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ABSTRACT

Every firm in a developed economy relies on the mere existence of countless other firms to keep prices competitive up and down all supply chains. Without this network externality, no firm forms; and without many firms, no network forms; locking in a low-income trap. Business group governance supersedes corporate governance in most developing economies and in the rapid catch-up development phases of most high-income economies by hierarchically coordinating firms in multiple industries, internalizing this network externality. High-income economies grow via creative destruction - creative firms imposing a negative externality upon firms they destroy or disrupt, but a larger positive innovation-related externality upon the whole economy. Business groups avoid creative self-destruction, innovation by one group firm that disrupts another. Corporate governance supersedes business group governance in high-income economies to facilitate productivity growth. If business group governance does not retreat, productivity growth is impaired and a middle-income trap can result.

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1. Introduction

Economic growth is wealth creation – making more or more valuable output from inputs at hand. High-income economies arose as two forms of growth took effect. In each of these modes of growth, firms create wealth by generating a large positive externality – that is, increases in the wealth of others. In charting these two sources of economic growth, we distinguish low-income economies, such as much of sub-Saharan Africa, middle income-economies, such as much of Latin America, and high-income economies, such as Australia or Britain. We argue that each source of growth imposes different pressures on corporations and on the very concept of corporate governance. [2]

The first source of growth is the positive externalities from the rollout of the network of interdependent corporations that is a free market economy. Every firm's viability depends directly on countless others (suppliers and customers, suppliers' suppliers and other customers, customers' customers and other suppliers, and so on; and on all the above having enough competition from yet other firms to keep their prices inline. A lone steel mill in an otherwise subsistence economy is a doomed venture. However, if countless firms do arise to fill out this network of interdependencies, the firms that fil it out can become viable. The establishment of this network creates a huge externality that powers the rollout of capital assets and business activity that lifts low-income economies to middle-income levels.

The second source of growth is positive externalities from technological progress. Firms invest in innovations that let them produce more or more valuable outputs from the same or less costly resources. Moreover, many innovations also create scope for other firms to find new higher productivity ways to do business. Ongoing innovation thus lifts the productivities of large numbers of firms across whole economies and across the world. The onset and continuation of technological progress creates a huge positive externality that lifts middle-income economies to high-income levels.

This concordance of two distinct engines of growth and two distinct stages of economic development is obviously an oversimplification. The engines of growth and stages of development blur together in late industrializing economies around the turn of the 20th century, for example. More recently, China is pushing technological frontiers while still rolling out the rudiments of free market economies in some provinces. Nonetheless, we suggest this distinction, however indistinct in reality, as a useful conceptual scaffolding on which to hang broad historical developments and economic theories.

The first industrialized economy, Great Britain, developed as these two sources of wealth creation

[2] We use the word corporation catholically to refer to an economy's big businesses, whether they are joint stock companies, listed limited partnerships or another legal structure. These distinctions are important in other contexts.

interacted. Steam engines were invented, pumped water out of coalmines, which produced coal to power steam engines that powered textile mills, and so on. Britain's industrial revolution lifted British living standards slowly, over multiple generations, to the highest in the world. Other countries sought to catch up with Britain more rapidly. A viable catch-up industrialization policy emerged – roll out the network first, building new wealth from network externalities, then switch over to productivity growth from ongoing innovation.

Belgium was the first successful catch-up economy, and pioneered the concept of the business group, an organizational form that arose subsequently in economy after economy as early-stage rapid growth kicked in (Marco Becht, 2018). A business group is a collection of companies governed by a common ultimate authority, but each with its own set of managers and shareholders. In many economies, most large listed companies came to belong to one of a handful of business groups. Consequently, even though the country's stock exchange shows a large number of listed firms, governance is not corporate, but occurs at the business group level. In these countries, corporate governance can be relatively unimportant as corporate boards and CEOs are subordinates. Business group governance is what matters.

Large business groups are generally pyramidal. An apex firm, usually controlled by a tycoon or business family descended from such a tycoon (La Porta, Lopez-de-Silanes, & Shleifer, 1999; Masulis, Pham, & Zein, 2015), controls a first tier of subsidiary firms, each of which controls firms in a second tier, each of which controls firms in the next tier down. Firms throughout the structure can issue shares as long as the immediate parent firm retains control, so a pyramidal group can mobilize vast quantities of equity financing while preserving unified governance at the business group level.

A common ultimate authority can coordinate the activities of the firms in a business group to prevent firms from holding each other up or otherwise cheating each other (R. Morck, 2009). In an economy with well-developed legal institutions and transparent competitive markets, cheated firms can take their business elsewhere (Felli & Roberts, 2016) or seek judicial redress (Haggard, MacIntyre, & Tiede, 2008). Absent well-developed legal institutions and transparent competitive markets, all parties factor a substantial probability of hold-up problems (Klein, Crawford, & Alchian, 1978; O. E. Williamson, 1975) at every turn into business decisions. If the probability of being held up at every turn is sufficiently high, large businesses do not form and the economy is caught in a low-income trap (Dincer & Uslaner, 2010; Farah & Hook, 2017; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1997).

Business groups subject multiple firms to one ultimate authority, who forces group member companies to deal fairly with each other, allow specialized firms to occupy the nodes of interconnected product chains, and let each raise risk-tolerant equity financing. Business groups can acquire reputations

for fair dealing. Such reputations can make business group member firms preferential suppliers and customers for independent firms, preferential employers for skilled workers, and preferential issuers of shares in otherwise fraud-prone markets (Khanna & Yafeh, 2007). The advent of business group governance thus unlocks the low-income trap and frees the economy to rise towards middle-income status (R. Morck, 2009, 2011; R. Morck & Nakamura, 2007).

In many parts of the world, business group governance has emerged as low-income economies rose to middle-income levels. However, some appear caught in a middle-income trap (Eichengreen, Park, & Shin, 2013), in which a low-productivity big business sector, operating under the rule of law, persists side-by-side with a vast number of tiny businesses, sometimes operating informally – that is, without legal standing. The big businesses in middle-income trap economies generally belong to one of a handful of pyramidal business groups, each controlled by heirs of the tycoons who founded those groups and lifted their economies out of the low-income trap generations ago.

Large business groups have the advantage of rising above pervasive risks of hold-ups and other forms of cheating, but if those risks disappear, so does that advantage. In lifting their economies to middle-income status, the controlling families of large business groups acquire immense economic and therefore political power. Policies that protect their business groups, which contain the economies' greatest and most important companies, are "pro-business", but policies good for existing big businesses can impede a country's rise to high-income status (Fogel, Morck, & Yeung, 2008). High-income economies prosper from creative destruction, ongoing productivity-increasing innovation that creative firms roll out and that eclipses or even destroys uncreative old-technology firms.

Rising the rest of the way to high-income status therefore requires policies that let innovative new firms, often led by creative outsiders, form, grow large, and destroy venerable old firms. Creative destruction increases overall productivity, so the wealth created outweighs the wealth destroyed and the economy grows steadily wealthier on average. However, the owners of venerable old firms lose, and understandably see broadening legal rights to upstart outsiders as bad for business. Escaping the middle-income trap thus requires deconcentrating economic power and opening access to efficient and evenhanded rule of law for everyone. Replacing business group governance, the coordinated governance of many firms across the economy, with corporate governance, each firm running on its own steam, may well be an important factor in this deconcentrating of power.[3]

[3] A longstanding issue in corporate governance pits assigning officers and directors an enlightened duty to shareholders, as in Britain, or a duty to shareholders and "stakeholders" (generally employees, but sometimes also customers, suppliers, creditors, the community, the environment, or others), as in some U.S. states (L. A. Bebchuk & Tallarita, 2020). This debate is largely, though not solely, about who owns new wealth a firm creates,

This paper avoids a comprehensive literature review because recent high-quality literature reviews of the relevant research are available elsewhere (Carney, Van Essen, Estrin, & Shapiro, 2018; Andrea Colli & Colpan, 2016; Colpan & Cuervo-Cazurra, 2019; G. G. Jones & A. M. Colpan, 2010; Locorotondo, Dewaelheyns, & Van Hulle, 2012; Poczter, 2018). Comprehensive studies of business groups in the historical development of individual countries are available as chapters in (Asli M. Colpan & Takashi Hikino, 2018; G. G. Jones & A. M. Colpan, 2010; R. Morck, 2005). This paper unifies ideas present in our earlier work (R. Morck, 2009; R. Morck, Wolfenzon, & Yeung, 2005; R. Morck & Yeung, 2003; Randall K Morck, Stangeland, & Yeung, 2000) into what we hope is a useful generalization. Finally, this paper is a reorganization of a large historical section of (Dau, Morck, & Yeung, 2020) that was dropped to comply with space restrictions.

2. The Low-income Trap

Without a developed economy surrounding it, no company can be economically viable; and without large numbers of economically viable companies, there can be no developed economy. This is the low-income trap Rosenstein-Rodan (1943) deemed the fundamental problem of kick starting economic development. Low income economies indeed consist of uncounted informal activities – subsistence agriculture, roadside tea stands, street-side vendors selling good laid out on benches or blankets, and the like - plus a handful of large state-owned or tightly politically-connected enterprises (La Porta et al., 1997). In laying out his blueprint for the postwar multilateral institution that became the World Bank, he presented the low-income trap as a network externality problem, though he did not coin that term (Liebowitz & Margolis, 1994). This reasoning, never rebutted, has been recast in the mathematics and remains a valid deduction from standard economic theory (Murphy, Shleifer, & Vishny, 1989). This section explains the nature of this low-income trap.

An *externality* is a market failure that arises when one actor's decisions have consequences for the welfare of others (Pigou, 1920). A corporate executive's decision to boost profits by polluting negatively affects the welfare of others downwind, imposing a negative externality upon them.

its shareholders or some mix of these other stakeholders. The tension we emphasize here is different, contrasting corporate governance, decision-making at the level of individual corporations against business group governance, decision-making at the business group level, with individual corporations' CEOs and boards demoted to something akin to branch managers. Business group governance could also be oriented towards maximizing the total shareholder value of the firms in the group or towards distributing the wealth created by those firms to employees, customers, suppliers, etc. The firms in a business group are shareholders in other business group firms and stakeholders in each other by dint of being each other's' creditors, customers, suppliers, etc.

Externalities constitute market failures because free markets lead to the overproduction of things with negative externalities and the underproduction of things with positive externalities. Public finance would solve externalities with taxes and subsidies (Pigou, 1920). For example, well-crafted taxes on pollution can reduce firms' profits from using polluting technologies and encourage their switch to cleaner ones, abating the negative externality costs downwind. Likewise, well-crafted research and development subsidies to innovative firms can boost investment in innovation.

Network externalities are externalities whose importance increases as a network expands (Liebowitz & Margolis, 1994). Alexander Graham Bell's invention of the telephone, improves people's lives by letting them communicate with each other more easily, even despite robocalls, spreading positive network externalities upon them. The telephone has large positive network externalities because owning a telephone is not terribly useful if yours is the only one, moderately useful if a few others have one, and maximally useful if everyone has a phone. The larger the scale of the telephone network, the greater the positive externalities from Bell's original idea. Positive externalities also arise from electric power grids (the more home that have electricity, the greater the variety and lower the unit cost of electrical home appliances) and the internet (the more people that have high-speed internet connections, the greater the variety and lower the cost of apps).

