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Deducing Varieties of Capitalism

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Abstract: One of the key criticisms made of the Varieties of Capitalism perspective advanced by Hall and Soskice (2001) is that it is functionalist. Here, I offer a deductive model of capitalism that is consistent with their framework. Specifically, I deduce the structure of nations' capitalist institutions based on distributive welfare gains to those actors representing an economy's main factors of production - land, labor, and capital. Based on the coalitions and political battles that may be fought among these actors, I derive seven capitalist ideal-types that fall along the LME-CME spectrum.

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One of the key criticisms made of the Varieties of Capitalism perspective advanced by Hall and Soskice (2001) is that it is functionalist (or inductive). That is, it looks at an existing array of capitalist outcomes (particularly Germany and the United States) and then posits an explanation about why they look the way they do rather than reaching conclusions that logically follow from specific premises, as with a deductive theory. Deductive argumentation would lead to the identification of capitalist ideal-types, which real-world systems would then correspond to. While Hall and Soskice do argue that existing capitalist outcomes depend on nations' specific historical/cultural circumstances, by basing their theory on these ill-defined attributes, we are unable to make specific predictions about other countries (another defining attribute of a deductive theory).

But in the process of examining capitalist systems, they do identify key attributes that distinguish them from one another. Drawing on the work of Oliver Williamson (1975), Hall and Soskice point to asset specificity as a critical attribute that differentiates Coordinated Market Economies (CMEs) from Liberal Market Economies (LMEs). Where assets are specific to the goods and services that are produced, relationships tend to dominate the manner in which actors organize their economic activity, as in CMEs. Where assets are more general -- that is, they can more easily be switched from producing one kind of good or service to another -- arms-length interactions predominate, as in LMEs. However, Hall and Soskice acknowledge that several countries do not fit neatly onto their CME-LME continuum. They place these political economies into a third category: Mediterranean (or Mixed) Capitalism. They are distinguished by their recent histories of extensive state intervention and large agrarian sectors, as in Italy, France, Spain, Portugal, Greece, and Turkey (Hall and Soskice, 2001: 21). Thus, taken together,

Hall and Soskice identify three key attributes that distinguish capitalist systems from one another: asset specificity, the level of government intervention, and the importance of the agrarian sector. Having a set of attributes to characterize capitalist systems is the first necessary step in building a deductive theory. The next step requires the identification of actors and the distributive welfare payoffs that accrue to them.¹

But to know which actors matter most, we must first consider the circumstances under which they have the greatest influence on the structure of capitalist institutions. Once we identify these circumstances, we can then consider which actors matter most. Next, we must identify their preferences over capitalism's distinguishing attributes. Finally, we must consider the outcomes that result from coalitions formed among them. This final step will yield capitalist ideal-types which capitalist systems correspond to. The structure of the paper follows this outline. The purpose of this paper is simply to provide a deductive theory of capitalist systems that is consistent with Hall and Soskice's framework. Empirical testing can later be conducted on it.

Finance as a Proxy for Capitalism

A key dilemma to crafting a deductive theory of capitalism based on actors' distributive welfare gains is trying to consider actors' preferences over numerous political-economic dimensions. However, the existence of institutional complementarities enables us to restrict the focus to a single sphere that can serve as a useful indicator for the structure of

¹ This emphasis on understanding the origins of capitalist institutions by considering actors' distributive payoffs is emphasized by Varieties of Capitalism scholars - including Peter Hall, Wolfgang Streeck, Bruno Amable, and Gregory Jackson - in the 2005 (3) issue of the *Socio-Economic Review* on 'institutional complementarity and political economy'.

the broader capitalist system. By what criteria should we choose this sphere? First, it would have to vary along the three key dimensions identified by Hall and Soskice: asset specificity, government intervention, and the size of the agrarian sector. Second, it should be a clear complementary feature of political economies as described by Hall and Soskice. And third, it would be helpful if data were available across countries and time to facilitate empirical testing. These three qualifications make the financial system particularly attractive.

The first key dimension, asset specificity, gets reflected quite well in the structure of the financial system. With a greater reliance on general assets, and arm's-length interactions, we would expect securities markets to be more important. This conjecture matches reality quite well. Hall and Soskice illustrate that clustering occurs among LMEs and CMEs with reference to stock market capitalization; LMEs tend to have a higher market capitalization than CMEs (Hall and Soskice, 2001: 19).

Government intervention in the economy also gets straightforwardly reflected in the structure of the financial system by the extent of government ownership of the nation's banks. Indeed, development economists point to government ownership of banks as a, if not *the*, critical mechanism by which government intervention in the economy takes place.² In this way, the organization of the financial system is a useful way to gauge government intervention in the economy.

The importance of the agrarian sector also gets reflected in the structure of the banking system, primarily through the scope of agricultural banking. A larger agrarian sector generally requires a greater number of local credit institutions, so the number of

² Gerschenkron, 1962; Lewis, 1950; Myrdal, 1968; Garvy, 1977; Kornai, 1979; Shleifer and Vishny, 1994; Shleifer, 1998; and La Porta, Lopez-de-Silanes, and Shleifer, 2002.

these, and the size of financing directed to the agricultural sector reflects its importance. The kind of local credit institutions that serve farmers' financing needs usually take the form of branch banking, unit banks, or government-run agricultural credit offices. One could argue that larger farms may act more like corporations, especially when considering modern agribusiness in the United States. However, if we focus on the origins of contemporary political and economic institutions, as will be argued below, farms were small. Thus, it is appropriate to consider the prevalence of local, agricultural banking as an indicator of the importance of the agrarian economy.

