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Globalization and Global Crises: Rest of the World vs. Israel

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Globalization and Global Crises

by

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Abstract

Post WWII globalization forces are facing headwinds by a cascade of global crises – the "The Great Recession" and the "The Pandemic Recession".

[1] I thank Yoni Ben-Bassat and Michel Strawczynsky for assistance, and a referee for useful comments. Acknowledgment are also due to The Sapir Center for Development for financial support.

The paper provides an overview of the new globalization trends in the world and in Israel, emphasizing the role of global crises, the Global Financial Crisis, and the Pandemic Crisis, in changing globalization long-term trends.

Introduction

International trade in the world economy increased rapidly after 1990, fuelled by the growth of a complex network of global value chains Trade globalization reversed course since the Global Financial Crisis. The new trend is expected to endure after the Global Pandemic Crisis. There are no indication of lessening trend of financial globalization, except for short term reversal during the Global Financial Crisis. Israel uniquely exhibits no discerning trend for its trade with the rest of world associated with the recent global crises.

Globalization benefits have long been recognized in economics. In his 1919 book, The *Economic Consequences of the Peace*, John Maynard Keynes described the open borders of the then bygone first age of globalization before WWI. He writes: "The inhabitant of London could order by telephone, sipping his morning tea in bed, the various products of the whole earth, in such quantity as he might see fit, and reasonably expect their early delivery on his doorstep, he could at the same moment and by the same means adventure his wealth in the natural resources and new enterprises of any quarter of the world, [and] *he could secure forthwith, if he wished it, cheap and comfortable means of transit to any country or climate without passport or other formality*."

Globalization did reverse its course in the second period, from the outbreak of World War I in 1914 until the end of World War II in 1945. World War I produced prolonged economic

dislocation, which included the withdrawal of Russia from world trade after the communist revolution in 1917, the Spanish flu pandemic in 1918 and 1919, monetary instability in the early 1920s, new immigration restrictions, the Great Depression starting in 1929, and a severe outbreak of protectionism in the 1930s. Health concerns are providing new rationales for protectionism, especially for international travel, medical gear and food, and a renewed emphasis on domestic sourcing.

Global value supply chains are highly vulnerable to pandemics because they are geographically vastly expanded. They are sensitive also to politically caused trade conflicts. Even prior to the Corona virus pandemic, trade globalization was challenged by a rising wave of populism spurred on by economic discontent in Europe, the United States, Latin America and elsewhere and a trade war between the US and China .

The paper is organized as follows. Section I addresses global crises, including the Global Pandemic Crisis. Section II addresses recent trends in financial globalization. Section III analyses the recent slowing growth trend of worldwide globalization, mostly trade globalization. Section IV describes . Section V analyzes the rerouting of Israel towards the new markets. Israel trade-globalization trends are discussed in section VI. Israel financial–globalization is discussed in section VII. Section VIII concludes.

I. World-Wide Globalization Slowdown

The backlash against trade globalization is not restricted to the Global Pandemic Crisis.. International trade increased rapidly after 1990, fuelled by the growth of a complex network of

global value chains (GVCs). These chains represent the process of ever-finer specialization and geographic fragmentation of production. Generally speaking, the higher the participation in intra-regional value chains, the higher the degree of regional economic integration. Likewise, the higher the degree of participation in inter-regional GVCs, the higher the degree of economic integration into the global economy. In the wake of the 2008 Global Financial Crisis, uncertainty in the world economy led many firms to reassess their business models. Rather than relying on global supply chains, an increasing number of firms invested in robots, which prompted a renaissance of manufacturing in industrialized countries. The global value chains could be reshuffled, or be reduced. Whether they will be localized or regionalized, or whether the crisis will lead to the continuation of globalization. A short period of economic recession seems unavoidable, but the question is whether the increased frequency of pandemics in the 21st century crisis will structurally transform globalization on the long-term. [2]

The pandemic-induced slump in economic activity is deep. Consumer spending, investment spending, and export demand tumble. Central banks are tied down by zero interest rate are losing its most effective stabilization-policy instrument. Consequently, the burden falls on fiscal policy. When the coronavirus hit, supply chains and production have been disrupted. However, the bigger impact of the pandemic has been on the demand side, the desire to invest has plunged, while people across the rich world are now saving much of their income.

[2] Pol Antras (2020) evaluates the extent to which the world economy has entered a phase of de-globalisation, and it offers some speculative thoughts on the future of global value chains in the post-COVID-19 age. Although the growth of international trade flows relative to that of GDP has slowed down since the Great Recession, this paper finds little systematic evidence indicating that the world economy has already entered an era of de-globalisation. Instead, the observed slowdown in globalisation is a natural sequel to the unsustainable increase in globalisation experienced in the late 1980s, 1990s and early 2000s.

Longer-term there is a risk that younger student from poorer backgrounds in the future will struggle to catch up after an extensive period out of school due to lockdowns and other disruptions. Education disruptions by the pandemic distorts the development trajectory of children, social mobility declines, lowering productivity and raising inequality.

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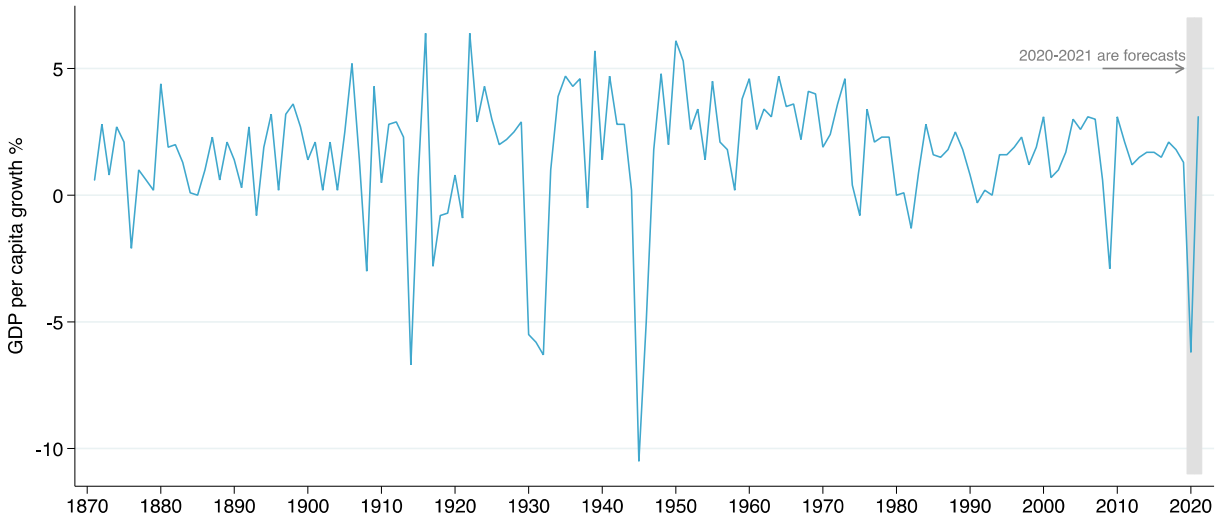
I.1 Global Crises

Carmen Reinhart and Kenneth Rogoff (2014), surveying centuries-old crises, have discovered startling qualitative and quantitative parallels across a number of standard financial crisis indicators in 18 postwar banking crises. They found that banking crises were protracted (output declining on average for two years); asset prices fell steeply, with housing plunging 35 percent

on average, and equity prices declining by 55 percent over 3.5 years. Unemployment rises by 7 percentage points over four years, while output falls by 9 percent.[3]

Figure 1: Global Growth Rates 1871-2020



Source: World Bank (2020), Global Economic Prospects.

Figure 1 indicates that since 1870, the global economy has experienced 14 global recessions. As for the most recent, the Global Pandemic Crisis, current projections suggest that the COVID-19 global recession will be the fourth deepest, and the most severe since the end of World War II.

I.2 Global Crises

Guerrieri et al (2020) demonstrate that supply shock, such as Covid-19, can trigger changes in aggregate demand larger than the shocks themselves, in a general equilibrium setting. This is possible when supply shocks are concentrated in certain sectors, as they are during a shutdown in

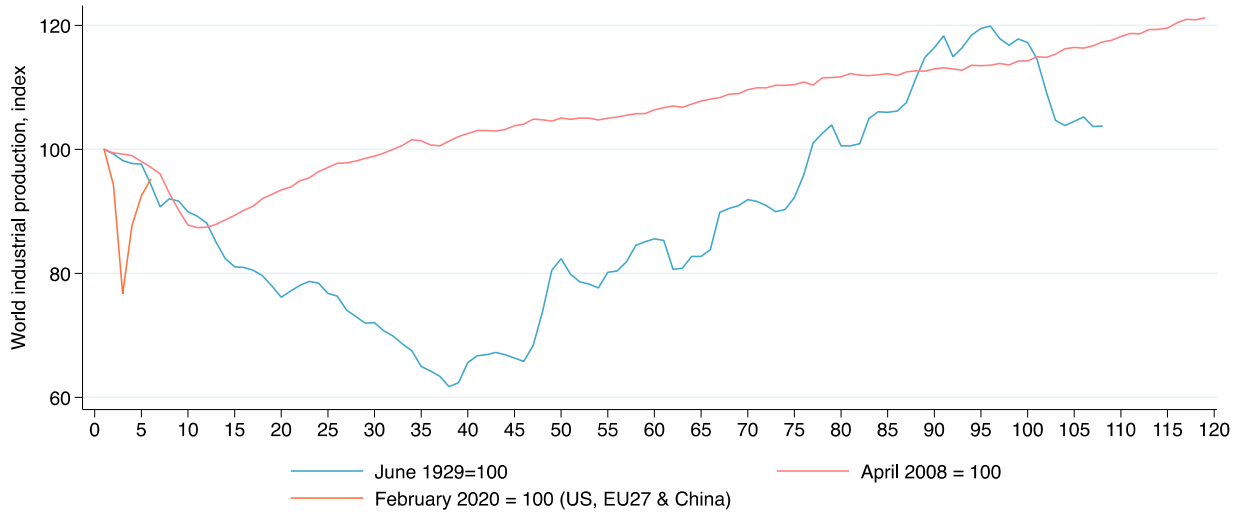
[3] See Razin (2014, 2021).