Rosenstein-Rodan (1943) argued that a developed free market economy per se has positive network externalities. Building a state-of-the-art electronics firm in an otherwise subsistence agriculture economy is unlikely to be profitable. In a high-income developed economy, such a firm purchases inputs from suppliers, whose product quality is kept high and whose prices are kept low by free market competition, each supplier relying on its suppliers and their competitors. The electronics firm relies on financing at rates kept low by competition between banks, financial institutions, and financial markets and on hiring employees educated in public schools and kept healthy by a national health care system. It relies on an efficient physical infrastructure to transport its products to its customers and on competition between rival customers to keep its prices high enough to cover its costs. It relies on those buyers having suppliers of their other needed inputs, and on each of those having competitors to keep the prices of those inputs low. It relies on the economy's communications system to move information around so price changes are meaningful signals of changes in the supply and demand. And, should problems arise anywhere in this web of commercial interdependency, each firm relies on a well-developed system of contract, securities, business, tort and criminal law and on its impartial enforcement by disinterested regulators and courts.

The viability of a single firm depends crucially on the existence and scale of this network. A new

firm in a high-income economy can set up in a node in an already existing network that spans its national economy and the globalized economy. A new firm in a near-subsistence agricultural economy is on its own, without suppliers, customers, investors, educated employees, rail and road connections, or even the rule of law.

Rosenstein-Rodan argued that the absence of this network deters the formation of businesses and the absence of businesses means the network cannot form, this self-reinforcing poverty forging a very stable low-income trap. The low-income trap is a positive network externality problem. Each individual firm is unviable because others failed to do their part in setting up, filling out, and completing the critical network. Public finance theory presents subsidies as the solution to underinvestment in the presence of positive externalities (Pigou, 1920). However, low-income economy governments have little economic activity to tax, little tax revenue and little ability to subsidize the rollout of such a network of interrelated firms and institutions (Besley & Persson, 2014).

Rosenstein-Rodan envisioned multilateral aid institutions solving this network externality problem by channeling aid from developed economy governments into low-income economy governments that could then provide the needed subsidies. This would let low-income economy governments orchestrate a Big Push – the rapid, simultaneous and centrally coordinated rollout of the entire network of interdependent firms and institutions.

3. Corporate Governance and the Stability of the Low Income Trap

In the decades following World War II, the World Bank and other multilateral organizations went to work and vast amounts of aid flowed into low-income economy governments, which implemented large-scale industrialization policies that subsidized business formations and expansions. Yet by the 1990s, very few low-income economies had industrialized. Foreign aid inflow, if anything, correlated negatively with economic growth during those decades and positively with increased official corruption (Bhagwati, 2005; Djankov, Montalvo, & Reynal-Querol, 2008; Easterly, 2003). This section explains how this policy failure revealed the very notion of corporate governance, given well-known government-failure problems, to be a key factor stabilizing the low-income trap (Garvey & Swan, 1994; Hancock, 1992; R. Rajan & Subramanian, 2007).

According to microeconomic theory, firms maximize profits by competing to develop new products and production processes in order to offer better and cheaper products to consumers (Romer, 1990). However, where government subsidies are a major source of corporate revenues, subsidies can become the central determinant of corporate profits. Consequently, investing in political connections to

secure and increase subsidies can become most firms' most profitable possible investment (Baumol, 1990).

This highlights a core problem with the conventional view of good corporate governance, famously summarized by Milton Friedman:

> "There is one and only one social responsibility of business to use its resources and engage in activities designed to increase its profits so long as it stays in the rules of the game, which is to say, engages in open and free competition, without deception or fraud" (Friedman, 1970)

The spontaneous development of the network of firms necessary to realize the positive network externalities of economic development is checked by a market failure called a hold-up problem (Coase, 1937; Hart, 2009, 2017; Holmstrom & Roberts, 1998; O. E. Williamson, 1986). A first-mover, say an entrepreneur who takes the plunge to set up a new firm in a near-subsistence agriculture economy might hope to inspire an essential supplier to set up shop too. However, the first mover is at a disadvantage in that the well governed profit-maximizing supplier can demand an up-front payment, equal to almost all of the first mover's expected profits, before setting up. The first mover can either turn over the money or go bankrupt. The first mover actually needs multiple suppliers and customers to be viable, and each of these well governed profit-maximizing can play this hold-up game too. Rationally expecting all this, any prospective first mover opts not to move in the first place. Economic development is stillborn. Good corporate governance a.k.a. profit maximization is responsible.

Aid-financed Big Push programs do establish firms, but hold-up problems can persist in a sparse network of firms. A profit maximizing firm or cartel with market power at any node in the network can hold-up the other firms in the network. Without passably efficient laws, courts, and regulators, hold-up problems can prevent a sparse network from filling out and fulfilling its potential. For example, profit maximizing intermediate goods suppliers can effectively hold-up buyer firms by charging high quality prices for low quality intermediate goods if the buyers cannot discern quality, leaving the buyers the costs of dealing with the quality problem (Lyon & Rasmusen, 2004). Once the intermediate goods producers' strategy became clear, profit-maximizing buyers refuse to pay high quality prices, profit-maximizing suppliers can afford to produce low quality intermediate goods only, and the buyer firms eat the costs of using low quality inputs. The whole network of profit-maximizing firms, beset by such problems, fails to generate the positive network externalities it might.

Friedman's vision of good corporate governance assigns each firm a duty to "increase its profits

so long as it stays within the rules of the game, which is to say, engages in open and free competition, without deception or fraud." However, laws, regulations, courts, and regulators set the rules of the game and require public funding. But taxable income is scarce in an economy crippled by pervasive hold-up problems, worse paid officials are perhaps more readily corrupted, and worse corruption further undermines governments ability to raise and spend tax revenues socially efficiently (Besley & Persson, 2014). Worse corruption also lets corrupt business tycoons and officials recast the rules of the game to advance their private interests, rather than overall economic development.

4. Business Group Governance and Escaping the Low-income Trap

Rosenstein-Rodan (1943) argued that central planning by state technocrats spending foreign aid could roll out the whole network of interdependent firms and institutions at once. With the network set up, firms could be turned loose to compete and high-income economic activity could ensue. His approach failed because governments were not up to the task.

Maximizing profits by maximizing subsidies was not what Friedman had in mind, but the strategy proved effective and followed directly from his definition of good corporate governance. Friedman's codicil "so long as it stays in the rules of the game, which is to say, engages in open and free competition, without deception or fraud" was not even violated, for close business-government cooperation was integral to aid-financed Big Push industrialization policies.

Business-government cooperation readily gels into regulatory capture: the industrial policy technocrats coordinating Big Push subsidies, initially representing government to business, increasingly represented business in government (Stigler, 1971). Subsidized businesses find supplementing friendly technocrats' pay with favors, nonpecuniary perks, and ultimately bribes to be profit maximizing good corporate governance. Officials overseeing the judicial system could help with laws and regulations drafted to render all this unsanctionable, if not quite definitively legal. Wherever Big Push industrial policies rolled out, corruption tended to take root and flourish (Easterly, 2005, 2006a, 2006b), undermining the policies and leaving economies stuck in the low-income trap.[4]

[44] China's rise from low-income to middle-income status, which occurred under its market socialism with Chinese characteristics system, might be deemed an exception. However, the Chinese system overall closely resembles Latin American corporatism in terms of how the government and private companies interact (Randall K Morck & Yeung, 2010; Randall K Morck & Yeung, 2014). China's rise to middle-income status illustrates the importance of pervasive hold-up problems (Fan, Huang, Morck, & Yeung, 2017) and large pyramidal business groups (Fan, Wongb, & Zhang, 2001). However, the leading role of the Communist Party is not generalizable (Bai, Hsieh, & Song, 2020; R. Morck & Yeung, 2018). We hope to explore how the issues raised in this paper played out in Chin in a follow-up study.

Niceties in the formal strictures of corporate governance likely played very little role. Firms maximized profits because their owners, politically connected tycoons and business families, wanted more money. If anything, corruption grew worse in developing economies with Napoleonic Code legal systems than in those with Common Law legal systems, despite their usually clearer shareholder rights (Beck, Levine, & Demirgüç-Kunt, 2002). Legal rights for corporate stakeholders, a hot topic in high-income economies, seldom attracted notice in low-income Big Push economies during this period – perhaps because big businesses-government cooperation was tight.

The barriers seem insurmountable, yet several dozen countries successfully industrialized and sustained broad-based high-income economies for generations. This section describes how elevating governance to a higher level, the coordinated governance of a large group of firms, rather than of an individual firm, provides a private-sector escape route from the low-income trap.

4.1 Business Groups in Continental Europe's Early Industrialization

Belgium pioneered a way out of the low-income trap, and became Europe's most industrialized country by the 1840s (Marco Becht, 2018; Mokyr, 2018). Belgium established private-sector state-championed industrial development banks, Société Générale (SG) and Banque de Belgique being paramount, to organize, finance, and provide margin financing for the outside shareholders of some 151 manufacturing companies in diverse sectors in the mid-1830s (Van Nieuwerburgh, Buelens, & Cuyvers, 2006). Financial crises in the late 1830s and late 1840s bankrupted many of these firms, and the banks seized their plant, property and equipment (Daems 1977). Rather than auctioning these assets off in liquidation sales, the banks reorganized them as controlled subsidiaries. Over time, the subsidiaries needed additional capital and the banks underwrote their securities issues (Becht 2018). This process led to business groups, each consisting of a bank owning controlling equity blocks in numerous distinct companies, each with its own managers and list of other shareholders, in different industries.

The banks appear to have preferred overseeing multiple specialized companies, rather than fewer firms, each industrially diversified, or a single widely diversified conglomerate. A form of limited liability was available, so organizing separate companies provided bankruptcy firewalls (Van Nieuwerburgh et al., 2006). Without limited liability, companies' liabilities for shareholders' debts as well as shareholders' liabilities for companies' debts were concerns (Hansmann, Kraakman, & Squire, 2005). Separate companies, each with its own accounting records, share price, and responsible top executives may also have simplified the bank's monitoring and control costs by outsourcing these tasks to markets (Dau et al., 2020). Industrially focused firms are also more readily monitored and hence more valued by outside

shareholders (Maksimovic & Phillips, 2007). Belgian business groups expanded in step with the country's financial development (Van Nieuwerburgh et al., 2006), so external financing was clearly an important consideration.

The controlling bank could order firms in its group to forego holding each other up, skimping on quality, or otherwise extracting profits from each other. Foregoing low-hanging profits legally obtainable in these ways is poor corporate governance, if this is interpreted as maximizing profits subject to the rules of the game. Nevertheless, preventing such behavior is good business group governance because it lets commerce and investment expand, at least between the firms in the group, to the benefit of them all and to the economy as a whole. Each business group could form a readily expanding interconnected network of reliably suppliers and customers. We posit that Belgium's pioneering invention of the business group explains its early and rapid industrialization.

