UNIVERSITY OF CALIFORNIA

Mexico Initiative

NAFTA and the Future of the U.S.-Mexico Relationship

A collection of thought pieces

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Edited by Melissa Floca | Center for U.S.-Mexican Studies

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FOREWARD

The UC San Diego Center for U.S.-Mexican Studies commissioned this series of thought pieces for a forum hosted by the University of California and Tecnológico de Monterrey in Washington, DC entitled *The Future of NAFTA and the State of U.S.-Mexico Relations*. These essays provided the intellectual cornerstone for discussions at the event with renowned academics, policymakers, and business leaders.

In the essays, faculty from across the University of California provide perspectives on what NAFTA has meant for North America and the changes in global trade and production since its creation, exploring:

- The need for investment in education and workforce development to prepare workers to participate in the 21st century economy
- The complex and often counterintuitive connections between trade, migration and labor markets
- The importance of updating trade agreements to include digital products and opportunities for trade in services like health care

Authored against the backdrop of the first and second rounds of NAFTA renegotiation talks, the pieces examine what we got wrong and what we got right almost three decades ago during the initial negotiations. And while the outcome of current renegotiations is far from clear, they offer an understanding of the importance of an integrated North America to the prosperity of the region, as well as the immediate damage that would be caused by the cancelation of the agreement.

NAFTA, MIGRATION, AND U.S.-MEXICO LABOR MARKETS

By Wayne A. Cornelius

Abstract: *NAFTA has not had a material impact on migration from Mexico and a renegotiated NAFTA is unlikely to change migration and labor market dynamics. The current NAFTA renegotiations take place in the context of steadily tightening labor markets on both sides of the border and a growing acceptance of the complementarity between labor markets in the U.S. and Mexico. It is simply untrue—but rather a political talking point—that the U.S. economy has little or no need for "unskilled" labor imported from Mexico. In the U.S., immigrants and U.S.-born children of immigrants will be crucial to filling future labor gaps in key service occupations such as home health care, food preparation, and building and landscape maintenance, as well as agriculture and construction trades.*

The renegotiation of NAFTA, according to groups and political leaders who have been critical of the agreement, must address the alleged "tension" between NAFTA and labor markets, especially on the U.S. side. The argument is that NAFTA has worked to the disadvantage of U.S. workers, especially in manufacturing. Furthermore, it is argued, NAFTA has not curbed "unwanted" Mexican migration to the United States and may have increased such migration because it damaged the livelihoods of Mexican *campesinos.*

The reality is that before it was signed, NAFTA was oversold by both the U.S. and Mexican governments as a short-term "remedy" for unauthorized Mexico-to-U.S. migration.[1] It is true that in the late 1990s and early 2000s many small-scale farmers in Mexico were adversely affected by the flood of cheap, processed agricultural imports—corn, powdered milk, milk substitutes, and meat—unloosed by NAFTA. But the evidence is thin that NAFTA-induced dislocations in rural Mexico generated significant, additional migration to the United States, above the levels established in the 1980s in response to other, non-NAFTA-related Mexican push and U.S. pull factors, especially the surge in U.S. job creation during the economic boom of the second half of the 1990s. Nor is there any systematic evidence that jobs created in Mexico as a consequence of NAFTA discouraged appreciable numbers of potential migrants

[1] See Wayne A. Cornelius and Philip L. Martin. 1993. *The Uncertain Connection: Free Trade and Mexico-U.S. Migration.* La Jolla: Center for U.S.-Mexican Studies, UCSD, Current Issue Brief 5; Wayne A. Cornelius. 2002. "Impacts of NAFTA on Mexico-to-U.S. Migration." In Edward J. Chambers and Peter H. Smith, eds., *NAFTA in the New Millennium.* La Jolla and Edmonton: Center for U.S.-Mexican Studies and University of Alberta Press, pp. 287–304.

from going north, in large part because NAFTA-created jobs were not located in parts of Mexico that had the largest labor surpluses and the highest emigration rates.

At this point in time, there is no appreciable component of unauthorized migration resulting from NAFTA-related economic dislocations in Mexico. Opportunity structures in rural Mexico are surely limited, and migration to the U.S. remains an option chosen by some Mexicans to boost family incomes. But that choice is no longer shaped materially by the existence of NAFTA. Moreover, the pool of potential migrants has been greatly diminished by both heavy U.S.-bound migration in the 1990s and 2000s and Mexico's demographic transition, discussed below.

The larger, ongoing picture is one of significant—and deepening—*complementarity* between labor markets in the United States and Mexico. Immigrants will be critical to filling future labor gaps: 76 million baby boomers are retiring, while only 46 million U.S.-born workers will be entering the labor force from 2016-2030. Between 2030-2050, immigrants and U.S.-born children of immigrants will generate over 60 percent of labor force growth. Moreover, immigrants are more likely than U.S.-born workers to be employed in key service occupations (e.g., home health care, food preparation, building and landscape maintenance) as well as agriculture and construction trades. In California, the employment holes that Mexican immigrants will be needed to fill are even deeper than national averages.

It is simply untrue—but rather a political talking point—that the U.S. economy has little or no need for "unskilled" labor imported from Mexico (or elsewhere). Employers in numerous sectors of the economy remain dependent on such workers to keep their businesses functioning and growing. Contrary to the conventional wisdom among many members of Congress and the Trump administration, a large percentage of so-called low-skilled jobs are anything but low-skilled. Try convincing a vineyard owner that his extremely valuable wine grapes can be tended by anyone without specialized skills or experience; a dairy farmer that his cows can be properly medicated by an unskilled worker; the roofing contractors whose customers expect him to complete that physically demanding, dangerous job in record time with zero defects. And who would hire an "unskilled" nanny, eldercare-giver, housekeeper, or gardener?

In the late 1990s, when my UC San Diego research team asked employers in Southern California to explain why hardly any U.S.-born people applied for jobs held by immigrants in their companies, a common response was that native workers lacked the specialized skills needed to perform these tasks.[2] Nothing much has changed. Job classifications dominated by Mexican immigrant workers do not attract appreciable numbers of California-born workers, and among the few who do seek such jobs, turnover is extremely high. This is the essence of labor market segmentation, in which immigrant and native-born workers rarely compete directly against each other for the same jobs, in the same firms, in the same localities.

Meanwhile, signs of a tightening U.S. labor market abound. Already, in many parts of the country, economic growth is being constrained by labor shortages. By August 2017, claims for unemployment benefits had been below 300,000—the threshold associated with a robust labor market—for 128 weeks, the longest stretch since 1970.

If anything, California should be concerned that in the future Mexico will no longer be able to contribute enough workers to its labor force to help the state sustain robust economic growth. Mexico's fertility rate has declined by more than 70 percent over the last half-century. The dramatic drop in child-bearing has reduced the numbers of new entrants into the Mexican labor force, which fell from about 150,000 per year in the 1970s to about 20,000 per year over the last ten years. The depletion of labor reserves in Mexico is one of the factors that have diminished the flow of unauthorized migrants to the United States so sharply since 2007, which is reflected in border apprehensions that have fallen to levels last seen in the early 1970s. And most undocumented immigrants now being apprehended at the border are Central Americans, not Mexicans.

