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Toward a Discursive Approach to Growth Models
Social Blocs in the Politics of Digital Transformation

Sidney A. Rothstein



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Abstract

The growth models perspective analyzes the role of social blocs in crafting countries' economic policies, but its treatment of business power as purely structural prevents it from addressing an important question in the politics of digital transformation: How have new sectors with miniscule economic footprints been able to influence economic policy? This paper explores how tech and venture capital successfully lobbied for financial deregulation at the beginning of digital transformation in the United States. The paper argues that explaining the role of social blocs in digital transformation requires incorporating discourse analysis and develops a conceptual framework around three discursive components in the dynamics of social blocs: coordination, persuasion, and performativity. This framework contributes to theory development in the growth models perspective and illustrates how the concept of social blocs can help make sense of the politics of digital transformation.

Keywords: digital transformation, discourse, growth models, social blocs

Zusammenfassung

Die Perspektive der Wachstumsmodelle analysiert die Rolle gesellschaftlicher Koalitionen bei der Festlegung der Wirtschaftspolitik der einzelnen Staaten. Ihre Behandlung der Unternehmensmacht als eine rein strukturelle verhindert jedoch, dass sie eine wichtige Frage in der Politik der digitalen Transformation angehen kann: Wie haben es neue Sektoren mit einem winzigen ökonomischen Fußabdruck vermocht, die Wirtschaftspolitik zu beeinflussen? Dieser Beitrag erörtert, wie Tech-Firmen und Risikokapitalunternehmen zu Beginn der digitalen Transformation in den USA erfolgreich für eine Deregulierung der Finanzmärkte lobbyiert haben. Er unterbreitet die These, dass die Erklärung der Funktion gesellschaftlicher Koalitionen für die digitale Transformation die Berücksichtigung der Diskursanalyse verlangt, und entwickelt einen begrifflichen Rahmen für drei diskursive Komponenten in der Dynamik gesellschaftlicher Koalitionen: Koordination, Überzeugung und Performativität. Dieser Rahmen trägt zur Theoriebildung in der Perspektive der Wachstumsmodelle bei und illustriert, wie der Begriff der gesellschaftlichen Koalition bei der Erhellung der Politik der digitalen Transformation helfen kann.

Schlagwörter: digitale Transformation, Diskurs, gesellschaftliche Koalitionen, Wachstumsmodelle

Contents

1	Introduction	1
2	The politics of digital transformation	3
3	Discourse and social blocs in digital transformation	5
4	Case study: The origins of the Silicon Valley model	7
5	Three mechanisms of social blocs in the Silicon Valley model	9
	Formation of social blocs	9
	Influence of social blocs	12
	Endurance of social blocs	15
6	Conclusion	17
	References	20

Toward a Discursive Approach to Growth Models: Social Blocs in the Politics of Digital Transformation

1 Introduction

Silicon Valley has long been the target of emulation. In 1960, Charles de Gaulle visited Northern California, returning to France with a national plan to develop a domestic tech sector (O'Mara 2019, 49). By 2017, every country in the Organization for Economic Cooperation and Development (OECD) promoted economic growth through “digital transformation” (OECD 2017a, 11), and hundreds of regions have named themselves after Silicon Valley, from “Silicon Mountain” in Cameroon to “Silicon Fen” in Cambridge. This is not the first time that countries around the world have pursued a common project of economic adjustment, but, in previous periods, the path of reform often followed the interests of economically powerful actors (Gourevitch 1986; Katzenstein 1985; Zysman 1984). In the digital transformation, however, the path of policy development seems to be dictated less by the heft of existing sectors than by the promise of new ones, such as information and communications technology, or “tech,” and entrepreneurial finance, especially venture capital.¹ In the vast majority of countries, neither tech nor venture capital has a significant economic footprint. How have these new sectors influenced the direction of economic policy in the digital transformation?

Despite recent progress in analyzing the role of business in economic policy, it remains a puzzle how tech and venture capital have exercised such considerable power. The budding growth models perspective, for instance, provides a compelling account of economic adjustment by foregrounding the concept of social blocs, whereby sectors with complementary interests band together to shape economic policy (Baccaro and Pontusson 2016; Baccaro and Pontusson 2019; Thelen 2019). So far, social blocs have been conceived as exercising a type of power that is structural and historically anchored: systemically relevant sectors, those that contribute to GDP and employment, are likely to see economic policy meet their interests. The sectors that constitute the Silicon Valley model, however, exhibit a strikingly different profile.²

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- 1 I use “tech” to refer to the information and computer technology firms associated with Silicon Valley, following popular usage. However, it should be noted that defining the tech sector can present considerable difficulties (see Hecker 2005), especially as its characteristic activities have shifted over time from manufacturing electronics to producing software and internet-based services. In this paper, the term remains focused on digital technologies, and, as I show, the politics around this sector display important continuities over time.
- 2 The term “Silicon Valley” was invented by journalist Don Hoefler in 1971 (O'Mara 2019, 99), and reflects an idealized version of Northern California's high-tech sectors, which paved the

Even after decades of expansion, tech makes up no more than 10 percent of GDP in any OECD country in the late 2010s, and often significantly less: in the European Union, tech constitutes less than 6 percent of GDP, while manufacturing is still at 16 percent (OECD 2019, 76; OECD 2020). Across the OECD, tech represents less than 6 percent of employment, and hovers around 4 percent in the European Union (Eurostat 2019; OECD 2017b, 43). Venture capital, the other core sector of the Silicon Valley model, also lacks systemic relevance. Across the OECD, venture capital represents less than 0.05 percent of GDP, and the only country with more than 1000 firms backed by venture capital is the United States (OECD 2017c, 124, 128). Despite their minuscule footprints, tech and venture capital have exerted tremendous influence over economic policy in the last decades, leading to the near universal adoption of national strategies for digital transformation based on the Silicon Valley model. Explaining why these sectors are so powerful requires a detailed account of the dynamics of social blocs, which this paper develops by addressing three questions raised by the growth models perspective: (1) How do social blocs form? (2) How do social blocs influence policy? (3) How do social blocs endure?

In addressing these questions, this paper joins recent attempts to update accounts of how business exercises power in the current era of production (Brazys and Regan 2017; Culpepper and Reinke 2014; Culpepper and Thelen 2020). Despite the vast amount of research on the power of business in politics,³ the growth models perspective is distinctive because its concept of social blocs approaches business power as more than a single act of influence, but instead as a durable political pattern inseparable from the context of capitalist development. This paper argues that, in the digital transformation, tech and venture capital formed a social bloc that promulgated a specific discourse articulating the expectation that investing in digital technology will drive economic growth. This discourse enabled tech and venture capital to shape economic policy despite lacking structural power. Drawing on a case study of the origins of the Silicon Valley model, the paper develops an account of business power in digital transformation that revolves around discourse rather than structure, and articulates three discursive components essential to the dynamics of social blocs.

The paper proceeds in five parts. The second section shows how purely structural accounts of social blocs cannot fully explain the role of business in the politics of digital transformation, followed by the third section, which argues that these gaps can be bridged by incorporating discourse analysis. The fourth section outlines the case selection strategy and methodological approach, which relies on theoretical-revision process tracing, and introduces the case study of capital gains tax reductions in the 1970s United States. While we observe similar paths of policy development across many countries currently pursuing digital transformation, focusing on a single case study enables elucidating the importance of discourse to three causal mechanisms through which

way for the “Silicon Valley model,” an attempt to operationalize those dynamics in a particular set of economic policies (Casper 2007).

3 For useful overviews, see Akard (1992); Vogel (1987).

new sectors acquire, exercise, and maintain power in the current era. Section five traces each mechanism, through which tech and venture capital (a) formed a social bloc, (b) influenced policy, and (c) endured over time. The final section concludes by proposing three paths for future research.

2 The politics of digital transformation

The near universal adoption of national strategies to promote digital transformation has attracted significant attention in social science. Two approaches stand out. The first treats digital transformation as technological change, and seeks to explain its political consequences, especially for economic inequality. The second is the growth models perspective, which treats digital transformation as economic adjustment and seeks to explain different paths of development. Building on a robust research tradition in comparative political economy to highlight the centrality of business power in guiding national paths of economic adjustment, the latter provides a more promising framework for explaining the politics of digital transformation. Nonetheless, its notion of business power must be updated in order to capture how new sectors, such as tech and venture capital, exercise power.