The Belgian model of business group-led industrialization was widely emulated, though many had a business family's firm atop, rather than a bank. The Louis Dreyfus & Co group complemented the Rothschild Frères and Paribas (Banque de Paris et des Pays-Bas) groups in French industrialization (Cassis 2018). Business families and banks both led business groups in Sweden (Hogfeldt, 2005; Larsson & Petersson, 2018). The relative importance of banks and families to Germany's industrialization is debated, but business groups were important (Fohlin, 2005; Schröter, 2018). Business groups also arose in Italy (Andrea Colli & Vasta, 2018), Spain (Cuervo-cazurra, 2018) and Portugal (Ferreira da Silva & Neves, 2018). In each economy, the coordinated control of multiple firms by a small number of business groups loomed large.

4.2 Business Groups, of But Not in Britain

Britain pioneered industrialization. Indeed, Belgian business group firm appropriated British technology. However, Britain's industrialization was slow, with economic growth rarely exceeding two percent per year and took many generations; and business groups are not evident (Jones, 2018). Throughout Britain's industrial revolution, British companies suffered chronic capital shortages (J. G. Williamson, 1984). Government war debt flooded bond markets, crowding out business borrowing until well into the 18th century. The Bubble Act of 1720 restricted chartered joint stock companies until 1825, so various forms of unchartered jointly owned businesses emerged. Shareholders had unlimited joint liability until 1855. Thereafter, shareholders' liability was limited to a par value, generally greater than the share price. Shareholder could be called upon to "pay in" additional funds up to the par value in the event of a business bankruptcy, so being a shareholder required deep pockets.

Businesses were independent family run proprietorships, partnerships or unchartered companies. A legal presumption that companies ought not to own shares in other companies deterred business groups until 1867, when intercorporate share ownership became legal (Brice, 1880, p. 92). However, business groups would have magnified shareholders' liabilities because the shareholders of all companies connected via intercorporate share ownership or common controlling owners were potentially jointly and severally liable until 1893, when the House of Lords decreed they were not. Limiting shareholders' liability to the value of their shares also became prevalent only in the 1890s.

In Britain's long industrialization, the two sources of productivity growth we associate with economic development unfolded together. Innovations in steam engines, textile production, mining and other fields arose as firms in these sectors developed. Thomas Newcomen invented the steam engine in 1712, but died a pauper; James Watt improved his design, but was unable to finance its commercialize until he partnered with a wealthy heir, James Boulton (Hills, 1993). Hold-up problems were limited only by social norms of gentlemanly behavior, for British courts provided scant redress (Mokyr, 2010). That sufficed to free Britain from the low-income trap, and as more institutions developed to protect firms from hold-up problems and to encourage innovators, British living standards slowly rose, eventually to become the highest in the world.

Business groups begin appearing towards the end of the 19th century, after the industrial revolution was largely in the past (Jones, 2000, 2018). Britain's market supporting institutions were up and running. Industrialization had created a class of wealthy heirs, whose incomes flowed from family trusts, which (though not companies), could own shares in companies. A few instances of non-family members participating in such trusts appear as early as the 1800.

In the1890s, merchant banks took to organizing London holding companies as trusts whose assets were business groups in then-emerging economies (Jones, 2018; G. Jones & A. M. Colpan, 2010). For example, the London Listed Matheson and Co. became a channel for pumping London capital into China. Matheson member firms included China Coast Steam Navigation, Indo-China Steam Navigation, Shanghai-Woosung Railway, China Railway, Canton Insurance, Ewo Bank of Shanghai, Rio Tinto Mines, Transvaal Exploration, Caucasus Copper and, through Jardine, Matheson and Co. in Hong Kong, China Sugar, Hong Kong Land, and Ewo Spinning (Chapman 1985, pp. 230-51).

London-based business groups played major roles in the late 19th and early 20th century industrializations of British colonies and dominions and in the Latin American republics (Fracchia, Mesquita, & Quiroga, 2010; R. Miller, 1995). Paris merchant houses organized similar structure, with business group operating companies in French colonies and their apex firms listed in Paris (Cassis, 2018).

The capital-receiving economies then had less developed legal and financial systems and other institutional infirmities. London merchant houses' British legal residencies may have mitigated risk that would otherwise have deterred their investors, customers, suppliers, managers and employees. Capital flowed in vast quantities from capital-intensive Britain to labor-intensive economies elsewhere throughout the world (G. G. Jones & A. M. Colpan, 2010).

London-based overseas business groups differed from Belgian and other continental European business groups in not drawing on a group bank to provide other group member firms with long-term debt financing for property, plant and equipment. This would appear to reflect British banking practices, which prioritized the provision of trade credit with readily saleable inventory as collateral.

Several British banks that lent to finance capital assets in the 1830s failed in the Financial Crisis of 1837, ruining their shareholders, who bore unlimited liability (Turner, 2014) p.38). Limited liability became available in the 1850s, but British banks retained unlimited shareholder liability, perhaps as a signal of confidence to depositors (Turner, 2014) p. 41). After the 1878 failure of the City of Glasgow Bank ruined its shareholders, banks began restructuring themselves into limited liability companies. The 1890 crisis, precipitated by the Argentine government's default on its debts to the Barring Bank, and that bank's bailout to rescue its shareholders, again reinforced the danger of long-term loans without liquid collateral (Mitchener & Weidenmier, 2008). By the late 1890s, this transformation was largely complete. Thus, through Britain's industrializations, its banks exposed shareholders to unlimited liability and therefore had to be conservative.

Banking in the dominions and colonies followed similar patterns. For example, the prominent Bank of Upper Canada's failure in 1837 left Canadian banks Canadian banks leery of lending without liquid collateral (Bliss, 1987). The repercussions of Barings 1890 near failure in Australia left that country's banks similarly conservative (Mitchener & Weidenmier, 2008).

Britain's largest ex-colony, the United States, industrialized in the Civil War (1861 to 1865). American business groups followed a unique trajectory American economic development (Collis, Anand, & Cheng, 2018; Hikino & Bucheli, 2018; Kandel, Kosenko, Morck, & Yafeh, 2019). Common Law retained the British presumption that a company had no business owning shares in any other company until 1891. The only mechanism for putting multiple companies under common control was therefore the trust, and trusts proliferated in the latter 19th century. John Pierpont Morgan built an economy-spanning industrially diversified empire of trusts around the Morgan Bank, which underwrote equity financing but largely avoided long-term direct loans to member companies. These trusts appear to have internalized hold-up problems and network externalities (Chernow, 2010), but were also widely condemned as exploitative of

smaller business owners, small investors, workers and consumers (e.g. (Brandeis, 1914).

By the 1880s, industrially focused trusts were becoming prominent and drawing heavy fire monopoly and monopsony pricing. Progressive era politicians responded by enacting the Sherman Act of 1890, an Anti-trust Law to force the breakup of trusts with market power. In 1888, apparently reflecting a widespread view that the Sherman Act applied only to trusts, New Jersey legalized companies owning shares in other companies.[5] This offered trusts the option of restructuring into pyramidal business groups, and increasing numbers did so. Other states raced to allow business groups too. By the 1920s, business group member firms dominated the New York Stock exchange. A spate of New Deal legislation broke up American business groups and its Chandlerian system (Chandler, 1977) of freestanding widely held professionally managed big businesses was in place by 1950.

4.3 Business Groups in South Korea's Escape from the Low-income Trap

The world's newest large high-income economy is South Korea. Its ascent from sub-Saharan to European living standards occurred in the 1970s, 1980s and 1990s, and so is a uniquely well-documented demonstration of the importance of business groups.[6] South Korea was largely an institutional blank slate, on which new institutions might be sketched out (Acemoglu *et al.* 2002; Woo 1991). A deeper investigation of South Korea's industrialization is therefore useful for building a general explanation of how business group governance, rather than corporate governance, provides an escape from the low-income trap.

Japanese colonial rule (1910 to 1945) destroyed traditional Korean elites, U.S. and Soviet occupation (1945 to 1948) ousted the Japanese, and the Korean War (1950 to 1953) leveled colonial infrastructure and industry. Syngman Rhee, the first president and Woodrow Wilson's student at Princeton, channeled massive US aid (Haggard, 1991; Lim, Haggard, & Kim, 2003) to subsidize nascent business groups, many with bank affiliates (Lim, 2004). Despite rampant corruption and financial crises, Rhee kept US aid pouring into what seemed a dismaying "foreign aid sinkhole" (Chapin, 1969). His indisputable positive legacy was universal basic education (Azariadis & Drazen, 1990); Seth 2002). By Rhee ouster in 1960, living standards were no higher than in 1945. South Korea was deeply corrupt, profoundly poor and in a deep financial crisis.

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[5] The US Supreme Court upheld the constitutionality of the Sherman Act in a 1911 judgment against Standard Oil, whereupon the conversion of trusts to business groups accelerated (Kandel et al., 2019).

[6] The discussion of South Korea draws on Lim (2004); (Lim, 2013), Lim and Hahm (2006), and Lim and Morck (2020).

General Park Chunghee seized power in 1961 and won Rhee-era tycoons' support by staying corruption prosecutions, despite nationalized their banks. The business groups expanded (Lim, 2004; Lim et al., 2003). Park scorned officers and officials tainted by commerce, leaving corruption an unwise career move. Park wanted economic development to end dependence on US aid, espeically as the Vietnam War revealed US irresolution. To build up foreign exchange reserves (essential for arms purchases under Bretton Woods) Park guaranteed exporters' foreign debts. This imposed a market test (exports had to be competitive) and a moral hazard (loan guarantees let business owners borrow aggressively abroad and tunnel money to their other firms. A 1969 foreign loan default crisis triggered bailouts, and then a full-scale financial crisis.

Park switched tactics to direct loans tor firms participating in a Heavy and Chemical Industries (HCI) drive that, incidentally built up domestic munitions production capabilities. Alert to moral hazards, Park demanded that HCI loan recipients issue equity. Previously narrowly held firms abruptly issued public equity and business groups (*chaebol* in Korean) formed as pyramidal structures, each with a family firm controlling several partially owned subsidiaries, which controlled their own partially owned subsidiaries, and so on. As in Belgium, this structure let the business family mobilize equity capital on a very large scale by organizing a large number of firms, yet control each by dint of controlling its parent firm. Park grudgingly accepted business families tunneling wealth from subsidized HCI firms to frivolous undertakings in consumer electronics and automobiles as a cost of dealing with merchants (Hundt, 2008, p. 68).

The coordinated way these business groups sprouted new firms illustrates how business group governance sidestepped the low-income trap. Koo Cha-Kyung (Aguilar & Cho, 1985) details how his family's LG chaebol expanded:

> "My father and I started a cosmetic cream factory in the late 1940s. At the time, no company could supply us with plastic caps of adequate quality for cream jars, so we had to start a plastics business. Plastic caps alone were not sufficient to run the plastic molding plant, so we added combs, toothbrushes, and soapboxes. This plastic business also led us to manufacture electric fan blades and telephone cases, which in turn led us to manufacture electrical and electronic products and telecommunications equipment. The plastics business also took us into oil refining, which needed a tanker shipping company. The oil refining company alone was paying an insurance premium amounting to more than half the total revenue of the largest insurance company in Korea. Thus, an insurance company was started. This natural step-by-step evolution through related businesses resulted in the Lucky-Goldstar (LG) group as we see it today."