A renegotiated NAFTA is unlikely to change these basic migration and labor market dynamics. Stronger worker protections and better mechanisms for enforcing minimum standards of employment can put upward pressure on wages in some U.S. industries, but the effects of such changes on labor supply

[2] Wayne A. Cornelius. 1998. "The Structural Embeddedness of Demand for Mexican Immigrant Labor: New Evidence from California." In Marcelo Suárez-Orozco, ed., *Crossings: Mexican Immigration in Interdisciplinary Perspectives.* Cambridge, Mass.: David Rockefeller Center for Latin American Studies and Harvard University Press, pp. 113-155.

and employment will be minimal, in the context of steadily tightening labor markets on both sides of the border.

Wayne A. Cornelius is Edward A. Dickson Professor and Distinguished Professor of Political Science and U.S.-Mexican Relations, emeritus, at UC San Diego. He is also Director Emeritus of UC San Diego's Mexican Migration Field Research Program.

REVISING NAFTA TO GOVERN THE DIGITAL ECONOMY

By Peter F. Cowhey

Abstract: *The NAFTA trade partners agree on the need for new provisions to address the expanding digital economy. But a super-charged, fast-track trade negotiation could restrict the talks to a narrow agenda championed by U.S. companies. Instead, negotiators could use NAFTA as a launching pad for broader global digital economy measures. Information and production disruptions are changing the way that all industries innovate and compete, requiring an expansion of the scope of trade policy innovations.*[3]

The Trump administration wants to revamp trade agreements to strengthen U.S. manufacturing and commodities. Achieving this goal will require implementing an ambitious agenda for revolutionary digital technologies essential to sustaining high value-added manufacturing and commodity production. Given NAFTA's integrated production system, the United States, Canada, and Mexico all need to embrace a global digital agenda.

Continuing dramatic advances in information and production technologies are modifying the dominant global model for innovation.[4] Today's innovation model is anchored by the Silicon Valley model, which relies on specialized startups, venture capital, and the use of global production chains. It especially focuses on information and communication technology (ICT) and biotechnology.

Information and production disruptions promote the evolution of digital platform clusters that are more geographically widespread than the Silicon Valley model, partly because they are transforming innovations and business models in older sectors ranging from automobiles to sophisticated building climate-control systems (which package climate and energy analysis systems with their hardware). Digital inputs are averaging about 25% of the value of U.S. manufacturing products already. The economics of commodity markets,

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3 For further exposition see: Peter F. Cowhey and Jonathan D. Aronson. 2017. *Digital DNA: Disruption and the Challenges for Global Governance*. New York: Oxford University Press.

4 The drivers of disruption include the dramatic drop in info tech and broadband costs, the rise in the internet of things, the use of machine learning and artificial intelligence to increase the value of Big Data, and the rise of modular (standardized, easy to use) technology interfaces with the expansion of open-source software that can be blended freely into new products. Breakthroughs in production include additive manufacturing, robotics, and new smart materials with sensors.

such as those of oil fracking and agriculture, have also changed due to digital technology innovation.

Underlying the platform clusters are digital tools (i.e., software operating systems) and common capabilities provided to diverse pools of customers, audiences, and related product suppliers that vary in their complexity and cost to duplicate. The tools are continuously updated because they are digitally intensive and rely on user feedback and big data. The “store”—exemplified by Amazon and Apple—is one tool that opens new ways to organize global markets for specialized information applications and physical goods. Digital tools also enable new forms of financing. (Crowdsourced project funding is less biased geographically than traditional venture capital funding.)

Smaller firms, the drivers of employment growth, are especially empowered because the costs for start-ups of information and communication hardware, software, and personnel dropped as much as 70 percent or 80 percent between 2000 and 2012. ICT inputs became easier to maximize and turned ICT into the largest, value-added input for many traditional goods, from key-making kiosks to auto systems. Platform strategies allow smaller specialist firms to integrate sophisticated physical goods with IT analytics to pioneer new products such as wireless medical devices, thereby bolstering the business case for product innovation because information derived from products can generate collateral revenues.

Start-ups, especially for consumer products, are introducing novel business models as they substitute an experimentation and discovery model for the traditional development and marketing model. Digital platforms increase the significance of “user interaction,” which propels firms to globalize more rapidly to gather data to differentiate products according to local patterns of use. Together, these changes permit more product customization to the tastes of specific groups of consumers and allow more cost-effective alteration of product specifications (including local customization), even on a global scale.

Short-term Policy Strategies

Older trade agreements such as NAFTA seldom addressed possibilities raised by digital innovation. Revisions should address the use of industrial policies to block global data flows and transnational access to cloud infrastructure and the misuse of competition policy as a digital trade barrier. A minimum agenda for NAFTA should affirm:

1. The freedom to choose the location of cloud ecosystem infrastructure for services and the right of foreign firms to provide a service by accessing their own business data across national borders. (The freedom of cross-border information flows also is required).
2. The freedom of suppliers to locate infrastructure wherever they wish without local presence requirements. (The use of large global cloud hubs located in another country should be permitted). Discrimination against electronic delivery of services, including software, and quantitative limits on the number or volume of services delivered should be banned and cross-border payments for services, subject to prudential regulation, should be permitted.
3. The right of customers to use extraterritorial suppliers of services via public telecommunications networks. Government policy also should respect technological neutrality in the delivery and technical organization of a service.
4. The use of international standards for encryption technology and the right of firms to use encryption for commercial purposes that qualify as "data controllers" within rules on a trusted digital environment (discussed below) should be recognized.

Two additional items are important for specialist, smaller firms.

1. Extend the World Trade Organization's International Technology Agreement (ITA) to further cover innovation-intensive industries. Since the 2015 revision of the ITA, the spread of digital platforms makes more industries ripe for coverage.
2. Negotiate the highest possible standards of liberalization for products that cross the traditional boundaries between a good and a service. Allow smaller firms to produce and then ship specialized manufactured products produced by a 3-D printer across national boundaries or to transmit the design to a 3-D printer at a subsidiary, the customer, or an intermediary in another country.

Long-term Policy Options

It will be difficult to address the thicket of legitimate, unavoidable public policy issues related to digital privacy and cyber security that will grow more important as digital technologies become more pervasive. These issues already undergird many of the challenges to using cross-border data flows to support production and innovation strategies. Critical to the success of digital innovation is the creation of an accepted global policy framework—a "trusted digital environment"—that can be supported by trade rules.

1. As proposed in the Trans-Pacific Partnership, countries should expand the trade disciplines for domestic regulations of digital services and goods. Administrative rule making should be transparent and use timely, objective criteria. Nondiscrimination among member country firms should be based on national origin, policies should be technologically neutral, and when designing policies a "least burdensome to trade" requirement should be adopted.[5]
2. Quasi-convergence of national regulations, based on common trade principles and norms featuring flexible mixes of binding "hard" and "soft" rules and policies within a common governance regime to address daunting new issues such as digital privacy and security.[6] Specific hard policy rules should forbid certain types of conduct. For example, a digital hard rule might forbid a government to demand a firm's software source code as a condition for market entry. Soft rules require the embrace of policy capabilities based on key principles that frame the parameters of national rules.[7] Authoritative soft rules could further anchor quasi-harmonization of national rules on topics such as privacy protection. Soft trade rules provide countries direction on how to achieve certain hard-rule obligations, such as principles companies might use to earn compliance certificates for binding privacy rules.
3. A trusted digital environment should work through Multi-Stakeholder Organizations (MSOs) that incorporate civil society organizations to improve governance but are subject to government oversight. Many complex technology decisions on implementing rules would benefit from the "bottom up" expertise of MSOs, such as figuring out how firms can fulfill compliance with government rules for digital privacy. MSOs also can help coordinate between national-level regulators and transnational MSOs within the checks and balances created by hard and soft trade

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5 Policies also should recognize the work of competent NGOs in some policy issues, including technical certifications and standards making.

