Intellectual Property Rights and the Decay of American Hegemony

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Dollar centrality in the global monetary system was a crucial pillar of US global power from 1945 until the Trump Administration and the COVID19 shock threatened to upend the global order. What was the structural basis for that centrality? Did it contain contradictions that drove endogenous decay? Hyman Minsky (1986, 79) posed a general question about money that applies here: "Every unit [in the economy] can 'create' money … the problem is to get it 'accepted'." Globally, this question becomes: Why do non-American actors continue to accept dollars, which, in practical terms, means holding dollar-denominated assets, and continue to use the dollar as the transaction currency for trade and foreign exchange hedging? Why do continuous US current account deficits and a steadily worsening US net international investment position—all of which could signal a declining ability to service dollar denominated claims—not induce other actors to flee the dollar for other, presumably more stable currencies?

These questions are themselves embedded in the larger issues Susan Strange raised about US hegemony. For Strange (1989), hegemony rested on four pillars: dominance in or control over ideological power, military power, production power, and credit creation (financial power). This chapter concentrates mostly on the third aspect. It argues that intellectual property rights (IPRs—patent, copyright, brand, and trademark) were central to all four aspects of US power after 1991. Put simply, military power rested on technological dominance generated through investment in basic R&D. In turn, US firms commercialized that R&D, and protected their profit streams with IPRs. This allowed them to organize global production chains from which they extracted the lion's share of profits. Profitability created a huge pool of US assets that could be traded for real goods, making chronic US trade deficits acceptable to its trade partners. Finally, with varying degrees of success, the US state projected its preferred and ideologically justified IPR regime into international law through global, regional, and bilateral trade agreements, often with the support of IPR-oriented foreign firms.

IPRs were one side of two inseparable structural factors assuring dollar acceptability in the pre-COVID19 world. The other factor was historically rooted, politically engineered deficient aggregate demand in major export surplus economies. Demand-deficient economies needed significant export surpluses to attain politically-acceptable minimum levels of GDP growth. But, by accounting definition, current account surpluses meant that exporters accumulated claims—assets—denominated in the importer's currency, as surplus countries in effect loaned deficit countries the money used to buy exports. Practically speaking, the United States accounted for half of cumulative current account deficits

between 1992 and 2018 (Table 1), meaning exporters accumulated US dollar-denominated claims. But why would an exporter trust the value of dollar-denominated assets in the face of continual current account deficits and rising net external debt?

The value of those dollar-denominated assets rested implicitly on profits generated by IPR-rich US firms and the GDP growth spillover from those firms. Here popular imagination and economic reality run in parallel: Apple alone accounted for about 1.5 percent of global stock market capitalization at the end 2019. This made it rational to trade BMWs (0.04 percent of global stock market capitalization) for pieces of paper—US Treasuries and stock market equities. More generally, continual growth of the US asset base enabled continual trade deficits without damage to the US dollar.

But those deficits also endogenously eroded the domestic social base for an open trading regime and a science-based economy. Electoral backlash by trade losers beginning in the early 1990s eventually helped put the more nationalist and de-globalizing Trump administration in power. That administration withdrew from agreements that would have expanded protection for IPRs of both US and foreign firms, tried to defund the US science base, scared away immigrant researchers, and deinstitutionalized foreign policy. This chapter thus argues that IPRs played a crucial role in sustaining and, through a process of endogenous decay, weakening US hegemony.

Table 1: Cumulative current account deficits and surpluses, 1992–2018, $bil* and % of total

12 largest deficit countries			12 largest surplus countries		
	$ bil	%		$ bil	%
USA	-10635.5	50.5%	China/HK	3670.1	15.4%
UK	-1780.5	8.5%	Japan	3380.2	14.2%
Australia	-904.9	4.3%	Germany	3298.1	13.9%
Spain	-813.7	3.9%	Gulf oil exporters**	2954.7	12.4%
Brazil	-721.3	3.4%	Russia	1214.9	5.1%
Turkey	-593.6	2.8%	Netherlands	1195.1	5.0%
India	-532.2	2.5%	Switzerland	1174.5	4.9%
Canada	-457.2	2.2%	Singapore	865.2	3.6%
Mexico	-450.2	2.1%	Norway	834.0	3.5%
Greece	-354.9	1.7%	Taiwan	815.0	3.4%
Poland	-277.7	1.3%	Korea	735.4	3.1%
Portugal	-260.8	1.2%	Sweden	493.2	2.1%
Sum, these 12	-17782	84.5%	Sum, these 12	20187	84.8%
Global deficits, total	**-21051**		**Global surpluses, total**	**23793**	