Digital transformation has intensified economic inequality, but explaining this development primarily in terms of technology tends to overlook the role of business in guiding the path of technological change, and thus leaves out critical aspects of the politics of digital transformation. Automation certainly shapes labor market dynamics and can increase inequalities in income and wealth, and many scholars highlight the importance of electoral politics in mediating these developments (Boix 2019; Hope and Martelli 2019; Iversen and Soskice 2019; Kurer and Palier 2019; Thewissen and Rueda 2019), but these approaches often treat technological change as exogenous, and thus tread perilously close to technological determinism. The peril inheres in overlooking how the path of technological change is endogenous to the political actions of certain actors, particularly firms and sectors that influence economic policy to promote particular technologies. Focusing primarily on elections, these approaches struggle to explain the politics of economic policy, which are typically addressed in the realm of “quiet politics,” where business power, rather than voter behavior, is the deciding factor (Culpepper 2011).

Approaching the politics of digital transformation by focusing on business power reflects a long tradition of studying the role of producer coalitions in shaping economic policy. The growth models perspective extends this tradition by treating digital transformation as economic adjustment, which, as in previous eras, is guided by different patterns of business power. Classifying national economies primarily in terms of their demand regimes, the growth models perspective distinguishes between countries where growth is driven primarily by exports and where it is driven by domestic consumption (Baccaro

and Pontusson 2016, 176). To explain this variation, scholars refer to the power of social blocs, which are “coalitions of social forces, typically straddling the class divide, that can legitimately claim to represent the ‘national interest’” (Baccaro and Pontusson 2016, 200). Whereas Amable and Palombarini (2009) incorporate electoral coalitions into the concept of social blocs, the growth models perspective has focused on business as the primary actor in a social bloc, and conceives of sectors as exercising “structural power” to influence policy (Baccaro and Pontusson 2019, 30). While the growth models theoretical framework acknowledges the role of discourse in the dynamics of social blocs, invoking Gramsci’s concept of hegemony (Baccaro, Blyth, and Pontusson 2019, 31; Baccaro and Pontusson 2019, 1, 18–19), empirical research has so far focused solely on structural power.

The framework of structural power in the growth models perspective underpins accounts of digital transformation in different countries, and points to three causal mechanisms essential to the dynamics of social blocs. First, Thelen (2019, 310) draws attention to the *formation* of social blocs. In the Netherlands, unions’ structural position vis-à-vis their ownership of massive pension funds aligned their interests with finance, leading to a coalition that supported financial deregulation and enabled shifting to a growth model based on business services. Second, Baccaro and Pontusson (2016, 200) focus on social blocs’ *influence* to explain variation in growth models. In the UK, finance’s systemic relevance allowed it to push for economic policies that favored its interests, while in Germany, export-oriented manufacturers steered policy in a different direction, due to their systemic relevance, represented by outsized contributions to GDP and employment. Third, Thelen (2019, 301) explains the *endurance* of a social bloc in Germany, whereby export-oriented manufacturers adapted institutions in order to preserve and protect complementary interests. By ensuring that national policy reinforced actors’ structural positions, Germany’s export-oriented manufacturers were able to maintain the social bloc necessary for influencing economic policy.

The growth models perspective provides evidence that countries pursue different paths of digital transformation, but it also raises questions about the underlying processes of change because structural power cannot fully explain these different paths. While countries may have diverged in more recent years, empirical research in the growth models perspective seems to overlook that most countries have adopted very similar sets of policies to support tech and venture capital. Starting in the 1990s, countries across the OECD invested in up-skilling, and liberalized markets for both labor and finance (O’Donovan 2020, 2), even where national models favored social protection over liberalization, as in France (Amable 2017, 29–31). Germany, for instance, pursued a raft of reforms, ranging from the implementation of a new stock market, the *Neuer Markt*, to adjusting corporate governance regulations, all of which were explicitly designed to foster the type of tech firm and venture capital associated with the Silicon Valley model (Adelberger 2000; Casper 2007; Vitols 2001). Conceiving of business power solely in terms of structure, the growth models perspective struggles to explain why such reforms were embraced, because neither tech nor venture capital possessed the economic

heft we would expect of such influential sectors. In Germany, for instance, the tech sector's contribution to GDP peaked in 2007 at 6.4 percent, dwarfed by manufacturing's contribution at 23 percent, while employment in tech was only 5 percent to manufacturing's 24 percent of the total workforce (Eurostat 2020; OECD 2020).⁴ Venture capital has had a similarly small economic footprint. Even at the peak of the dot-com boom in 2000, German venture capital raised little more than \$5 billion (BVK 2001, 4), which was less than half of Volkswagen's profits that year (Volkswagen AG 2000, 81), and fewer than 20 percent of German startups received venture capital funding (Vitols 2001, 59).

Germany is not the only country where tech and venture capital lacked structural power but were still able to influence economic policy. Brazys and Regan show that tech became the centerpiece of economic policy in Ireland, for instance, despite lacking structural power (Brazys and Regan 2017). Their account underlines that the sectors driving digital transformation have different interests than the manufacturing sectors of previous eras of production, and indicates that business power in the current era is also different (see also Breznitz 2007; Ornston 2012). In Ireland, policy reforms followed projections of prosperity, which the state adopted and used to guide policies that embraced digital transformation by promoting tech and venture capital. As the next section argues, these new sectors were able to influence economic policy in no small part by engaging a discourse that frames tech and venture capital as driving economic growth.

3 Discourse and social blocs in digital transformation

While discourse has always been central to capitalism, it is critical to digital transformation due to its role in shaping expectations (Beckert 2016; Marazzi 2008; Mieszkowski 2006; Nitzan and Bichler 2009). Expectations are at the core of the politics of digital transformation because the embrace of technological innovation is based on a particular set of expectations that doing so will drive economic growth. In the EU, for instance, the "Horizon 2020" program, which is a "flagship initiative aimed at securing Europe's global competitiveness" by allocating €80 billion to research and development, is based on the expectation that particular forms of research and development lead to technological innovations with positive economic effects (European Commission 2013). Expectations about the economic value of a particular investment reflect one way that business exercises power: by promulgating a discourse that frames the national interest in terms of the interests of a particular social bloc (Baccaro and Pontusson 2016, 200). In the digital transformation, tech and venture capital have promulgated a discourse that investing in digital technology will drive economic growth.

4 These figures reflect an expansive definition of the tech sector, which includes both computer manufacturing and the information sector, and therefore likely overstate tech's relevance to Germany's economy.

While this expectation may have become common sense, it nonetheless has a politics, which revolve around an “imagined future” (Beckert 2016) where a non-existent technology drives economic growth once the proposed economic policies are adopted. When policymakers debate how to guide economic growth, they engage this and other imagined futures, which can take the form of theories, models, or narratives (Beckert 2016, 173–74). These imagined futures play an important role in national policymaking, especially when it comes to technological innovation (Ergen 2015; Ergen 2019). Although imagined futures take many forms, from theories to models to narratives, they are always discursive; imagined futures are stories we tell about a reality that does not exist, and those stories are constituted by discourse. Discourse is especially significant for explaining the politics of digital transformation not just because it encompasses “the substantive content of ideas,” but also because discourse captures “the interactive processes by which ideas are conveyed” (Schmidt 2008, 305). These interactions are one important channel through which to explain how social blocs form, influence policy, and endure.

Table 1 Three causal mechanisms in the dynamics of social blocs

Causal mechanisms	Discursive components
Formation	Coordination
Influence	Persuasion
Endurance	Performativity

Three properties of discourse are relevant to these essential mechanisms of social blocs, and thus to how business exercises power (see Table 1). First, while purely structural approaches to social blocs suggest that economic conditions endow particular sectors with complementary interests, which lead to the formation of social blocs, a discursive approach focuses on how sectors rely on discourse to *coordinate* their interests. Sectors’ locations in economic structure may endow them with complementary or common interests (Gourevitch 1986; Milner 1988), but neither structural interdependence nor congruence is sufficient to form a social bloc. The complexity of modern economies entails that every sector has multiple and conflicting interests, so that “coordinative discourse” is essential to social blocs’ formation, because actors use it to selectively articulate a particular range of interests (Béland and Cox 2016; Hay 2011; Martin and Swank 2012, chap. 6; Schmidt 2008, 310).

Second, while a social bloc’s contribution to economic growth is relevant to the ability of its constitutive sectors to influence policy, doing so requires *persuading* policymakers that serving these interests really will drive economic growth. Sectors that contribute significantly to GDP and employ a significant portion of the workforce do not automatically receive policies that meet their interests (Culpepper and Reinke 2014; Vogel 1987). Instead, *persuasive* discourse plays a key role in sectors’ ability to credibly demonstrate to policymakers exactly how they contribute to growth, and what can be gained by adopting their desired policies (Fairclough and Fairclough 2012, chap. 2; Schmidt 2008, 312).