response to a pandemic. The fact that some goods are no longer available makes it less attractive to spend overall. An interpretation is that the shutdown increases the shadow price of the goods in the affected sectors, making total current consumption more expensive and thus discouraging it. On the other hand, the unavailability of goods in some sectors can shift spending towards the other sectors, through a substitution channel. Whether or not full employment is maintained in the sectors not directly affected by the shutdown depends on the relative strength of these two effects. A supply shock in sector 1 can spill over into a demand shortage in sector 2 that is amplified by incomplete markets. Guerrieri et al (2020) then turn to borrowing constrained consumers and show that the condition for a contraction in employment in unaffected sectors becomes less stringent. Intuitively, if workers in the affected sectors lose their jobs and income, their consumption drops significantly if they are credit constrained and have high marginal propensity to consume (MPC). To make up for this, workers in the unaffected sectors would have to increase their consumption of the remaining goods sufficiently. This requires a higher degree of substitution across sectors. If goods are not too close substitutes, aggregate demand contracts more than supply and employment in the unaffected sectors falls. Regarding consumption spending, Kozlowski et al (2020) observe that although there may be an initial "catch-up" surge of consumer spending in advanced economies with the emergence of a vaccine, consumers are likely to save more, in the longer run. In addition to its direct impact on investment and hiring, the pandemic will likely impose longer-term productivity costs. By the time the pandemic is over, a generation of children, particularly those from lower-income households, will in effect have lost significant period of their schooling. Young adults who struggle to find their first job in the labor market can expect to earn less in the future than they

might otherwise have done. In these aspects, health triggered crises are different from financially sourced crises.

Figure 2 displays the index of world industrial production during the months following the onset of three crises (June 1929 for the Great Depression (GD), April 2008 for the Global Financial Crisis (GFC), and March 2020 for the Global Pandemic Crisis (GPC).

Figure 2: World industrial production, Great Depression vs. Global Financial Crisis



Source: Updated dataset of Eichengreen and O'Rourke (2010). Recent data for US and EU are taken from the OECD (2020), the Chinese data taken from the National Bureau of Statistics of China (Press release, August 2020). Indices are weighted by 2019 real GDP (in PPP terms) from the OECD.

The Global Financial Crisis has some similarities with the Great Depression. Eichengreen and O'Rourke (2010) observe that the downturns following the two financial crises were initially very similar. The first year of the 2008-2009 slump in industrial production was fully comparable to the first year of the great global slump from 1929 to 1933. It appears that in both cases the trigger is a credit crunch following a sudden burst of asset-price and credit bubbles. However, differences in financial institutions and policy reactions (monetary, fiscal and regulatory) may explain the divergence of tracks after the initial stages. Recovery of world

industrial production starts much earlier in the Great Recession than in the Great Depression. Periods of depressed output are significantly shorter in the former than the latter, thanks to different policy reactions and improved financial and budget institutions. The difference between the two global crises occurred after about ten months. During the Great Recession, there was a relatively quick recovery after ten months. Such a recovery did not occur during the Great Depression. The downturn would continue for another 25 months before the recovery set in. As indicated, the fundamental reason for the sharp contrast between these two crises, in terms of recovery periods, was the different reactions of monetary and fiscal authorities.

The Global Pandemic crisis is not caused by failures of the financial system as was the case regarding GD and GFC. It is caused by the pandemic shock that required lockdown of productive sectors of the economy. Contributing to the macroeconomic theory of the health driven crises, Guerrieri et al (2020) demonstrate in a general equilibrium setting, that supply shock, such as Covid-19, can trigger changes in aggregate demand larger than the shocks themselves. This is possible when supply shocks are concentrated in certain sectors, as they are during a shutdown in response to a pandemic. The fact that some goods are no longer available makes it less attractive to spend overall. An interpretation is that the shutdown increases the shadow price of the goods in the affected sectors, making total current consumption more expensive and thus discouraging it. On the other hand, the unavailability of goods in some sectors can shift spending towards the other sectors, through a substitution channel. Whether or not full employment is maintained in the sectors not directly affected by the shutdown depends on the relative strength of these two effects. A supply shock in sector 1 can spill over into a demand shortage in sector 2 that is amplified by incomplete markets. Guerrieri et al (2020) then turn to borrowing constrained consumers and show that the condition for a contraction in employment in unaffected sectors

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In comparing the 2008 Global Financial Crisis (GFC) to the 2020 Global Pandemic Crisis (GPC) there are few key differences.

Origin of crisis. The shock that stated the GFC was an internal to the economy. The crisis originated from the malfunctioning of the economy's financial system. In contrast, the shock, which started and prolonged PC, was external to the economy. Epidemiology forces drive the crisis.

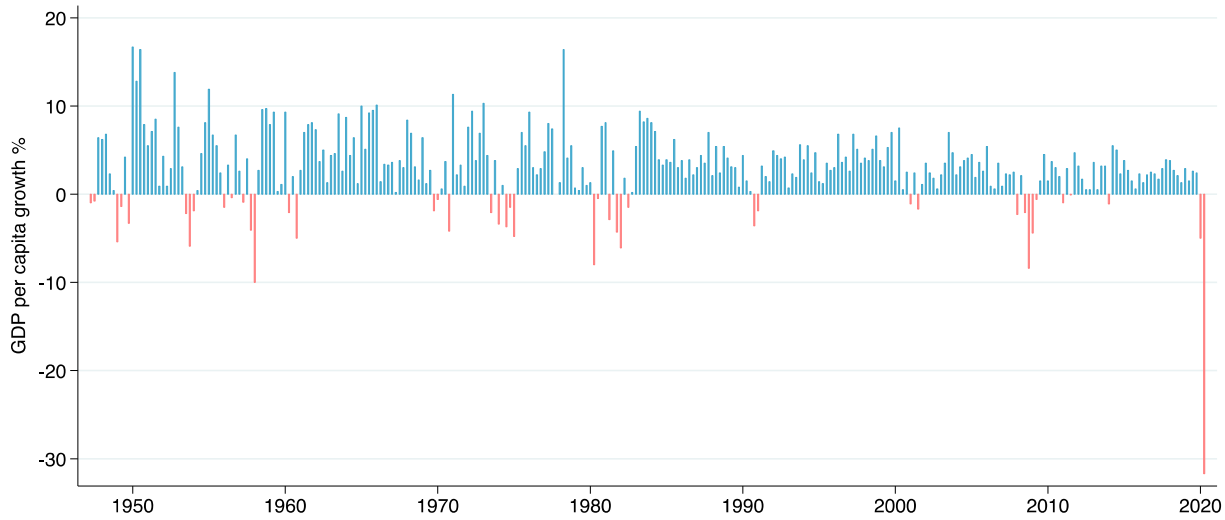
Magnitude of the initial shock. Quantitatively, the first quarters decline since the inception of the crisis, in employment and output, are greater in the PC case, compared to the GFC case.

Length of recovery. The recovery period from PC, once immunity from coronavirus is discovered and covered large segments of the population, is expected to be quick. In contrast, the recovery period in the GFC case was protracted.

I.3 Disaster Relief and Stimulus

Figure 3: US gross domestic product: Percentage change from previous

Quarter, 1950-2020 2nd quarter)

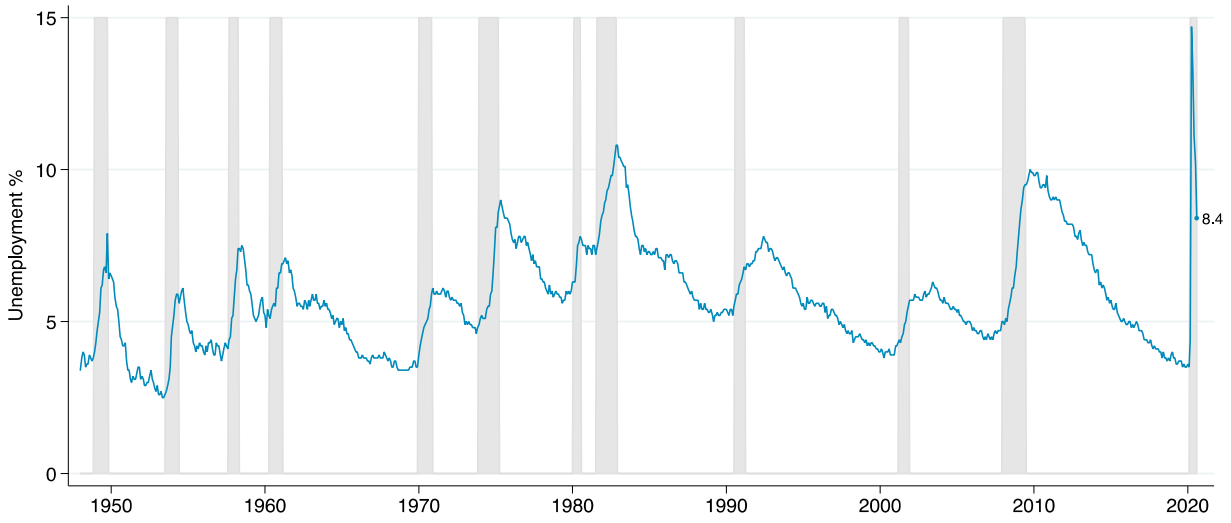


Source: US Bureau of Economic Analysis (2020)

Figure 3 shows that the magnitude of the initial shock is the most severe, compared to post WWII downturn of US output.

Pandemic lockdowns brought the unemployment rate to an historical highest (see Figure 4). Exiting from the lockdown, U.S. jobs grew by 4.8 million in June 2020. It was the second month of strong job gain after the lockdown huge losses, when businesses laid off or furloughed tens of millions of workers as the pandemic put a large swath of economic activity on ice.

Figure 4: US Unemployment rate since 1948



Source: Bureau of Labor Statistics and the Federal Reserve Economic Data. Unemployment rates are seasonally adjusted.

Disparities in the 2020 pandemic US unemployment across different demographic groups are significant. The largest employment declines during the pandemic to date are among Hispanics, younger workers and workers who have a high school degree or some college education but have not completed a college degree.