6 Hard rules are binding (enforceable) obligations on countries that forbid particular policies, such as tariffs higher than those mutually agreed upon. Soft rules are binding; they specify commitments to maintain capabilities for making and enforcing rules or for creating rules to achieve certain agreed-on purposes. The specific mechanisms or policies are up to the individual nation so long as they fulfill the intent of the obligation. Soft rules are how the WTO successfully promoted compatible regulations for global telecom competition in the Basic Telecommunications Agreement (BTA) in 1997. In contrast, APEC Principles are not binding.

7 For example, the BTA required meaningful competition policies to govern interconnection of competing telecom networks.

rules.[8] Soft rules also should outline conditions about the operation and membership of recognized MSOs.[9]

4. The creation of a trusted digital environment also requires reciprocity. NAFTA should feature "conditional most-favored-nation" clauses for the trusted digital environment commitments, so only signatories would benefit. Many privacy and security challenges will require interpreting soft rules through the MSO process. Who should participate and who should benefit in the MSO process? Thus, if a Chinese firm could benefit from revised NAFTA privacy and security certifications through a Canadian subsidiary, this would complicate the politics and technocratic implementation of soft rules.[10]

Peter F. Cowhey is Dean of the School of Global Policy and Strategy at UC San Diego, where he holds the Qualcomm Endowed Chair in Communications and Technology Policy.

8 For example, negotiators could develop language that allows the FTC and other national privacy authorities to accept MSOs as auditors and reviewers of privacy guidelines.

9 Examples of such process qualifications are the WTO rules about technical standards organizations and the U.S. Government requirements for the processes of ICANN.

10 The TPP provisions on services (Articles 10.3 and 10.4) had useful starting points on conditionality.

AFTERTHOUGHTS ON NAFTA

By J. Bradford DeLong

Abstract: *We anticipated that NAFTA would be a material benefit for Mexico and an effective zero for the United States. In fact, NAFTA has not realized the anticipated gains for Mexico, and the country likely would be better off if it had instead focused on a development strategy of more educational uplift and greater infrastructure investment. But for Mexico, the harm is over and done with and canceling NAFTA would be a new destructive shock. In the U.S., NAFTA has allowed us to take advantage of an important and unanticipated change in international trade: The move to a regime of "value chain" trade in which wealth and growth went to those who could best place each part of a long production process in the most efficient location. For the U.S., North American economic integration is likely to continue to benefit producers.*

Nearly a quarter century ago, early in the Clinton administration, I was one of the leads on the team responsible for constructing estimates of the economic impact of NAFTA. And I definitely have some explaining to do.

Our models showed NAFTA as a small plus for American consumers and a substantial plus for Mexico. We also anticipated that the agreement would negatively impact other developing countries that were potential competitors with Mexico for the American market. For American manufacturing, we estimated a small plus for capital-intensive manufacturing (machine tools, aircraft, high-end silicon); a small minus for labor-intensive manufacturing (apparel, food processing); and a substantial minus for manufacturing that had been sheltering behind protectionist walls constructed with the help of lobbyists (leather, furniture).

As expected, NAFTA turned out to be a plus for American consumers and a minus for other developing countries competing with Mexico. And American manufacturing was impacted as expected. It was also a major win for Wall Street and a significantly larger than expected plus for manufacturing that could be disaggregated into transnational value chains. The trade agreement was a substantial short-run minus for Mexico as reflected in the 1994-95 financial crisis, but a long-run plus for Mexico because of the substantial value of guaranteed tariff- and quota-free access to the U.S. market.

What Did We Get Wrong?

We got two things wrong, one of which made NAFTA worse than we expected for Mexico (but had little impact on the United States), and the second of which made NAFTA better for both Mexico and the United States than we had forecast back in the early 1990s.

The most important aspect of NAFTA turned out to be the Mexican financial liberalization that allowed Mexico's rich to cheaply purchase political risk insurance from Wall Street by getting their money into New York (this did little harm to the U.S.). Mexicans did not buy as many U.S. manufactured goods as we had forecast, but they did finance construction and plant expansion through investment in America. As a result, the loss of jobs in the predominantly blue-collar male occupation of consumer-goods manufacturing was offset by a gain of jobs in the predominantly blue-collar male occupations of construction and intermediate- and capital-goods manufacturing. Even in the depths of the Great Recession in 2009-2011, the trade deficit with Mexico was a negligible player in American net job losses.

But the outflow of money from Mexico to the United States did great harm to Mexico when combined with the Mexican government's mismanagement of its reserve accounts: It led directly to the 1994-1995 financial crisis, which raised unemployment in Mexico by roughly 4 percent for about three years. That crisis and recession was a bigger harm to the Mexican economy than the benefits of expanded trade with the U.S. Of course, that does not mean that Mexico would in any way benefit from the abrogation of NAFTA today: The harm is over and done with, the benefits continue to mount, and canceling NAFTA would be a new destructive shock inflicting more harm and disrupting the pattern of Mexico's division of labor that has grown up over the past quarter century.

But in hindsight, Mexico would probably be better off if it had not undertaken NAFTA, and had focused instead on a development strategy of more educational uplift and greater infrastructure investment. The U.S., by contrast, is on the whole better off because of NAFTA—and primarily because of what turned out to be the second most important aspect of NAFTA, an aspect that our team analyzing NAFTA early in the Clinton administration missed almost completely.

Auto parts will serve as an example—one of the particular industries that was supposed to have been placed under the most dire threat by competition from Mexico by both right-wing critics of NAFTA such as Ross Perot and left-wing critics such as my colleague Harley Shaiken. Autos and auto parts were at the top of their “endangered jobs” lists. Mexico, they said, had high-quality workers earning low wages in auto assembly plants, and the U.S. simply would not be able to compete.

But in the three years after NAFTA was implemented, employment in the American automotive industry grew by 14.1 percent, worker hourly earnings grew by 5.6 percent, and Ford, Chrysler, and GM invested $39.1 billion in new manufacturing plants and equipment in the U.S.—and only $3 billion in Mexico. What seems to have happened is that the North American auto industry reacted to NAFTA by rationalizing itself—moving those parts of it that could be effectively performed by relatively low-skill workers to Mexico, and thus gaining a cost advantage vis-à-vis European and Japanese producers.