Koo is quite clear about how each new firm had to be formed to provide a business partner existing firms needed, each firm overcoming precisely the network externality problem. Rosenstein-Rodan (1943) stressed as the central barrier to rapid development. By 1980s, each of the larges chaebol had achieved "full set diversification" – one member firm in each major industry.

South Korea under Park, often characterized as a state-run Big Push (Amsden 1992; Woo 1991; Woo-Cumings 1999; Lim 2000; 2009), is actually far more interesting. Koo is unclear as to the importance of subsidies, export promotion loan guarantees, and HCI Drive loans to LG's expansion. Subsidies likely entered at multiple points, either directly to LG business group member firms or to other firms, whose assets, technologies, or personnel later ended up belonging to LG firms. Nonetheless, a state-led Big Push is hard to discern. Rhee's subsidies were money-for-loyalty crony capitalism. Park's export promotion and HCI subsidies focused narrowly on a few key sectors, leaving most sectors to sink or swim. The chaebol may have tunneled more subsidies from firms in targeted sectors to firms in other sectors than is generally thought.

The chaebol controlling families, not state technocrats, organized the coordinated establishment and expansions of firms across the economy. Indeed, by 1979, when HCI Drive subsidies precipitated another financial crisis, many thought the *chaebol* families were coordinating the state (Luedde-Nerath 1986; Chibber 1999, 2005). Shortly after Park decided to end all subsidies to business, the head of the secret service shot him for still mysterious reasons. He left South Korea in 1979 a middle-income economy, per capita GDP having risen from sub-Saharan to Latin American levels. His other major legacy was clean water in every village that made for much healthier conscripts (Park 2009).

The Koreans almost certainly learned about business groups from Japan. General Park-chunghee was an alumnus of the Tokyo Military Academy and observed the final stages of Japan's successful escape from the low-income trap directly, and Japanese ideas about economic organization pervaded South Korea under Japanese colonial rule. Japan's ascent, though slower than South Korea's, equally illustrates the importance of foreswearing corporate governance for business group governance.

4.4 Business Groups in Japan's Escape from the Low-income Trap

Japan had shut out foreign contact for centuries when Admiral Perry's US gunboats steamed into Tokyo harbor in 1853, overwhelming and dishonoring Japan's Tokugawa Shogun. Young samurai warriors seized power in the name of the figurehead Meiji Emperor. The Meiji Restoration government, to modernize the military, sent students abroad to study foreign technologies. These returned with alarming news of

Japan's poverty and backwardness. In a comprehensive institutional reboot, Japan adopted a Scottish banking system, British navy, German law code, American free press, Prussian constitution, French compulsory public schools and what seemed global best practice institutions across the board.

Getting foreign technologies up and running did not interest Japan's merchant families, members of a social caste despised by samurai warriors in any case. The Meiji government therefore created legions of state owned enterprises (SOEs) in the 1860s and 1870s. Japan had considerable mineral wealth at the time, and mining SOEs were to subsidize industrial SOEs until all were self-sustaining (R. Morck & Nakamura, 2018). Soft budget constraints let all the SOEs, including mining companies, bleed money (KORNAI*, 1986). Japan borrowed in London and domestically, printed money, and, after suppressing a costly samurai rebellion, confronted a financial, currency, and sovereign debt crisis in 1879.

Finance Minister cut the size of government, imposed comprehensive free market reforms, and undertook a mass privatization of SOEs (R. Morck & Nakamura, 2007). Officials were well paid and, under laissez-faire and could deliver little for bribes. Corruption was apparently economically insignificant.

After changing hands, the SOEs' assets and talent passed to merchant families, such as the Mitsui (silk) and Sumitomo (copper mining), or new entrepreneurs, such as the founders of Mitsubishi and Nissan. Each used mining firms as cash cows to revitalize ex-SOE assets and establish new firms in successively more industries (R. Morck & Nakamura, 2018). As these business groups (*zaibatsu* in Japanese) expanded, wealth spread. Mine company revenues fell, but the zaibatsu continued expanding existing firms and organizing new ones in the growing stock markets, expanding until each of the largest had a firm in every major sectors (R. Morck & Nakamura, 2007).

Banks in the Mitsui, Mitsubishi, Nissan, and Sumitomo zaibatsu specialized in trade credit. Only a few zaibatsu emulated Belgian, French or Swedish business groups in using their banks to finance the expansion and formation of other group firms. Group industrial development banks, called organ banks successfully financed the expansion of the Suzuki group, but the high and interconnected debts of its member firms proved financially unstable. Zaibatsu with organ banks imploded in the global financial crisis of the early 1920s (Okazaki, Sawada, & Wang, 2007). Organ banks came to be seen as poor business group governance, and this view may have explained Park Chunghee's decision to nationalize Korean business groups' banks immediately after he gained power.

The tycoons and families controlling these groups portrayed themselves as nation-builders, but were likely self-interested. The tycoons and business families that controlled the zaibatsu "cared more" about firms they owned directly than about those firms' subsidiaries and subsidiaries' subsidiaries (Morck and Nakamura 2005, p. 386). Thus, Nissan′s founder, Yoshisuke Aikawa, ran the Nissan group to maximize

shareholder value in the widely held firm at the apex of the Nissan zaibatsu to retain the support of its shareholders, and shunted funds in and out of other group firms to this end (R. Morck & Nakamura, 2007). The controlling shareholder shunting funds out of a firm, called tunneling, constitutes poor corporate governance (Johnson, La, Lopez-de-Silanes, & Shleifer, 2000).

However, using that money to finance a high value-added investment elsewhere in the business group can be deemed good business group governance and a step out of the low-income trap (Almeida and Wolfenzon 2006). A controlling shareholder ordering a group member firm to forsake monopoly or monopsony profits from holding-up other group firms (Holmstrom and Roberts 1998) or to produce intermediate goods essential elsewhere in the group at a loss likewise constitutes poor corporate governance. However, in each case, the controlling shareholder's actions might constitute good business group governance, defined as maximizing the value of the business group as a whole.

By the early 20th century, Japanese firms were a major factor in global trade (Meissner and Tang 2017). By the 1930s, Japan had living standards on par with much of Europe Kajima 1967) and had become an industrial power able to wage war on Britain, China, France and Russia, if not on America.

4.5 Good Business Group Governance and Escaping the Low-income Trap

The economic histories above suggest that low-income subsistence agriculture economies can initial rapid "catch-up" growth by permitting private-sector governance to rise to the business group level. Private sector business groups can coordinate the rollout of the network of interdependent firms that, ultimately, can become a free market economy.[7]

Good business group governance need correspond to neither maximizing the controlling shareholder's wealth not maximizing national wealth. Much as Soviet factories remitted earnings to central planners for reallocation across the economy, zaibatsu member firms remitted earnings to the business group's apex firm, to be reallocated them to fund technology, capital investment, or non-profit maximizing actions wherever the group needed (Goto 1982; Aoki 1988, p 223). Each business group was thus an industrially diversified centrally planned economy within Japan's Victorian classical liberal economy. The Soviet system is a historical failure wherever implemented and business group controlling shareholders are unlikely to be less self-interested than other humans are. However, Japan's economic history reveals forces that can come into play to align the controlling shareholder's private interests with maximizing group value and with the country escaping the low-income trap.

[7] For a review of the structures of business groups using network analysis, see (Lincoln & Sargent, 2018).

Business Group Governance Displaces Corporate Governance. Decision-making in the Japanese zaibatsu was unambiguously at the business group-level, not the corporation-level. Good business group governance reallocated capital from firms with free cash flow to finance the expansion of other firms or the formation of new firms, as needed by the business group as a whole (Hasegawa 1938; Miyajima 2004. Individual firms' earnings rose to the group's apex firm, which then distributed capital across the group's member correlations. Each firm's president and top managers accepted that the profits of their firm might have to take a hit for the sake of the economy-spanning business group (Morikawa 1992, p. 105). Key decisions made at the business group level appears to be an overarching characteristic of business groups in economies passing through this state of development. Corporation Presidents appear to be junior officers, hired help reporting to the controlling family or tycoon.

Competition between Business Groups. Each business group imposed central planning on its member corporations. Unlike the Soviet central planners, business group central planners had competition. For example, Japan had several large economy-spanning business groups competing with each other for final customers and talented employees. Soviet inefficiency in the Sumitomo group would quickly have sent customers and employees flying to the Mitsui, Mitsubishi, Nissan or Suzuki groups. The group with the most economically-efficient central planning and the least rapacious controlling shareholder could charge lower prices and pay higher wages, all else equal, so a sort of competitive central planning may have promoted economic efficiency (Morck and Nakamura 2007). Competition between multiple business groups is also evident in continental Europe, British overseas business groups, and Korean business groups.

Business Groups Internalize Externalities. Each business group became large relative to the size of its host economy. This lets business groups handle internally transactions that, if done between independent profit maximizing firms, would trigger the low income trap. In some cases, business groups even expand sufficiently to invest in pure public goods, such as universities and transportation infrastructure, confident their member corporations would internalize much of the positive externalities of a more educated pol of employees (Morck and Nakamura 2007). The Mitsui business group established the now elite Hitotsubashi University in Tokyo. The extent to which business groups elsewhere funded schools, hospitals, universities or other public goods providers is, as far as we know, unexplored. However, business groups' internalization of markets for intermediate goods appears to be a common feature across many countries

(Khanna & Yafeh, 2007).

Equity Financed Group Member Corporations**.** Japan's business groups expanded using equity financing. Most zaibatsu banks adopted Scottish merchant banking practices, using deposits to fund trade credit with readily sellable inventories as collateral. The ill-omened Suzuki group and others with organ banks that financed long-term loans with capital assets as collateral aside, Japanese business groups relied increasingly on equity finance to supplement intragroup earnings transfers as each expanded. Equity, rather than debt financing, may have made Japan's business groups less prone to the episodic financial crises and state bailouts that interrupted rapid industrialization elsewhere. Fully diversified shareholder, holding a value-weighted portfolio containing shares in every firm, would not have objected to tunneling that decreased the value of their shares in one group firm to increase the value of their shares in another by a greater amount. Something akin to this calculation also maximized the value of the group apex firms, whose assets were a diversified portfolio of shares in the other firms in the business group. If the weights of each business group member firm in the apex firm's portfolio were proportional to their weights in the diversified shareholders portfolio, maximizing the apex firm's value (the controlling shareholder's presumed objective) accords with maximizing the value of the group as a whole to public shareholders. Exact proportionality is unlikely, but even merely rough proportionality might help.