Social distancing is more difficult for workers in the service sector and unemployment rates are higher for some service sector occupations like food service and travel. Workers in jobs where face-to-face interactions are difficult to avoid are significantly more likely to have been unemployed.

The US employment rebound came in part thanks to more than $500 billion in federal aid to small businesses offered on the condition that workers be retained, under the one-off Paycheck Protection Program (PPP). The “keep-heads-above-water” policy response has been massive and quick among advanced economies. The European style is trying to preserve firms and workers in

their current jobs and the U.S. version is to try to address it as a natural catastrophe and try to subsidize people but allow higher unemployment. In the US, Cares Act legislation was aimed at providing relief for individuals and businesses that have been negatively impacted by the coronavirus outbreak. The CARES program[4] included:

Direct payments: Americans who pay taxes will receive a one-time direct deposit of up to $1,200, and married couples will receive $2,400, plus an additional $500 per child. The payments will be available for incomes up to $75,000 for individuals and $150,000 for married couples.

Unemployment: the program provides $250 billion for an extended unemployment insurance program, expands eligibility, and offers workers an additional $600 per week for four months, on top of what state programs pay. It also extends UI benefits through Dec. 31 for eligible workers. The program applies to the self-employed, independent contractors and gig economy workers.

Payroll taxes: The measure allows employers to delay the payment of their portion of 2020 payroll taxes until 2021 and 2022.

Use of retirement funds: The bill waives the 10% early withdrawal penalty for distributions up to $100,000 for coronavirus-related purposes, retroactive to Jan. 1, 2020. Withdrawals are still taxed, but taxes are spread over three years, or the taxpayer has the three-year period to roll it back over.

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[4] The beginning of 2021 witnesses the second-largest federal stimulus package, after the 2020 first package of CARES.

The Federal Reserve, that had cut interest rates to near zero, had rolled out a 2008-type menu of emergency loan program, while teaming up with the Treasury Department with programs to support lending to small and medium size businesses, and buy corporate debt. That is, the Federal Reserve took a semi-fiscal expansionary policy.[5]

The Paycheck Protection Program (PPP) act offered small businesses loans that can be converted into grants if they are used to maintain payroll. US Bureau of Labor Statistics (May 2020 report) shows a partial bounce back of contact-intensive sectors like restaurants and dentists' offices that were largely shut down by social distancing. Welfare states reacted with many job maintenance and firm relief measures have been implemented during the Great Lockdown. In both the EU and the US tax deadlines have been pushed back. Many US states waived the one-week 'waiting period' before receiving unemployment benefits and the job search requirement. They expanded eligibility to include those who need to stay at home to take care of either a child (due to daycare and school closures) or other dependent, who may be sick/quarantined, and those who are themselves sick or quarantined due to suspicion of being sick.

The UK government is further putting in place government-backed, subsidized loans to help small businesses weather the storm. The French government is extending its 'chômage partiel' (temporary unemployment) program, effectively covering 85% of wages. Germany's stimulus package centerpiece includes a three percentage-point reduction in value added tax, valid from June 2020 until the end of 2020. In addition, the coalition partners signed off on a €50bn "future package" of investment, with a focus on the transition to a greener economy, and research in

[5] On Bank of Israel policy crisis response (liquidity provision), and whether it helped maintain financial integration see Rui, Esteves, and Nathan Sussman (2020).

areas such as artificial intelligence and quantum computing. Huge sums will be spent on expanding Germany's charging infrastructure for electric cars. Since the VAT is equivalent to a tax on wages, plus a tax on wealth, the cut in VAT boosts consumption spending and provides incentive to work. It also has an intertemporal stimulating effect. The government changes VAT rates to create a future path of increasing sales taxes and hence stimulate inflation expectations.

I.4 Real-Time Evidence

Chetty et Al (2020) use daily credit card data to provide real-time evidence on impacts of the Covid-19 Pandemic.[6] They find that in the first few months of the pandemic, spending fell much more for the rich than the poor (top 25% vs. bottom 25%), and the bulk of the reduction resulted from a drop in spending on in-person services. This indicates there was not necessarily a reduction in purchasing power. The reduction was related to fears of the virus. Business revenue dropped more severely in high-income areas. The authors' interpretation is that this is a supply shock, not a lack of purchasing power.

CARES Act stimulus increased spending, but did not fill the hole created by the pandemic shock. Stimulus checks did increase spending among low-income Americans, but the vast majority of the increase in spending was on durable goods, not in-person services. For stimulus to have an impact on employment in the short-run, people would have to switch jobs or move.

The PPP act had limited impact on employment. The authors suggest that businesses who took the loans did not expect to lay off workers to begin with.

[6] Economists often study the effects of shocks with household survey data, but these data—while important—have limitations. First, they have time lags and low frequencies. Second, they cannot be disaggregated.

Effects of this shock on employment and inequality may be long lasting and require policy interventions. 70% of low-income workers who had jobs in wealthy parts of Manhattan lost their jobs. Chetty cites evidence, from past studies of the Great Recession that people do not often move in search of new jobs; suggesting policy intervention may be required. Further, there are potentially big implications for inequality. One example: Low-income students are doing far fewer math exercises on commonly used app than their higher-income peers are.

II. Financial Globalization

Full international financial integration requires that in the long run (when prices adjust to various shocks and markets clear), the following arbitrage equation holds:

$$1 + r_t^{US} = \left(1 + r_t^i\right)\frac{q_{i/US,t+1}}{q_{i/US,t}},$$

Where i stands for Israel, Canada, Germany and the United Kingdom; and q stands for the real exchange rate *Vis a Vis* the US dollar[7]:

$$q_{i/US,t}^t = E_{i/US,t}\frac{P_{US,t}}{P_{i,t}},$$

In addition, E stands for the nominal exchange rate, Vis a Vis the US dollar; and P stands for the price level.

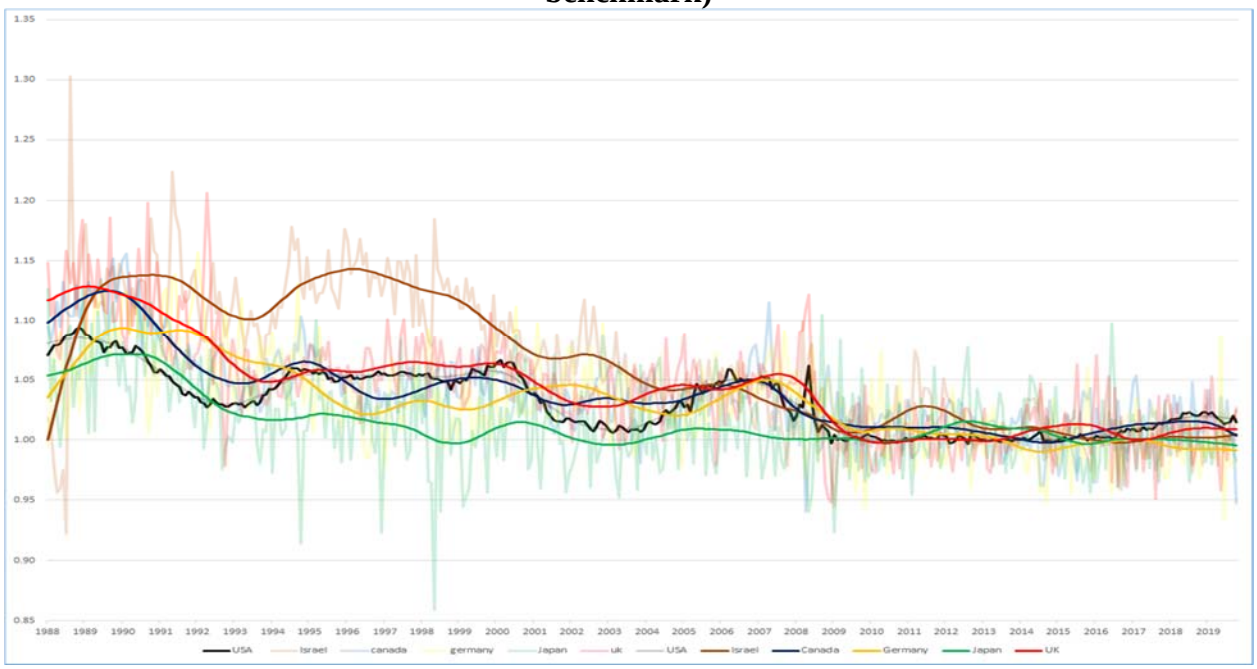
[7] Recall that by the Fisher equation:

$$1 + r_t^{US} = (1 + i_{US}^t)\frac{P_{US,t}}{P_{US,t+1}}, \text{ That is, } (1 + r_t^i)\frac{q_{i/US,t+1}}{q_{i/US,t}} = (1 + i_i^t)\frac{P_{i,t}}{P_{i,t+1}}\frac{q_{i/US,t+1}}{q_{i/US,t}}.$$

This measure of financial integration portrays how close is the country's real interest rate, adjusted for the real exchange rate evolution from the present into the next period, to the world real interest rate. Other countries, using their own currencies, have their own domestic price adjustments processes. Under perfect international arbitrage the real rates of interest, adjusted for real exchange rate changes are equalized.

The next Figure plots the graphs of the real-interest-rate, adjusted for real exchange rate changes, the yields on three-month government bonds for Israel, Canada, Germany and the United Kingdom, and the yields on three-month US government bonds. International financial integration generates more synchronized country-specific yields. Time series are filtered to wash out short-run idiosyncratic fluctuations. This figure demonstrates strikingly that in the 1990s Israel integrated sufficiently into the world capital market, while convergence occurred at the beginning of the 2000s.