Creating Capitalist Institutions

Among many of today's wealthy democracies, industrialization during the late nineteenth and early twentieth centuries altered the existing agrarian-based economy and created a new, 'modern' form of capitalism. For some countries, new capitalist institutions were created in the context of pre-existing political and economic institutions (e.g., US, UK, Canada, Australia, and Switzerland). Among many other countries, however, wars disrupted the structure of their political and economic institutions, and led to a new set of institutional bargains that altered the existing capitalist arrangements— especially in the wake of World Wars I and II. New political institutions cemented the power of the winning actors, and thereby preserved the political support for (and created numerous veto-points to prevent significant changes to) the new capitalist institutions. In this manner, the new political institutions helped to preserve the changes to the capitalist institutions. In other words, the political bargain altered the evolutionary path of the old capitalist institutions and set it on a new course, as seen in figure 1.

Figure 1a: Post-Crisis Capitalism

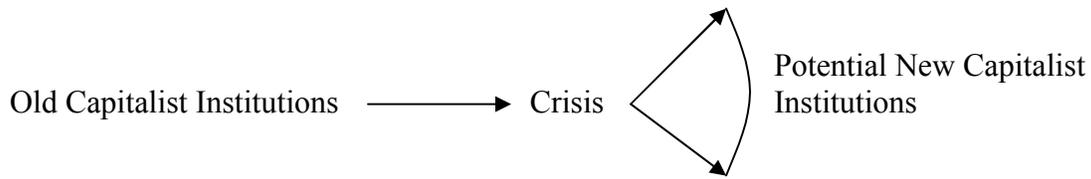
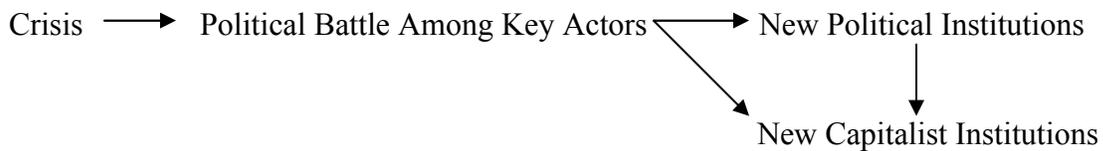


Figure 1b: Post-Crisis Capitalism



An example of this occurred in France following World War II. Prior to the war, the Third Republic political institutions placed the locus of legislative power in the upper house, where wealthy business owners and landowners could veto proposals made by labor and small farmers, who dominated the lower house. During this period, the French government employed a laissez-faire economic policy, and it adopted the telling features of a liberal market economy – looking much like the contemporary United States. After the war, however, labor and farmers dominated French politics and drafted a new constitution which placed the locus of political power in the lower house, and altered the capitalist institutions accordingly. Consequently, France adopted a new ‘Mediterranean’ style of capitalism, with considerable state intervention.

To be sure, capitalist institutions can and do change as a result of non-crisis forces such as globalization and technological innovation (e.g., Thelen, 2004). However, they often do so in a way that preserves the functional intent of the bargain originally struck

among the actors. For example, French labor nationalized the main commercial banks after World War II as a way to implement employment stabilization policies (among other labor-friendly initiatives). In the 1980's, as a result of globalization, these banks were privatized (Hall, 1986), and stock markets became more important to external firm financing. Although markets became more important, they were regulated in a way that conformed to labor's desire to preserve employment stability by requiring state approval for mergers and acquisitions. As a result, the functional intent of the original bargain was preserved although its contemporary manifestation had changed (Hall and Thelen, 2005; Vitols, 2005; Deeg and Jackson, 2005). So, to understand the structure of contemporary capitalism requires that we identify its political origins, which may be found many decades earlier.

But, as mentioned above, new capitalist institutions have also emerged in the context of pre-existing political institutions. In these instances, political institutions often preserve a political bargain struck among actors many decades prior (often by preserving actors' veto-power to unfavorable institutional outcomes), and thereby delimit the capitalist outcomes that are possible. Figure 2 illustrates this scenario.

Figure 2a: Constrained Capitalist Outcomes

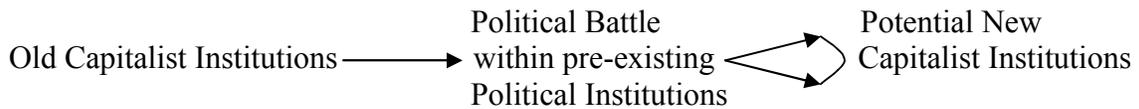
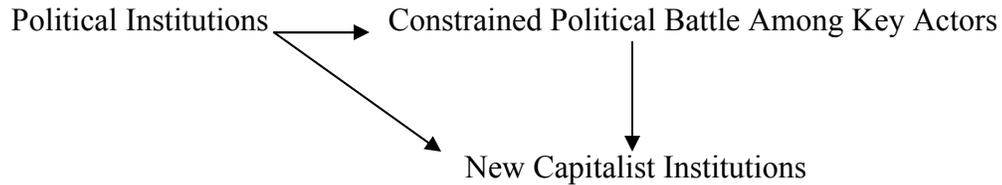


Figure 2b: Constrained Capitalist Outcomes



The evolution of the United States from an agrarian-based capitalism throughout much of the nineteenth century to its contemporary market-oriented form in the early twentieth century illustrates how the pre-existing political institutions privileged certain political interests and thereby biased the capitalist outcomes. In this instance, the political institutions preserved farmers' clout as capital became increasingly influential. In the early nineteenth century, farmers dominated politics and the economy, and capitalist institutions were structured accordingly. With industrialization, owners of capital threatened to dominate American economic institutions and fundamentally alter American capitalism before being reined in by farmers (along with other populist interests) during the early twentieth century, whose political power was protected by the nation's political institutions. Consequently, securities markets (and diffuse ownership) arose in place of powerful universal banks (and concentrated ownership) to provide sufficient financing to the new industrial enterprises (Roe, 1994). The key lesson here is the same as the post-crisis scenario: understanding capitalism among today's wealthy democracies requires that we examine the political bargains struck among key actors at critical moments of institutional change often many decades ago.