Lastly, discourse must be viewed as supplementary to, rather than independent of, structural approaches to social blocs. This is especially evident when it comes to social blocs' endurance. Purely structural approaches are correct to expect that sectors remain allied as long as their relative economic positions remain unchanged. However, beginning from a situation where sectors' interests may not in fact be complementary, a discursive approach heightens our sensitivity to the importance of *performativity*, whereby actors' articulation of complementary interests leads them to act "as if" their statements were true, and in so doing, making those statements a reality (Beckert 2016, 186; Mackenzie 2008). Focusing on discourse in the dynamics of social blocs is not to ignore structure, but to recognize the dialectical relationship between the two, especially the ways in which economic structures become real through discourse, including the conceptual frameworks that shape how actors articulate their interests (Donoghue 2018, 398; Howarth 2010, 314; Ives 2005, 464). While the growth models perspective recognizes this dialectical relationship in theory by invoking Gramsci's concept of hegemony, it is not yet reflected in empirical research. This paper makes a first step toward filling that gap.

In order to develop a more encompassing framework for the dynamics of social blocs in the digital transformation, and thereby to shed light on how new sectors exercise power, this paper revisits the early days of Silicon Valley. In the 1970s US, tech and venture capital formed a social bloc based on a coordinative discourse that selectively articulated some interests over others. Together, they influenced the path of economic policy by presenting policymakers with a simplified causal account linking each sector to economic growth, and persuaded legislators that serving the interests of tech and venture capital would serve the national interest. Acting as if this discourse were true has indeed led some aspects to be realized, such as increasing interdependence between tech and finance, so that while structural accounts may explain some aspects of the current stage of digital transformation in the US, they are less effective at explaining earlier stages. This is significant because while the US has focused on technological innovation to drive economic growth since the 1970s, many other countries have only recently adopted this strategy. Better understanding the origins of the Silicon Valley model thus holds important insights for the dynamics of social blocs in the current era, where nearly every country has adopted economic policies that promote tech and venture capital in the name of digital transformation.

4 Case study: The origins of the Silicon Valley model

On November 6, 1978, President Jimmy Carter signed the Revenue Act of 1978, which cut taxes in a number of areas. The most significant was the cut to capital gains taxes, sponsored by Congressman William Steiger (R-WI), which reduced the highest rate from 50 percent to 28 percent. Commonly recognized as a foundational moment in the power of business in the latter half of the twentieth century (Blyth 2002, 162; Mar-

tin 1991, 27), the reduction of capital gains taxes marked the “first fruit of the supply-side movement” (Berman and Pagnucco 2010, 359), and signaled not just the growing power of business in general, but the power of Silicon Valley in particular. Financial deregulation is often viewed as a prerequisite for what became the Silicon Valley model (Janeway 2012), but its constitutive policies are less a functional necessity than the contingent result of targeted lobbying by a social bloc composed of tech and venture capital (Mazzucato 2015, 57).

The American Electronics Association (AEA) represented tech. Founded as the Western Electronic Manufacturers Association (WEMA) in 1943 by David Packard, the association changed its name to the AEA in 1978 (Saxenian 1989, 33). By this point, the AEA included 900 firms in thirty-seven states, with its members employing more than one million people, primarily in designing and assembling electronic instruments related to computers (Zschau 1978a, 5). The National Venture Capital Association (NVCA) was founded in 1973, and while it quickly established an office in Washington, D.C., reducing the capital gains tax was its first major legislative win (Kenney 2011, 1707). Many accounts of Silicon Valley’s history recognize *that* these two associations came together in the late 1970s to reduce capital gains taxes (Berman 2012, 73; Florida and Kenney 1992, 114; Lazonick 2009, 73; Nicholas 2019, 178; O’Mara 2019, 168) but do not explain *how* they formed a social bloc, influenced policy, and endured over the following decades.

Seen through the expectations of purely structural approaches to social blocs, the reduction of capital gains taxes in 1978 presents a deviant case (Gerring 2007, 105). As the following case study illustrates, lobbying by tech and venture capital produced the policies they wanted, but not for the reasons expected by purely structural approaches. First, the relative positions of tech and venture capital in the economy cannot explain why they formed a social bloc. Second, this bloc was not systemically relevant to the US economy, leaving purely structural approaches unable to explain why they were so influential. Third, purely structural approaches cannot explain why this bloc has endured over time, given that tech’s and venture capital’s relative economic positions did not automatically entail a social bloc in the first place.

The goal of the following case study is to revise the causal mechanisms underlying existing accounts of social blocs. By engaging theoretical-revision process-tracing, the case study highlights the importance of discourse as an omitted causal condition central to the dynamics of social blocs (Beach and Pedersen 2019, 270). While drawing on existing theories of how discourse shapes power (e.g., Carstensen and Schmidt 2016), the case study turns to Fairclough and Fairclough’s critical discourse analysis to show that discourse is complementary to structural factors, rather than independent of them (Fairclough and Fairclough 2012, 82). This approach allows dissecting three properties of discourse in action in order to articulate discursive components in the dynamics of social blocs. Relying on a range of primary sources, particularly Congressional testimony, the following section demonstrates how turning to discourse helps fill gaps in purely structural accounts of digital transformation.

5 Three mechanisms of social blocs in the Silicon Valley model

Formation of social blocs

Tech and venture capital formed a social bloc in May 1977, when the AEA and NVCA committed resources to construct a task force focused on reducing capital gains taxes. Made up of eleven tech executives and venture capitalists, the task force was chaired by Edwin Zschau, the CEO of a small computer firm. Zschau coordinated the task force's activities in Washington, which included organizing testimony from both the AEA and the NVCA at Congressional hearings. On multiple occasions, the AEA testified together with representatives from the NVCA, who made their gratitude clear:

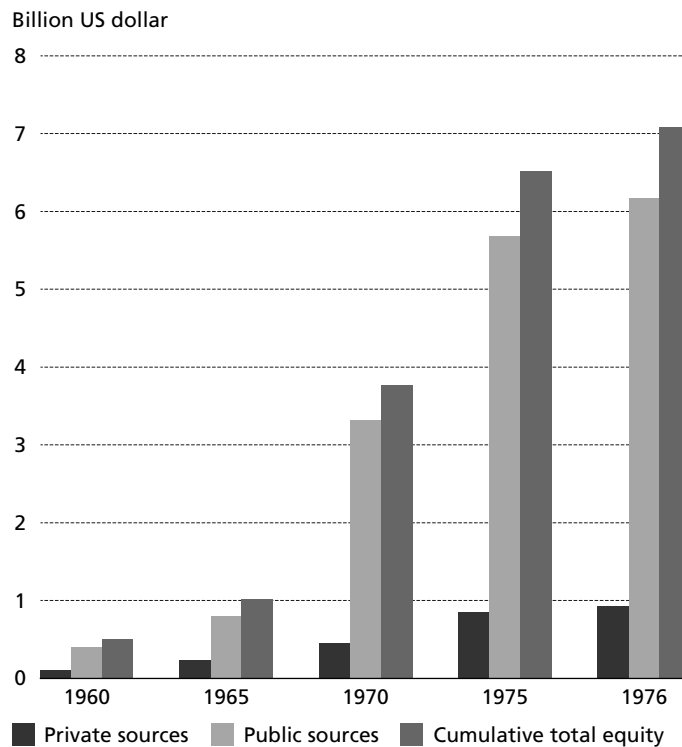
We in the NVCA are very much indebted to the American Electronics Association (AEA), which you heard from earlier today, and its Capital Formation Task Force for sponsoring the AEA Capital Formation Survey which documents in an authoritative manner the enormous benefits that have been derived from an economic incentive system that has worked superbly well. (Dennis 1978, 1340)

The NVCA was thankful not just for the AEA's frequent testimony to Congress, but also for their work behind the scenes, speaking to reporters, lobbying legislators and interest groups, and commissioning studies, including the survey referred to above, which speakers from both the AEA and NVCA frequently referenced during their testimony.

The AEA's previous lobbying had focused on trying to increase the prices that the Department of Defense paid firms for developing technology, with members arguing up through March 1977 that greater demand in the form of higher prices incentivized firms to invest in technological innovation (Fluke 1977). When they took on capital gains, however, the AEA articulated its interests differently. Now, the primary issue for tech firms was not the prices of its products but their access to capital. Members complained to Congress that if the capital gains tax was not lowered, the tech sector would disappear (De Castro 1978, 277). Zschau testified that "risk capital investment is like the goose that lays golden eggs," but "actions of the government which make risk capital investments less attractive can unwittingly kill the goose that lays these golden eggs" (Zschau 1978a, 11). The AEA's discourse painted tech firms' interests as complementary with venture capital's.