Note: Global deficits and surpluses do not equal because of errors, omissions, capital flight, and tax avoidance.
Note: All surplus oil exporters = 24.8% of global surpluses.
* = current dollars. Inflation adjusted data are essentially similar.
** = Saudi Arabia, Kuwait, Qatar, UAE.
Source: Author's calculations from IMF, World Economic Outlook database, October 2019 release.

Dollar Centrality

The dollar's durability in the face of persistent US current account deficits and a negative net international investment position suggests looking at those deficits as part of the structural basis for US power: a feature, not a bug. Network analytic research (Oatley et al. 2013; Fichtner 2016) confirms the centrality of US and allied financial firms in global monetary flows, and of the United States as a source of and site for investment flows. Yet, the mechanisms generating persistent centrality remain relatively unexplored beyond invocation of network effects—essentially transaction costs—or generic reference to US hegemony in the global economy. The connections between dollar centrality in the international monetary system and other aspects of US global power in the production, knowledge, and military spheres—the other three pillars of US structural power in Susan Strange's (1989) formulation—remain similarly opaque.

Two related though not exhaustive mechanisms generate durability, centrality, and "feature-ness" for the dollar. These mechanisms connect all four of Strange's pillars of global power, but this chapter concentrates on financial power. The first mechanism is that US current account deficits generate dollar centrality through self-reinforcing dynamics prior to the networks revealed by network analyses. Deep-seated domestic institutional arrangements in current account surplus economies produce chronic domestic aggregate demand shortfalls, which then produce US current account deficits. The more those export-led economies run surpluses with the United States, the more dollars they accumulate; the more dollars they accumulate, the more dollars flow through their financial and especially banking systems back into dollar assets and liabilities; the more dollar assets and liabilities those financial firms hold on their balance sheets, the more those firms rely on the Federal Reserve Bank (FED) both as a lender of last resort or a supplier of outside money during (the inevitable) crises; the more those financial firms lend or invest in dollars, the more counterparty debtor economies are drawn into use of the dollar. This mechanism originates from institutional responses to the problem of late development and not the emergent network of dollar claims and liabilities itself.[1] That said, lower transaction costs and the huge US asset market also reinforce this emergent network.

Still, surely dollar acceptability must face limits set by persistent US current account deficits. Prudent actors might well balk at accepting more assets denominated in a currency at risk of sustained depreciation. In today's world of flexible exchange rates, only above-average US economic growth and/or profits for the firms constituting the bulk of equity market capitalization validates confidence in dollar assets (Schwartz 2009).

Mechanism two is thus about profits, which corresponds to Strange's productive power. US firms capture a disproportionate share of global profits, and, within this context, firms with robust IPRs capture a disproportionate share of US and global profits. Compliance with international trade treaties protecting IPRs is the focal point or center of gravity for this disproportionality. IPRs give some US firms monopoly or near monopoly power in the global (and domestic) commodity chains they construct. While many firms are not enmeshed in these chains, they tend to capture a relatively small volume of global profits. US firms accounted for 35.2% of cumulative profits for the 10,800 largest global ultimate owners, from 2010 to 2018.[2]

Profitability for US IPR-rich firms rests on compliance with trade treaties and enmeshment in global value chains orchestrated by US firms. The extension of US IPR law through various trade treaties

[1] Schwartz (2019) provides a more nuanced argument.

[2] Author's calculation from Bureau van Dijk Orbis database.