Identifying the Key Actors

So which actors matter most? Because of their fundamental importance to the structure of any nation's economy, their political power during industrialized nations' institutional birth and evolution, and because they have strong interests in the structure of the financial system and the broader capitalist system, actors representing an economy's main factors of production -- land, labor, and capital -- are clear candidates.

While few would question the importance of labor and capital to contemporary capitalism, some may view farmers' relevance with skepticism. However, farmers have played a critical role in determining the structure of the contemporary American financial system, the world's largest economy. For example, political power over banking regulations has historically been devolved to state governments that cater to local agricultural interests, which has forced centralized capital markets to arise to offer a coordinating mechanism with which to raise sufficient capital for large corporations in place of commercial or universal banks with nationwide branches (Calomiris, 2000; Verdier, 2003). These conditions have contributed to the emergence of diffuse ownership in American companies (Roe, 1994).

Additionally, farmers have played an important role in determining the structure of the world's major institutional investors: pension funds (Baldwin, 1990). Farmers favor public pension systems instead of private pension funds run on behalf of corporations, and where they are public, politicians are reluctant to make investments in seemingly risky assets such as the equities market. This helps to preserve the concentration of corporate ownership and denies an important source of liquidity that would aid the development of equities markets.

But of potentially greater importance is farmers' preference for government intervention which can lead to subsidized lending for farmers and corporations for politically expedient reasons. For example, the funds collected via banks catering to the rural citizenry in France and Japan (via the *Crédit Agricole* and the *Postal Savings Bank*), have been commonly lent to industrial firms at subsidized rates through government operated intermediaries which helps to sustain these firms' reliance on patient capital.

Finally, farmers are an important player in China's economy, which is likely to become the world's largest in the next few decades. In view of their historical importance to OECD economies and their contemporary relevance to China's political economy and to other developing countries, to ignore farmers would be like ignoring the elephant in the room.

Is it worthwhile considering whether these actors form alternative cleavages over time, or whether subsets of these actors are worthy of investigation? Hiscox (2001) has demonstrated that, with regard to trade issues, actors representing factors of production tend to form sectoral cleavages as factor mobility declines. For example, low-skilled labor working in an auto factory could be easily retrained to work in a shoe factory, creating stronger incentives for labor to form class-based unions. However, more highly skilled labor working in a computer software company would have great difficulty in retraining and finding work in a pharmaceutical firm. By this logic, labor becomes more sector-based as economies rely more heavily on knowledge-intensive production. While this is certainly a valid point, the main bargains over industrialized nations' institutions were primarily struck when labor was more class-based in the 19th or early 20th century, or immediately after World War II. But does this mean that today's newly democratizing

nations are likely to exhibit different cleavages? And, if labor is no longer class-based, are their past institutional victories no longer applicable to the structure of today's economies? I argue no, on both points.

Newly democratizing nations are, usually, also newly industrializing nations. As such, their labor force is ascending the development ladder in the same manner that other industrialized nations did during the last century. In this regard, it seems less erroneous to think of labor as class-based than as sector-based in newly democratizing nations. Also, past labor victories over the institutional structure of the political economy remain important and valid for today's globalized world because, as Hall and Soskice (2001) explain, complementarities among the numerous institutions of political economies make change difficult. The pre-existing political and economic institutions delimit the choices that actors can make although new cleavages may emerge. And veto points within political institutions, often wielded by minority groups such as farmers, prevent change.

Farmers are viewed as the main actor representing land. One might argue that it would be appropriate to consider large landowners versus small farmers, however, such a breakdown would overly complicate the analysis. Moreover, in the context of democracies, farmers' political power comes from votes, so small farmers (labeled simply as farmers) are viewed as the most appropriate actor representing land.

Owners of capital are viewed as owners of firms, which fall along a spectrum from small to large. As will be discussed below, farmers and owners of small firms tend to have similar financing preferences in terms of favoring decentralized bank lending institutions. The critical actor for the development of the financial system (and the

structure of capitalism) is the owner of a large firm, since it this actor more than any other who favors the development of equities markets.

Asset Specificity and Corporate Finance

Before thinking about these actors' preferences over the three critical attributes of capitalist systems, it is necessary to understand whether different financing alternatives lead to corporate strategies that focus more on the short- or long-term (via impatient or patient financing, which correspond to CME and LME systems, respectively). Companies that focus on achieving short-term performance benchmarks, such as quarterly earnings, are generally driven by the need to meet the expectations of diffuse shareholders who will simply sell the company's shares as a result of underperformance. Longer-term corporate strategy does not face such intense short-term pressures since owners are more likely to intervene in the management of the firm to improve its performance, which allows for the development of strategies that require longer-term investments with more distant payoffs. By focusing on the long-run, corporations in CME countries can develop assets that are highly specific to the manufacture of a particular product (e.g., highly skilled labor and German automobiles). Workers who are more confident of being in their position for a long period of time are more willing to invest in acquiring skills and knowledge specific to their job. In LMEs, corporations often cut costs via layoffs during downturns in the business cycle to keep earnings up, which undermines their workers' incentives to invest in the acquisition of job specific knowledge and skills.