A purely structural approach to growth models would explain the formation of the tech-venture capital bloc by referring to complementary interests. For instance, Janeway's concept of the "innovation economy" presents venture capital as a functional element necessary for generating investment in risky businesses, such as tech (Janeway 2012). Many have questioned this view (e.g., Mazzucato 2015), but the economic conditions of the 1970s US could be seen as strengthening it, because inflation would have driven capital-hungry sectors, such as tech, into the arms of venture capital. In 1977, inflation stood at about 6.5 percent (DeLong 1997, 258) and was viewed as one cause of a broader "capital formation" crisis (Blyth 2002, 161), whereby borrowing costs rose as the Fed

Figure 1 Equity in AEA member firms



Source: Author's calculations, based on "Capital formation survey of high-technology companies," WEMA (Included in Zschau 1978b, 1331).

increased interest rates up to 5.35 percent by May 1977 (Board of Governors of the Federal Reserve System (US) 2020). Capital-intensive sectors, like tech, thereby had significant incentive to pivot toward equity and away from debt. Thus, a purely structural approach might suggest that the formation of the tech-venture capital bloc was simply the result of their relative positions in the specific inflationary environment of the 1970s, which endowed them with complementary interests.

However, the AEA's own data suggests that tech's interests were not so complementary with those of venture capital. According to a survey that the AEA conducted of its members, the tech sector relied primarily on government funding between 1960 and 1976, with private sources making up only 16 percent of investment in the sector. Moreover, the volume of private investment grew in this period by a factor of seven (see Figure 1). While it is true that younger firms relied on private capital more than mature firms, the AEA's own data suggest that their situation was improving rather than worsening. Firms founded after 1965 received ten times more private funding in their first five years than firms founded before 1965 (see Table 2). Thus, the AEA's own data provide little evidence of overlap between tech's and venture capital's interests.⁵

⁵ While the AEA distinguished between public and private sources of capital, it did not specify what "public" meant, so this could refer to funding from the Department of Defense, National

Table 2 Total private equity from year of founding, by cohort (thou. US dollar)

Year of founding	Years since founding		
	< 5 years	> 5 years	> 10 years
1956–1960 (26 firms)	3,923	29,515	81,596+
1961–1965 (38 firms)	7,511	26,125	48,050+
1966–1970 (135 firms)	87,648	268,519+	–
1971–1975 (77 firms)	31,464	–	–

Source: Author's calculations, based on "Capital formation survey of high-technology companies," WEMA (included in Zschau 1978b, 1333–37).

The inflationary environment of the 1970s is also not sufficient to explain why tech and venture capital formed a social bloc. Inflation may have increased borrowing costs in the late 1970s, but tech had already faced similar conditions without turning to venture capital. From 1972 to 1974, interest rates rose from 3.5 percent to 12.92 percent (Board of Governors of the Federal Reserve System [US] 2020), and while both the AEA and NVCA were active in this period, they did not ally with one another. Moreover, even in 1977, the AEA turned down the NVCA's overtures multiple times before finally agreeing to collaborate on lobbying Congress (Johnson 1980, 46). If the two sectors' interests had been so complementary as expected by purely structural approaches, they would have formed a social bloc earlier and more easily.

It is unclear what the NVCA said to the AEA that made it finally agree to form a common task force, but what is clear is that the AEA's articulation of its interests shifted in this period. This shift in interest articulation indicates the importance of coordinative discourse in the formation of the social bloc. Against purely structural approaches, which read actors' interests directly from their relative positions in the economy, a discursive approach recognizes that interests are frequently projections, representing what actors expect, or hope, the future to bring (Beckert 2016; Hay 2011). In the case of the tech-venture capital bloc, coordinative discourse was central to shifting the tech sector's articulation of its interests, particularly in the form of supply-side economics.

While the AEA's own data suggests that its members depended more directly on state funding than on venture capital, it chose to articulate its interests in terms of a projected future where venture capital played a greater role. This future-oriented articulation of interests echoed two assumptions of supply-side economics. First, the supply-side approach shifted the AEA's attention to the factors necessary for producing goods, in this case capital investment, and away from the demand for firms' goods, which was represented, at this point, in large part by the federal government. Second, reflecting the market fundamentalism often associated with the supply-side approach (Block and Somers 2016, 3), the AEA studiously overlooked the role of government in providing the inputs necessary for production, particularly when it came to capital investment.

Institute of Health, or any number of other sources. Despite these limitations, the survey, which included data from 325 electronics firms, remains an illustrative piece of evidence regarding tech's structural position vis-à-vis venture capital.

These two assumptions led the AEA to articulate its interests as complementary with venture capital's, even though capital investment represented only one aspect of tech's business model, and even though only a very small portion of that capital investment came from private sources.

The AEA likely adopted supply-side discursive frameworks through their meetings with leading figures of that approach, such as Jude Wannisky (Johnson 1980, 282), as well as exposure to emerging authorities, like Arthur Laffer and Martin Feldstein, who testified alongside the AEA to support reducing capital gains taxes (Feldstein 1978; Laffer 1978). Supply-side economics served as coordinative discourse by providing the AEA a framework to articulate its interests in a manner that made forming a social bloc with venture capital appear as a logical and necessary step to realize a prosperous future. Moreover, the AEA did not simply adopt this discourse itself. The AEA helped fund econometric studies on the effects of lowering capital gains taxes by DRI and Chase Econometrics, which were singled out for relying on supply-side assumptions (Blyth 2002, 163–64). Zschau personally bankrolled a study by Chase Econometrics (Johnson 1980, 171). The models underlying these studies articulated tech's interests in a manner that justified forming a social bloc with venture capital, and also played an important role in influencing policymakers.

Influence of social blocs

In 1977, nobody could have expected that President Carter would lower taxes for corporations and wealthy individuals. Carter entered office as a populist, declaring his commitment to help low-income Americans, but the Revenue Act of 1978 reduced corporate income tax from 48 percent to 46 percent and, more substantially, reduced the top rate on capital gains from 50 percent to 28 percent. These tax cuts represented government's response to popular pressure from both firms and individuals, but it was the tech-venture capital bloc that most directly influenced this legislation and made the capital gains tax reduction its core. An aide to Congressman Steiger told the *Washington Post* that "the boss was quite interested in what he [Zschau] had to say" (Lardner Jr. 1978), and contemporary observers noted that "it was not until Dr. Edwin Zschau of the American Electronics Association presented Congress with hard data on what the capital gains tax was doing to his industry that legislators began to listen" (Bartlett 1981, 151). The tech-venture capital bloc's message was so influential because they succeeded in persuading legislators that reducing the capital gains tax would drive economic growth by supporting technological innovation.

While the reduction of taxes in general is not terribly surprising given that legislators hoped to spur economic growth, it is surprising that capital gains taxes were reduced. From the perspective of purely structural approaches to social blocs, one would expect systemically relevant sectors, such as manufacturing, to influence policy, rather

than the tech–venture capital bloc, which had a miniscule economic footprint. In 1978, manufacturing accounted for 22 percent of US GDP, and employed more than 20.6 million Americans. The tech sector, by contrast, accounted for 2.6 percent of GDP and employed no more than 4.5 million (BEA 2020).⁶ The most important representatives of business interests, the National Association of Manufacturers and the Business Roundtable, made clear that their members were more interested in corporate income tax and investment tax credits than capital gains taxes (Bixler 1978; Jones 1978). In addition, small business, which accounted for the majority of employment, had little interest in capital gains taxes. During Congressional hearings, when asked about “your top priority for tax stimulus for the small business sector of the economy,” the Council of Small and Independent Business Associations and the Small Business Legislative Council were quick to answer, “The corporate tax rate” (DeBolt 1978, 1365; Pendergast Jr. 1978, 1365).⁷ The Revenue Act of 1978 did partially respond to the interests of these systemically relevant sectors by lowering the corporate income tax by two points, but reductions to capital gains taxes were the Act’s “centerpiece” (Martin 1991, 27). Explaining why requires incorporating discourse into purely structural accounts of social blocs.

The tech–venture capital bloc was able to influence the path of tax reform because they persuaded legislators that serving their sectors’ interests would serve the national interest. While economic policymaking in the postwar era had revolved around driving aggregate demand, in the 1970s productivity became the central focus. William G. Miller, Chair of the Federal Reserve, testified that “there is nothing more important than renewing vitality in productivity, plant modernization and technology – regaining our leadership as a producing nation” (Miller 1978b, 1179). The tech–venture capital bloc engaged this call by developing a discourse that framed lower capital gains taxes as a necessary condition for increasing productivity. Buttressing this discourse with theoretical models from supply-side economics, the tech–venture capital bloc presented legislators an “instrumental rationalization” for lowering capital gains taxes (Fairclough and Fairclough 2012, 110). According to these models, lower taxes on capital gains leads to technological innovation, which, in turn increases productivity.