Small and Honest Government. Japan's Victorian classical liberal minimalist government, staffed with highly paid civil servants, was not prone to corruption. Park Chunghee's export promotion and heavy and chemicals industries interventions in 1960s and 1970s South Korea were narrowly targeted, the rest of the economy left to market forces. Small government was the rule in Victorian Australia and Canada, in Latin America, and in the British colonies hosting London-based business groups. Political rent seeking (investing in corrupting government officials to obtain subsidies, regulatory loopholes, etc.) is less profitable where few subsidies are on offer, few regulations are worth skewing, and civil servants have larger salaries to lose if charges of corruption arise.

Openness. Japan was an open economy. Japan had reluctantly accepted so-called Unequal Treaties, which eliminated its trade and capital mobility barriers. Japan's physical distance from other industrialized and industrializing economies gave its domestic producers a pricing advantage, but gross inefficiency by its zaibatsu would have lost customers to importers. Indeed, the zaibatsu contained importer corporations and their controlling shareholders might readily have increased their revenues and decreased their costs

by shifting from inefficient local production to more profitable importing. Japan's openness may thus also have promoted efficiency. Imports could fill in missing links in product chains where transportation costs were not prohibitive (Trindade 2005). Exporting also let corporations operate at efficient scales despite initially small domestic markets. Victorian-era free trade norms also likely helped.

5. The Middle Income Trap

Business group governance may free economies from a low-income trap, letting them rise to middle-income levels, where a middle-income trap can stall economic development. The middle-income trap arises because business groups are well suited to an incompletely developed economy and their advantage over independent firms appears to erode away in most high-income economies. The economic power that accrues to the controlling decision maker of a business group large enough to lift an economy out of the low-income trap necessarily has the political power to shape institutional development. Incomplete institutional development, advantageous to the prosperity of business group member firms, thus comes to pass (R. Morck & Yeung, 2003, 2004; Schneider, Colpan, & Wong, 2018). This is essentially the limited access order (North, Wallis, & Weingast, 2009) describe, in which a tight elite can form and operate businesses successfully, but others cannot.

This section argues that business group governance, after lifting an economy past the low-income trap, can trip this middle-income trap and lock in a highly stable limited access order. Evading the middle-income trap, we argue, requires a deconcentrating economic power by prioritizing corporate governance and abandoning the business group governance helpful at low-income levels. Economies that continued on to high-income status saw business groups falling away, crumbling under legislative assault, or fading away under global market pressures and economic decision-making falling into the hands of individual corporations' CEOs and boards.

5.1 How a solution to one problem becomes a new problem

The ultimate authorities of the emerging business groups that lifted economies free of the low-income trap are typically energetic and talented tycoons, able to coordinate the activities of multiple firms. After these tycoons pass away, and their heirs assume control of their business groups, the problem of unreliably inherited talent becomes fundamental. General intelligence, emotional intelligence, and all manner of other traits associated with entrepreneurial success are very imperfectly inherited (Galton, 1865; Herrnstein & Murray, 2010; Pinker, 2003). Consequently, the traits of their children, grandchildren, and great grandchildren regress towards population means with each successive generation. This leaves

the large business sectors of a middle-income economies dominated by a few large business groups, each under an ultimate authority of increasingly average talent.

Talent is imperfectly inherited, but social position and connections can grow deeper with each successive generation in a limited access order (North, Wallis, Webb, & Weingast, 2007). Intermarriage, moving in common elite educational and social circles and common political interests can meld the children, grandchildren, and great grandchildren into tightening elites. Institutions supporting competitive transparent markets and efficient legal systems that would let independent firms form and prosper would render business groups unnecessary. Consequently, such institutions are not in the interests of these elites.

For institutions supporting competitive transparent markets and efficient legal systems to arise and persist, governments need not just tax revenue, but also the political will to establish such institutions. The highly connected and tightly integrated economic elite of a middle-income economy can readily prevent such institutions from arising by influencing their fiscally constrained governments. Members of elite business families assume positions of political influence in a vertical integration of government and business elites (North et al., 2007). The police power of the state protects members of the elite from malfeasance by all others, but neither extend that protection to others punish malfeasance by elites (North et al., 2007). Access to the Rule of Law, courts, legal contracting, and other institutions is limited. Barriers to entry by outsiders protect established business groups (Pattnaik, Lu, & Gaur, 2018).

Owning and running a large business requires access to these institutions. The economy consists of large companies belonging to elite-controlled business groups, augmented by countless small businesses controlled by the non-elite and operating without formal legal status. Powerful elites who control the state are difficult to tax (Alstadsæter, Johannesen, & Zucman, 2019; Otusanya, 2011), as are the small informal businesses that operate outside the rule of law in a limited access order (La Porta & Shleifer, 2014). Ill-paid officials supplement their income through corruption and the diversion of tax revenues (Fisman & Miguel, 2010). Tax evasion emerges as a response to corruption (Slemrod & Yitzhaki, 2002). Fiscally constrained governments of middle-income economies cannot develop institutions to open access to competitive markets and the rule of law. Large business groups' controlling families may dislike official corruption, but they can deal with it better than most others can (Dela Rama, 2012).Middle-income country governments captured by hereditary business elites can fail to appreciate the long-term costs of policies supporting the status quo. A more cynical reading might posit that entrenched political and economic elite value the status quo above long-term broad-based prosperity.

Innovation powers economic growth in high-income economies (Romer, 1990). Over two-thirds

of the historical economic growth in today's high-income economies is directly attributable to technological progress (Solow, 1956, 1957). Less than one third is attributable to capital accumulation and increased use of natural resources. Technological progress arises through a process of creative destruction (Schumpeter, 1912, 1942). New creative firms arise and destroy, partially or completely, old uncreative firms. This economic turnover is necessary because those who control existing firms have vested interests in preserving the status quo. Existing firms often resist or actively oppose new technologies and other innovations that erode the value of their existing assets. Consequently, successive new generations of entrepreneurs founding and building their own firms are necessary for the growth of high-income economies (Fogel et al., 2008).

Again, talent being unreliably inherited, these entrepreneurs generally arise from outside the economy's existing elite and require capital to build their new firms. Institutions that effectively limit large-scale access to capital markets and financial institutions to existing elites effectively blocks the rapid formation and expansion of potentially disruptive upstart firms (King & Levine, 1993). After an initial burst of stock market development that finances the companies in founding tycoons' business groups, an institutional deterioration can make new listing difficult (R. G. Rajan & Zingales, 2003). Bank financing is likewise restricted because the country's existing banks are generally member firms on one or another of its large business groups (R. Morck, Yavuz, & Yeung, 2011).

5.2 Business Groups in Latin America's Middle-income Trap

Many Latin American countries made substantial progress towards industrialization in the late 19th and early 20th century (Haber 2006), often capitalized by London-based business groups (R. Miller, 1995). Argentina, Australia and Canada seemed equally promising (Di et al. 1985), but Latin American development stalled or even reversed (Edwards, 2010; Edwards, Esquivel, & Márquez, 2007).

Nationalism was one factor. British merchant house groups had invested heavily in the region (Miller 1995; Platt 1985), but British control was politically unpopular and control soon passed to local elites, whose *grupos económicos* (Leff, 1978) were often pyramidal. National independence movements, led by colonial elites rejected revolutionary French ideas infiltrating from Iberia (Gott 2007), preserved extractive institutions unamicable to markets, competition and entry (Acemoglu et al. 2001; Lewis 2005). Business groups, by letting each elite family control a huge swath of their big business sectors, are a continuation of this historical path (Schneider 2008).

Elite capture of national institutions was perhaps another factor (Krasner, 1984; North, 1990; Thelen, 1999; Goldstone 1998; Pierson, 2000). Rajan and Zingales (2003) use Latin America to exemplify

early industrialization enriching a first generation of entrepreneurs, whose heirs use political rent-seeking to slow or stall institutional development that might upset a *status quo* favorable to them. Rajan and Zingales argue such politically powerful entrenched elites effect financial reversals, shrinking their economies' financial systems to deny potential competitors capital. Latin American banks, generally member firms in elite families' business groups, lent generously to other firms in their groups while limiting loans to firms outside their groups. This bank governance model is associated with slow growth, inefficient capital allocation, and financial crises (La Porta et al. 2003; Morck, Yavuz and Yeung 2011; Del Angel 2016). This may give elite families' business groups a survival advantage in financial crises because their banks can bail out their other firms, confident that their government will bail out their banks. Independent nonfinancial firms, in contrast, would fail.

Import substitution is a third factor. A protectionist economic policy advocated by Argentine economist Raoul Prebisch (1950). Prebisch argued multinational corporations (MNCs) bought commodities in developing economies at low monopsony prices and sold manufactured goods in developing economies at high monopoly prices. His solution was to raise trade barriers to block both commodity exports and manufactured goods imports and disburse massive subsidies to help domestic manufacturing firms substitute for MNCs (Baer 1972). Import substitution proved a hothouse for business groups (Hoshino, 2010). Close-knit cartels, protected by trade barriers and subsidized by governments, kept prices high and made innovation superfluous to profits. Some monopolies were even state orchestrated, such as that of the privatized Mexican telephone monopoly Telmex, in the 1990s (Doh, 2000). MNCs could only enter by partnering with a domestic firm, in practice a member firm in a family business group, to transfer a technology. Domestic business groups could use existing member firms' earnings to finance such ventures, so they had no need for domestic financial markets (Schneider 2009 p. 565).

Another often-overlooked factor is Corporatism. The Great Depression had discredited free-market liberalism, and Falangist Spain and Estado Novo Portugal offered a church-sanctified alternative. Iberian-style Corporatism, discussed above, spread across the region in the mid-20th century, often after military coups. Dictators gained legitimacy by implementing a then-prominent Catholic social doctrine called Corporatism. Corporatism replaced markets with supply, cost, price, and entry management by Associations, committees of business owners, clergy, labor leaders, and officials. Each Association regulated one of thirty or so a vertically connected set of industries. The controlling families of large business groups often had representation the Associations governing multiple industries. Like import substitution, corporatism fertilized business groups, whose controlling families contributed

enthusiastically to Association decisions.

Large family controlled pyramidal *grupos economicos* dominate Latin American economies historically and today (Aldrighi & Postali, 2010; Fracchia et al., 2010; Hoshino, 2010; Khanna & Palepu, 2000a; Khanna & Yafeh, 2005; Lefort, 2010; R. M. Miller, 2010) Nationalism, elite capture, import substitution, and Corporatism all likely entrenched elites. When liberal market reforms again spread to Latin America in the 1980s and 1990s, these institutions protected family business groups (Schneider, 2008). At the end of the 20th century, a third of great Argentine business groups were controlled by their founder s' children, a third by their founders' grandchildren, and a third by their founders' great grandchildren (Fracchia et al., 2010). Schneider (2009b, p. 565) concludes "MNCs and domestic business groups impeded movement towards both markets in corporate governance and coordination in inter-firm relations" throughout Latin America.