(Sell 2003; Drahos 2010) allows US IPR-based firms to capture a disproportionate share of global profits via that monopoly power. US firms accounted for 34.4% of cumulative profits generated by any firm appearing on the Forbes Global 2000 list from 2006 to 2020; within that, firms in sectors characterized by robust IPRs account for 37.9% of US profits and 13% of global profits.[3] Treaty compliance historically has not been purely voluntary (Gruber 2000), but, rather, reflects a gradient in which mutually beneficial cooperation ranges into coercion as the proportion of local (non-US) firms benefiting from those treaties declines. US firms are not the only ones that possess marketable intellectual property. Non-US firms that also benefit from IPRs broaden the global political coalition supporting robust IPRs; those firms account for 45% of profits in the biotech and pharmaceutical sectors, for example. Yet, US firms tend to control the commodity chains in which many foreign firms participate.

These two mechanisms are connected: the first explains why non-US actors accumulate dollar-denominated assets, and the second explains why they retain those assets. The two mechanisms transform the exorbitant burden—current account deficits associated with use of the dollar as the international reserve currency—back into an exorbitant privilege. They represent a transfer of real resources back to the US economy in exchange for promises to pay back something in the future. Finally, though we will not explore this in the current chapter, these two mechanisms are also linked to the military side of US power, where a similar logic of dominance over potential peer rivals has driven science policy and technological innovation. Put bluntly, a military-innovation complex (Hozic 1999; Hurt 2010; Weiss 2014; Mazzucato 2015) is the research foundation for high profit US IPR firms.

Dollar Centrality Meets Late Development

Non-oil exporting countries with massive export surpluses are often lauded as high performing economies. There is some truth here, because, obviously, people do buy their exports. But there are two reasons to contain our enthusiasm. First, stellar export performers have lower GDP growth rates than the main deficit countries, China excepted. Second, most export over-performers are foreign investment underperformers, earning below average returns on the foreign assets they accumulate. Slower growth stems from domestic political economies that suppress domestic demand. Domestic demand suppression, in turn, forces a reliance on export surpluses for growth.

The major surplus countries fall into two distinct groups that are demand deficient for structural and political reasons (Table 1). The first is oil exporters. We would expect oil exporters—if rational—to treat oil as an illiquid asset and seek to transform oil profits into more liquid assets, rather than expending oil revenue on current consumption (Schwartz 2012). As oil is mostly priced in dollars, they will thus accumulate dollars and possibly dollar-denominated assets. Oil pricing in dollars, in turn, forces net-oil importing countries to earn or buy dollars in global export markets. In the aggregate, this implies that the world has to earn an export surplus versus the United States to buy oil, or to borrow in dollars from successful exporters. Dollar pricing for oil was, and continues to be, a major foreign policy priority for the United States (Spiro, 1999).

The other major surplus countries in Table 1 were or are all late developers. As Gerschenkron (1962; see also Streeck and Yamamura 2001) argued, successful late developers generally mobilize capital for development by suppressing domestic demand. The capital thus mobilized is channeled into successively “heavier” industries, which, in varying proportions in different countries, tends to starve

[3] All data from the Forbes Global 2000 are the author’s calculations from annual FG2k lists. Scott DeCarlo, “Methodology: How We Crunch the Numbers.” *Forbes*, April 18, 2012, p. 36 explains *Forbes*’ selection methodology.

agriculture, light industry, small and medium sized enterprises, and the service sector of investment capital. When this policy-driven mobilization of domestic resources creates viable, globally-competitive firms at the technology frontier, it typically leaves behind permanently deficient domestic demand. Low household consumption in GDP enables and forces firms to look outward for markets, which they find in the Anglo-economies and some developing economies. Late developers also try to undervalue their currency to promote exports and growth (Prasad 2015). Indeed, Höpner (2018) argues that even Germany, an advanced economy with a robust welfare state, has operated a pro-export undervaluation regime since 1950. As an outcome of late development, this is more a structural systemic factor than an expression of independent local choices. Successful late development creates durable constellations of political and economic power suppressing domestic demand.