What are the financing alternatives that corporations generally face, and what kinds of temporal pressures do they create? Corporate finance occurs either through

internally generated funds (retained earnings) or with external financing. Internally generated funds tend to preserve the pre-existing incentives for corporate strategy as determined by the ownership structure. Whether firm ownership is concentrated or diffuse, the use of internal financing simply preserves the incentives already in place.³

When owners of firms turn to external financing sources, they face two basic choices: taking a loan or issuing securities. Both choices entail substantial costs including information collection and transmittal (that is, costs of creating and enforcing mechanisms that lead to credible monitoring of firms and revelation of the true state of firm finances), and physical transactions costs (costs associated with legal and accounting paperwork, and with physically distributing securities to ultimate holders). Intermediaries offer a useful way to economize on these costs. Commercial banks solve problems of transactions costs and information asymmetry including the physical costs of transacting (clearing payments, liquidating insolvent firms), costs of generating information (monitoring firms' actions and outcomes), and costs of enforcing contractual compliance on the part of firms and bankers (disciplining borrowers and protecting against improper behavior by the banker at the expense of those funding the bank). Investment banks are also seen as providing a low-cost means of generating and disseminating credible information about firms' characteristics, which benefits both securities issuers and purchasers in deciding on the form and price of the security used to finance an investment.

³ Thus, although internally generated funds may be widely used (Jenkinson and Corbett, 1996 and 1997), this does not necessarily reduce the extent of short-term pressures in diffusely owned firms.

With regard to taking a loan or issuing securities, the recent literature on corporate finance focuses on a continuum of financing instruments defined according to the elasticity of their cost with respect to problems of asymmetric information (Myers 1984; Myers and Majluf 1984; Diamond 1991). As firms mature, they ascend this ‘pecking order’ of finance. Firms just starting out may be forced to rely exclusively on retained earnings and the wealth of insiders. After a successful beginning, the firm can begin to rely on bank loans. The bank spends resources to monitor the firm, and protects itself against adverse selection problems by holding a debt claim on the firm. As the firm matures and develops a track record, its financing will change. Informed intermediaries will be willing to take equity positions in the firm, which will reduce the leverage of the firm and its exposure to financial distress, and provide a positive signal to outside investors. Outside finance through securities may initially take the form of closely held senior instruments (e.g., private placements). Later, firms will graduate to issuing bonds and preferred and common stock on the open market to outsiders, using underwriters as a means for providing credible signals of the firm’s value to outsiders.

Do these various financing options produce different temporal incentives for firm strategy? Bank lending tends to preserve a long-term orientation if corporate ownership is concentrated ex ante. While banks require regular loan payments, if a firm gets into trouble, the bank is likely to work with the firm to determine how it can repay its debt. But bank lending tends to be costly relative to securities markets as firm size increases.

Bond markets, or debt markets, offer a less costly form of financing while at the same time introducing external performance monitoring deadlines with annual bond ratings. But because these ratings get updated on a yearly basis, they produce weaker

incentives to focus on the short-term than other financing options, such as issuing equity. Selling shares with voting rights *may* produce stronger short-term incentives since outside shareholders often demand quarterly earnings updates, and other mechanisms to make corporate performance transparent. This, in and of itself, is insufficient, however, since ownership may remain concentrated, with the majority owner denying the requests of minority shareholders, and preferring to intervene in the management of the company rather than selling his ownership stake (or preferring to expropriate company assets and therefore not wanting to make the company's finances available to outsiders). Indeed, selling a large block of shares could be difficult and costly, especially if sold over a short period of time since it would likely cause the share price to fall; there may also be tax disincentives and regulatory hurdles, especially in the case of mergers and acquisitions, creating further complications.

Short-term incentives tend to arise most strongly when ownership becomes more diffuse. Diffuse shareholding generally arises as majority owners sell their shares to capture the benefits of diversifying their investments, and as firms expand the size and scope of their operations through mergers and acquisitions. In such circumstances, dispersed owners (who face collective action problems to closely monitor the firm) use the share price as an indicator of whether to hold onto their shares, or to sell them. But in order for a company to attract minority shareholders, the market must offer a credible mechanism for the manager's performance to be tied to the firm's share price (e.g., quarterly earnings reports, transparent accounting, incentivizing options, etc.); that is, for the manager to act in the best interests of minority shareholders. Only if the market successfully resolves this agency problem will diffuse shareholding arise. Quarterly

earnings reports, and other frequent updates on firm performance, are critical tools by which this is accomplished. Markets that successfully solve this agency problem and allow diffuse ownership to emerge tend to expand in size as a larger pool of investors can be tapped at a lower cost.

Corporate pyramids fall in between concentrated and diffuse ownership structures in terms of generating a long- versus short-term focus. Pyramids attempt to capture the benefits of low-cost financing available through equities markets without sacrificing the benefits of control. To attract investors, there must be sufficiently strong safeguards for minority shareholders – and accompanying mechanisms that resolve the managerial agency problem, such as quarterly earnings reports -- since the parent company will retain majority ownership. This leads to some elements of short-term behavior to satisfy minority shareholders' concerns. However, majority ownership by the parent corporation preserves a bias toward the long-term; or, at least, moderates the focus on the short-term. This is also true for inter-corporate shareholding, as in Japan; there is a bias to the long-term though pressures for conforming to shareholders' interests also exist.

Actors' Preferences

What are the preferences of these actors – farmers, labor, firm owners -- with regard to the three financial system attributes that proxy for the capitalist system?: asset specificity (long versus short-term financing), government intervention via banks, and agricultural financing.