5.3 High-income Economies and their Business Groups

Economies that rose farther to sustain broad-based high-income levels did so via productivity growth stemming from technological change. Technological change is a process of creative destruction, with new creative upstart firms destroying, or at least disrupting, old-technology firms. Growth no longer comes from rolling out more existing-technology firms to populate all the nodes in a network of interdependent sectors, as in the rise from lo- to middle-income status. Competition between firms to innovate first or more boldly becomes the driving force raising living standards and successful innovation becomes aligned with good corporate governance.

Creative destruction sees innovative corporations imposing a negative externality upon the non-innovative corporations they destroy or disrupt; but a usually far larger positive externality upon the economy as a whole, as the innovations come into widespread use, inspire follow-on innovations, expand consumers' choices, and so on.

However, the same creative firm destroying the same old-technology firm appears different if both are member corporations in a business group. Business group governance would sensibly balance the increased value to the innovator against the disruption to the old-technology firm and avoid innovation not advantageous to the group as a whole – what R. Morck and Yeung (2003) dub creative self-destruction.

Corporate governance tends to eclipse business group governance after economies come to rely on innovation and creative destruction for continued growth. The well-governed innovative corporation forging ahead, without concern for damage to less well-governed non-innovative firms, is the whole

purpose of competition in a knowledge-based economy. The destruction of old technologies becomes an essential part of economic growth; and tax-financed welfare states arise to provide soft landings. Amazon is not responsible for brick and mortar store ex-employees, even though Amazon's innovations caused the destruction of their jobs.

Different high-income economies underwent this switch from one engine of growth to the next in different ways. The term "switch" is only roughly appropriate, for the turn of the 20th century and the 1920s were eras of intense technological progress that occurred as many late industrializing countries were still without complete networks of firms and markets. Some economies even switched back and forth, with business groups regenerating to accommodate nation-building policies, especially in the decades of largescale reconstruction after World War II. The following subsections sketch brief highlights of how corporate governance came to the fore and business group governance fell away in different high income economies.

Major High-income Anglosphere Economies[8]

In the United States (Kandel et al., 2019), **t**he idea of corporate governance rose to prominence in the Great Depression, which lifted unemployment to 25% and cut industrial production by 40%. Many blamed Wall Street and Big Business. Academics in President Franklin D. Roosevelt's "Brain Trust" condemned business groups' controlling shareholders for using their unduly concentrated economic power to advance and protect their private interests at the expense of general prosperity (Berle & Means, 1932; Bonbright & Means, 1932). Rival Progressive reformers debated whether corporate governance ought to advance the interests of small shareholders or a broader range of corporate stakeholders (Dodd Jr, 1931), but neither side saw much virtue in business groups.

Roosevelt's Second New Deal therefore launched a sustained and effective attack on American business groups. United States enacted legislation in the 1930s explicitly to break up its business groups (Kandel et al. 2019). The 1933 Glass-Steagall Act severed the Morgan Bank from its pyramidal group, whose former member firms became freestanding. The Public Utilities Holding Companies Act of 1933 banned complicated business groups from controlling firms in regulated public utility sectors. Successive Income Acts from 1933 on implemented and the raised intercorporate dividend taxes, rendering

[8] Singapore and Hong Kong, high-income British ex-colonies, also developed with large business groups dominating their economies (Cheung, Rau, & Stouraitis, 2006; Tsui-Auch & Yoshikawa, 2010). Both are trade hubs, small open entrepôt economies with major tax advantages, whose development paths are atypical.

companies owning shares in other companies an increasingly tax disadvantaged strategy. The 1934 Securities and Exchange Act banned insider trading. The 1940 Investment Companies Act of 1940 banned investment funds from interfering the management of firms whose stock they owned.

Roosevelt remained in the White House into a third term, and his Democratic Party retained power until the 1952 election. Two decades of sustained attack on business groups for monopolistic practices, tunneling to avoid payouts to public investors and tax authorities, and other abuses proved effective. America's pyramidal groups broke up. CEOs and corporate boards make decisions at the corporate level.

Small business groups persist (generally an entrepreneur or family owning control blocks in more than one listed firm), but are a peripheral concept. Where the coordinated control of operations in more than one sector arose, a unitary conglomerate firm ran everything. Multiple listed firms often share a common institutional investor, but the Investment Companies Act prevents business group-level control. The very concept of a business group was soon lost to American law schools, business schools and economics departments.

With each corporation an independent entity under intensifying pressure to maximize profits, productivity-increasing innovation made sense regardless of any negative impact on old-technology firms and sectors. Good corporate governance promoted the growth through technological progress that creates and sustains high-income prosperity.

Domestic business groups arose in early 20th century Britain, but faded into insignificance by the second half of the century (J. Franks, 2020; Julian Franks, Mayer, & Rossi, 2005). Equity control blocks diminished rapidly amid equity-financed merger activity and seasoned equity issues to finance expansion n(J. Franks, Mayer, Volpin, & Wagner, 2012). Such business groups as persisted became tenuously connected. Post-war Labour governments organized powerful, well-funded, trade-based pension funds to give the working class a voice in corporate governance. A few decades later, these pension funds and other institutional investors became advocates for corporate governance reforms (M. Becht, Franks, Grant, & Wagner, 2017; J. Franks, 2020).

Among these, the 1968 Takeover Rule played an important role in the disappearance of remaining British business groups. The rule automatically extended any takeover bid for 30% or more to a bid for 100% and the target firm's delisting. Ongoing merger activity soon left only firms without large blockholders trading on the London Stock Exchange, those with large control blocks having been taken

private (Julian Franks et al., 2005).[9] Business group governance had essentially no mention through these developments. Corporate governance developed in response to a series of reports – the Cadbury Report, the Higgs Report, each sharpening CEOs and directors' duties to the enlightened interests of that single corporation's shareholders (Cheffins, 2008). Good corporate governance again aligned with productivity-enhancing innovation and high-income prosperity.

Business groups in Australia and Canada followed parallel trajectories (R. Morck, Percy, Tian, & Yeung, 2005; R. Morck & Tian, 2017; Ville, 2018). London merchant houses organized business groups with operating companies in Australia; London capital financed Canadian entrepreneurs' business groups. In both countries, business groups were prominent in late 19th and early 20th century industrialization; mostly fell away spontaneously as the 20th century progressed; resurged in the 1970s amid largescale industrial policy subsidy programs; and then mostly fell away, again spontaneously, after those programs ended. Parallels with Sweden, whose largest business groups played a pivotal role in industrial policy because Social Democratic officials liked making deals with "big business" with a few phone calls (Hogfeldt, 2005). Like Britain, Australia and Canada saw intense merger activity and equity financing, so equity issues and equity financed takeovers may have eroded control blocks as J. Franks et al. (2012) document in the demise of British business groups.

Through all this, in both countries, the primary duty of CEOs and boards was to their single corporation, ongoing takeover activity and, later, activist investors targeted firms with depressed share prices. Canada's Oppression Remedy is a business group-level governance regulation, but grants shareholders of a business group member firm standing to sue the group's controlling shareholder for tunneling, even if this benefits other group firms, and thus essentially requires that group member firms be run as if they were independent.[10] Pressure to maximize each firm's share valuation again translates into pressure to innovate, allowing both countries to attain and sustain high-income economy status.

Israel, founded in 1949, is a recent example of a high-income Common Law economy dismantling business groups (Kosenko & Yafeh, 2010). Invaded by all its neighbors upon its 1949 creation and populated largely by refugees, Israel had a limited formal market infrastructure. Moreover, many Israelis had Eastern European roots and supported socialism; and the country was a democracy. The economy became densely regulated and businesses grew accustomed to high taxes and generous subsidies. Business organizational forms developed to suit this environment. Many important businesses were

[9] Mandatory Takeover Laws elsewhere, where takeovers are rare, appear to have little impact.

[10] Two Supreme Court rulings, People's v. Wise [2004 SCC 68] and BCE Inc. v. 1976 Debentureholders [2008 SCC 69], infer vague stakeholder rights that may extend across business groups in Canada.

controlled by the Jewish Agency (part of the World Zionist Federation) or Histadrut (a labor union alliance), both closely linked with the long-governing Labour Party, but nine family controlled business groups drew on foreign capital to finance their member firms. A 1960s financial crisis and succession disputes undid many of the family groups, leaving their ex-member firms controlled either by foreigners or Histadrut. A hyperinflation in 1974–84 amid intensified interventionism saw business groups expand rapidly into increasingly pyramidal structures, even as the economy floundered. The largest were the manufacturing-centered Koor and bank-centered Hapoalim groups, both Histadrut controlled, the Leumi groups, whose ultimate control passed from the Jewish Agency to the state, and the diversified family-controlled IDB and Eisenberg groups. In the 1980s, as Israeli governments shifted from direct control to industrial policy taxes and subsidies, groups expanded further.

By the late 1980s, bitter experience had eroded support for socialism. Privatizations shunted former state-affiliated group firms to family business groups, and then to new family business groups that displaced old ones. Over the next two decades, the economy did well and Israel became a high-income economy.

However, corporate control remained concentrated. At the end of 1990s, 20 industrially diversified family-controlled pyramidal business groups, containing some 160 listed companies, constituted about half of total stock market capitalization, the 10 largest constituting 30% of total market capitalization (Kosenko, 2007). Group firms especially dominated finance.

Group and non-group firms ROAs and Q ratios were similar. However, this concentration of economic and political power became a public policy issue (L. Bebchuk, 2012). The Israeli newspaper *The Marker* led a campaign for reform. A first reform mandated that firms issuing more shares automatically unify their outstanding share classes, leaving previously super-voting shares and nonvoting shares with one-vote per share (Hauser & Lauterbach, 2004; Lauterbach & Pajuste, 2015). This need not affect pyramidal groups where dual class shares magnify corporate insiders' control over independent firms, rather than cement business groups (Lauterbach & Yafeh, 2011). A second 2013 reform, The Law for Promotion of Competition and Reduction of Concentration, banning pyramids from having more than two tiers may have been more effective (Hamdani, Kosenko, & Yafeh, 2020).

Major High-income Continental European Economies

Large diversified business groups are commonplace in the early industrializations of continental European

economies.[11] Unlike Anglo-Saxon economies, continental Europe retained large business groups through the 20th century. One factor may have been the devastation World War II inflicted on much of the continent's industrial infrastructure. The postwar reconstruction took some three decades, and was a period of sustained high growth, albeit from a low war-devastated starting point (Eichengreen & Ritschl, 2009; Jánossy, 1969; Vonyó, 2008). Business groups played key roles in the postwar industrial policy systems of subsidies that financed reconstruction, and so became associated with prosperity-increasing public-private partnerships. Postwar reconstruction, at least in its early stages, may have created hold-up problems and other market failures reminiscent of the low-income trap. Business groups and industrial policy technocrats, working hand-in-hand, may well be advantageous to post-war reconstruction. The blueprint is evident in the ruins of prewar structures and sustained high growth requires no creative destruction.