To support their persuasive discourse of instrumental rationalization, the tech–venture capital bloc commissioned a number of studies. This data was influential because it purported to show that reducing capital gains taxes would drive economic growth. During a hearing before the Senate Subcommittee on Taxation and Debt Management, Zschau presented data from the AEA’s survey, concluding that it “leads us to the answer to the question of who benefits most from the capital gains tax reduction. Our survey says

6 To measure the tech sector, I use data on “electronic equipment and instruments,” which were classified as SIC 36 and 38 in the 1970s.

7 Some minutes later in the discussion, after Zschau articulated why reducing the capital gains tax should be the Committee’s primary focus, Pendergast suggested that he too supported reducing the capital gains tax (p. 1367). His preceding testimony, however, supports his first position that Council of Small and Independent Business Associations gave priority to reducing corporate income taxes.

all of us. Really, it is the American people” (Zschau 1978c, 270). The causal linkage between furthering the tech–venture capital bloc’s interests and the national interest relied on a variety of arguments, such as tech’s contribution to a positive balance of trade (Miller 1978a, 127), but the most popular argument had to do with tech’s contribution to productivity. Senator Alan Cranston (D-CA) explained to his colleagues that he supported reducing capital gains taxes partly because “the way to increase productivity and exports is through research and development of new technology” (Cranston 1978, 246). Reducing taxes on capital gains would fulfill these goals by increasing investment in research and development.

The tech–venture capital bloc’s discourse was influential partly because it drew on existing beliefs, such as the superior productivity of small business, but also because it engaged an extremely simple conceptual framework. Tossing aside all the complications of what drives economic growth, the tech–venture capital bloc focused almost exclusively on productivity. Zschau and others emphasized that tech contributed to productivity improvements, underlining that “without sufficient advances in technology, productivity suffers and US companies become less competitive not only in foreign markets but also here at home” (Zschau 1978a, 7; Zschau 1978c, 281). Legislators adopted this simplified causal linkage between tech and economic growth, along with the proposed solution and the symbols the tech–venture capital bloc invoked. Congressman Steiger, for instance, repeated a line from Zschau’s February 1978 testimony when he told the Ways and Means Committee two months later that “Risk capital investment is like the goose that lays golden eggs” (Steiger 1978, 6024). This symbolism was powerful, but not powerful enough to actually increase productivity, as captured by the widely noted “productivity paradox” (Brynjolfsson 1993).

What makes the tech–venture capital bloc’s influence so surprising is that its interests won out over much more established sectors’. It was precisely in this period that business became a significant player in American politics, but, rather than pushing for reducing capital gains taxes, major business organizations were focused elsewhere, such as reducing the corporate income tax and slashing environmental and labor regulations (Akard 1992, 602). However, it was the tech–venture capital bloc that succeeded in persuading legislators that their sectors were uniquely suited to driving economic growth. The success of the instrumental rationalization they presented legislators for reducing capital gains taxes certainly had something to do with its simplicity: all government had to do was reduce taxes on capital gains. This would spur technological innovation, thus improving productivity, and thereby spark economic growth. Indeed, this was the argument that legislators ultimately put forward when the Committee on Ways and Means released their proposal for the Revenue Act of 1978 (Committee on Ways and Means 1978, 120), indicating that the tech–venture capital bloc’s discourse was directly influential in shaping the path of economic policy.

Endurance of social blocs

The tech–venture capital bloc has proved to be remarkably durable, and indeed has become ever stronger over the past decades. In her history of Silicon Valley, O’Mara (2019) traces the deepening relationship between tech and venture capital from the 1970s onward, and Lazonick (2009) demonstrates that the alliance between the two sectors is at the core of the “New Economy Business Model.” Kenney (2011), moreover, traces how, starting in the 1970s, venture capital became a core component of the national system of innovation in the US. Indeed, more than four decades after the Revenue Act of 1978, it is difficult to conceive of the Silicon Valley model *without* the enduring alliance between tech and venture capital.

Purely structural approaches to social blocs would explain this endurance as the result of tech and venture capital’s relative positions in the economy continuing to provide each with complementary interests. However, as illustrated above, tech and venture capital lacked complementary interests at the origins of the Silicon Valley model, so, just as purely structural approaches cannot explain the formation of the tech–venture capital bloc, neither can they explain its endurance. While the preceding sections illustrated how discourse must be incorporated into structural approaches in order to explain the dynamics of social blocs, this section shows how the relationship between discourse and structure changes over time. Due to discourse’s performative properties, the fact that tech and venture capital acted *as if* they had complementary interests has contributed to developments making this *actually* the case. Similar to the two mechanisms addressed above, explaining the endurance of the tech–venture capital bloc requires incorporating discourse into structural approaches to social blocs, but leaves a greater role for structure.

While tech and venture capital’s positions in the economy did not endow them with complementary interests in the 1970s, the growth of the Silicon Valley model has created a strong interdependence between the two sectors. Given tech’s unique investment demands, which require huge cash reserves in order to finance research and development, it represents an attractive revenue stream for financial institutions that charge fees to manage these cash reserves. Up through 1980, tech and non-tech firms reported similar cash-to-asset ratios, at around 10 percent, but from 1980 onward, they diverged, reaching nearly 40 percent for tech firms in 2007, while non-tech firms remained around 11 percent (Booth and Zhou 2013, 9). At the same time, tech has come to constitute an ever larger proportion of publicly-traded firms, growing from 13 percent in 1974 to 38 percent in 2000 (Booth and Zhou 2013, 7). Each of these developments has contributed to the financial sector’s interest in tech, and the scale of the potential revenues is massive in some cases. In 2014, Apple alone had \$178 billion in cash, which created enormous windfalls for the financial firms managing those assets (Schwartz 2017, 205). Tech has arguably boosted Wall Street’s liquidity more than any other sector (Schwartz 2017, 204), which suggests that finance increasingly depends on tech.

This quantitative shift in tech's relationship to finance reflects a qualitative shift in the Silicon Valley model toward winner-take-all dynamics, which also increases tech's dependence on finance. In the late 2000s, Silicon Valley began to coalesce around the rise of "unicorns," firms valued at more than \$1 billion (Kenney and Zysman 2018). Unicorns represent a strategy whereby investors bet that one particular firm will become dominant, and they pump that firm with capital, allowing it to stay afloat through years of losses as it attempts to gain market share. If the firm can become the dominant player, it can extract considerable rents, thus providing investors enviable returns. Unicorns' revenue depends on investors rather than sales, which makes these firms directly dependent on finance. The scale of potential returns from picking a winner, such as Google, has increased the flow of capital into Silicon Valley, and has led to the rise of mega-funds like Softbank, which raised more than \$100 billion in 2018 (Kenney and Zysman 2018, 9). Moreover, given the capital required to fund unicorns, and the potential returns, an ever broader swath of finance now invests in tech (Aragon, Li, and Lindsey 2018; Chernenko, Lerner, and Zeng 2017), thereby eroding the distinction between Wall Street and Silicon Valley, and indicating significant structural interdependence between tech and finance writ large.

Despite this increasing structural interdependence, discourse still plays an important role in the endurance of the tech-venture capital bloc due to its performative properties. As observed above, in the early days of the Silicon Valley model, tech and venture capital did not have complementary interests, but acted *as if* they did. The discourse that tech and venture capital deployed to frame their interests as complementary was based on a theoretical model that presented entrepreneurial finance as essential to economic growth via its necessity for technological innovation. This discourse, which enabled the tech-venture capital bloc to influence legislators to pass economic policy that served its interests, remains central to policy development in digital transformation.

The tech-venture capital bloc's political activity did not stop following its success in reducing capital gains taxes, and one area of continued focus has been the regulation of stock options. The Financial Accounting Standards Board (FASB) has repeatedly proposed regulations to limit firms' ability to award employees stock options, and, since the 1980s, tech and venture capital have come together to fight the proposals (Hacker and Pierson 2010, 191). Each time, the tech-venture capital bloc mobilized the same discourse to contest the measures, presenting the same theoretical model as from 1978 to argue that (a) financial deregulation is necessary for technological innovation, (b) technological innovation increases productivity, (c) productivity increases spur economic growth, so that (d) financial deregulation is necessary for economic growth. Since 1978, this theoretical model has become accepted as common sense by legislators from both parties in the US, and its widespread adoption has enabled the tech-venture capital bloc to continue to influence policy and, indeed, to transform the assumptions underlying its discourse into actually existing structural conditions.

In 2004, following another attempt by the FASB to regulate stock options, Congress held hearings on the matter, during which the tech–venture capital bloc’s discourse was on full display. Members of Congress seemed to take for granted that tech’s interests are complementary with finance’s, and that financial regulation – in this case, the FASB’s proposal to more tightly regulate stock options – would hurt economic growth. Legislators opposed the FASB’s proposed rule change because they believed it would obstruct tech firms’ ability to award stock options as a tool to attract, retain, and motivate employees. According to Congressman Gene Green (D-TX), expensing stock options would impair firms’ ability to use “incentives [that] are critical to the development of technology and related industries where human capital is the driving force of the industry” (Green 2004). Other representatives presented similar arguments, each echoing the perspective of the NVCA, which testified that “the technology industry today simply would not exist without venture capital and without employee stock options” (Heesen 2004, 16).