This institutional lock-in around reduced consumption also extends to financial systems. Late developing economies typically rely on patient bank lending rather than the more volatile securities or capital markets to finance investment. Although financial systems everywhere have been shifting away from traditional lend and hold banking models (Deeg and Hardie 2016), bank lending, rather than a securities market, still dominates in late developers. In the most recent data from 2013, the ratio between securitized debt plus bond debt versus unsecuritized bank loans was roughly 2.2::1 for the US market, while the ratio for Japan was 1::1, and, for the eurozone and EU, it was only 0.62::1 (IMF 2015). This is a political outcome, given that roughly 80% of US securitized debt carries a government guarantee, and that securitization markets in much of the EU shrank because mortgage backed securities became politically toxic after the 2010 crisis. Consequently, most foreign financial systems continue to be bank dominated, with banks providing 80 to 90% of corporate funding in Europe versus 30 to 40% in the United States (Standard and Poor's 2015).

Successful late developers' reliance on exports for growth and banks for financial intermediation generates dollar centrality. Their exports largely go to the anglo-economies, and, more specifically, to the United States. The four anglo-economies in Table 1, plus New Zealand, accounted for 66% of cumulative global current account deficits between 1992 and 2019. US deficits alone averaged a non-trivial 0.8% of global GDP, or about $394 billion per year, contributing significantly to global demand (in comparison, the Obama stimulus 2009–2010 averaged $400 billion per year).[4] If export surplus countries returned those dollars to the United States by purchasing American goods, then their export surpluses would naturally shrink; if they exchanged dollars for their own currency, then that currency would appreciate, again shrinking export surpluses. And if they demanded payment in their own currencies, then importers would have to have some way of earning that currency, again shrinking surpluses.

Rational exporters, of course, demand payment in hard currencies and then convert that into asset purchases. But this conversion is not immaculate. Rather, their dollars flow through their local banking system and then into the global financial system. Local banks thus have growing dollar denominated liabilities (i.e. deposits), which, in turn, compel those banks to relend dollars in global markets in order to have a corresponding asset. The dollar share of liabilities (deposits) and assets (loans) on bank balance sheets thus grows. US dollar denominated liabilities have never accounted for less than 49 percent of all cross-border bank liabilities, and accounted for 57 percent in 2017. By contrast, if intra-EU lending in euros is netted out, euro denominated lending has never exceeded 8% of cross border lending and has averaged 3.5%.[5] Similarly, Taiwanese insurance firms seem to have

[4] IMF World Economic Outlook database at https://www.imf.org/en/Publications/WEO/weo-database/2019/october.

[5] Calculated from BIS data at https://www.bis.org/statistics/consstats.htm.

accumulated huge dollar assets in order to prevent the Taiwan dollar from appreciating (Setser and anonymous 2019).

Banks in export surplus economies thus accumulate large dollar liabilities (as export firms deposit their earnings) and dollar assets (as banks on-lend funds globally). The weighted average for dollar-denominated cross-border liabilities of banks in the eight European countries for which the BIS has data was 36 percent between 2000 and 2017. Indeed, non-US banks generated 80–85 percent of offshore dollar lending, with virtually all of that funded from dollars supplied by non-US entities. US dollar lending by non-US banks rose from roughly $4 trillion in 2000 to $14.1 trillion in 2017, of which roughly $10.5 trillion went to non-banks (McCauley et al. 2015; Aldasoro et al. 2017).

But is this accumulation of dollar assets really a problem? After all, the export surplus economies are huge net creditors in world markets. Surely this must reflect some decay of US hegemony in Strange's terms. While exporters are net creditors, the ones for which comprehensive data exist appear to earn sub-par returns on those investments. Export surplus Germany, Netherlands, Denmark, and Finland all ranked variously in spots 9 to 13 out of the 13 countries for which comprehensive data on returns on foreign assets from 1975 to 2017 exists (Hünnekes et al. 2019, 3–5).[6] These rankings do not reflect marginal differences. The gap between US and German returns on foreign assets averaged a non-trivial 5.7 percentage points from 1975 to 2017. Worse, the return on German domestic assets was consistently higher than that for German-owned foreign assets. Germany—and by extension almost all the other non-oil exporting surplus countries—appears to be in the unenviable position of eking out modest GDP growth based on external demand, while translating its earnings into suboptimal investments. US hegemony is precisely visible in exporters' sacrifice of real consumption today for the promise of some weak future return, based on hypothetical US exports. What are exporters counting on? Here, the outsized and IPR-based profitability of dominant US firms matters.