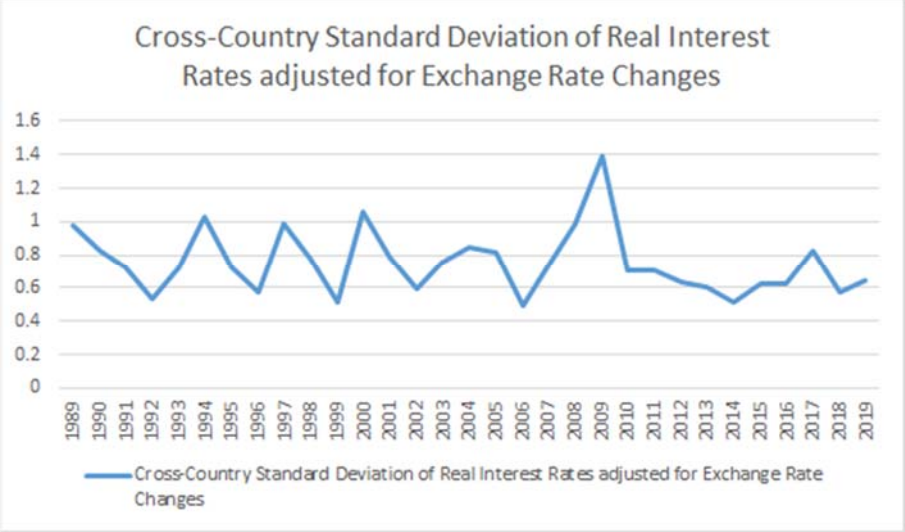
Figure 5: Gross Real Interest Rate Adjusted for Real Exchange Rate Changes (US benchmark)



***Note**: Series are HP-filtered. Monthly data are shown in the background. **Source**: Stats Bureau, FRED, World Bank, Real-exchange-rate adjusted, yields on three-month government bonds for Israel, Canada, Germany and the United Kingdom, and the yields on three-month US government bonds.*

The cross-country dispersion measure, shown in Figure 6, describes a downward trend, except for a short-term blip during the Great Financial Crisis.

Figure 6: Cross-country standard Deviation of real interest rates adjusted for exchange rate changes



Source: Stats Bureau, FRED, World Bank, Real-exchange-rate adjusted, yields on three-month government bonds for Israel, Canada, Germany and the United Kingdom, and the yields on three-month US government bonds.

In sum, Figure 6 brings out a strong evidence for financial integration among advanced economies.[8]

[8] See also the analysis of the Corona crisis short-term effects on financial globalization in Mohsin et al (2020). In the Appendix we depict the cross country trend of standard deviation of Israel's real interest rates adjusted for exchange rate changes and the US real interest rate.

III. Trade Globalization

Antras (2020) provides systematic evidence indicating that the world economy has already entered an era of de-globalization in the first decade of the 2000s. He argues that the recent slowdown in globalization is a natural sequel to the unsustainable increase in globalization experienced in the late 1980s, 1990s and early 2000s.9 The ICT revolution has made a great unbundling of production chains possible, and large wage differentials, globally, have made doing so – profitable. This generated vast new quantity of 'supply chain trade'. Greater international economic interconnectedness over recent decades has been changing inflation dynamics.10 The expansion of global value chains (GVCs), i.e., cross-border trade in intermediate goods and services, is an important channel through which global economic slack influences domestic inflation.[11]As GVCs expand, direct and indirect competition among economies increases, making domestic inflation more sensitive to the global output gap. This can affect the trade-offs that central banks face when managing inflation. The slope of the Phillips Curve may have changed.[12] There is evidence that global inflationary cycles that correspond with an intensifying globalization propagates common shocks via commodity, trade and financial channels. Correlations of CPI are as elevated today as during the first oil shock and on the surface we appear to be in the midst of a highly synchronized global rates cycle.

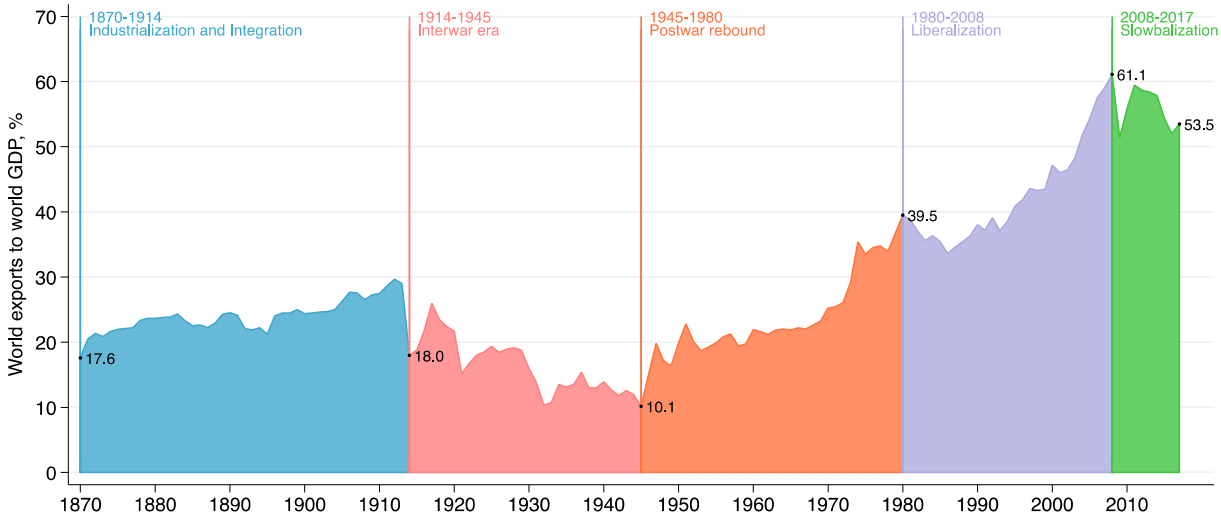
Global value chains will likely undergo a drastic transformation in the decade ahead. The change will be driven by a push for greater supply chain resilience due to the pandemic.

[9] See also Baldwin and Tomiura (2020).
[10] See Carney (2017).
[11] See Auer et al (2017).
[12] See Razin (2018).

One aspect of a lack of resilience in the last decades of globalization to pandemic is that GVCs were highly vulnerable. They have not been not sufficiently diversified. Consequently, they are sensitive to interruptions caused by either a pandemic like this one or trade conflicts. Even prior to the Corona virus pandemic, trade globalization was challenged by a rising wave of populism spurred on by economic discontent in Europe, the United States, Latin America and elsewhere and a trade war between the US and China. The recent backlash against trade globalization is not a new phenomenon, either. International trade increased rapidly after 1990, fueled by the growth of a complex network of GVCs. These chains represent the process of ever-finer specialization and geographic fragmentation of production. Kilic and Marin (2020) distinguish between local value chain participation, regional value chain (RVC) participation and global participation (GVC). Generally speaking, the higher the participation in intra-regional RVCs, the higher the degree of regional economic integration. Likewise, the higher the degree of participation in inter-regional GVCs, the higher the degree of economic integration into the global economy. In the wake of the 2008 Global Financial Crisis, uncertainty in the world economy led many firms to reassess their business models. Rather than relying on global supply chains, an increasing number of firms invested in robots, which prompted a renaissance of manufacturing in industrialized countries. As indicated previously, the global value chains could be reshuffled, or be reduced. Whether they will be localized or regionalized, or whether the crisis will lead to the continuation of globalization. A short period of economic recession seems unavoidable, but the question is whether COVID-19 crisis will structurally transform globalization on the long-term. Unemployment patterns differ markedly from the experience of the Great Recession that began in 2008.

Global trade, measured by the ratio of world exports to world GDP, is a proxy for economic integration. Figure 7 reveals five periods of modern globalization (see Irwin (2013)).

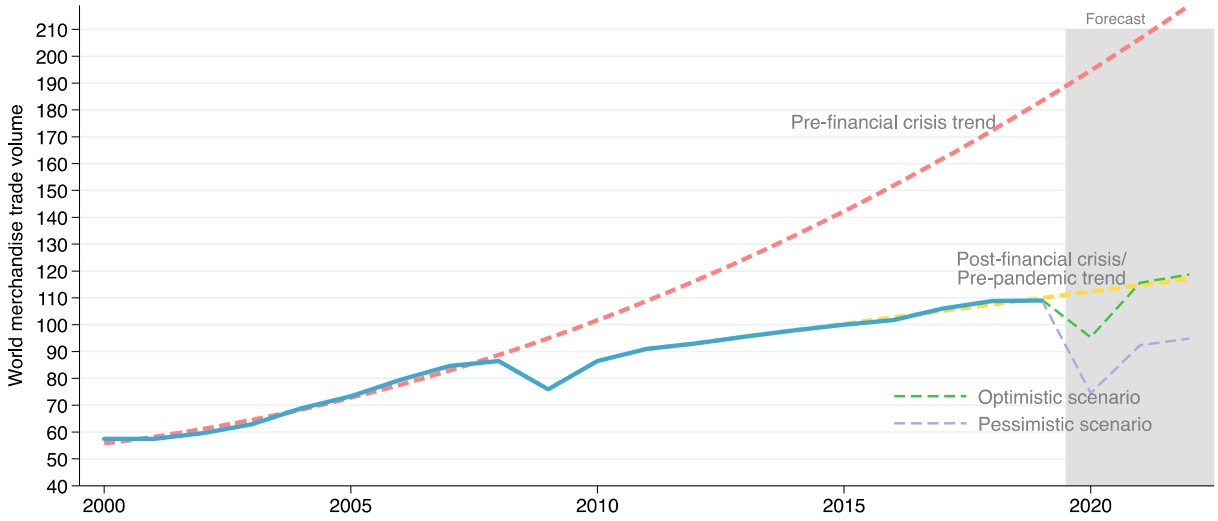
Figure 7: Ratio of world exports to world GDP: 1870-2007



Source: Our World in Data, "Globalization over 5 centuries, World".