More than a decade later, the tech sector remains a mascot for the argument that financial deregulation is necessary for economic growth. During the 2020 Presidential primary, the Cato Institute expressed concerns that Democratic candidates would raise taxes on capital gains, thus threatening economic growth. Drawing directly on the 1978 hearings about capital gains taxes, the Cato Institute argued that startups, particularly the high-growth firms known as “gazelles,” are necessary to keep the US economy moving, and that they require financial deregulation: “From Apple Computer in the 1970s, to Amazon in the 1990s, to Airbnb today, gazelles are fueled by risk capital and favorable capital gains taxes have kept the fuel flowing” (Jordan 2020). Even when the tech–venture capital bloc has occasionally failed to shape policy to meet its interests, it has succeeded in promulgating a discourse that tilts the playing field in its favor. The theoretical linkage that is often treated as common sense today – that financial deregulation spurs economic growth by making technological innovation possible – illustrates one way in which discourse is central to the endurance of the tech–venture capital bloc. Even more striking, however, is the way in which this discourse has been critical in shaping the path of policy reforms that have transformed structural conditions. In contrast to the 1970s, tech’s interests today likely are in fact complementary not just with those of venture capital, but with the interests of a broad swath of finance. This raises a question whether the tech–venture capital bloc has morphed into a more general tech–finance bloc.

6 Conclusion

This paper highlighted the role of discourse in explaining why tech and venture capital have been able to influence economic policy in the digital transformation despite lacking structural power. Extending the growth models perspective, the paper developed a theoretical framework that illustrates how discourse can be integrated into purely structural approaches to social blocs. This theoretical framework revolves around three caus-

al mechanisms characteristic of social blocs, namely, their formation, influence, and endurance. This framework extends the notion underlying the concept of social blocs that business power is more than just a single act of influence, but is instead constituted by a durable political pattern inseparable from the context of capitalist development. Drawing on a case study of the origins of the Silicon Valley model, the paper contributes both to theory development in the growth models perspective, as well as to addressing an important empirical puzzle in the politics of digital transformation. Studying how business uses discourse can strengthen existing accounts of social blocs and provide a framework to explain how tech and venture capital have been able to exercise power over the path of economic policy despite lacking systemic relevance.

While developing a theoretical framework to advance the growth models perspective and providing new empirical insights on the origins of the Silicon Valley model, this paper faces three limitations on which future research can build. First, as illustrated above, in the 1970s US, supply-side economics was critical in leading tech and venture capital to see their interests as complementary, and in providing the tools to persuade policymakers that their interests were coextensive with the national interest. However, this paper provides little indication of how other countries' economic traditions might shape the dynamics of social blocs and the path of digital transformation. Applying the discursive framework developed in this paper to cross-national comparisons would help address this question. Scholars could study how ordoliberalism or ideas of the social market economy have shaped the path of digital transformation in Germany (Schulze-Cleven and Weishaupt 2015; Vail 2018), just as in Sweden, we would expect ideas of social democracy to have a similar impact (Andersson 2009).

Second, while existing research shows that political institutions shape firms' influence on policy development (e.g., Gourevitch and Shinn 2005; Martin 1991), the single case study presented above leaves unaddressed how digital transformation might affect the role of institutions in mediating the power of new firms. The US's liberal system implies that influencing policy requires persuading policymakers directly, which may have made it easier for new sectors like tech and venture capital to shape the path of economic policy, and, moreover, it may have provided an environment more conducive to the formation and endurance of this social bloc. In contrast, in corporatist countries like Germany, systems of interest intermediation imply that the primary channel for influencing economic policy is to build broad cross-sectoral coalitions, which could conceivably give existing sectors an advantage over the new ones that drive digital transformation (Hall and Soskice 2001, 48). Future research could engage cross-national comparisons in order to examine the effects of different political institutions on how new sectors, such as tech and venture capital, are able to exercise power.

Lastly, scholars could address the vexing issue of internal hierarchy within social blocs (Baccaro and Pontusson 2019, 11). As the above case study illustrated, tech and venture capital in the US succeeded in exerting enduring influence over economic policy since the 1970s. However, it remains unclear who really benefits from the policies they have

passed. Reducing taxes on capital gains in 1978, for instance, certainly benefited those tech firms that received venture capital in the following years, but how should we conceive of their benefits in relation to the venture capitalists who accumulated massive fortunes as they institutionalized the practices now associated with the Silicon Valley model (Kenney 2011)? Determining who benefits, however, requires confronting the question of how actors perceive their interests. While this paper has emphasized the role of discourse in shaping actors' perceptions of their interests, this is not to deny the material reality of unequal distribution in capitalism. Future scholars can take up the question of internal hierarchy within the social blocs that drive digital transformation by integrating the discursive approach developed above with existing structural approaches, particularly around questions of economic inequality.

While the tech-venture capital bloc has endured since the 1970s, the late 2010s have presented it with new challenges. Some of these come from the state, as legislators consider breaking up the monopolies that currently constitute the tech sector (Culliford 2019). Other challenges come from within the social bloc itself, as tech workers begin to recognize that, despite their stock options, they are workers. Google's hostile response to recent efforts at labor organizing among its engineers has only strengthened workers' growing sense that their interests do not overlap with the bosses' (Ghaffary 2019). Just as a discursive approach to social blocs can help make sense of policy debates at the national level, it could also offer insights into the processes through which workers' perceptions of their interests change over time. The Silicon Valley model has benefited tech and finance, but by socializing the risk of investment while privatizing the returns, it has contributed significantly to economic inequality (Lazonick and Mazzucato 2012). As tech workers come to perceive their interests differently, perhaps they will mobilize for more equitable economic policies.

References

- Adelberger, Karen E. 2000. "Semi-Sovereign Leadership? The State's Role in German Biotechnology and Venture Capital Growth." *German Politics* 9 (1): 103–22.
- Akard, Patrick J. 1992. "Corporate Mobilization and Political Power: The Transformation of US Economic Policy in the 1970s." *American Sociological Review* 57 (5): 597–615.
- Amable, Bruno. 2017. *Structural Crisis and Institutional Change in Modern Capitalism: French Capitalism in Transition*. Oxford: Oxford University Press.
- Amable, Bruno, and Stefano Palombarini. 2009. "A Neorealist Approach to Institutional Change and the Diversity of Capitalism." *Socio-Economic Review* 7 (1): 123–43.
- Andersson, Jenny. 2009. *The Library and the Workshop*. Stanford: Stanford University Press.
- Aragon, George O., Emma Li, and Laura Anne Lindsey. 2018. "Exploration or Exploitation? Hedge Funds in Venture Capital." *Social Science Research Network Scholarly Paper* 3251086, Rochester, NY.
<http://dx.doi.org/10.2139/ssrn.3251086>.
- Baccaro, Lucio, Mark Blyth, and Jonas Pontusson. 2019. "Rethinking Comparative Capitalism: The New Politics of Growth and Stagnation." Unpublished manuscript.
- Baccaro, Lucio, and Jonas Pontusson. 2016. "Rethinking Comparative Political Economy." *Politics & Society* 44 (2): 175–207.
- Baccaro, Lucio, and Jonas Pontusson. 2019. "Social Blocs and Growth Models: An Analytical Framework with Germany and Sweden as Illustrative Cases." *Unequal Democracies Working Paper* no. 7, University of Geneva, Geneva.
<https://unequaldemocracies.unige.ch/files/7815/5421/4353/wp7.pdf>.
- Bartlett, Bruce R. 1981. *Reaganomics: Supply Side Economics in Action*. Westport, CT: Arlington House.
- BEA (Bureau of Economic Analysis). 2020. "Value Added by Industry, Gross Output by Industry, Intermediate Inputs by Industry, the Components of Value Added by Industry, and Employment by Industry, 1947–1997." *Bureau of Economic Analysis*. Accessed April 21.
<https://www.bea.gov/industry/io-histannual>.
- Beach, Derek, and Rasmus Brun Pedersen. 2019. *Process-Tracing Methods*. 2nd ed. Ann Arbor: University of Michigan Press.
- Beckert, Jens. 2016. *Imagined Futures: Fictional Expectations and Capitalist Dynamics*. Cambridge, MA: Harvard University Press.
- Béland, Daniel, and Robert Henry Cox. 2016. "Ideas as Coalition Magnets: Coalition Building, Policy Entrepreneurs, and Power Relations." *Journal of European Public Policy* 23 (3): 428–45.
- Berman, Elizabeth Popp. 2012. *Creating the Market University: How Academic Science Became an Economic Engine*. Princeton: Princeton University Press.
- Berman, Elizabeth Popp, and Nicholas Pagnucco. 2010. "Economic Ideas and the Political Process: Debating Tax Cuts in the U.S. House of Representatives, 1962–1981." *Politics & Society* 38 (3): 347–72.
- Bixler, Roland M. 1978. *The President's 1978 Tax Reduction and Reform Proposals*. Committee on Ways and Means, US House of Representatives, 2nd Session, March 6, 1978, 832–45. Washington, DC.
- Block, Fred, and Margaret R. Somers. 2016. *The Power of Market Fundamentalism: Karl Polanyi's Critique*. Cambridge, MA: Harvard University Press.
- Blyth, Mark. 2002. *Great Transformations: Economic Ideas and Institutional Change in the Twentieth Century*. New York: Cambridge University Press.
- Board of Governors of the Federal Reserve System (US). 2020. "Effective Federal Funds Rate." FRED, Federal Reserve Bank of St. Louis. Accessed April 21.
<https://fred.stlouisfed.org/series/FEDFUNDS>.
- Boix, Carles. 2019. *Democratic Capitalism at the Crossroads: Technological Change and the Future of Politics*. Princeton: Princeton University Press.
- Booth, Laurence David, and Jun Zhou. 2013. "Increase in Cash Holdings: Pervasive or Sector-Specific?" *Frontiers in Finance and Economics* 10 (2): 1–30.