The Importance of Intellectual Property Rights (IPR)

Surplus economies necessarily accept some assets corresponding to their net sales. Their aggregate willingness to accept those assets rests on a belief in the future credibility of those assets, which in turn rests on differential growth in the overall US economy (supporting the credibility of public debt, mortgage backed securities, and real estate) and on differential profitability (supporting the credibility of private bonds and equities) (Schwartz 2009). Despite current account deficits, the US economy has enjoyed aggregate and per capita growth rates in real local currency terms and purchasing power parity terms exceeding all of the G7 from 1992 to 2019.[7] The US firms that make up the bulk of equity market capitalization enjoy relatively high profitability. By and large, those firms possess robust IPRs. These firms are crucial for differential growth, given that the expected value of other major tradable assets ultimately depends on growth in and revenues from the corporate sector.

Where do those IPRs come from and why do they reflect US hegemony? Capitalism is ultimately about profits and the power created by the capitalization of expected (future) profit streams into share market value. The US government's industrial and trade policies simultaneously support differential growth and profitability for US firms as well as geo-strategic superiority for the US military in the face of other countries'—often successful!—efforts to catch up. As Gilpin (1975) predicted, US firms' ability to capture profits from simple manufactured goods had eroded by the end of the 1970s in the face of

[6] Unfortunately, data on Japan are not available.

[7] Author's calculation from the IMF World Economic Outlook database at https://www.imf.org/en/Publications/WEO/weo-database/2019/october.

German and Japanese economic recovery. The US government used active industrial and trade policies to restructure the global economic playing field in favor of intellectual property and away from simple manufactured goods after 1970. Simple manufacturing became a low-profit segment in a rapidly expanding set of global commodity chains dominated by US firms with robust IPRs. This gave US firms a disproportionate share of global profits, though not necessarily to the benefit of average US incomes or, even more so, worker incomes (Table 2).

The fear of peer military and economic rivals has motivated US state actors to continually engineer new disruptive technology and disperse it among commercially viable US firms (Weiss 2014). Military and economic pre-eminence requires both abundant revenues and the ability to maintain a technological edge versus a broad range of potential enemies. Systematic and sustained defense-oriented support for technology development, which started in the 1940s, goes far beyond the justly-famous DARPA (Defense Advanced Projects Research Agency). Various US government agencies aiming to create new, commercially viable firms rather than just new technologies now run dozens of venture capital funds, like the CIA's venture capital firm In-Q-Tel. Technologies funded by the US state extend well beyond the cell phone technologies that Mazzucato (2015) highlights. Funding goes into social network analytics, biomedical and biotechnologies, new materials, alternative fuels, and batteries. Here, Strange's military structural power overlaps with financial and productive structural power, because the firms engendered by this policy are disproportionately profitable.

Table 2: Top 10 IPR-based US firms: share of global and sector cumulative profits for all Forbes Global 2000 firms, 2005–2019, plus global and national rank

	Rank		Share of all global profit	Share of global profit for indicated sector (will not sum to 100)	
	Global	USA only			
Apple	1	1	1.2%	Software	34.4%
Microsoft	6	3	0.8%	Software	22.2%
Google	20	10	0.5%	Software	14.3%
Johnson & Johnson	22	12	0.5%	Pharmaceuticals	10.6%
Pfizer	24	13	0.5%	Pharmaceuticals	10.2%
IBM	27	14	0.5%	Software	13.2%
Intel	29	15	0.4%	Tech-hard	6.1%
Procter & Gamble	30	16	0.4%	Consumer Brands	6.9%
Cisco Systems	40	20	0.3%	Tech-hard	4.3%
Oracle	42	21	0.3%	Software	8.5%
These 10, share of all global profit for FG2k			5.5%		