As trade economists Mary E. Burfisher, Sherman Robinson, and Karen Thierfelder wrote in 2001 in the *Journal of Economic Perspectives*, there was “a dramatic increase in [North American] intra-industry trade in autos and parts.... [Economic] efficiency gains from finer specialization ... do not appear to be ‘Ricardian,’ in that they are not primarily based on ... [exploiting low wages] but ‘Smithian’ in the sense that NAFTA widened the extent of the market and permitted increasing returns to finer specialization. Most fears about the ill effects of NAFTA on the U.S. auto industry, whether in term of employment, wages, or investment, have been proven wrong.”[11]

The 1990s saw the world move from an international trade regime of "Heckscher-Ohlin-Vanek" trade in which countries exported goods in which their factors of production and level of technology gave them a comparative advantage to a regime of "value chain" trade in which wealth and growth went to those businesses, regions, and countries that could best take advantage of the ability to place each part of a long production process in a location where the configuration of prices and exchange rates allowed it to be done more effectively. NAFTA was a material aid to that for the United States: Mexico, and close economic integration with Mexico, turned out to be an important resource and benefit for American producers over the past quarter century. And it is highly likely to be so for the next quarter century—unless NAFTA is abrogated, and a trade war with our neighbor to the south begins.

We anticipated back in the early 1990s that NAFTA would be a material benefit for Mexico and an effective zero for the United States. NAFTA, as it worked

[11] I cannot cite this article as evidence independent of my viewpoint—for I commissioned and edited it—but I do strongly believe that it is correct.

out, turned out to be a small net minus for Mexico, and a not overwhelmingly large but still a welcome net plus for the United States. I am trying to do better with my forecasts today than I did with those I made back then, a quarter century ago.

J. Bradford DeLong is a professor of economics at UC Berkeley, a research associate of the National Bureau of Economic Research, and a weblogger at the Washington Center for Equitable Growth.

HEALTH CARE SERVICES AND NAFTA

By Maria Echaveste

Abstract: *The aging of Americans, the high cost of health care, and the inadequate access to health care in many parts of the country require reimagining health care. It is time to reconsider NAFTA's existing provisions regarding cross-border trade of services and greatly expand trade in health care services with Mexico. People working in the U.S. along the border could obtain their health care in Mexico; increasing medical tourism to Mexico by U.S. residents could reduce health care costs; and medical professionals trained in Mexico could help address the current shortage of primary care physicians, nurse practitioners, and nurses in the U.S.*

Who knew I was on the cutting edge of the medical tourism industry when I made my first trip to Mexico at the age of 12? Having broken my teeth jumping over a tennis net, my parents decided the only affordable way to fix my teeth was to go to Mexico. Off we went on a three-day bus trip to San Luis Potosí, and I returned to middle school able to smile without embarrassment.

Fast forward to 2017: Medical tourism has increased around the world, with countries such as India, Thailand, and Singapore as destinations for patients seeking medical treatments as diverse as hip replacement and dental crowns, but at lower cost. It is time to reconsider NAFTA's existing provisions regarding cross-border trade of services and greatly expand trade in health care services with Mexico. With the aging of Americans, the high cost of health care, and inadequate access to health care in many parts of the country, why are we not exploring aggressively the procurement of health care services in Mexico?

Consider these estimates made in 2013:

1. Almost 10 million American adults (ages 19-64) with year-round insurance coverage would be unable to pay their medical bills;
2. 35 million American adults would be contacted by collection agencies for unpaid medical bills;
3. 15 million Americans would deplete all their savings to pay their medical bills; and
4. More than 11 million Americans would take on credit card debt to pay their hospital bills.

Chapter 12 of NAFTA governs cross-border trade in services and Article 1202 specifies the agreement "shall accord to service providers of another Party [country] treatment no less favorable than it accords in like circumstances to its own service providers." Article 1210 speaks to issues of licensing and certifications and encourages equivalency and uniformity of standards. These and other provisions are ripe for exploration in the health care sector by both the public and the private sector. Three areas for expansion to consider are: people working in the U.S. along the border and who could obtain their health care in Mexico; increasing medical tourism in Mexico by U.S. residents and citizens to reduce health care costs; and workforce development to address the current shortage and increasing need for medical professionals such as primary care physicians, nurse practitioners, and nurses, among others.

With respect to the first, inasmuch as more than 70,000 people cross the border daily from Mexico to work in the U.S., from San Diego to Brownsville, cross-border health services clearly make sense. In 1998, California was the first state to pass legislation permitting cross-border health plans.[12] It did so in response to a need in the San Diego area, where employers ranging from hotels to manufacturing plants operating in the U.S. sought lower-cost health plans, especially for their low-wage workers. In 2000, Blue Shield of California was the first insurance company to offer a cross-border health plan to employers for their employees; Health Net followed. Both insurance companies use a contracted provider network in Mexico and legislation requires employers to have an office within 50 miles of the border if the health services are only provided in Mexico.

In 2006, Health Net offered the first private insurance plan to customers who want to see doctors in the U.S. or Mexico. As part of its research before offering this plan, Health Net estimated that some 600,000 people traveled to Tijuana for health care. Since then, more insurance companies have been exploring the procurement of health care in other countries. For example, BlueCross BlueShield of South Carolina has contracted with providers in Costa Rica, Ireland, and Thailand, among other countries, for the health insurer's high-deductible, low-premium plans, because employers like them for their low-wage workers. There is an absence of state and federal regulation, however, to ensure quality, so the consumer must be vigilant.

[12] Texas, as the only other state to speak to this issue, prohibits cross-border health services, as it caved into pressure from U.S. doctors and health providers.

The growth of SIMNSA (Sistemas Medicos Nacionales, S.A. de C.V.) is instructive; it is now a comprehensive health care service and licensed as an HMO by the state of California. It works with Blue Shield and Health Net in their cross-border health plans that operate in Tijuana, Tecate, and Mexicali, Mexico. SIMNSA serves over 100,000 beneficiaries; employers who utilize SIMNSA include school districts, other public agencies, and private employers. Recently, SIMNSA partnered with Scripps Health network to turn SIMNSA's eight-story clinic in Tijuana into a full-service hospital with 200 patient beds, an emergency department, and an intensive care unit. Expected to open in 2018, this hospital intends to offer oncology, cardiology, neurosurgery, and labor and delivery procedures to complement SIMNSA's current array of outpatient services.

Given that most Mexican border urban areas are larger than their U.S. counterparts, the opportunity for growth in providing health care services in the border region, from Tucson to El Paso to Brownsville, should be on the agenda of policy makers on both sides of the frontier. Yet it's not just the border areas that could benefit from increased trade in health care services. Medical tourism to Mexico should be encouraged. The favorable exchange rate and the lower cost of living makes Mexico very attractive to retirees with restricted incomes. But even beyond the U.S. citizens who live in Mexico, why shouldn't retirees throughout the U.S. access health care in Mexico?

Accessing health care in Mexico through private insurance plans as well as government health care such as Medicare should result in significant cost savings for the entire system. Obviously with the perennial concern over Medicare fraud (which should not be ignored), regulations and oversight are critical; however, savings should still result. If one then layers on components of the private insurance system such as Medicare Advantage, one can see real possibilities for both improved access to health care and savings.

If Mexico were to expand its medical tourism to attract more U.S. residents with their private and government dollars, it will need to invest in more state-of-the-art medical facilities. Clearly this is happening in places such as Tijuana but also in Monterrey and Guadalajara. There also have been interesting developments with respect to nursing home and rehabilitation centers; again, as American citizens age, demand will only rise for these services.