Farmers: With regard to asset specificity, farmers prefer an economy with a greater emphasis on specific assets; in other words, a relationship-based economy. Long-term economic arrangements are important to them for coping with uncertain crop yields from one season to the next. Farmers, across most countries during the twentieth century, are generally too small to seek financing from capital markets, and must rely on local banks, either in the form of branches of large, networked banks, or in the form of unit banks (i.e., small, local banks without ties to a larger, national banking network). This relationship to the local bank, or agricultural credit bureau, is critical to their survival and success. Keeping capital location-specific with regulations protecting and supporting local banks ensures that lenders will not go elsewhere at the expense of local farms. Moreover, keeping banks location-specific ties the bank's fortunes to those of local farmers; local banks will have to continue lending to local farmers despite a long-term negative revision in expectations regarding the profitability of investment (e.g., an expected long-term decline in the terms of trade). This preserves a long-term relationship between the local bank and farmers, and offers a kind of 'loan insurance' in the sense that farmers can rest assured that banks will continue to loan to them even in bad times (Calomiris, 2000). For this reason, farmers may favor unit banks since they are tied to the local economy, as compared with the branch of a larger national bank, which can send funds to 'greener pastures' (as witnessed in the U.S. during the 19th and 20th centuries). To compensate for the risk of bank failure as a result of underperforming, or nonperforming, loans (an acute risk for unit banks), deposit insurance may be created (as occurred with the Glass-Steagall Act of 1933).

As a consequence of farmers favoring local agricultural banking arrangements, the growth of securities markets will be stunted. While farmers may not have a clear interest in the structure of corporate ownership (i.e., diffuse or concentrated ownership), where they have more political power and there exists a more equitable distribution of wealth, ownership of large corporations is *less* likely to be concentrated and controlled by a small group of families or institutions (e.g., populist resistance to capitalist oligarchs in the late 19th century U.S.; Chandler, 1977: 498; Roe, 1994). Instead, ownership, corresponding to general wealth and banking outcomes, will tend to be more dispersed. Farmers will also tend to favor government intervention in order to divert money away from industrializing sectors (or other areas of the economy where a higher return is likely).

Labor: For reasons of employment stability, an economy centered around specific assets is preferred by labor (Aoki, 1994). As a result, labor seeks to avoid the short-term indicators of corporate performance that accompany the diffusion of corporate ownership (Roe, 2003). Self-financing, bank loans, bond sales (especially long-term bonds), and equity sales while preserving concentrated ownership are all favored to the diffusion of corporate ownership through equity sales or mergers and acquisitions.

Labor favors a more centralized financial system, via branched banks, which facilitates the financing of urban industries. But like farmers, labor also favors government intervention in the economy in order to provide financing to industry during downturns in the economy to avert layoffs (and complementing Keynesian monetary policy). Labor also tends to favor government intervention - when labor controls

government – in order to offer specific financing incentives to industries and firms to ensure that they act in the interests of workers (e.g., preserving employment security and full employment). If banks are not a viable option for influencing industry (i.e., securities markets are more dominant), labor still favors government intervention to minimize layoffs, as frequently occurs with mergers and acquisitions. In this regard, they favor ‘managed markets’. But banks are also favored as a mechanism for financing corporations either through loans, or via investment banking services because of their intertemporal risk smoothing capabilities (Allen and Gale, 2000). Thus, labor generally favors bank dominance (via bank lending).

Capital: Informational characteristics of firms (the availability of a track record, the costs to outsiders of monitoring and controlling activities of the firm) are important determinants of whether firms choose to finance themselves with securities issues or with bank lending. Financing through bank lending tends to be more important in the early stages of the life cycle of the firm; as the firm matures and grows, investment banking services and equities markets become more heavily relied upon, *ceteris paribus*. Thus, owners of small firms tend to favor economic arrangements that privilege relationships (as in CMEs), while large firms will favor financing via equities markets, and thus more arms-length interactions which minimize transactions costs.

Both small and large firms favor minimal government intervention since this reduces inefficiencies in the allocation of capital, and lowers the costs of obtaining financing (e.g., via taxes and regulations). They would also tend to favor low levels of agrarian financing since the diversion of capital creates higher lending costs for them.

Coalitions and Outcomes

Labor, farmers, and owners of small firms all prefer an economy organized around specific assets (i.e., long-term relationships, as with bank lending). Owners of large firms are more likely to push the economy in the direction of general assets (i.e., arms-length interactions, as with equities markets). Since farmers and small firms both tend to favor local banking, I consider large firms' preferences exclusively with regard to capital owners' preferences in deriving financial and capitalist outcomes. Incorporating small firms as an additional actor in deriving outcomes complicates the analysis considerably, with little added benefit. Moreover, small firms face considerable collective action problems in organizing politically since they are in diverse sectors of the economy, and often lack the resources to mobilize themselves effectively. Because farmers are solely in the agricultural sector, their collective action problems are easier to resolve, and their policy preferences are more homogeneous.

Thus, financial and capitalist system outcomes depend primarily upon the coalitions formed between farmers (F), labor (L), and owners of large firms (K_L). It is important to note that these actors do not necessarily form coalitions to achieve specific financial system outcomes; rather, they form political power-sharing coalitions from which financial and capitalist structures emerge.