- Brazys, Samuel, and Aidan Regan. 2017. "The Politics of Capitalist Diversity in Europe: Explaining Ireland's Divergent Recovery from the Euro Crisis." *Perspectives on Politics* 15 (2): 411–27.
- Breznitz, Dan. 2007. *Innovation and the State: Political Choice and Strategies for Growth in Israel, Taiwan, and Ireland*. New Haven: Yale University Press.
- Brynjolfsson, Erik. 1993. "The Productivity Paradox of Information Technology." *Communications of the ACM* 36 (12): 66–77.
- BVK. 2001. *BVK Statistik 2000*. Berlin: Bundesverband deutscher Kapitalbeteiligungsgesellschaften – German Venture Capital Association e.V.
- Carstensen, Martin B., and Vivien A. Schmidt. 2016. "Power through, over and in Ideas: Conceptualizing Ideational Power in Discursive Institutionalism." *Journal of European Public Policy* 23 (3): 318–37.
- Casper, Steven. 2007. *Creating Silicon Valley in Europe: Public Policy Towards New Technology Industries*. New York: Oxford University Press.
- Chernenko, Sergey, Josh Lerner, and Yao Zeng. 2017. "Mutual Funds as Venture Capitalists? Evidence from Unicorns." *NBER Working Paper* no. 23981, National Bureau of Economic Research, Cambridge, MA.
<http://www.nber.org/papers/w23981>.
- Committee on Ways and Means. 1978. *Revenue Act of 1978*. H. Rept. 95-1445. US House of Representatives, Washington, DC, August 4.
- Cranston, Alan M. 1978. *Capital Gains Tax Bills*. Committee on Finance, US Senate, 2nd Session, June 29, 1978, 244–48. Washington, DC.
- Culliford, Elizabeth. 2019. "Where U.S. Presidential Candidates Stand on Breaking up Big Tech." *Reuters*, October 29. Accessed December 20.
<https://www.reuters.com/article/us-usa-election-tech-idUSKBN1X811J>.
- Culpepper, Pepper D. 2011. *Quiet Politics and Business Power: Corporate Control in Europe and Japan*. Cambridge: Cambridge University Press.
- Culpepper, Pepper D., and Raphael Reinke. 2014. "Structural Power and Bank Bailouts in the United Kingdom and the United States." *Politics & Society* 42 (4): 427–54.
- Culpepper, Pepper D., and Kathleen Thelen. 2020. "Are We All Amazon Primed? Consumers and the Politics of Platform Power." *Comparative Political Studies* 53 (2): 288–318.
- De Castro, Edson D. 1978. *Capital Gains Tax Bills*, Committee on Finance, US Senate, 2nd Session, June 29, 1978, 277–78. Washington, DC.
- DeBolt, Don. 1978. *The President's 1978 Tax Reduction and Reform Proposals*. Committee on Ways and Means, US House of Representatives, 2nd Session, March 7, 1978. Washington, DC.
- DeLong, J. Bradford. 1997. "America's Peacetime Inflation: The 1970s." In *Reducing Inflation: Motivation and Strategy*, edited by Christina D. Romer and David H. Romer, 247–80. Chicago: University of Chicago Press.
- Dennis, Reid. 1978. *The President's 1978 Tax Reduction and Reform Proposals*. Committee on Ways and Means, US House of Representatives, 2nd Session, March 7, 1978, 1338–45. Washington, DC.
- Donoghue, Matthew. 2018. "Beyond Hegemony: Elaborating on the Use of Gramscian Concepts in Critical Discourse Analysis for Political Studies." *Political Studies* 66 (2): 392–408.
- Ergen, Timur. 2015. *Große Hoffnungen und brüchige Koalitionen: Industrie, Politik und die schwierige Durchsetzung der Photovoltaik*. Frankfurt a.M.: Campus.
- Ergen, Timur. 2019. "Imaginarities of National Decline and US Tax Policy in the 1980s." Conference paper. 31st Annual Meeting of the Society for the Advancement of Socio-Economics, "Genealogy of Visions of the Future," New York, June 27.
- European Commission. 2013. "What Is Horizon 2020?" *Horizon 2020 – European Commission*. Accessed April 21.
<https://ec.europa.eu/programmes/horizon2020/en/what-horizon-2020>.
- Eurostat. 2019. "ICT Specialists in Employment – Statistics Explained." *Eurostat. Statistics Explained*, July. Accessed September 4.
https://ec.europa.eu/eurostat/statistics-explained/index.php/ICT_specialists_in_employment.

- Eurostat. 2020. "Employment in Technology and Knowledge-Intensive Sectors at the National Level, by Sex (1994-2008, NACE Rev 1.1)." Accessed April 21.
http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=htec_emp_nat&lang=en.
- Fairclough, Isabela, and Norman Fairclough. 2012. *Political Discourse Analysis: A Method for Advanced Students*. London: Routledge.
- Feldstein, Martin. 1978. *Capital Gains Tax Bills*. Committee on Finance, US Senate, 2nd Session, June 29, 1978, 295–338. Washington, DC.
- Florida, Richard, and Martin Kenney. 1992. *The Breakthrough Illusion: Corporate America's Failure to Move from Innovation to Mass Production*. New York: Basic Books.
- Fluke, John M. 1977. *The Renegotiation Reform Act of 1977*. Committee on Banking, Finance and Urban Affairs, US House of Representatives, 1st Session, March 29, 1977, 210–19. Washington, DC.
- Gerring, John. 2007. *Case Study Research: Principles and Practices*. New York: Cambridge University Press.
- Ghaffary, Shirin. 2019. "It's Been a Year since 20,000 Google Employees Walked off the Job. And They're Madder than Ever." *Vox*, November 1. Accessed November 1.
<https://www.vox.com/recode/2019/11/1/20942234/google-walkout-one-year-anniversary-unionization-organizing-tech-activism-we-wont-built-it>.
- Gourevitch, Peter A. 1986. *Politics in Hard Times: Comparative Responses to International Economic Crises*. Ithaca: Cornell University Press.
- Gourevitch, Peter A., and James Shinn. 2005. *Political Power and Corporate Control: The New Global Politics of Corporate Governance*. Princeton: Princeton University Press.
- Green, Gene. 2004. *FASB Proposals on Stock Option Expensing*. Committee on Energy and Commerce, US House of Representatives, 2nd Session, July 8, 2004. Washington, DC.
- Hacker, Jacob S., and Paul Pierson. 2010. "Winner-Take-All Politics: Public Policy, Political Organization, and the Precipitous Rise of Top Incomes in the United States." *Politics & Society* 38 (2): 152–204.
- Hall, Peter A., and David Soskice. 2001. "An Introduction to Varieties of Capitalism." In *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, edited by Peter A. Hall and David Soskice, 1–68. New York: Oxford University Press.
- Hay, Colin. 2011. "Ideas and the Construction of Interests." In *Ideas and Politics in Social Science Research*, edited by Daniel Béland and Robert Henry Cox, 65–82. New York: Oxford University Press.
- Hecker, Daniel E. 2005. "High-Technology Employment: A NAICS-Based Update." *Monthly Labor Review* 128 (7): 57–72.
- Heesen, Mark G. 2004. *H.R. 3574 - The Stock Option Accounting Reform Act*. Committee on Financial Services, U.S. House of Representatives, 1st Session, March 3, 2004, 15–17. Washington, DC.
- Hope, David, and Angelo Martelli. 2019. "The Transition to the Knowledge Economy, Labor Market Institutions, and Income Inequality in Advanced Democracies." *World Politics* 71 (2): 236–88.
- Howarth, David. 2010. "Power, Discourse, and Policy: Articulating a Hegemony Approach to Critical Policy Studies." *Critical Policy Studies* 3 (3–4): 309–35.
- Iversen, Torben, and David Soskice. 2019. *Democracy and Prosperity: Reinventing Capitalism through a Turbulent Century*. Princeton: Princeton University Press.
- Ives, Peter. 2005. "Language, Agency and Hegemony: A Gramscian Response to Post-Marxism." *Critical Review of International Social and Political Philosophy* 8 (4): 455–68.
- Janeway, William H. 2012. *Doing Capitalism in the Innovation Economy: Markets, Speculation and the State*. New York: Cambridge University Press.
- Johnson, Robert Wolcott. 1980. "The Passage of the Investment Incentive Act of 1978: A Case Study of Business Influencing Public Policy." PhD diss., Harvard University, Cambridge, MA.
- Jones, Reginald. 1978. *The President's 1978 Tax Reduction and Reform Proposals*. Committee on Ways and Means, US House of Representatives, 2nd Session, March 6, 1978, 845–55. Washington, DC.
- Jordan, Chuck. 2020. "The Capital Gains Tax Threat." *The Hill*, February 20. Accessed March 5.
<https://thehill.com/blogs/congress-blog/politics/483928-the-capital-gains-tax-threat>.