Source: Author's calculations from Forbes Global 2000, various years

Big US firms' profits are disproportionately large relative to the US share of the global economy, while other countries' shares are smaller or disproportionately low. The annual Forbes Global 2000 (FG2k) lists the 2000 largest firms in the world each year based on an index combining sales, profits, market capitalization, and assets. Table 3 shows the share of cumulative profits for all G7 and Chinese firms in the FG2k as a share of all profits by the 4042 firms ever appearing in the FG2k list between 2006 and 2020. The FG2k list is slightly deceptive in that it contains only publicly listed firms (so, for example,

neither Saudi Aramco until recently nor the German Mittelstand). But McKinsey (Manyika et al. 2018) examined 33,000 publicly and privately held firms with revenues over $200 million per year. Of these, 5750 firms with revenues exceeding $1 billion—measured as earnings before interest, tax, depreciation, and amortization (EBITDA)— accounted for two-thirds of total profits from 1994 to 2016. So, the 4042 FG2k firms are a reasonable proxy for the world just before and after the 2008 global financial crisis.

Table 3: Profit share of Forbes Global 2000 firms by country, and country share of global GDP, 2005–2019

	1	2	
	Profit share, %	GDP share in 2018*, %	Ratio of 1::2
USA	34.4	24.2	1.42
China + HK**	13.7	16.3	0.84
China ex-HK	11.6	16.2	0.72
Japan	6.9	5.9	1.17
UK	5.0	3.3	1.52
France	3.7	3.3	1.12
Germany	3.5	4.7	0.74
Canada	2.6	2.0	1.30
Italy	1.1	2.4	0.46

* Most recent non-estimated data
** Not all HK-domiciled firms are Chinese owned, so this row overestimates the share in column 1

Source: Author's calculations from (1) Forbes Global 2000 and (2) IMF WEO database. https://www.imf.org/en/Publications/WEO/weo-database/2019/october.

That data shows the salience of IPR-rich firms in the US economy, and the degree to which they account for the disproportionate US share of global profits. The top 10% firms in the bio-pharmaceutical, computer and electronics, internet, and branded consumer goods sectors accounted for 38% of profits generated by McKinsey's top 5750 firms from 2014 to 2016 (Manyika et al. 2018). The top 1% of firms—58 entities—captured 36% of total profits, with 53% of that accruing to IPR-based firms (thus, 18% of total profits). Most of those firms were US-based. Table 4 shows the sectoral breakdown for the FG2k firms by country of incorporation. US dominance of the three big IPR-based tech, consumer brand, and pharmaceutical sectors stands out relative to the three other major global sectors.

The profitability of US IPR-based firms does not flow automatically from new technologies or clever design. Rather, it reflects and sustains US hegemony. None of these new economy sectors would be profitable without domestic legislation and global treaties establishing robust IPRs. Information-rich goods are public goods: non-rival in consumption and non-excludable in ownership, and thus impossible to sell profitably without patents, copyrights, and other forms of protection that establish property rights. The US state conducted a concerted, 40-year campaign to expand US IPR law globally in order to secure revenue streams for US firms (Sell 2003; Drahos 2010; Hurt 2010).

Table 4: Country shares of cumulative sectoral profits, and sector share of total global profits by Forbes Global 2000 firms, 2005–2018, %

Tech Hard- & Software*		**Pharmaceuticals & Biotech**		**Consumer Brands**	
USA	67.9	USA	48.6	USA	43.8
Korea	9.9	Switzerland	18.2	UK	15.8
Taiwan	5.5	UK	11.5	France	11.6
Japan	3.2	France	5.9	Belgium	6.4
China	3.0	Japan	5.8	Japan	5.6
India	2.7	Denmark	3.9	China	5.3
Germany	1.8	Germany	1.8	Mexico	2.7
Sector % of Global	**8.4**	**Sector % of Global**	**4.2**	**Sector % of Global**	**3.4**