Table 1: Coalitions and Financial/Capitalist System Outcomes

Cleavage	Winner	Financial System Outcome	Corresponding Capitalist System	Example
Rural vs. Urban				
F vs. L & K _L	F	<ul style="list-style-type: none"> • High reliance on banking • Increasing government intervention with industrialization • High level of agricultural financing 	Agrarian CME	Early 19 th Century U.S.
	L & K _L	<ul style="list-style-type: none"> • Concentrated (likely universal) banking and/or managed markets • Moderate level of government intervention • Low level of agricultural financing 	Classic CME	Germany post-WWII
Class Conflict				
K _L vs. F & L	K _L	<ul style="list-style-type: none"> • High reliance on equities markets • Minimal government intervention • Low level of agricultural financing 	Owner-oriented LME	France pre-WWII, Japan pre-WWII
	F & L	<ul style="list-style-type: none"> • Banking dominance via concentrated banking for corporate finance and decentralized agrarian banking • High level of government intervention • Moderate level of agricultural financing 	Mediterranean	France post-WWII
Voice vs. Property				
L vs. F & K _L	L	<ul style="list-style-type: none"> • High reliance on banking • High level of government intervention • Low level of agricultural financing 	Statist CME	Austria post-WWII
	F & K _L	<ul style="list-style-type: none"> • Decentralized banking with well developed, diffusely owned equities markets • Minimal government intervention in corporate finance; gov. intervention for agricultural financing • Moderate level of agricultural financing 	Managerial LME	20 th Century U.S.
Social Contract	F, L, K _L	<ul style="list-style-type: none"> • Concentrated banking for industry with extensive local agricultural credit offices and/or managed markets • Moderate government intervention • Moderate level of agricultural financing 	Inclusive CME	Japan post-WWII

Table 2: LME – CME Continuum

LME		CME	
Owner-Oriented LME	Inclusive CME	Classic CME	Agrarian CME
Managerial LME			Statist CME
			Mediterranean

A) Rural vs. Urban Politics

i) Farmers: Small, rural banks are likely to dominate when farmers wield political power. This is the first stage from which industrialization begins. Government intervention will occur to prevent (or at least slow) capital from being redirected to the growing industrial sectors of the economy.

As industrialization proceeds, farmers may form a coalition with capital or labor. Whether democratic political institutions allow farmers to wield vast political power, despite a fall in their economic importance and population size - as in the U.S - can have considerable ramifications for the structure of the financial system. In such circumstances, political authority over financial regulation is likely to be administered at the subnational level, especially in large countries. This becomes important to the financial structure that emerges when farmers must forge a coalition with capital or labor, since it is likely to lead to either an LME (in coalition with capital) or Mediterranean (in coalition with labor) style of capitalism.

ii) Labor and Capital Coalition: This coalition is the classic one that leads to a coordinated market economy, as found in Germany. Corporate finance will have a bias towards the long-term, via internal financing, bond sales, and/or equity sales while retaining concentrated ownership (via individuals, banks and other financial institutions,

and nonfinancial corporations). These financing structures allow greater employment stability for labor. Government intervention is also likely, albeit in a more indirect (or muted) manner than that found when labor, or labor and farmers, exercise political control.

B) Class Conflict

i) Capital: When owners of large firms control politics, they are likely to press for the development of securities markets to reduce the transactions costs of external financing, and may seek to retain controlling blocks in corporations via pyramids. In other words, they want to have their cake and eat it too. Government intervention will be minimal, and agrarian financing will be low. Banks will likely be universal with branches in rural areas to draw deposits out of the interior.

ii) Farmers and Labor: Both prefer government intervention, so this will likely emerge as a dominant feature. This coalition will also likely lead to a combination of centralized commercial banking to finance industrial development and local agricultural banking (e.g., France with state-owned banks along with the huge *Crédit Agricole*). What is particularly interesting about this case is the difficult transition that occurs as capital owners become more influential (e.g., since the 1980s). Because institutions were originally designed according to the preferences of labor and farmers, they do not easily accommodate capital owners' growing influence. Consequently, growing pains occur for the political economy as actors must use institutions ill-suited to accommodate capital owners' needs.

C) Voice vs. Property

i) Labor: When labor wields exclusive political power, a centralized, government-controlled banking system emerges. Labor seeks to control the financial system through nationalized, government-run banks in order to direct lending to specific firms and industries in exchange for high and stable employment. Pyramids may likewise arise to allow the state to influence multiple firms easily. As capital owners become influential (with globalization), managed markets that favor a long-term corporate strategy (e.g., via concentrated ownership) are likely to emerge in place of directed bank lending.

ii) Farmers and Capital Coalition: When farmers exercise political power in democratic governments, they implement a decentralized banking structure, which may precede the advent of capital's political power and economic importance. Once capital forms a coalition with farmers, capital requires the creation of centralized capital markets to finance industry since the banking system is likely decentralized. As part of farmers' general antipathy towards oligarchic capital, they seek to prevent the emergence of concentrated banking and monopolistic corporations, which creates political pressure for diffuse ownership. The U.S. offers a clear example of the financial structure resulting from this power-sharing coalition (e.g., Roe, 1994; Calomiris, 2000).

D) Social Contract

This occurs when labor, capital, and farmers come to a three-way compromise on the structure of the financial system. This is more likely to occur when an exogenous force, such as a foreign power or a small state coping with a global economy, causes these actors to find a socially inclusive compromise. A clear example of this is American influence on post-WWII Japan. If it were not for American involvement, a labor-farmer outcome would have been likely, but US pressure forced a capital-labor-farmer compromise. Globalization likewise places pressure on small states to form a corporatist compromise like that found among many small European countries (Katzenstein, 1984). As capital gains increasing leverage via globalization, a transition may occur from a reliance on banking to managed markets so as not to alienate labor and farmers (i.e., limited government intervention).