The final area that should receive increased attention is the training of medical professionals. There is a documented shortage of primary care physicians and other medical professionals in rural and suburban areas throughout the country. As the numbers of Latinos in this country continue to grow, bilingual medical professionals are in increasing demand. With all due respect to the wonderful nurses from the Philippines, it is inexcusable that there are not more bilingual nurses and other medical professionals trained in Mexico working in the U.S. We should be looking at the certification and licensing processes to ensure that we are not depriving ourselves of needed professionals.

In sum, the opportunities for growth in Mexico and the U.S. for human capital development and economic enterprises that serve the health care needs of both countries are breathtaking to contemplate.

Maria Echaveste is a senior fellow at the UC Berkeley Center for Latin American Studies, and has built a distinguished career working as a public policy consultant, lecturer, a senior White House official, longtime community leader, and corporate attorney.

THE ROLE OF INSTITUTIONS IN THE U.S.-MEXICO RELATIONSHIP

By Rafael Fernández de Castro

Abstract: *Through NAFTA, North American leaders agreed on how to manage trade, establishing a set of rules that has efficiently ordered the flow of goods and services across borders for more than two decades. This achievement allowed Mexican diplomats to become complacent, shelving the pursuit of an institutional framework to manage the other aspects of the complex relationship with the U.S. This is most starkly reflected in the intense conflict and unilateralism around immigration issues, highlighting the need for a reassessment of the institutions supporting U.S.-Mexican relations and the renewal of mechanisms of consultation.*

"You don't know what you have until you've lost it," warns an old Mexican saying. It is very easy to grow accustomed to the good times, as was the case for Mexico and Mexican diplomacy after NAFTA went into effect. With the implementation of NAFTA, U.S.-Mexico trade relations reached their zenith. In twenty-three years, only one trade dispute surfaced—over trucking at the border—that could not be resolved through the institutional frameworks of NAFTA and the World Trade Organization (WTO).

Through NAFTA, North America leaders agreed on how to manage trade, establishing a set of rules that has efficiently ordered the flow of goods and services across borders for more than two decades. However, it was not always like that. In the late 1980s, Mexico was the country with the largest number of accusations of unfair trade practices in the U.S. Dozens of antidumping petitions were filed against Mexican exporters. The bilateral trade relationship was characterized by anarchy and conflict.

For immigration, the scenario has been radically different. In the absence of a binational agreement and with immigration reform pending in the U.S., chaos, intense conflict, and a rampant display of unilateralism have taken place. In the last twenty years, according to the estimates of U.S. Customs and Border Protection (CBP), over 7,000 migrants have perished trying to cross the U.S.-Mexico border, and thousands of others have died on their journey through Mexico. In the summer of 2014, unaccompanied migrant children, mostly from the Northern Triangle of Central America, flocked to the U.S.-Mexico border, creating a true humanitarian crisis at the United States' southern doorstep. According to CBP, close to 70,000 unaccompanied minors reached the border. More recently, the Trump administration has raised the specter of mass deportation for more than half a million Mexican-born Dreamers who could be sent back to a country where they are essentially foreigners.

It could be argued that after NAFTA went into effect, Mexican diplomacy fell into complacency. That is, the Mexican government became confident that because of NAFTA, the country had secured a harmonious relationship with the U.S., sidelining its pursuit of the creation of an institutional framework to manage the other aspects of its intense and complex relationship with the U.S. In the 1990s, parallel to the NAFTA negotiations, Mexican diplomacy sought to strengthen the bilateral mechanisms of consultation, such as the creation of the Binational Commission, the Border Governors' Conference and the U.S.-Mexico Interparliamentary Group. There was an unprecedented effort to institutionalize the management of the U.S.-Mexico relationship.

The U.S.-Mexico Binational Commission (BNC), for example, became the premier mechanism for coordinating intergovernmental affairs. The BNC met once a year and was chaired by the U.S. Secretary of State and the Mexican Foreign Minister. In the mid-1990s close to twenty Cabinet members from both sides of the border participated in the meeting. The BNC created numerous working groups that focused on the most important issues of the relationship. Indeed, the last working group at the federal level on immigration affairs belonged to the BNC. But in the last 15 years there has been no bilateral mechanism to coordinate immigration policy between the U.S. and Mexico.

It is noteworthy that other strategic partners such as Australia and the U.S., and France and Germany, have bilateral commissions, the Australia-United States Ministerial Consultations (AUSMIN), and the Franco-German Ministerial Council, respectively. The last meeting of AUSMIN, for example, took place in Sydney in June 2017. The list of attendees included Secretary of State Rex Tillerson and Secretary of Defense James Mattis. The meeting helped ease bilateral tensions after the unpleasant exchange between Prime Minister Malcolm Turnbull and President Donald Trump.

It can also be argued that the four U.S. presidents prior to Trump—from George H.W. Bush to Barack Obama—had a keen understanding of the importance of Mexico for the well-being of the U.S. Mexican affairs were a priority for their administrations. During the last twenty years, Mexican diplomacy relied heavily on presidential encounters. These became frequent and turned into the preferred mechanism to solve pressing conflicts and launch new bilateral initiatives. For example, NAFTA was initiated in the first presidential encounter between George H.W. Bush and Carlos Salinas. Similarly, two decades later, the Merida Initiative was brought to fruition in the first meeting between Presidents George W. Bush and Felipe Calderón.

Given Trump's constant attacks, it has become obvious that Mexican diplomats cannot engage with Trump to solve problems or to launch initiatives. As a result, it is necessary to return to the emphasis on mechanisms of bilateral consultation, in part as a response to the decentralized nature of U.S. policy-making. Specifically, Mexico must pursue a three-pronged strategy to:

1. Strengthen and reconfigure binational mechanisms of consultation.
2. Redouble diplomatic efforts to engage with the U.S. Congress.
3. Awaken Mexico's natural allies in the United States to lobby for mutually beneficial causes.

Mexican diplomatic efforts, headed by the NAFTA renegotiating team and the Mexican Embassy in Washington, are taking the necessary steps to achieve the second and third elements. Mexican officials are also fortifying their outreach to the Mexican diaspora in the U.S., recognizing the important voice of the Mexican-American population in U.S. politics. And it is worth acknowledging that the Mexican private sector is once again present in Washington. After a twenty-year absence, the top Mexican business association—the Consejo Mexicano de Negocios—recently hired a lobbying firm to represent its interests.

What is missing is perhaps the most important element: a reassessment of the institutional framework surrounding U.S.-Mexican relations, and the prioritization of the renewal of previous mechanisms of consultation. This reemergence could begin with the BNC, spearheaded by Tillerson and Mexican Foreign Minister Luis Videgaray, followed by meetings of the U.S.-Mexico Interparliamentary Group and the Border Governors' Conference.

The last two and a half decades have shown the tremendous difference that institutions can make. It is the difference between a harmonious relationship—

like the U.S.-Mexico commercial relationship—and fighting like cats and dogs—like the U.S.-Mexico debate on immigration. The difference lies in formal agreements and mechanisms and institutions that foster dialogue and diminish uncertainty in intergovernmental affairs.

