enables radically tiny organizations to have large impacts and out-complete large-scale incumbents. *How does the availability of contractors for essential organizational activities change the distribution of incomes across the enterprise? How does it change the sizes of organizations across the value chain?*

- In social welfare provision, states are under great budget pressures due in part to "Baumol's disease," by which services increase in cost much faster than manufactured products. Traditional methods of financing social welfare and retirement are facing strains around the world, while in the US, functions previously provided by firms (health insurance, retirement security) are increasingly taken on by states or individuals. *How does the location of social welfare provision (public or private) influence the size of organizations and the creation of new enterprises?*
- In education, the rising cost of higher education (due in part to Baumol's disease) leaves many college students weighed down by debt as they enter the labor force. New technologies enable on-demand training for very specific skills and hold out the possibility of job training being offered just-in-time by outside providers. *How does educational funding influence the kinds of training provided and the kinds of firms that are possible? How does the privatization of education change the priorities of scholarship?*
- Labor markets face perhaps the biggest disruption of all through "Uberization," by which labor is hired by the task rather than by the job. Online platforms increasingly allow workers to bid for the performance of specific tasks for set fees. The career was replaced by the job; now the job is increasingly being replaced by the tasks, with dire implications for career mobility. *What kinds of new forms of enterprise will be enabled by "Uberization," and what*

impact will these new forms have on inequality?

In combination, these changes are poised to reshape business enterprise itself. Where the traditional corporation entailed boundaries, members, and goals, with career ladders providing mobility for long-term employees, the new enterprise increasingly resembles a web page, consisting of a set of calls on resources (including labor) that may be housed outside the firm (Davis, 2016b). As the components of enterprise are available for short-term contracts, businesses come to look like impromptu constructions for specific performances. This will play out differently around the world, as is evident from the starkly divergent receptions to Uber in North America, France, Germany, China, and Indonesia.

Conclusion

Income inequality results from the employment practices of organizations, and organizations are shaped by institutions, particularly those at the level of the national economy. Institutional scholars can contribute to our understanding of income inequality around the world by rigorously analyzing national institutions and their effect on organizational hiring practices and reward structures. As new technologies change the institutional backdrop for organizations in the 21st century, we are witnessing a wholesale reformulation of what an enterprise looks like, and even whether it counts as an "organization" at all. The most productive organizational research on inequality today will take up the task of analyzing changing technologies, changing institutions, and the changing architecture of enterprise as careers are replaced by jobs and jobs are replaced by tasks.

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