Conclusions

Identifying the key players is critical. While most discussions on modern capitalism focus on workers, managers, and owners, these studies frequently overlook the origins of these institutions. Considering the substantial influence of institutional inertia on modern outcomes, it is necessary to examine the origins, and to consider which actors were most important at that time. In this regard, farmers have played a critical role. Although they may lack the power to exert changes to the institutions of contemporary capitalism in wealthy economies, their influence is felt most strongly through the legacy of the institutions they were instrumental in creating, and by retaining the power to block changes to it. By shaping the origins of capitalist institutions, the effects of farmers on contemporary capitalism are substantial, though frequently overlooked.

In this regard, an enlightening and novel understanding of modern capitalist outcomes emerges by considering the political power-sharing coalitions that involve farmers, including those of farmers and labor (France), farmers and capital (US), and farmers with labor and capital (Japan). For example, in France following World War II, farmers offered political support for the increased level of government intervention in the financial system, and helped to create and support the expansion of what was to become one of the world's largest banks – the Crédit Agricole. In the US, farmers' political influence led to strong regulations protecting local banks and, through the US's decentralized political system, they contributed to the fragmentation of the American financial system. In Japan, farmers supported the postal savings bank, which became even larger than France's behemoth Crédit Agricole, and which fed large amounts of money to the government which was then lent to industry (through the Fiscal Investment and Loan Program) and thereby helped to foster a long-term financing orientation among Japanese firms.

One of the clearest and most pertinent applications of this research regards the future of capitalism in China. If an economic or political crisis occurs leading to democratic reforms (this is a serious concern for Chinese leaders as they have witnessed other Asian nations undergo political upheavals in response to government corruption), then it is likely that groups representing land, labor, and capital would be the major actors battling over the future of the country's political and economic institutions. This is true not only of China, but of most other developing countries too. Developing a deductive model of capitalist outcomes enables observers of the global economy to make predictions about capitalism in developing countries during the twenty-first century.

Appendix

Labor's choice of investment regime (bank or equity dominance) is consistent with the framework of Perotti and von Thadden (2006), in that when labor's wealth is low, it favors a safer investment regime and corporate strategy which occur with banking dominance. When individuals' wealth is high (owners of capital), they favor a riskier investment regime and corresponding corporate strategy, as with equity dominance. Farmers are not incorporated into their framework since farmers' influence on the choice of investment regime with regard to corporate strategy is indirect. By favoring banking services that cater to the local agricultural community, farmers would contribute to the scale and scope economies that banks may enjoy (banks could draw on a larger customer base for deposits with which to lend to corporations, which may likewise increase the range of services they could offer, and which may increase the funds that the government could lend to corporations). In such circumstances, a focus on the median voter may provide misleading predictions over financial outcomes since political battles over the initial structure of the financial system often occur as a result of groups' lobbying, or bargaining, power. Before addressing the question of lobbying power, let us first consider the basic median voter model for the structure of the financial system.

Following Perotti and von Thadden (2006), workers seek to maximize the expected utility of total individual wealth, $W_i = \alpha(w_i) + (1-\alpha)r_i(R_i)$, where α is the share of a worker's wealth from wages, r is the rate of return on the worker's investments which is a function of the firm's return, R_i . Utility functions are identical across workers and given by:

$$(1) \quad U = E(W_i) - \frac{1}{2} A \text{var} (W_i)$$

where A is a measure of risk aversion.

Firms choose an investment strategy, which is given by a cumulative distribution function, $G_\phi(R)$, on $[0, \infty)$ that describes the distribution of returns generated by the investment. They may choose between a riskier strategy, G_r (equivalent to equity), and a safer strategy, G_s (equivalent to bank loans), where the variance of the safer strategy is less than the riskier one, but the returns to the riskier strategy are greater, *ceteris paribus*. Formally,

$$(2) \quad \text{var} (R_s) < \text{var} (R_r).$$

$$(3) \quad R_s < R_r.$$

Firms are funded with a mixture of debt and equity. Each firm has a bank loan with face value equal to B , where equity holds the claim to residual profits. Moreover, bank debts are not so high as to make firms risk-loving. Because earned wages typically have priority over debt in bankruptcy, and banks have priority over equity holders, a bank loan of face value B gives the bank a claim of

$$(4) \quad b(R) = \min(B, \text{Max}(0, R-w)) = \begin{cases} B & \text{if } B + w \leq R \\ R-w & \text{if } w \leq R \leq B + w \\ 0 & \text{if } R \leq w \end{cases}$$

Firm strategy, $\varphi \in \{s, r\}$, is determined by the dominant investor in each firm. The choice can be characterized as follows:

Lemma 1: If equity is dominant in a firm, it chooses the riskier strategy $\varphi = r$, regardless of w . If banks are dominant, there is a $w_0 > 0$ such that the following holds. If $w > w_0$, the dominant bank prefers $\varphi = r$ over s , and if $w < w_0$, it prefers $\varphi = s$.

Intuitively, because equity is the residual claimant to profits, it will favor the riskier strategy, which increases the upside of profits. Dominant banks, on the other hand, who receive the intermediate slice of returns, $R \in (w, w+B]$, will favor safer investments as long as w is not too large. If w is large ($w \geq w_0$), any debt claim has no downside gains but mostly upside gains, and debt holders will act like equity holders. However, if w is smaller, banks will be hurt more by the increase in profit variability than benefit from the increase in expected profits and thus prefer less risk.