- Katzenstein, Peter J. 1985. *Small States in World Markets: Industrial Policy in Europe*. Ithaca: Cornell University Press.
- Kenney, Martin. 2011. "How Venture Capital Became a Component of the US National System of Innovation." *Industrial and Corporate Change* 20 (6): 1677–723.
- Kenney, Martin, and John Zysman. 2018. "Unicorns, Cheshire Cats, and the New Dilemmas of Entrepreneurial Finance?" *BRIE Working Paper* 2018–1, Berkeley Roundtable on the International Economy, Berkeley.
- Kurer, Thomas, and Bruno Palier. 2019. "Shrinking and Shouting: The Political Revolt of the Declining Middle in Times of Employment Polarization." *Research and Politics* 6 (1): 1–6.
- Laffer, Arthur. 1978. *Capital Gains Tax Bills*. Committee on Finance, US Senate, 2nd Session, June 29, 1978, 257–68. Washington, DC.
- Lardner Jr., George. 1978. "Tax Cuts on the Hill: Conservatives Celebrate, Liberals Struggle Against Further Slashes." *The Washington Post*, July 31.
- Lazonick, William. 2009. *Sustainable Prosperity in the New Economy? Business Organization and High-Tech Employment in the United States*. Kalamazoo: Upjohn Institute for Employment Research.
- Lazonick, William, and Mariana Mazzucato. 2012. "The Risk-Reward Nexus in the Innovation-Inequality Relationship: Who Takes the Risks? Who Gets the Rewards?" *Industrial and Corporate Change* 22 (4): 1093–128.
- Mackenzie, Donald. 2008. *An Engine, Not a Camera: How Financial Models Shape Markets*. Cambridge, MA: MIT Press.
- Marazzi, Christian. 2008. *Capital and Language: From the New Economy to the War Economy*. Cambridge: Semiotext.
- Martin, Cathie Jo. 1991. *Shifting the Burden*. Chicago: University of Chicago Press.
- Martin, Cathie Jo, and Duane Swank. 2012. *The Political Construction of Business Interests: Coordination, Growth, and Equality*. Cambridge: Cambridge University Press.
- Mazzucato, Mariana. 2015. *The Entrepreneurial State: Debunking Public vs. Private Sector Myths*. Revised edition. New York: Anthem Press.
- Mieszkowski, Jan. 2006. *Labors of Imagination: Aesthetics and Political Economy from Kant to Althusser*. New York: Fordham University Press.
- Miller, William. 1978a. *Capital Gains Tax Bills*. Committee on Finance, US Senate, 2nd Session, June 29, 1978, 126–37. Washington, D.C.
- Miller, William. 1978b. *Revenue Act of 1978*. Committee on Finance, US Senate, 2nd Session, September 6, 1978, 1173–1219. Washington, D.C.
- Milner, Helen V. 1988. *Resisting Protectionism: Global Industries and the Politics of International Trade*. Princeton: Princeton University Press.
- Nicholas, Tom. 2019. *VC: An American History*. Cambridge, MA: Harvard University Press.
- Nitzan, Jonathan, and Shimshon Bichler. 2009. *Capital as Power: A Study of Order and Creorder*. New York: Routledge.
- O'Donovan, Nick. 2020. "From Knowledge Economy to Automation Anxiety: A Growth Regime in Crisis?" *New Political Economy* 25 (2): 248–66.
- OECD. 2017a. *OECD Digital Economy Outlook 2017*. Paris: OECD Publishing.
- OECD. 2017b. *OECD Science, Technology and Industry Scoreboard 2017: The Digital Transformation*. Paris: OECD Publishing.
- OECD. 2017c. *Entrepreneurship at a Glance*. Paris: OECD Publishing.
- OECD. 2019. *Measuring the Digital Transformation: A Roadmap for the Future*. Paris: OECD Publishing.
- OECD. 2020. "OECD National Accounts." OECD.Stat. Accessed April 20. https://stats.oecd.org/Index.aspx?DatasetCode=SNA_TABLE1.
- O'Mara, Margaret. 2019. *The Code: Silicon Valley and the Remaking of America*. New York: Penguin Press.
- Ornston, Darius. 2012. *When Small States Make Big Leaps: Institutional Innovation and High-Tech Competition in Western Europe*. Ithaca: Cornell University Press.

- Pendergast Jr., Edward H. 1978. *The President's 1978 Tax Reduction and Reform Proposals*. Committee on Ways and Means, US House of Representatives, 2nd Session, March 7, 1978. Washington, DC.
- Saxenian, AnnaLee. 1989. "In Search of Power: The Organization of Business Interests in Silicon Valley and Route 128." *Economy and Society* 18 (1): 25–70.
- Schmidt, Vivien A. 2008. "Discursive Institutionalism: The Explanatory Power of Ideas and Discourse." *Annual Review of Political Science* 11 (1): 303–26.
- Schulze-Cleven, Tobias, and J. Timo Weishaupt. 2015. "Playing Normative Legacies: Partisanship and Employment Policies in Crisis-Ridden Europe." *Politics & Society* 43 (2): 269–99.
- Schwartz, Herman Mark. 2017. "Club Goods, Intellectual Property Rights, and Profitability in the Information Economy." *Business and Politics* 19 (2): 191–214.
- Steiger, William A. 1978. *The President's 1978 Tax Reduction and Reform Proposals*. Committee on Ways and Means, US House of Representatives, 2nd Session, April 24, 1978, 6018–50. Washington, DC.
- Thelen, Kathleen. 2019. "Transitions to the Knowledge Economy in Germany, Sweden, and the Netherlands." *Comparative Politics* 51 (2): 295–315.
- Thewissen, Stefan, and David Rueda. 2019. "Automation and the Welfare State: Technological Change as a Determinant of Redistribution Preferences." *Comparative Political Studies* 52 (2): 171–208.
- Vail, Mark I. 2018. *Liberalism in Illiberal States: Ideas and Economic Adjustment in Contemporary Europe*. New York: Oxford University Press.
- Vitols, Sigurt. 2001. "Frankfurt's Neuer Markt and the IPO Explosion: Is Germany on the Road to Silicon Valley?" *Economy and Society* 30 (4): 553–64.
- Vogel, David. 1987. "Political Science and the Study of Corporate Power: A Dissent from the New Conventional Wisdom." *British Journal of Political Science* 17 (4): 385–408.
- Volkswagen AG. 2000. *Annual Report*. Wolfsburg: Volkswagen AG.
- Zschau, Edwin V. W. 1978a. *Capital Formation*. Select Committee on Small Business, US Senate, 2nd Session, February 8, 1978, 4-61. Washington, DC.
- Zschau, Edwin V. W. 1978b. *The President's 1978 Tax Reduction and Reform Proposals*. Committee on Ways and Means, US House of Representatives, 2nd Session, March 7, 1978, 1309–37. Washington, DC.
- Zschau, Edwin V. W. 1978c. *Capital Gains Tax Bills*. Committee on Finance, US Senate, 2nd Session, June 29, 1978, 268–95. Washington, DC.
- Zysman, John. 1984. *Governments, Markets, and Growth: Financial Systems and the Politics of Industrial Change*. Ithaca: Cornell University Press.

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