Business groups in continental Europe failed to draw fire from left-leaning reformers. Nostalgia for these decades, *les Trente Glorieuse* (the Glorious Thirty) in France, *Wirtschaftswunderjahren* (economic wonder years) in West Germany, *il boom economico* (Economic Boom) in Italy, and *Rekordåren* (record years) in neutral Sweden, whose undamaged industrial firms supplied reconstruction elsewhere, may be one factor. Economic openness and the common market expanding and deepening across Europe that limited even very large business groups' scope for egregious market power abuses may have been another. Business group controlling families' links to the left-leaning politicians implementing the industrial policies may also have left a socialist afterglow in some countries, perhaps especially Italy (Andrea Colli & Vasta, 2015) and Sweden (Hogfeldt, 2005). Yet another factor may have been European business groups' member firms including banks, which might bail out other business group firms in recessions or crises that damage or ruin more productive independent firms (R. Morck et al., 2011).

By the 1970s, the post-war reconstruction era had run its course and continued growth required innovation and creative destruction. Consistent with business groups avoiding creative self-destruction (R. Morck & Yeung, 2003), group member corporations' innovation are concentrated in sectors unrelated to the operations of other firms in the same group (Belenzon & Berkovitz, 2010). The importance of business groups relative to freestanding firms is falling (Asli M. Colpan & Takashi Hikino, 2018; Asli M Colpan & Takashi Hikino, 2018); perhaps as creative firms in one group disrupt uncreative firms in other groups, or as freestanding creative firms rise. Increasing European integration and increasing openness to

[11] Business groups were prominent in many European economies (Aganin & Volpin, 2005; Marco Becht, 2018; Cassis, 2018; Andrea Colli & Vasta, 2018; Cuervo-cazurra, 2018; Ferreira da Silva & Neves, 2018; Fohlin, 2005; Hogfeldt, 2005; Larsson & Petersson, 2018; Schröter, 2018). A range of unique control mechanisms may have substituted for pyramidal control in the Netherlands (De Goey & De Jong, 2018; de Jong & Roell, 2005).

global competition are plausible explanations for intensified competition.

Japan.

Japan's business groups arose as described above, were broken up by fiat, reformed, and now appear decreasingly competitive (R. K. Morck & M. Nakamura, 2005). Japan was a U.S. military protectorate from 1945 to 1952, and Americans with fresh experience breaking up US business groups did the same in Japan, though military rule made the process quicker. By the US withdrawal in 1952, Japan's big businesses were freestanding widely held professionally managed firms, emulating the emerging norm in the United States.

To block successive bouts of takeover bids in the 1950s and 1960s, the managers of former business group member firms created new shares and swapped small blocks these for small blocks of the shares of every other former member firm of that group with each swap calculated to pay offsetting dividends. Each firm could, by increasing its market capitalization slightly more than twofold, end up with a majority of its shares held by other group firms with no increase in dividend costs. The resulting structures, called keiretsu, were a genuinely new kind of business group. No controlling shareholder imposed decisions on corporations' CEOs, no coordination across keiretsu firms was evident. Governance was corporate, but independent of pressure to earn profits or innovate. Keiretsu firms oversaw Japan's postwar reconstruction, an effort that involved close links with government planners well into the 1970s.

Japan's highest profile innovators, firms such as Honda, Sony, and Panasonic were outside this system. Keiretsu firms fell behind, despite subsidies and bailouts and now fill out the ranks of Japan's so-called zombie firms that are blamed for its prolonged growth slowdown (Caballero, Hoshi, & Kashyap, 2008; Dow & McGuire, 2009). Japan's keiretsu business groups are increasingly seen as relics of postwar reconstruction and a policy problem (El Kalak & Yamada, 2018)

5.4 Escapes in Progress

This section looks at two economies that, in terms of the issues raised above, are in transition. India, long a low-income economy with a chronically low "Hindu grwoth rate" rose on middle-income status over the past three decades (Rodrik & Subramanian, 2005). India's experience reveals how the government's dogged efforts to advance a state-led Big Push foundered for a generation amid the government failure problems descrtibed above (Easterly, 2006b). It's business groups formed, but a rise to middle income levels was not possible until the state withdrew its hand. South Korea, the world's newest major high-income economy, now grapples with the political economy problems of abandoning business group level

governance and substitute corpraote governacne.

Business Groups and India's New Middle-income Economy

Business groups dominate Indian big business throughout its modern history (Sarkar, 2010a). In newly independent India, the Tata and Birla families assembled the largest business groups, expanding their substantial colonial era groups by picking up pieces of retreating British overseas business groups as independence dawned (Khanna & Palepu, 2005; Raianu, 2018). Group banks also played important roles in both until India's 1969 bank nationalizations (Ghosh, 1974, p. 320). India's first prime minister, Jawaharlal Nehru, implemented an idealistic form of socialism that imposed dense regulation – the so-called License Raj (Das, 2002, 2013) – on all aspects of business activity to harness business for the social good. Over the subsequent decades, the License Raj became an intimidating and increasingly corrupt barrier to entry. The largest business groups found ways to cope. The Birla and Tata families each had a large "embassy" in the capital, whose employees navigated the bureaucracy, filling out documents, standing in long lines to submit them, and influencing key officials to provide needed stamps, signatures, and certificates of approval. A single embassy served all the firms in each family's vast business group, a genuine example of economies of scale in business-government relations. India's millions of very small firms had no hope of fulfilling regulatory requirements and resorted to remain small to evade the notice of License Raj officials – an optimal business strategy not obviously concordant with rapid economy development,

Large new business groups grew by working the License Raj. Das (2002, p. 190) details how Dhirubhai Ambani built the Reliance Group, one of India's largest business groups, by trading exporter import licenses, immensely but artificially under the License Raj's import substitution system, and by befriending pivotal government officials. However, he was not merely a political rent-seeker, but also worked to improve institutions. Denied bank financing, he reanimated India's moribund stock market by marketing his shares to middle class investors in a travelling roadshow that quadrupled the number of Indian shareholders (Das, 2002, p. 193). This opened new financing opportunities for Indian entrepreneurs.

Few have such stamina, so large business group firms may well have been the only viable organizational form (other than state-owned enterprises). The groups expanded into unrelated industries to access quality inputs that could not be reliably sourced through arm's-length market transactions (Sarkar, 2010b). Khanna and Palepu (1997); (Khanna & Palepu, 2000b, 2005) argue that Indian business groups allocate capital and other resources to the member firms with the best growth opportunities.

Research from various angles confirms that Indian business group firms share capital (Lensink, Van der Molen, & Gangopadhyay, 2003)) and risk (Komera & Lukose PJ, 2014). Efficient capital and risk sharing would reduce group firms' costs of capital; but Indian groups' capital and risk sharing is not necessarily efficient (Chacar & Vissa, 2005). Moreover, Bertrand, Mehta, and Mullainathan (2002) find capital systematically flowing from member firms in which the controlling family's stake is small to member firms in which the controlling family's stake is large (see also Kali & Sarkar, 2011; Siegel & Choudhury, 2012). Indian business groups' controlling shareholders also use rights issues to accumulate and augment control blocks gradually (Jetley & Mondal, 2015). Both practices arguably reduce outside investors' dividends and therefore increase group firms' costs of capital. Both characterizations could be correct simultaneously, thus research on their potential interactions would be useful.

Minority solidarity may have created a sense of stewardship that reduced agency costs between the controlling family and hired managers. Tata and Birla firms historically drew non-family top managers from their Parsi religious minority and Marwari caste, respectively. Fair dealing therefore protected the reputations of both the business group and the minority (Chen, Chittoor, & Vissa, 2015; Khanna & Palepu, 2000b, 2005; Lamin, 2013; Ray & Chaudhuri, 2018). A larger business group can magnify the scope and scale on which reputational capital is applied, increasing its value. Where institutions are weak, a wider application of reputational capital may be especially valuable.

Free-market reforms in the 1990s cut regulation, opened the economy, and reduced entry barriers with some success (Aghion, Burgess, Redding, & Zilibotti, 2008; Cuervo-Cazurra & Dau, 2009); As the reforms progressed, business group firms – the top performers in terms of financial ratios under the License Raj – lost their edge over independent firms (Fuad & Akbar, 2018; Zattoni, Pedersen, & Kumar, 2009). Diversified groups lost ground to focused ones (Ramaswamy & Purkayastha, 2017; Ramaswamy, Purkayastha, & Petitt, 2017) Groups with rent-seeking advantages lost ground to those with efficiency advantages (Majumdar & Bhattacharjee, 2018) Group firms costs of capital rose (Khatua, 2017). Group affiliates' financial performance advantage also receded as India opened to global markets (Hu et al. 2019). By 2020, India had become a middle-income economy.

Business Groups and South Korea's New High-income Economy

By 1979, HCL subsidies were ballooning, inflation soaring, foreign debt half of GDP, and *chaebol* seemed to be directing the state (Chibber, 1999, 2005; Luedde-Neurath, 1986). To counter the financial crisis, Park decided to end subsidies to the chaebol, but was assassinated by the head of the secret service before the decision was announced. In 1980, General Chun Doo-hwan took over a bankrupt state shut out of

global debt markets. To obtain an international bailout, as a last resort after all other options were exhausted, Chun grudgingly adopted free-market economics and ended subsidies to the chaebol precisely a century after Japan. Korea's rapid ascent to First World status now began.

To expand their chaebol without losing control, the families took to equity-financed pyramiding. The chaebol pyramids sprouted new tiers of firms and, like prewar Japan′s great *zaibatsu*, soon attained "full set diversification" – a member firm in every key industry (Kim, Hoskisson, Tihanyi, & Hong, 2004). Each chaebol became a self-contained image of a national economy, its firms dealing mainly, often solely, with each other, competing with other chaebol for capital and foreign customers. They perhaps competed for domestic customers, but oligopoly power was a growing concern. Their political influence ran deep. In lieu of subsidies, Chun brutally suppressed wages to safeguard the chaebols' global competitiveness. South Korean workers, as productive as those in high-income countries, were to accept patriotically low wages.

Widespread strikes and student protests brought in democracy in 1987. Wages rose rapidly, approaching First World levels by the mid-1990s, creating a large domestic market that more than replaced falling exports (Mo & Weingast, 2013) as the chaebol expanded (Kim et al., 2010; (Almeida, Kim, & Kim, 2015)) and productivity surged (Young, 1995).[12] Foreign capital flooded into the new high-income economy as investment, 25% of GDP under Park, rose to 40% of GDP under democracy. Banks remained SOEs, but many *chaebols* set up non-bank financial institutions that lent to their other firms at low rates, perhaps reflecting rational expectations that the chaebol were too big to fail (G. S. Bae, Cheon, & Jun-koo, 2008; K.-H. Bae, Kang, & Lim, 2002; Gormley, Johnson, & Rhee, 2015; Minetti & Yun, 2015). Excessive leverage and capital misallocation are evident in the years leading up to the crisis in 1997(C. H. Lee, Lee, & Lee, 2002). After a brief recession, slower growth typical of high-income economies resumed.