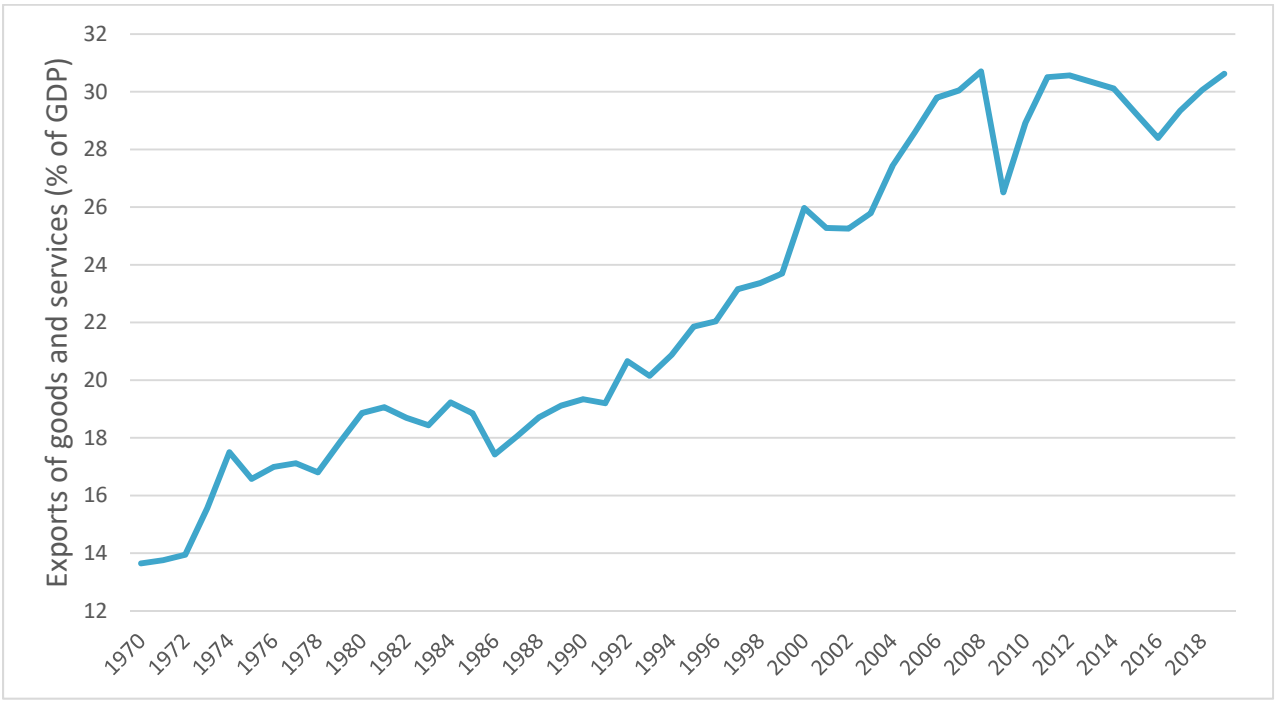
The pandemic is expected to add further momentum to the de-globalization trend. The forecasted diminished world trade in goods is shown in Figure 8a and 8b.

Figure 8a: Volume of world merchandise trade



Source: WTO, Merchandise export volume indices.

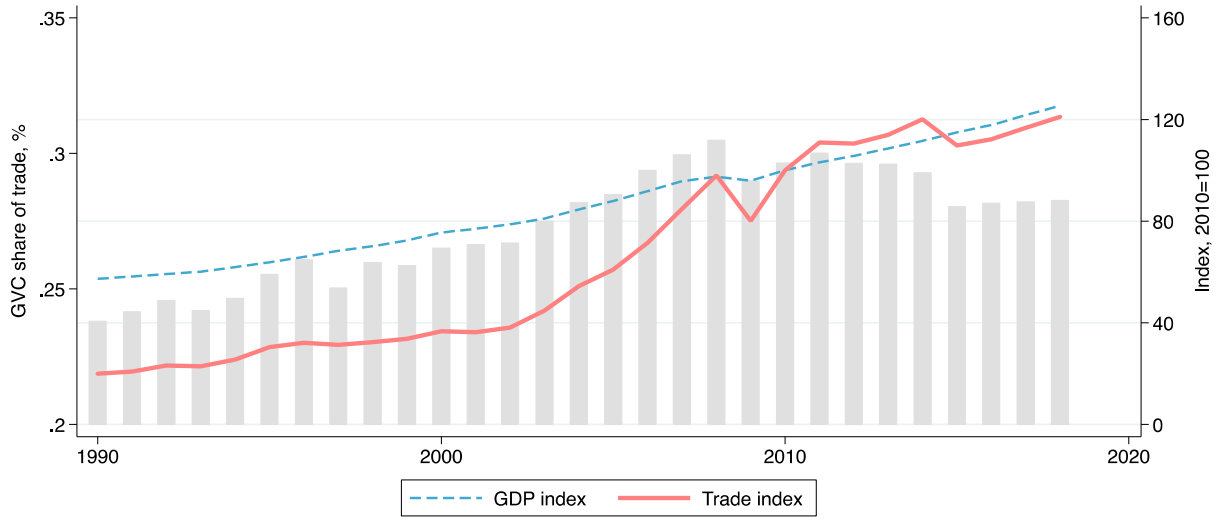
Figure 8b: World Exports (% of GDP)



Source: World Bank national accounts data, and OECD National Accounts data files.

World Investment Report has monitored FDI and the activities of multinational enterprises for 30 years, during which time international production saw two decades of rapid growth followed by a decade of stagnation. Flows of cross-border investment in physical productive assets stopped growing in the 2010s, the growth of trade slowed down and global value chain (GVC) trade declined (figure 9)[13].

Figure 9: Global Value Chain



Source: The Eora Global Supply Chain Database, UNCTAD (2020) and the World Bank (2020). Trade is global exports of goods and services. GVC share of trade is proxied by the share of foreign value added in exports, based on the UNCTAD-Eora GVC database (Casella et al., 2019).

IV. Israel's Globalization

Israel has registered remarkable economic achievements over its relatively short lifetime. It emerged in 1948 as a rather weak and impoverished agricultural economy. Over the past seven decades, though, Israel transformed itself into a strong and wealthy industrial economy, one that

[13] See UNCTAD (2020).

has become a world leader in many areas of high technology, ranging from computers to medicine, as attested to by its membership in the Organization for Economic Co-operation and Development (OECD). Thanks, in large part, to its steadily advancing integration into the global economy; Israel has moved firmly out of the developing world and into the developed world. At all stages of its development, globalization played a key role.

IV.1 New Export Markets

The global economy was jolted in the mid-1980s by China's and Vietnam's decision to abandon autarky in favor of export-led growth and to embrace "market communism." Socialist India and Muslim Indonesia liberalized and emulated their neighbors' trade participation strategy soon thereafter.[i] Suddenly, and with little warning, more than a third of the world's population joined the postwar globalization parade, powerfully effecting global demand everywhere, including Israel.

IV.1.1 China Transforms

Liberalization, globalization, outsourcing, and technology transfer were the key drivers, not domestic rates of economic growth. China claimed double-digit GDP growth from 1950 to 1976 during the Maoist epoch, but its trade participation, outsourcing, and inflowing foreign direct investment were negligible, as was its contribution to global economic vitality.

Beijing began distancing itself from autarky in the1980s when Deng Xiaoping introduced

special economic zones (SEZ) in Shenzhen, Zhuhai, Shantou, and Xiamen, and designated the entire province of Hainan as a special economic zone. In 1984, China further opened fourteen coastal cities to overseas investment: Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang, and Beihai.

China leveraged the opportunities for outsourcing and technology transfer afforded by SEZs by liberalizing its domestic economy. This involved a rapid sequence of market-oriented reforms that circumvented communist ideological prohibitions against private ownership by allowing entrepreneurs and state companies to lease assets while preserving the party's monopoly on freehold property. The first reform, called Gaige Kaifang (literally, reforms and openness), lasted more than a decade, from 1976 until shortly after the Tiananmen Square massacre, June 5, 1989. The idea at its core was the gradual reversal of the three ideological pillars of command economy: criminalization of private property, criminalization of private business, and criminalization of entrepreneurship.

The centerpiece of the post-Mao system was the "household-responsibility system" (allowing peasant family households to operate their plots independently of team and communal influences), which made it possible for them to prosper by increasing productivity and selling above quota output in collective farm markets and household (cottage) industries in 1980. The principle soon thereafter was applied nationwide. The household-responsibility system was coupled with the "town village enterprise" (TVE) movement, an effort to transform the separate profit-seeking activities of individual households into a coordinated agro-industrial communal business. TVEs were flexible, and enjoyed considerable discretion in choosing and implementing agro-industrial activities. As time passed, many TVEs began operating as private enterprises,

despite their cooperative form,[ii] and prospered in part due to the absence of freehold property-owning competitors[iii] and to the newly decentralized state finance.

The second phase of Deng Xiaoping's march to partial consumer sovereign markets (as distinct from market-assisted command) can be conveniently dated at 1992, when he undertook his famous southern tour to Shenzhen. During the trip, Deng characterized China's emerging productive order as a "socialist market economy," and asserted that "if China does not practice socialism, does not carry on with 'reform and opening' and economic development, does not improve the people's standard of living, then no matter what direction we go, it will be a dead end." This clarion call to reinvigorate the marketization process in the aftermath of the Communist Party's post-Tiananmen Square retrenchment was successful.

Deng's team promptly transformed red directors into managers of market-competitive state-owned enterprises (SOEs), and then ultimately into managers of private companies, by expanding and codifying their powers in "The Regulations on Transforming the Management Mechanism of State-Owned Industrial Enterprises," issued July 1992. The document granted managers fourteen control rights over (1) production, (2) pricing, (3) sales, (4) procurement, (5) foreign trade, (6) investment, (7) use of retained funds, (8) disposal of assets, (9) mergers and acquisitions, (10) labor, (11) personnel management, (12) wages, (13) bonuses, and (14) internal organization, and refusal to pay unauthorized charges by the government.

These developments have been accompanied by parallel stock market and banking reforms, allowing SOEs to increase equity (shares) sales to outsiders, and banks to tighten credit discipline over profligate SOEs. They also facilitated market-driven reshuffles of corporate structure through mergers and acquisitions. China joined the WTO in 2002. Vietnam followed a nearly identical path to liberalization and globalization under the banner of *doi moi* (renewal) and

joined the WTO in 2007.

IV.1. 2 India Transforms

India and Indonesia were never communist nations and did not have to undo the trammels of command economies, but both markets were severely over-controlled. While details of their liberalization and globalization differed, the thrust to laissez-faire was the same.