Rafael Fernández de Castro is a professor at UC San Diego's School of Global Policy and Strategy and director of its Center for U.S.-Mexican Studies (USMEX).

DIGITAL TRADE: CALIFORNIA, MEXICO, AND NAFTA 2.0

By K.C. Fung

Abstract: *Renegotiating NAFTA presents an important opportunity to include digital trade. A modernization of NAFTA should provide for the free flow of data and information across borders and the balanced protection of intellectual property, while avoiding forced localization of digital assets and custom duties on electronically transmitted content. This can provide benefits to both the United States and Mexico. The state of California and the University of California, as important actors in the global innovative economy, can offer important and useful bridges in digital trade between the two countries.*

The North American Free Trade Agreement (NAFTA) was negotiated 25 years ago (USTR 2017a, 2017b), before the digital age. On May 18, 2017, the current administration notified Congress the intent to renegotiate NAFTA. The new trade talks can in fact represent a great opportunity to modernize the agreement and include provisions related to various aspects of digital trade.

The focus on digital trade is particularly relevant for the state of California and the University of California (UC). According to Quirk-Silva (2017), California in 2015 was the sixth largest economy in the world. The California economy is tied to trade, tourism, innovation activities, and the movement of human capital and finance (CalChamber 2017, Quirk-Silva 2017). California's top export destination continued to be Mexico in 2016, with an export value of $25.26 billion, about 16% of all California exports. Computers and electronic products remained California's largest exports to Mexico. U.S. service exports to Mexico and Canada more than tripled from $27 billion in 1993 to $92 billion in 2014. In addition, Mexican tourists spent $3.2 billion in California (CalChamber 2017).

California and the UC are leaders in innovation and activities related to intellectual property rights (IPRs) such as patents, copyrights, and trademarks. According to the Silicon Valley Institute for Regional Studies (2017), California accounted for close to 25% of U.S. internet-related jobs, about 22% of software jobs, and more than 40% of motion picture jobs. According to Joint Venture Silicon Valley (2017), $9.3 billion of venture capital investment flowed to Silicon Valley and an additional $13.8 billion went to San Francisco companies in 2016. In 2015, according to the University of California (2016), 1,745 new inventions were disclosed by UC researchers in 2015, with

520 U.S. patents and 795 foreign patents issued. There were 12,203 active inventions in UC's portfolio as of FY2015. Also, 934 startups have been founded on UC patents since 1980, with 85 startups formed in 2015 from UC inventions alone.

Digital Trade and NAFTA

Digital trade broadly includes e-commerce and related aspects such as IPRs and privacy. There are many digital issues that should be examined with a new NAFTA (USTR 2017a, Internet Association 2017, CalChamber 2017, Copyright Alliance 2017, The Software Alliance 2017). Here we will discuss briefly four topics.

First, for NAFTA 2.0, the agreement should allow the free flow of data and information across countries digitally, subject to some concerns such as privacy. The ability to transfer and access information across borders is important for the economies of the United States and Mexico as well as for research in North America (Internet Association 2017). In general, governments should only be allowed to restrict the free flow of information for legitimate public policy objectives. The UC system is an important part of this endeavor. For example, the National Science Foundation awarded UC San Diego and UC Berkeley a grant to establish the Pacific Research Platform (PRP), a science-driven data freeway. PRP will link West Coast research universities and allow data to move a thousand times more quickly. It may be possible that such data can be transmitted to universities in other countries (such as Mexico) in the future in a secured way (University of California 2017).

Second, there should be no forced localization of digital assets. Firms should not be required in general to store or manage data locally. Forced localization tends to hurt consumers and businesses and threatens the open nature of the internet (Elms and Nguyen 2017, Internet Association 2017, Beckerman 2017).

Third, an updated NAFTA should pledge not to impose custom duties on electronically transmitted content, encouraging free flow of videos, games, software, and music. The World Trade Organization has a temporary ban on imposing duties on digital content. New NAFTA provisions can ensure that this will continue, at least in North America.

Fourth, NAFTA should promote balanced protections for copyrights, patents, trademarks, and industrial designs related to digital trade. For example, creators of phonograms should be given the exclusive rights to reproduction and communication of their works (Technet 2017, Internet Association 2017, Elms and Nguyen 2017). However, to encourage research, teaching, news reporting, etc., fair use and some limitations of IPRs need to be considered. Furthermore, some "safe harbors" for internet service providers (ISPs) should be provided so that ISPs are not always held responsible for all potentially infringing materials on their platforms.

Conclusion

Renegotiating NAFTA, done properly, can be an opportunity to modernize the agreement to include digital trade. This can provide benefits to both the United States and Mexico. The state of California and UC, as important actors in the global innovative economy, can provide important and useful bridges in digital trade between the two countries.

K.C. Fung is a Professor of Economics at UC Santa Cruz, where his work focuses on international trade and finance, foreign direct investment, economic development, Asia/Pacific economies, and Silicon Valley.

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EDUCATION AND ECONOMY: INTERTWINED AND INTERDEPENDENT

By Patricia Gándara

Abstract: *Enabling communities to reap the benefits of the U.S.-Mexico commercial relationship requires creating viable pathways to a successful adulthood for binational youth. In California, we are failing to provide educational opportunities to Latinos, who now make up over half of the K-12 student population. And accelerated return migration has resulted in unprecedented waves of young people leaving California classrooms for Mexico, where they struggle to access education. These young people are especially well-suited to participate in the cross-border economy facilitated by NAFTA. But educational and workforce development policies must be made central to the current renegotiation if we are to create the human capital needed to sustain and grow our economies.*

Nothing is more essential to North American competitiveness than the education of our youth and hence the skill level of the workforce. It is therefore extraordinary that so little is mentioned about this topic in the discussions on NAFTA. Both the present well-being and the future of the U.S. and Mexico are highly dependent on how well we educate *the students we share*.

As of 2014, about 7.5 million children living in the United States were the children of Mexican immigrants.[13] Moreover, the best data available tells us that there are at least half a million U.S.-born citizen children of Mexican parents currently living and trying to integrate into Mexican schools, often without sufficient literacy in Spanish to do so successfully.[14] This number is known to be an underestimate because it does not include youth of high school or college age, where some of the greatest obstacles to accessing schooling occur.

Taken together, there are millions of students that the two nations share and they are receiving an inadequate education on both sides of the border. To the extent that these young people fail to acquire an education that prepares

[13] Child trends. 2014. *Immigrant Children: Indicators of Child and Youth Well-Being*. https://www.childtrends.org/wp-content/uploads/2013/07/110_Immigrant_Children.pdf, Appendix 1.
[14] Jacobo-Suárez, Mónica. 2017. "Migración de retorno y políticas de reintegración al sistema educativo mexicano." In J. Durand, C. Heredia and J. Shiavon, eds., *Perspectivas Migratorias IV*. Tijuana/Mexico City: COLEF-CIDE.

them to participate meaningfully in the economy of the nation in which they reside, innovation is stymied, productivity is held back, and economies falter. In parts of the United States where Mexican immigrant children are concentrated, such as the Los Angeles to San Diego corridor in Southern California, the average education level of the population is actually declining, as the mostly white and better-educated generation disappears and the new generation, largely of Mexican origin, takes its place.