Even before the 1997 crisis, the chaebols' continued dominance of a new high-income economy was a political concern (Lim & Hahm, 2006). Business groups made sense when markets, contracts, and trust were weak; but now seemed mechanisms of elite entrenchment (Kee-Hong, Jun-Koo, & Jin-Mo, 2002; S. Lee, Park, & Shin, 2009; Oh, 2017). Rising concerns about chaebol families' financial and corruption scandals evoke concerns they are too big to jail (Choi, Hyoung-Goo, & Lee, 2018; Oh, 2017). An ongoing corruption scandal jailed President Park Geun-Hye (General Park's daughter) and Lee Jae Yong (the Samsung scion). Lee swiftly obtained release; the ex-president was not.[13]

[12] Young (1995) shows studies linking most of South Korea′s growth to factor accumulation mismeasure its productivity growth.

[13] See "Samsung Heir Is Indicted but Avoids Jail" *New York Times*, Sep 1, 2020.

More calls to break up the chaebol ensued. Concerns about financial misdeed, monopoly power, and excessive political influence brought in the reforms that broke up business groups in the US in the 1930s, in US-occupied Japan after 1945, and in early 21st century Israel. Support for similar measures may gain increased political traction in South Korea if market forces fail to marginalize business group power, as occurred in Australia and Canada.

6. Switching Engines

Rosenstein-Rodan (1943) identifies the fundamental barrier to growth in low-income economies as a Catch 22. Every firm, to be viable, needs many others, and each of those needs yet more. A firm needs suppliers and customers, their suppliers' suppliers and other customers, their customers' customers and other suppliers, and so on; and needs enough potential competitors for every one of these to keep prices in line. Rosenstein-Rodan's point is that no firm can be viable without this network up and running, but that the network cannot form without many firms forming first. He concluded that starting the engine of economic growth requires a Big Push to get this network up and running all at once.

The economic planners and multilateral aid institutions Rosenstein-Rodan (1943) charged with implementing Big Push have generally ended badly. Government support formed initial sets of firms in Belgium in the 1830s and 1840 (Marco Becht, 2018), Japan in the 1860s and 1870 (Randall K. Morck & Masao Nakamura, 2005), and South Korea in the 1950s through 1970s (Lim et al., 2003). State aid brought on corporate debt defaults, banking crises, sovereign debt defaults and general economic crises in these countries. These patterns are typical across countries and time periods (Easterly, 2003, 2006b, 2006c).

Successful ascent to middle-income levels corresponds to the state withdrawing its guiding hand in Japan and restricting its interventions to narrow sets of industries and firms in South Korea. Rapid catch-up industrialization in Europe and European offshoots occurred in the late 19th and early 20th centuries, an era of classical liberalism, small government, free international capital flow, and (with exceptions) free trade. A common theme across these economic ascents is the importance of business groups: constellations of firms, each financed and managed separately, but all under the supervision of one tycoon, business family, or in some cases, bank. Indeed, business groups are ubiquitous across developing economies (Khanna & Yafeh, 2005, 2007; Masulis et al., 2015; Schneider, 2009a) economies and in the early industrializations of most of today's high-income economies (G. Jones & A. M. Colpan, 2010).

Aguilar and Cho (1985) quote South Korea's Koo Cha-Kyung describing how he had problems producing cosmetics because plastic caps were hard to find and had to set up a plastic company. He had to control both companies because if someone else had set up South Korea's only plastic cap company,

Koo would have had to pay whatever price that lone supplier charged. The supplier, maximizing profits, share value or surplus, would charge a price high enough to siphon off almost all the cosmetics company's profits, leaving Koo just enough to cover costs and stay in business. A lone cosmetics company might not stand, but a nascent business group containing a cosmetics company and plastic company, both controlled by the same person, could survive and accumulate profits. In this way, company after company formed, each to help the business of the others and all governed as a group. Business group governance that stopped one company from taking advantage of another let economic development unfold. As rival business groups expand in this way, competition between business groups for consumer spending, outside investment, and employees exerts pressure on each to increase group-level efficiency.

South Korea is the world's newest major high-income economy and the development of its business groups is uniquely well documented. Business groups arose in other economies at analogous points in their development trajectories. That something analogous was going on in many economies at that stage of development seems plausible. Research on the historical origins of business groups to date (Colpan & Cuervo-Cazurra, 2019; Asli M. Colpan & Takashi Hikino, 2018; Asli M Colpan & Takashi Hikino, 2018; G. G. Jones & A. M. Colpan, 2010) is broadly consistent with this thesis, but more research is always useful.

Rapid industrialization in both South Korea and Japan followed economic crisis caused by state-financed businesses. In Japan especially, these state-financed firms imported foreign technologies. After the ensuing finance crisis, these firms' assets and technologies were present in the domestic economy, bought by private-sector actors who, in many cases, went on to tap stock markets to form and expand large business groups. In this sense, governments prepared the ground for private-sector business group-led development.

Business groups expand in a capital-intensive phase of economic growth, setting up new group firms as their existing group firms' needs develop. This requires massive capital, and often corresponds to the establishment of a domestic stock market. Capital inflows from London, the global financial center of the late 19th and early 20th century, were important to expanding business groups in many catch-up industrializing economies. Apex firms for many business groups elsewhere were formed and traded in London. Pyramidal structures let each business group's ultimate controlling tycoon, family or bank tap public equity on a massive scale while retaining control of every firm in the group. Several groups expanded in competition with each other for final goods consumers, employees and public capital, suggesting market discipline might have limited inefficiencies within each successful group.

Once a large interconnected network of firms is in place, further wealth creation must come from something else. The engine of growth in high-income economies is innovation and rapid innovation is disruptive – a process Schumpeter (1912) called creative destruction. Creative firms with new technologies rise and disrupt or even destroy other firms that could not keep up. The creative firm generates new wealth from its innovation, but the overall economy generates vastly more new wealth. One innovation (e.g. the personal computer) opened new ways of doing business (e.g. Walmart's computerized inventory system), follow-on innovations (e.g. apps, the internet) and all manner of new options for consumers (e.g. on-line shopping). Ultimately, the economy creates more and more value for consumers at lower costs on a grand scale and the economy grows. The collateral damage – typewriter companies, brick-and-mortar retailers, and others – fall away as collateral casualties of technological progress.

Economies whose existing corporations belong to large business groups can internalize much of this. If Amazon and Sears were member firms of the same business group, Amazon's rise might have been checked to save Sears for the good of the business group as a whole. Being in the same business group internalizes the balances benefits to one firm against costs to the other. Balance can have positive connotations, but in this case also has negative implications for high-income economic growth. This is because most of the benefits of innovations go to still others – consumers with online shopping options, small businesses that can source inputs on-line, and so on. Social gains do not factor into the group's decision.

Economies where each firm is out for itself, that is, where governance is corporate, not at the level of a large business group, encourage innovator firms to innovate, protected by intellectual property rights, without regard to the disruption or destruction this causes non-innovative firms' shareholders and stakeholders. This sustains continued prosperity growth because the positive externality from each individual firm's successive innovations spreads widely across the economy. Removing the collateral damage innovators cause from their private cost-benefit analysis reshapes their incentives to better align with broad-based, on-going, technology-drive economic growth. Corporate governance that avoids accounting for the negative externality from creative destruction is thus social welfare enhancing.

Equity markets appear crucial. Issuing shares provides a risk-tolerant form of capital to innovators. Individual shareholders, by diversifying, can smooth out the gains and losses of successful innovators and the loser-firms they sideswipe. Moreover, information-rich equity markets also shape firms' costs of capital, elevating the shares of more promising innovators as well as the shares of other firms throughout the economy able to build upon those innovations. This lets the initial innovators and the firms building

on their innovations raise more money per new share issued. By the same logic, unlikelier innovators must issue larger numbers of their more depressed shares to raise any given amount of capital. This reduces their insiders' equity blocks, facilitating a transfer of control – perhaps to more innovative new managers. The ups-and-downs of individual firms' shares, if driven by rational and informed trading, channel more capital on better terms to likelier successful innovators. Economies with larger, more active, more information-laden and better-regulated stock markets post faster productivity growth (Durnev, li, Morck, & Yeung, 2004; King & Levine, 1993; Randall K. Morck, Yeung, & Yu, 2013; Wurgler, 2000).

Because the positive externality of ongoing innovation is at the economy-level, compensating losers is most efficiently financed at the economy level. Social welfare programs financed by broad-based taxes arose in high-income economy for various reasons. Their staying power may reflect the match between economy-wide benefits of continual innovation and economy-wide taxation to finance a safety net for casualties in the competition to innovate.

High-income economies managed to power up innovation as their main engine of growth. Some broke up business groups, others saw competition erode their business groups away leaving economies ever more dominated by freestanding firms. Yet others found ways to tame their business groups. But many economies that went through rapid early-stage industrializations languished in prolonged middle-income traps. Argentina, Brazil, Colombia and many other Latin American economies underwent promising eras of rapid development around the turn of the 20th century, but then failed to continue the ascent to high-income economy status. These economies retained large business groups as a central organizational form for big business, but also embraced 20th century ideologies unconducive to continued economic prosperity. India's License Raj (Das, 2002), Latin America's Corporatist managed economies (Randall K Morck & Yeung, 2010), Egypt's Arab Socialism (Vitalis, 1995), and Turkey's statist Kemalism (Colpan, 2010) each found grounds for continued state intervention and thus made investing in government connections to shape that intervention a high-return investment. The mid-20th century spread of import substitution shut off access to foreign suppliers and customers, further entwining big business and government.

Business elites that overlap with political elites, such as many families controlling very large business groups, are especially well-positioned to accumulate political rents (R. Morck & Yeung, 2003, 2004; Schneider et al., 2018). State protected monopolies, subsidies, regulated prices, and other fruits of business-government cooperation can become more lucrative and less risky than innovation. A limited access to the formal institutions that surround big businesses likewise enhances stability and avoids disruptive upstarts. A middle-income trap sets in, with established big business prospering and the

economy stagnating. Business groups, under no pressure to break up are well suited to prosper in a middle-income trap economy.

Most of today's high-income economies rose steadily from pre-industrial agriculture through rolling out the network of suppliers and customers that undergirds a modern economy and onward to high income-levels. We can characterize the middle-income trap and the economic forces that likely contribute to its stability. Free markets, openness, and open access to the Rule of Law all clearly matter. A few tax havens and petro-states aside, no economy has attained high-income status without these.

However, a decentralization of private sector governance also appears as economies rise to high-income levels. Vast business groups break up, their controlling families holding on to choice firms, but forsaking the power to coordinate across the whole economy. In some countries – notably the United States, japan, and Israel – state intervention broke large groups up after public concerns about monopoly power, undue political influence and other abuses gained traction. Elsewhere, large groups broke up spontaneously – as in Australia and Canada. Still elsewhere, economic openness and good government may prevent such abuse and force group firms to be run more or less independently. Decentralizing the governance of big businesses may curtail corruption, though freestanding large corporations in many countries are active and successful lobbyers. A deeper reason why decentralizing governance to the level of individual corporations likely helps economies rise to high-income status is that corporate governance externalizes the destruction, disruption, and collateral damage one firm's innovation inflicts on other firms. Innovators get on with innovating, losers be damned. The whole economy benefits and the whole economy finances the safety nets for the casualties of ongoing rapid innovation-based economy growth.

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