The reform process in India sought to accelerate economic growth and the eradication of poverty. The process of economic liberalization began in the late 1970s and picked up momentum in July 1991, with a systemic shift to a more open economy, greater reliance upon market forces, and a larger role for the private sector, including foreign investment. Subsequent reforms have gone a long way in decontrolling the domestic economy, emphasizing, like China, gradual transition rather than shock therapy.

The changes initiated in 1991 eliminated the dominance of the public sector in the industrial activity, discretionary controls over private industrial investment, trade and exchange controls, tight restrictions on direct foreign investment, and the overregulation of the financial sector. The reforms unleashed powerful entrepreneurial forces. Since 1991, successive governments across political parties have successfully carried forward the country's economic reform agenda. Most of the central government industrial controls were dismantled. Massive deregulation of the industrial sector was done in order to bring in the element of competition and increase efficiency. The list of industries reserved solely for the public sector—which used to cover eighteen industries, including iron and steel, heavy plant and machinery, telecommunications and telecom equipment, minerals, oil, mining, air transport services, and electricity generation and distribution—was drastically reduced to three: Israel went through

major trade liberalization, entering important FTAs in the 1970s and 1980s (with the EEC and United States, respectively), and a substantial cut of tariffs and removal of non-tariff barriers (NTBs) in the 1990s. These had important effects on income redistribution and probably contributed to Israel's orientation toward exports. More than two-thirds of Israel's trade was in the early period with the EU and the United States.

V. Export Rerouting

Israel's exports to Asia grew substantially throughout the years, relative to all other export destinations. Figure 10 shows Israel's exports shares by destination region.

[Figure 10 here]

Financial reforms that emphasized liberalization, including the interest rate and reserve requirements, have made India's financial industry globally competitive. The financial system has been deregulated and opened to international financial markets, and it employs derivatives and other modern innovations.

Recently, Israeli exports to Asia have surged, and they have stayed stable with the United States, but exports to most of Europe sharply declined. The "gravity" model helps explain these trends.[14]

As the force between two objects in physics depends on the product of their masses and the distance between them, so trade between two countries is thought to depend on their

[14] Germany also benefitted from China's integration into the global economic system, (especially in exports of cars and machineries). By 2008 Sino-German trade volume had reached 200 billion Euros, and China was Germany's largest trading partner. German goods exports to China, as a percentage of total German exports, rose from 2% in 1995 to almost 8 percent in 2019.

economic mass (GDP) and all frictions affecting trade, including transport costs and policy variables. The theoretical and empirical foundations of the gravity model have been solidified in recent years by Eaton and Kortum (2002), Anderson and Van Wincoop (2003), and Helpman, Melitz and Rubinstein (2008). The shifts in trade between Israel and East Asia are likely to be a direct consequence of the policy transformations in China and India that can be captured via the gravity effect: the increasing economic "mass" (GDP) in southern East Asia coupled with the tearing down of the border restrictions (as indicated above).

Mohar (2009) studied the share of Israel's goods exports in the total imports of the destination country, by using a nonstructural gravity model. The main explanatory variables in the destination country are GDP (representing the market size), GDP per capita (representing the buying power of the average individual), distance, and a dummy variable representing whether or not there are trade agreements between Israel and the destination country. The sample period is 2001–2008.

Figure 11 describes the excessive/deficient shares, above or below what is predicted by the gravity model. Exports to China are under-predicted, while exports to the United States are over-predicted. The gaps predominantly reflect missing variables such as lagged exports (the gravity model is static), measurement errors associated the date and scope of bilateral trade agreements, and the heterogeneity of the good composition of the destination-country imports.

[Figure 11 here]

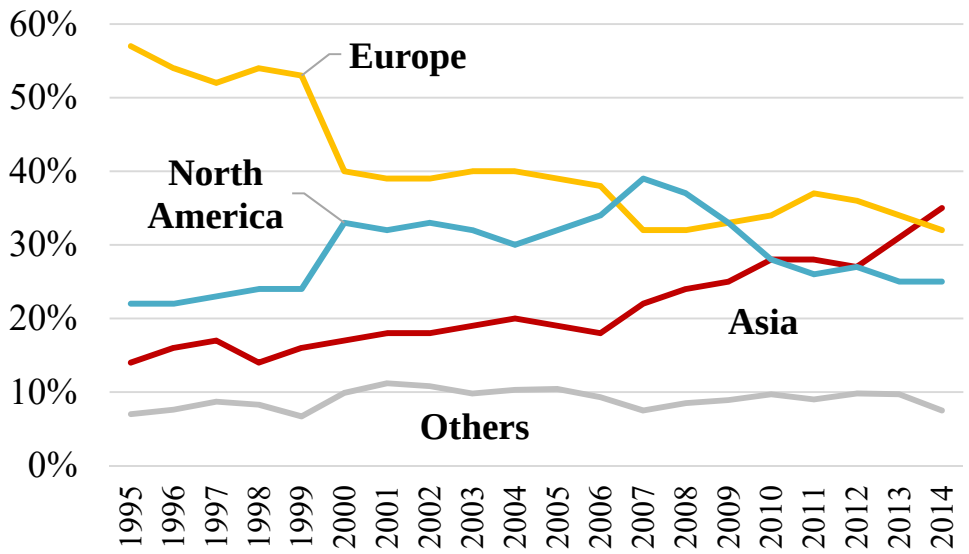
Summing up, the global economy has been changed since China decided to abandon autarky in favor of export-led growth, India liberalized its trade, and both lifted the Arab League boycott on trade with Israel. Israel, like other export nations, is pivoting toward emerging

markets in East Asia.[15]

The gravity models (pioneered by Tinbergen (1962)) have been a workhorse in analyzing the determinants of bilateral trade. A nonstructural model applied to the trade between Israel, Europe, and the United States (Israel's traditional trading partners), as well as East Asia (Israel's emerging trading partner), indicates the importance of East Asia to the export-led growth of the Israeli economy. Furthermore, it guarantees a more sustainable growth in the decades to come.

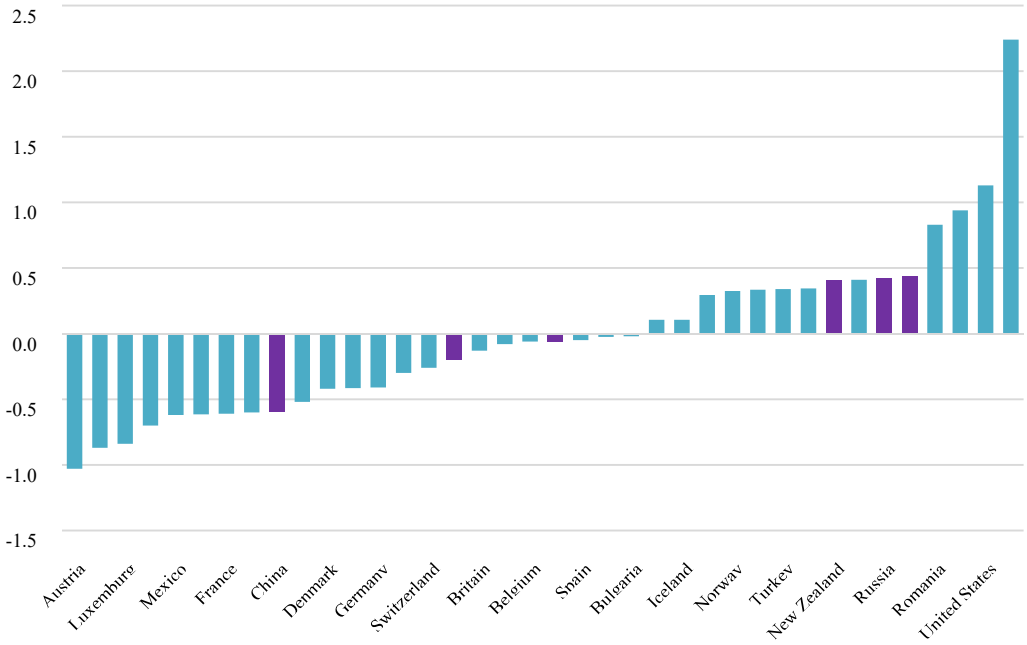
Figure 10: Israel's Export Shares by Regional Destination

[15] An insightful toy model to think about trade barriers is as follows: Assume two symmetric countries. Each country specializes in production. Goods enter symmetrically into utility, with elasticity of substitution σ (>1) between the goods. There is only one factor of production—labor. It takes α units of labor to produce one unit of either country's good; it takes τ units of labor to transport that good to the other country. Both countries impose ad valorem tariffs at rate *t*. Then the ratio of imports to consumption of home good exports as a share of GDP is ν/(1+ν), where $v = \left(1 + \frac{\tau}{\alpha}\right)^{1-\alpha} (1 + t)^{-\sigma}$. The shutting down of trade (or the imposition of a [partial] trade embargo) is equivalent to a rise in tariff, or an increase of transportation cost. In either case trade shrinks. Then, reversing the autarkic policies by the opening up of trade would boost trade. The increase in productivity $1 / \alpha$ weakens trade. See Krugman (2016). The model, however, does not capture the forces that led to the rise of Israel's trade with China over time.



Source: The Observatory of Economic Complexity, MIT

Figure 11: Differences between the Gravity Model Predictions and the Actual Share of Israel Exports in Trading Partners' Imports*, percentages



*Countries without a trade agreement with Israel are emphasized.

Source: Mohar, BOI, 2009

Countries without a trade agreement with Israel are emphasized.