American schools are relatively effective at teaching basic English literacy to immigrant children, yet Mexican-origin children fare poorly in U.S. schools by any measure. Barely a quarter (26 percent) of Latino[15] students reach proficiency in math in fourth grade compared with half (51 percent) of white students and two-thirds (65 percent) of Asian-American students, and the gaps increase as the students move up grades.[16] Unfortunately, proficiency in math for Mexican-origin students in early grades is a powerful predictor of later educational attainment.[17]

In 2006 only 61% of Latinos in the U.S. were graduating from high school with their classmates, and yet by 2016 this had climbed to 76%, an astounding increase that suggests sound educational policies can have a rapid and dramatic effect. Yet it bears mentioning that still one-quarter is not graduating. A similar increase in college graduation has not occurred, and Latinos remain the least likely of all groups to gain a college degree. According to the National Center for Education Statistics, in 2015 only 16% of Latinos had earned a BA or higher by age 29, as compared with 66% of Asians and 44% of non-Hispanic Whites. As a result, Latinos face significant barriers to entry in the higher-skilled workforce.

In STEM fields that support innovation, only 9 percent of college degrees go to Latinos, although they comprise nearly one-fourth of the college age population in the U.S.[18] The shortage of college degrees conferred to Latino

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[15] Most data sources combine all Spanish-speaking groups under one category, referred to variously as Hispanic or Latino; however, this is a reasonable proxy for Mexican origin as at least two-thirds of Latinos or Hispanics originate from Mexico.

[16] National Assessment of Educational Progress. 2016. "The Nation's Report Card." National Center for Education Statistics. U.S. Department of Education.

[17] Crosnoe, Robert. 2006. *Mexican Roots, American Schools*: *Helping Mexican Immigrant Children Succeed*. Stanford: Stanford University Press.

[18] Excelencia in Education. 2013. *Finding your Workforce: Latinos in Science, Technology, Engineering, and Math (STEM)*. http://www.edexcelencia.org/sites/default/files/FindingYourWorkforce-STEM-2015.pdf.

students hits especially hard in California, where more than half of all high school graduates are Latino (and about 85% are of Mexican origin[19]). The Public Policy Institute of California projects that California will be 1.1 million college degrees short to fill the anticipated workforce needs for 2030, with tremendous negative implications for the tax revenues and the economic strength of the state.[20] The shortfall in college degrees obviously has profound personal consequences as households see incomes stagnate.

In Baja California there are an estimated 50,000 U.S.-born youth who have recently arrived in Mexico from the U.S.,[21] and will probably seek to return at some point. However, more than half of young people in the region will abandon school before completing the equivalent of a high school education, and very few will go on to college.[22] Those young people who do not complete high school will neither be prepared to succeed in the U.S. or California economies nor will they be able to earn enough to achieve any social mobility in Mexico. Without at least some college, these young people will not be able to contribute to the vast potential for growth of the border economy, with dynamic industry clusters in aerospace and medical devices, among other STEM and R&D intensive industries.

It is clear that the cross-border economic relationship requires its own rules and institutions. And we must think along the same lines in terms of education and workforce development policies and programs for binational youth. Our research shows that binational high school students lack information on educational and professional pathways that will allow them to leverage their bicultural upbringing.[23] Their migration experience makes them ideally suited to participate in the cross-border economic activities that NAFTA enables, but it also puts them at risk of falling out of education. NAFTA agreements must reflect the importance of increasing the education level of the Mexican-origin

[19] Pew Research Center, Hispanic Trends. 2014. Demographic Portrait of Hispanics in California. http://www.pewhispanic.org/states/state/ca/.

[20] Johnson, Hans, Marisol Cuellar Mejia and Sarah Bohn. 2015. *Will California Run Out of College Graduates?* San Francisco: Public Policy Institute of California. http://www.ppic.org/publication/will-california-run-out-of-college-graduates/.

[21] Jensen, Bryant, Rebeca Mejía Arauz and Rodrigo Aguilar Zepeda. 2017. "Equitable teaching for returnee children in Mexico." *Sinéctica* 48.

[22] Orfield, Gary and Kfir Mordechay. Forthcoming. *Education, Inequality and the Future of a Great Cross-Border Megalopolis*. Los Angeles: Civil Rights Project, UCLA.

[23] Floca, Melissa, Ana Barbara Mungaray-Moctezuma, Max Matus, Mariana Barragan-Torres, Alfonso Basulto, Zaira Razu Aznar and John Porten. 2017. 2016 Survey on Education and Migration in San Diego and Tijuana: 9th and 10th Graders. [Data file and code book]. La Jolla: Center for U.S.-Mexican Studies.

population on both sides of the border if the updated pact is to be effective at improving the economic conditions across North America.

Patricia Gándara is a Research Professor at the UCLA Graduate School of Education, Co-Director of the Civil Rights Project, and Director of Education for the UC-Mexico Initiative Leadership Council.

PARADOXES AND PROSPECTS FOR PROGRESS

By Raúl Hinojosa and Edward Telles

Abstract: *U.S.-Mexico integration is in the midst of a historic shift that could signal a new era of mutually beneficial complementarity in trade and migration. The nearly quarter-century focus on trade liberalization policy, however, has ignored the much more potentially beneficial areas of migration and remittance reform, as well as other wage and employment dynamics that could lead to upward convergence of living standards across borders. Meanwhile, "inter-mestic" political dynamics in both the U.S. and Mexico have paradoxically entered into a highly conflictive period, which could produce vicious cycles of catastrophe or, alternatively, be resolved in a California-led pattern of integration.*

This thought piece is based on the research and policy agenda of the newly formed U.S.-Mexico-California Collaborative, and inspired by panel discussions among U.S.- and Mexico-based members of the collaborative at the August 2017 conference "Expanding Bridges and Overcoming Walls." The event brought together academics and policy makers to discuss research related to three fundamental questions:

(1) How do we explain the Trump campaign's paradoxical yet successful use of a misleading U.S.-Mexico narrative in counties with limited trade and migration ties to Mexico?

(2) Is there a material basis for dramatically opposed interests between Mexico and the U.S., or are we in fact entering into a new era of rising complementarity?

(3) Can California's historic shift from anti-immigrant to pro-integration serve as a model for the future?

The Trump Paradox

Donald Trump's political rise utilized the narrative that America ceased being great because of “illegal” immigrants and trade agreements destroying U.S. jobs. Many observers have conflated the rise of Trump’s electoral popularity with the existence of measurable negative impacts from trade and migration on the lives of Trump supporters, as well as evidence for the need for more restrictive immigration and trade policies.

An examination of the geographical concentration of voter support for Donald Trump, however, indicates a negative correlation between backing for Trump and the presence of Mexican immigrants, as well as import competition from Mexico or China. In fact, areas with a high concentration of Mexican immigrants and trade exposure to Mexico and China were actually more likely to favor Hillary Clinton.[24] The Deferred Action for Childhood Arrivals program (DACA) presents an even more exaggerated paradox: Of 120 counties that account for 75% of the DACA population, none voted for Trump. This raises the fundamental question of whether the Trump anti-immigrant and anti-trade policy approach is a sustainable political-economic movement.