Proof: Equity only gets returns from the firm when both wages and bank loans have been satisfied. For banks, the preference depends on the wage level (determining how much of the downside of returns they must cede) and B (determining how much of the upside they capture). Bank returns are

$$(5) \quad \int_w^{w+B} (R-w)dG(R) + (1 - G(w+B))B.$$

Hence, banks favor the safe strategy if and only if

$$(6) \quad \Delta(B, w) = \int_w^{w+B} (R-w)d(G_s(R) - G_r(R)) + (G_r(w+B))B > 0$$

By partial integration,

$$(7) \quad \Delta = \int_w^{w+B} (G_r(R) - G_s(R))dR.$$

If $w \geq R_0$, the integrand is negative by assumption. On the other hand, if $w = 0$, the integrand is positive if B is not too large. Since Δ is continuous in w , this proves the existence of the intermediate value w_0 . ■

Now, we can turn to rewriting the expected utility for worker i as a function of wages, and from the corporate strategy:

$$(8) \quad U(\alpha, w, \varphi) = E[(w)_i + r(R_i)] - \frac{1}{2} \text{Avar} [r(R_i)]$$

$$= \alpha(w) + (1-\alpha)E_R[r, R] - \frac{1}{2} \text{Avar}_R[r, R]$$

Proposition 1: Suppose a firm's investment policy φ can be determined by the median worker in the firm. Then, workers with a larger fraction of their wealth coming from their investments in the firm favor a more risky firm strategy, and a more equity-oriented financial regime.

Proof:

$$(9) \quad \text{var}[(r, R)] = E[(r, R)^2] - E[(r, R)]^2$$

$$= \int_0^r R^2 dG(R) - \left(\int_0^r R dG(R) \right)^2 - 2w(1-G(w)) \int_0^r R dG(R) + w^2 G(f)(1-G(w))$$

Hence, worker's expected utility is, after inserting (7) into (5), partially integrating, and rearranging,

$$(10) \quad U(\alpha, w, \varphi) = \alpha(w) + (1-\alpha) \left(r - \int_0^r G_\varphi(R) dR \right) - A \left[r \int_0^r G_\varphi(R) dR - \frac{1}{2} \left(\int_0^r G_\varphi(R) dR \right)^2 - \int_0^r G_\varphi(R) dR \right]$$

Differentiating with respect to $\int_0^r G_\varphi(R) dR$ yields

$$(11) \quad \frac{\partial}{\partial(r, R_i)} U = \alpha - 1 + \alpha - rA + A \int_0^r G_\varphi(R) dR + A$$

$$= \frac{-2\alpha + 1}{A} + r - 1$$

Worker utility increases as the return on equity increases, and decreases as more money is held as wages without being invested. Increasing risk aversion tends to reduce labor's utility as a result of the volatility inherent in equity investments. ■

We can now examine which of the investor groups, banks or equity holders, will be granted a dominant position through legislation in political equilibrium. When choosing a corporate strategy, and investment regime, the median voter recognizes that the level of rents depends on the riskiness of corporate profits, which she cannot control directly. Hence, when choosing stakeholder dominance, the median voter will prefer the party whose interests in corporate strategy are best aligned with her own.

Proposition 2: The median voter chooses bank dominance if

$$(12) \quad U(\alpha_m, \min(w_0, w_s^*), r(R_s)) > U(\alpha_m, w_r^*, r(R_r))$$

and equity dominance otherwise. If this inequality holds, and $w_s^* < w_0$, then she chooses banking dominance. If the inequality holds and $w_r^* \geq w_0$, she chooses equity dominance. If the inequality does not hold, then equity dominance is chosen. Because labor's wealth would generally be low when political battles were fought over the structure of corporate ownership and finance, a safe strategy (banking dominance) would generally prevail under such circumstances. ■

Lobbying Power

In contrast to the median voter model, one might consider a lobbying model since the median voter model assumes that all individuals can influence policy outcomes equally. Drawing on Grossman and Helpman (1994), lobbying success would then depend upon the extent to which politicians value social welfare, S_i (i.e., the median voter's welfare), relative to the money they receive from lobbies, L_i :

$$(13) \quad \max_{i \in \{s,r\}} U^P = \max_{i \in \{s,r\}} (1-\beta)L_i + \beta S_i$$

where $\beta \in (0, 1)$. Assuming that politicians have a fixed weighting of social welfare and lobbying contributions, as well as a fixed median voter, the policy outcome depends on the lobbying contributions. If lobbying contributions depend on a fraction of the wages paid to workers, $L_i(w_i)$, financial returns $L_i(r(R_i))$, and farmers' incomes levels $L_i(w_f)$, then the outcome turns on which actors can make the largest contributions:

$$(14) \quad \text{If } \int_0^{L_s(ws)} \int_0^{L_s(r(R_s))} f(w_s, r(R_s)) dw_s dR_s \begin{matrix} > \\ = \\ < \end{matrix} \int_0^{L_f(w_f)} \int_0^{L_r(w_r)} \int_0^{L_r(r(R_r))} f(w_r, r(R_r)) dw_r dR_r, \text{ then } \left\{ \begin{array}{l} \text{bank} \\ \text{bank}^4 \\ \text{equity} \end{array} \right.$$

We can see that the outcome, from a median voter perspective, would likely favor banks since farmers, together with low-income workers, are likely greater in number than high

⁴ If the lobbies are equal, then the status quo is presumed to win.

income workers/voters. But in terms of lobbying influence, the outcome would instead turn on the wealth of high income workers/voters (capital owners), and thus their ability to overcome the voting power of low-income voters. In such circumstances, equity markets have a greater chance to emerge.

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