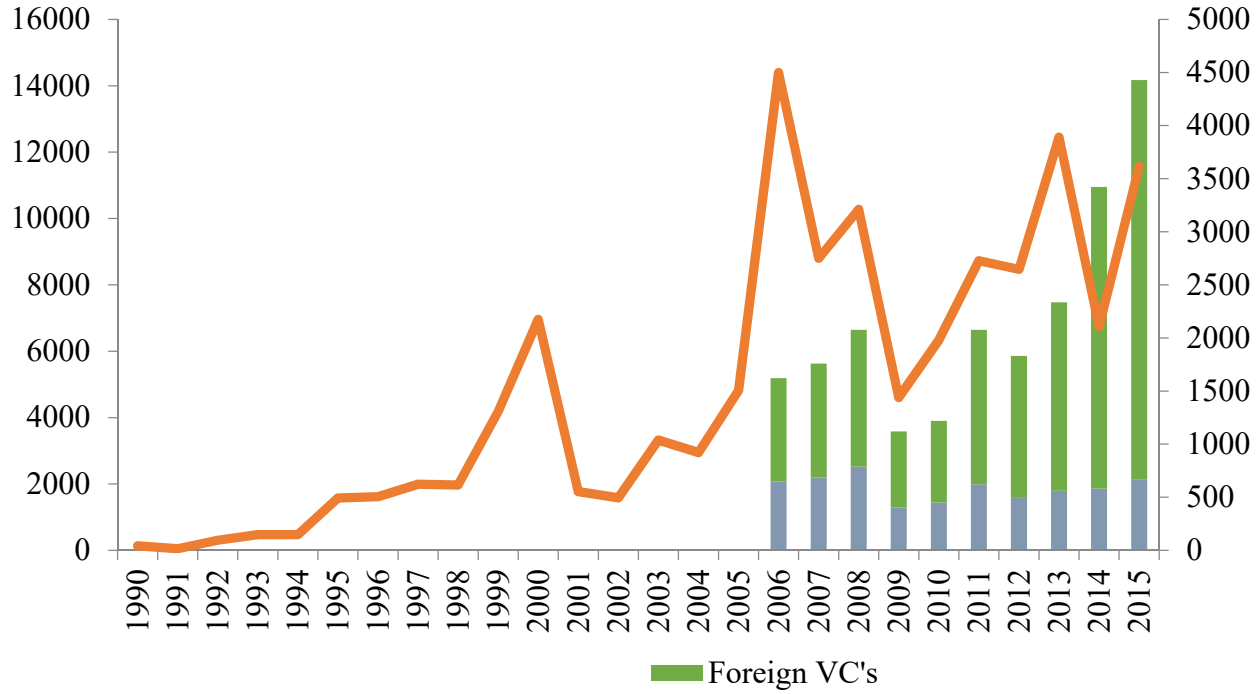
VI. Trade Globalization and High Tech Surge

Foreign direct investment (FDI) has been crucial for the emergence of Israel's high tech sector into occupying an elite position in the world economy. Recall that, FDI refers to investments in companies and production outside the realm of the stock market. Whenever a foreign company buys an Israeli start-up, it is counted as FDI. Israel pulled in the fourth highest level of foreign direct investment in relation to the size of its economy in the 2010s. Israel brought in about 4 percent of GDP in FDI. The OECD average was just 1.4 percent. It fell however short of the Ireland at 16.1 percent and Chile at 7.4 percent. For Israel, the OECD accounted for the lion's share of FDI inflows, more than a quarter, of late. The lion's shares, came from the United States and the EU. Recently, China became an important source for FDI inflows.

Israel's inward FDI flows accelerated in the 1990s and the 2000s (see Figure 12). Israel's venture capital development (data covers only the 2000s) exhibits a remarkable increase as a proportion of total inward FDI, demonstrating the sharp increase in funding to high-tech startups.

But the venture capital picture in Israel goes back to the early 1990s, with capital raising ebbing and flowing and with trends changing.

Figure 12: Israeli High-Tech Venture Capital Fund Raising (right axis, Million, current US dollars) and Inward Foreign Direct Investments (left axis, Million, current US dollars)

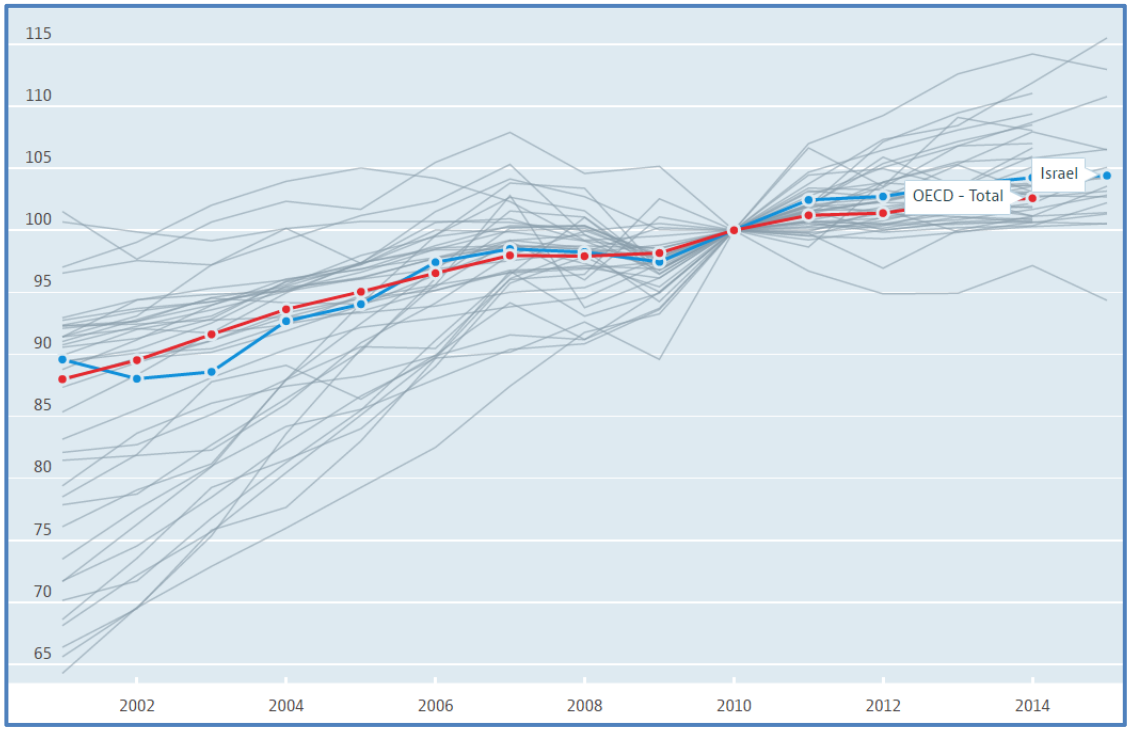


Source: IVC Research Center.

The dot-com bubble was a brief period of surging equity prices in the internet sector and related businesses 1997-2000. Firms discovered that they could increase share prices merely by adding the prefix e (e-Bay) or suffix com (Amazon.com) to their corporate names. Purchasers of dot-com equities and derivatively hard assets gulled themselves into believing that normal standards of valuation could be set aside because dot-com ventures had unbounded profit horizons. The mania had a direct impact on all countries with significant high-tech sectors, including Israel. The dot-com bubble not only the present discounted value of their capital stocks, it triggered large volumes of foreign direct investment (FDI) to other economies, including the emerging high-tech sector in Israel; which had beneficial effect on national income both during the bubble and after it burst. This started a steady rise in inward FDI into Israel.

The relatively high R&D spending has not fully manifested itself in productivity. However, as Figure 13 shows, Israel labor productivity picked up moderately in the 2000s.

Figure 13 2000-2015 GDP per hour work (constant 2010 prices)



Source: OECD Library.

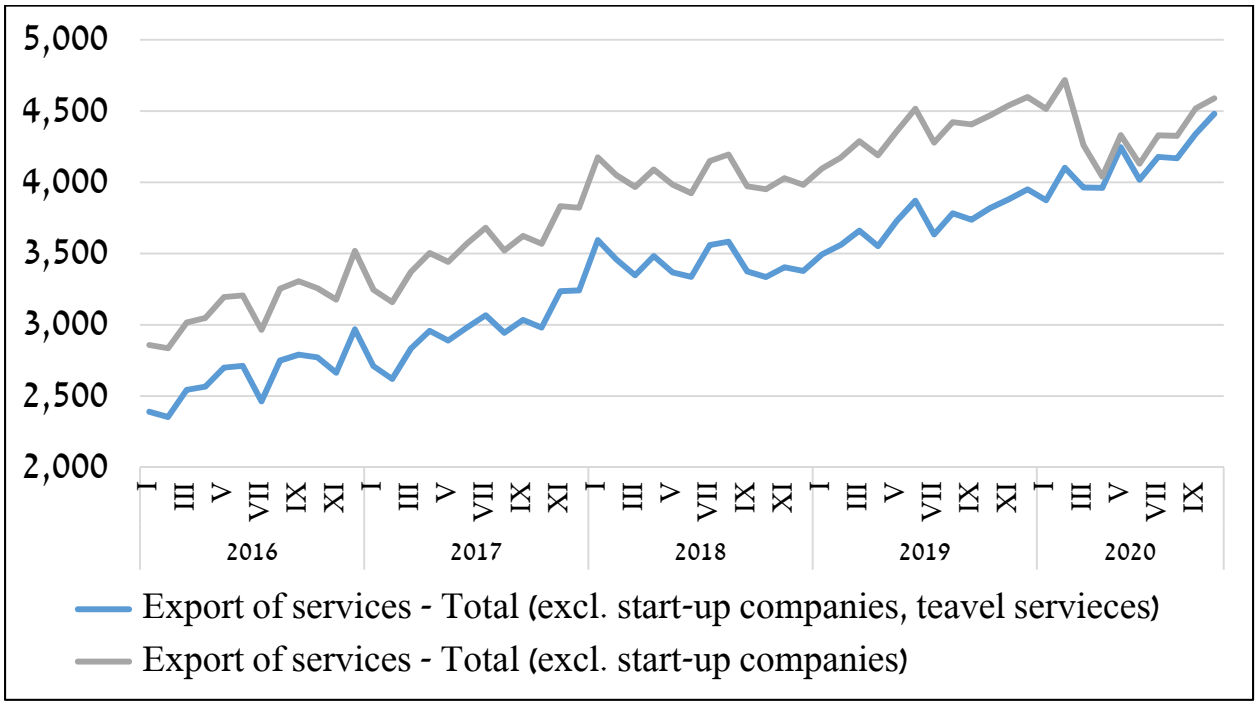
Israel recently pulled in the fourth highest level of foreign direct investment in relation to the size of its economy, (OECD library); figures for in 2013. Foreign direct investment refers to investments in companies and production outside the realm of the stock market. Whenever a foreign company buys an Israeli start-up, it is counted as FDI. Israel brought in about 4 percent of GDP in FDI. The OECD average was just 1.4%. [16]The United States was the source of roughly 30% of global FDI outflows, followed by

[16] Israel fell short only of the three countries that came ahead of it: tiny Luxembourg, in first place, brought in 39.5% of its GDP in FDI, followed by low tax Ireland at 16.1%, and Chile at 7.4%.