Auto & truck assembly and parts		**Oil & gas operations**		**Major banks**	
Japan	35.9	USA	27.5	USA	23.7
Germany	31.6	Russia	18.4	China	20.5
Korea	8.6	China	10.1	Canada	8.1
China	7.3	NLD	7.8	Japan	7.1
France	5.3	UK	5.6	UK	6.9
USA	3.3	Canada	4.5	Australia	6.7
India	2.5	India	3.7	France	5.3
Sector % of Global	**3.5**	**Sector % of Global**	**11.7**	**Sector % of Global**	**11.9**

Source: Author's calculations from Forbes Global 2000, various years
* = Computer equipment, Semiconductors, Communications devices, Software & Software Services

US trade deals thus typically emphasize two sets of interests. The first is US financial firms' access to other countries' financial markets, which helps maintain dollar centrality, as well as access to value created in those economies. The second is legal protection for IPRs. As early as the Tokyo Round of GATT talks (1973–1979) the United States was trying to export its stronger IPR rules to the rest of the world (Sell 2003; Hurt 2010). Since then, the United States has systematically tried to export its internal IPR regime to the rest of the world; strengthening IPRs in each successive trade round. The failed Trans-Pacific and Transatlantic Trade and Investment Partnerships both had substantial IP protection.

This legal infrastructure enables US firms to construct global commodity chains in which they operate the high-profit, human capital-intensive parts of the production chain, while delegating physical capital-intensive production to mostly non-US rich country firms (which in turn absorb considerable capital into that immobile, asset specific, and thus vulnerable physical base) and delegating labor-intensive assembly steps to developing economies. In turn, this elevates the market capitalization of IPR-rich US firms, giving them considerable power relative to other firms. The 30 largest IPR-based US firms by market capitalization in the FG2k at the end of 2018 accounted for 32.5% of US market capitalization, 14.7% of FG2k market capitalization, and 12.5% of global market capitalization. That said, both Japan in the 1960s and China after 1995 made market entry conditional on technology transfer.

This structure is the material manifestation of Strange's (1989) productive and financial power. Net direct investment income flows currently amount to roughly 1% of US GDP, constituting a transfer of resources to the United States. Second, this structure creates overseas domestic constituencies for continued cooperation with the United States. Foreign firms' large fixed capital investments can only be validated through continued participation in those commodity chains, and often by helping to maintain or extend IPR law. Indeed, many non-US firms, especially in pharmaceuticals and software, support robust IPRs. European luxury brands similarly rely on IPR protection. Yet, this global protection for IPRs differentially favors US firms.

Endogenous Decay?

The dollar's central position in the global monetary system reflects and produces US hegemony. But it also generates what Michael Pettis (2011; see also Germain and Schwartz 2014) has called an exorbitant burden—chronic trade deficits. By definition, current account deficits subtract from economic growth, even though they transfer real resources—goods and services—to the deficit economy. Robert Gilpin (1975) already noticed in the mid-1970s that the expansion of US multinational firms was shrinking the economic gap between the United States and its European allies; he later elevated this re-working of Lenin's combined and uneven development into a general principle of hegemonic decline. Continual current account deficits should imply either or both an erosion of the tradables sector or slower growth in the United States. Externally, this raises the problem flagged above: why should export surplus countries continue to buy US assets whose value is exposed to significant currency depreciation or widespread IP theft? Internally, the job losses associated with the hollowing out of low-end manufacturing have weakened the domestic social base of support for US hegemony, as the Trump administration evidences.

Externally, a flight from US assets would require either or both some substitute global currency, or a reorientation of the domestic political economy of export surplus countries. In principle, if a major export surplus economy were to open its financial and product markets, its currency might displace the dollar. The only economies big enough to handle this at a world scale are China and the European Union (or eurozone). China's financial liberalization remains a decade-long unfulfilled promise and its *Made in China 2025* policy—now operating under a variety of different labels—aims at yet more import substitution. EU28 and EA19 unemployment at the end of 2019 was 7.2% and 7.9% respectively. Even with a current account surplus of 2.7% of GDP in 2017–2018 (half of which was with the United States), the EA19 still had an output gap of 0.5% of GDP and GDP growth of only 1.9%, versus US GDP growth of 3%. Both the EU and China are short of sellable assets, though for different reasons. Finally, neither potential supplier of global money is likely to cease relying on exports to the United States as a source of growth, especially in a post-COVID19 world where states are trying to unwind high levels of unemployment.