Japan, China and Russia. For Israel, the OECD accounted for the lion's share of FDI inflows, primarily the US and the EU, but China's share rises fast.

Figure 14 shows that exports of services, which is based on Israel comparative advantage in high-tech industries is steadily rising. As for the short run pandemic effects, the graph shows that excluding tourism that the high-tech exports are unaffected.

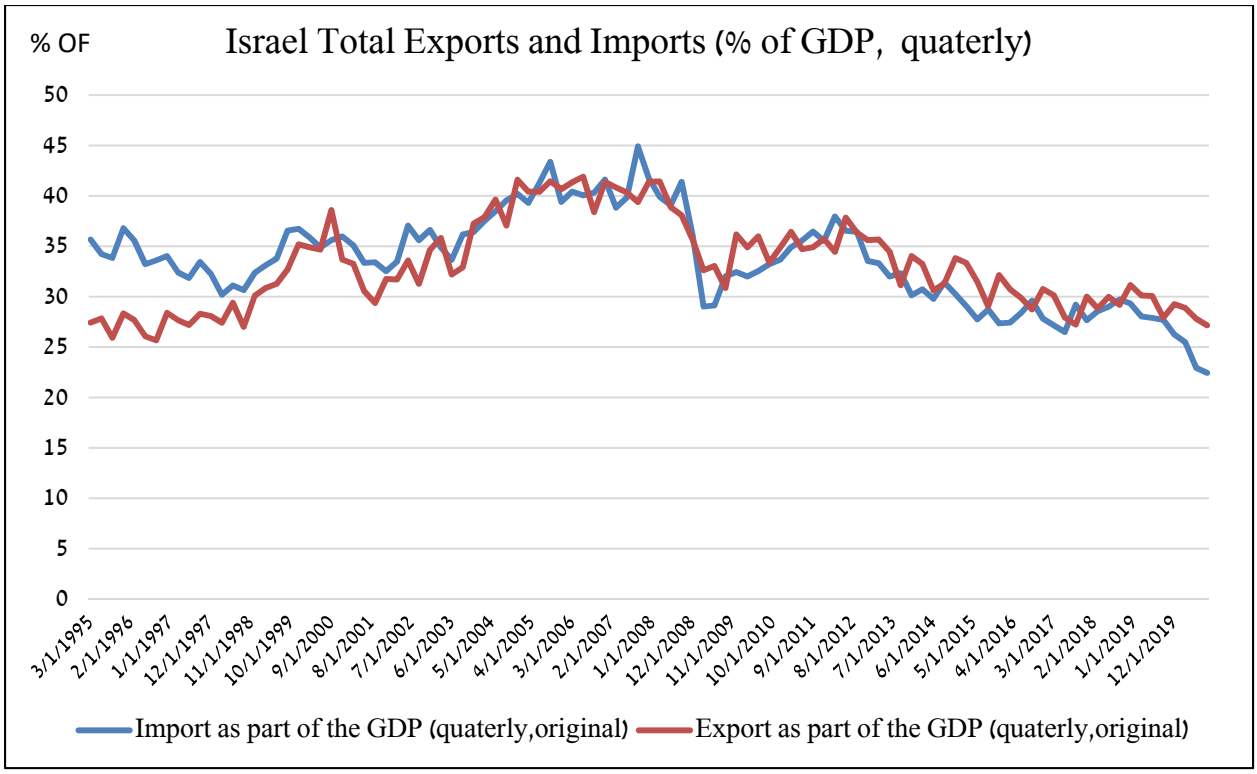
Figure 14: Israel Exports and imports of Services (million dollars, seasonally adjusted)



Source: Bank of Israel data set.

Israel is a significant trade-open economy. Israel's total exports in percentage share of GDP has been around 30 to 40 percent of gdp; similarly imports. See Figure 15.

Figure 15: Israel Total Exports and Imports, % of GDP, quarterly



Source: Bank of Israel data set.

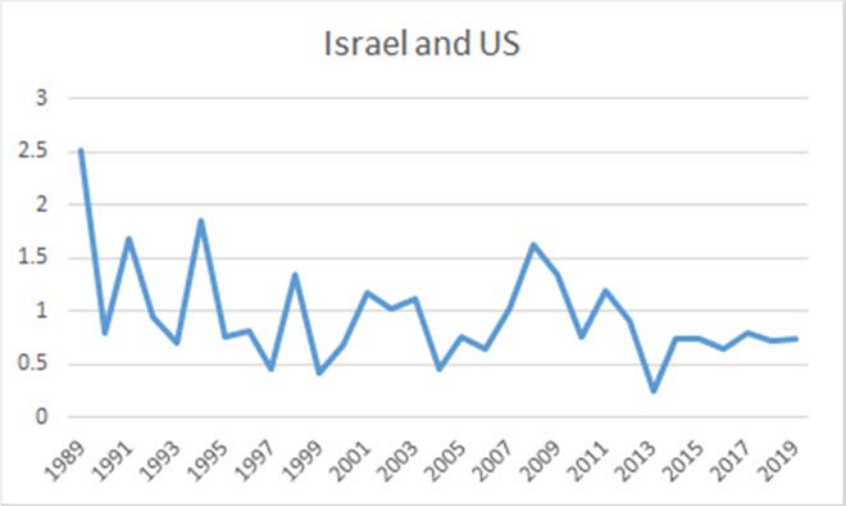
VII. Israel Financial Globalization[17]

International financial integration generates more synchronized country-specific yields. As before, a measure of financial integration into the world markets is deviations from equality

[17] The globalization process that Israel has been involved with is covered in detail in Razin (2018).

of the real-interest-rate, adjusted for real exchange rate intertemporal changes, across economies using their own currency and having their special inflation processes. The real interest is measured by the yields on three-month government bonds. Here we examine the dispersion between Israel and the US in the real interest rate (adjusted by the real exchange rate intertemporal changes).

Figure 12: Cross country standard deviation of the real interest rate (adjusted by the real exchange rate intertemporal changes): Israel and the US



Source: Stats Bureau, FRED, World Bank, Real-exchange-rate adjusted, yields on three-month government bonds for Israel, and the yields on three-month US government bonds.

Figure 12 shows that, except the Global Financial Crisis, the Israel-US dispersion is trending down. The downward trend indicates the steady integration of the Israel's financial market into the world financial market; primarily that of the US.

VIII. Conclusion

The paper addresses strains posed by the Covid-19 pandemic: there is at least a temporary setback to globalization, and the cost of fighting the pandemic will strain the ability of governments to provide the welfare state in a style to which many of their citizens have become accustomed.

Global Pandemic Crisis: global: globalization, Migration, and Welfare State

The corona virus pandemic has altered the interactions among globalization, migration and redistribution policies will take. While the pandemic could strengthen nationalism and isolationism and accelerate the retreat from globalization, the outbreak could also spur a new wave of international cooperation in health, environment, exchange of information, of the sort that emerged after World War II. The pandemic is driving the world economy to retreat from global economic integration. National security and public health concerns are providing new rationales for protectionism. The Great Financial Recession of 2008–10 marked a historic turning point in the degree of global economic integration. In the 2020 post-pandemic era, policymakers appear poised to take deliberate steps to reinforce the movement toward de-globalization[18].

Global Pandemic Crisis: implications for mobility

More broadly, the Corona crisis changed migration patterns. Border closures, suspended asylum programs, interruptions in global transportation and stay-at-home lockdowns have drastically curbed migration around the world, particularly from poorer nations to rich ones. Once exit

[18] See Razin (2021).

strategies begun to be implemented, the pent-up demand drove impatient people to start surging across borders, as Central Americans have done recently in migrant caravans headed to the US, and Syrians and others did in 2015 during the European migration crisis. However, social distancing and border restrictions in wealthy countries will remain long after the first Corona infection wave subsides. The pandemic is likely to change the migration skill composition patterns as low skill workers typically present more social-distancing problems than high-skilled workers do. Autor (2020) points to key factors for the projected decline in demand for low-skill workers in the post-Corona-virus era: the health risk in personal services, the acceleration of automation, the reallocation of sales towards large firms, and the likely change in demand away from retail services. The impact on migrant-skill-composition of social distancing, the matching technology, the expected arrival time of a vaccine, and testing with or without contact tracing are yet to be rigorously explored. In the post-corona era, firms have strong incentives to revise course and substitute GVCs with adopting robots. This shift could lower the demand for unskilled workers while increase demand for high-skilled workers, thereby raising wage gaps.

Global Pandemic Crisis: Long term effects

The Global Pandemic crisis is not caused by failures of the financial system as was the case regarding GD and GFC. It is caused by the pandemic shock that required lockdown of productive sectors of the economy. Although there may be an initial "catch-up" surge of consumer spending in advanced economies with the vaccine emergence, in the longer run, consumers are likely to save more. Thus, the world-wide saving-glut trend is reinforced. In addition to its direct impact

on investment and hiring, the Pandemic Crisis like the Great Recession impose longer-term productivity costs.

The literature points to several reasons for a long term effects of the pandemic (Ilzetzki (2021). For one, supply chain disruptions can cause a decline in the economy's productive capacity, but how persistent these are is still uncertain? First, it may take time for new entrants to replace firms that failed due to the pandemic. Second, unemployment tends to be persistent as workers' skills deteriorate and their attachment to the labor force may weaken. Fatás and Summers (2017) give evidence of hysteresis effects of this sort. Third, corporate debt overhang may create 'zombie firms', which have lesser incentives to invest in productive capital. However, Jordá et al. (2020) find no historical support for post-crisis growth depending on corporate debt levels.

TBW: ISRAEL GLOBALIZATION CONCLUSION

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