Yet, hegemony based on and funded by control over IPRs is inherently fragile. Constructing elaborate global commodity chains and allowing non-US firms to handle more of the capital-intensive parts of production risks losing the ability to generate new, patentable technologies. In this respect, the rapid development of new electronics and biological technologies in China is a major threat, even though, or perhaps especially because, those firms have trouble enforcing IPRs and thus generating profits. The relative ease of technology transfer and rising educational capacity in potential peer rivals makes it easier for them to adopt and adapt the physical and organizational technologies that give US firms their advantage in generating new technology. Like the Red Queen, US firms and state cannot stand pat.

Domestic discontent is more likely to undermine a strategy of economic growth and hegemonic dominance via IPRs. Perpetual trade deficits imply lost jobs, particularly in the low value-added parts of the manufacturing sector. Reliance on IPRs for profit thus tends to concentrate income into a small number of firms and employees, hollowing out the middle of the income distribution. Stagnant wages and diminished upward mobility have undermined the political consensus sustaining US current account deficits. Currently, only a minority of Americans believes that trade helps wages and employment grow (Stokes 2018). This was especially true for the non-college educated voters that tipped the 2016 Presidential election towards Donald Trump and thus towards more protectionist policies and anti-science policies. The potential for continued and erratic Republican party governance or opposition to Democratic party technology initiatives both undermines US domestic growth and the credibility of US public and private promises to validate future claims on US tax revenue, mortgages, and profits. In particular, the Trump administration's changes to visa policy and general anti-science orientation weakened the research base for technology development. These factors reinforce the deglobalization pressure stemming from the COVID19 pandemic.

Conclusion

Accurately assessing the durability of US geo-economic power requires accurately assessing the mechanisms that produce and maintain that power. Susan Strange (1989) identified four main structural sources of power but without much specificity as to their mechanisms. Here I have tried to show the centrality of IPRs for mechanisms sustaining dollar centrality and control over global commodity chains. Dollar centrality in the international monetary system allows the US as an economy and, more specifically, US firms to escape constraints that balance of payments deficits impose on weaker countries (Cohen 1998). In a world with free markets and minimal financial repression, US current account deficits would disappear through currency depreciation and capital flight.

In our world, however, successful late developers have institutionally rooted domestic demand deficiency generating persistent current account surpluses. Their addiction to external demand means they accumulate excess export revenues that in turn require the creation or existence of counterpart assets. Only the United States can provide those assets in sufficient quantity and quality (Schwartz 2009). US firms accounted for over half of global equity market capitalization in 2020, with one-third of this attributable to the top 30 IPR-based firms by market capitalization. Other assets, like Federal debt, mortgage backed securities, and real estate, are all ultimately funded by the economic activity that large US firms generate. IPRs and the profits they generate are thus central to US global power, barring fundamental changes wrought by COVID19, other external shocks, or US domestic political chaos stemming from the Trump administration.

Of these, the first and the last are likely to combine to diminish US hegemonic power. The botched US response to COVID19 surely will shake faith in dollar-denominated assets, particularly if US growth falters relative to European or Chinese growth. More narrowly, government responses to COVID19 will cause or force many supply chains back on-shore, particularly for health-related commodities. In this context, it is easy to see the erosion of pharmaceutical and other IPRs as states override patents to maximize production of critical drugs and equipment. This might culminate in a 1930s-style retreat into continental monetary and trade blocs, necessitating a painful adjustment of surplus economies' domestic political arrangements. Avoiding this requires global reflation and recovery based on continued US current account deficits, and thus the export of "assets" backed by IPRs, which might sustain US hegemony. But this would in turn require expanding the US welfare state to compensate the losers from perpetual current account deficits, and this seems increasingly unlikely given the current balance of political power in the US political system.

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