A New Era of Complementarity?

In recent decades, the U.S.-Mexico relationship has been characterized by increasingly liberal trade and investment policies that have also been accompanied by more restrictive immigration policies and a lack of policies to make remittances more productive. Despite the focus on trade, it is migration flows to the U.S. that have actually been responsible for the largest positive impacts on U.S. GDP, while remittances have provided huge benefits to Mexican households and communities. Beyond the potential impact of policy reforms, the larger question is whether North America is entering a new era of complementarity, with upward wage and productivity convergence, increased intraregional and interregional trade and reduced migration flows.

[24] Raúl HinojosaOjeda, Maksim Wynn and Zhenxiang Chen. 2016. “Donald Trump’s False Narrative on Mexican Migration and Trade: A Geopolitical Economic Analysis.” BTI Institute: University of Houston.

- Demographically the U.S. has transitioned from a post WW-II population boom to a dramatic process of aging, beginning in the 1970s, which will produce net population loss without immigration. Meanwhile, Mexico's demographic dividend is also ending.[25&26]

- Migration between Mexico and the U.S. transformed from a relatively low postwar bracero recruitment to a post-1965 large-scale legal and undocumented network migration that expanded and peaked in the early 2000s. Since then, total Mexican migration declined precipitously, reaching net zero because of a combination of demographic and sectoral shifts.[27]

- The role of remittances expanded significantly from its induced origins during the Bracero program, shifting to a post-NAFTA explosive adoption of cash wire transfers. This represents an unprecedented integration between an expansive range of communities, with remittance corridors proliferating and becoming the most important source of income for investment in education, houses, and health.

- Trade relations transitioned from postwar domestic sources of growth to NAFTA-era internationalization of value chains, providing rising regional productivity advantages for both the U.S. and Mexico. However, despite higher productivity growth, wages in tradable sectors have not maintained pace.[28&29]

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[25] Jeffrey Passel and Ana Gonzalez-Barrera. 2017. "Mexicans in the United States: New Trends and Changing Characteristics (draft)." In Expanding Bridges and Overcoming Walls: A Transnational Interdisciplinary Conference. University of California, Santa Barbara, August.

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From Anti-Immigrant to Pro-Integration

We cannot allow a restrictive policy agenda in trade and migration to create the basis for a broad political movement. Perhaps the California experience both before and after Proposition 187 can serve as a model for the path forward in U.S.-Mexico relations. The stage is indeed set for potential backlash led by California against the punitive federal policies on immigrants, mirroring a similar backlash after the state's anti-immigrant initiatives of the 1990s. There is a lot at stake for California because of the California-Mexico trade, migration, and remittance flows. California's political leadership has demonstrated that it is committed to leading the way on sensible policies on immigration and trade, based on evidence-based research and a concern for human rights rather than the current administration's nationalistic policies that build on white anxieties about immigrants and minorities.

Prospects for North American Progress

The evidence is clear: Draconian immigration policies combined with the disintegration of NAFTA would drastically harm both countries. Recent research shows mass deportations would cause a 5% drop in U.S. GDP, with a trade war with both China and Mexico leading to a 3% decline in GDP.[30] Massive deportations would similarly have devastating effects on migrant-sending communities in Mexico and Central America, in particular because of associated remittance cutoffs. This would likely result in regional dislocations in Mexico and Central America, sending new waves of migration to the border.

Alternative U.S.-Mexico policy scenarios show major benefits would result from comprehensive policy reform on migration and remittances. Comprehensive immigration reform would provide $1.5 trillion in returns over 10 years, raising wages, productivity, consumption, and tax revenues, and generating positive impacts in areas of both high- and low-concentration of

[30] Sherman Robinson, Raúl Hinojosa-Ojeda and Karen Thierfelder. 2017. "NAFTA and Immigration: Linked Labor Markets and the Impact of Policy Changes on the U.S. Economy." UCLA North American Integration and Development (NAID) Center and Peterson Institute for International Economics (PIEE), July.

Mexican immigration.[31&32] And DACA legalization would provide even higher returns to the U.S. economy ($3.6 trillion over 40 years).[33] As was the IRCA experience, immigration reform today would also raise wages for immigrants and thus reduce demand for lower-skilled undocumented migration, reducing the need for greater border enforcement. In addition, new technology-enabled remittance reform has huge potential via financial inclusion of $25 billion of remittance cash-to-cash flow, attacking the root causes of migration by helping communities shift toward internal savings and investment dynamics.

A move toward major reforms in migration, remittance, and trade adjustment policy would reinforce general macro convergence trends of demographic and migration supply-side tightening, raising real wages and labor conditions and reducing income inequality while still meeting growing U.S. labor demand. The fortuitous irony is despite rising U.S. political tensions, North American conditions of macro convergence can now allow for the raising of wages in both countries, reducing the need for undocumented migration and increasing the demand for two-way trade in both countries.

Raúl Hinojosa is the Founding Director of the North American Integration and Development Center and Associate Professor in the César E. Chávez Department of Chicana/o Studies at UCLA.

Edward Telles is Director of the Broom Center for Demography and Distinguished Professor of Sociology at UC Santa Barbara.

[31] Hinojosa-Ojeda, Raúl. 2010. "Raising the Floor for American Workers: The Economic Benefits of Comprehensive Immigration Reform." Center for American Progress and American Immigration Council. Washington.
[32] Hinojosa-Ojeda, Raúl. 2011. "The Economic Benefits of Comprehensive Immigration Reform." *Cato Journal* (32)1, pp. 175–199
[33] Hinojosa-Ojeda, Raúl and Paule Cruz Takash. 2012. "No DREAMers Left Behind: The Economic Potential of DREAM Act Beneficiaries." UCLA North American Integration and Development (NAID) Center.

TRADE AND MIGRATION: NAFTA'S MIGRATION HUMP

By Philip Martin

Abstract: *International migration involves the movement of people over national borders, while international trade deals with the production of goods or services in one country and their consumption in another. Migration and trade can be substitutes, so that lowering barriers to trade between countries with different wage levels reduces economically motivated migration "naturally" as trade in goods narrows the differences in wages that can lead to unwanted migration. Or migration and trade can be complements, when there is both more trade and more migration. NAFTA was sold as a substitute for migration, but turned out to be a short-run complement. The end of the Mexico-U.S. migration hump justifies a new attitude toward migration.*

The North American Free Trade Agreement was the first reciprocal and rules-based trade agreement between an industrial and a developing country. Canada and the U.S. signed a free trade agreement in 1989 with little fanfare in the U.S., and Mexican President Carlos Salinas in 1990 proposed a similar FTA with the U.S. to lock recent Mexican economic policy changes into an international agreement and reassure foreign investors. The major opposition to NAFTA arose in the U.S., where presidential candidate Ross Perot in 1992 predicted that there would be a "giant sucking sound" as U.S. jobs moved to Mexico. Unions led by the AFL-CIO made the defeat of NAFTA their primary goal in 1993.

NAFTA was narrowly approved by the U.S. Congress in 1993 and went into effect January 1, 1994. The purpose of NAFTA was to increase trade and investment between Canada, Mexico, and the U.S., and a hoped-for side effect was less unauthorized Mexico-U.S. migration. NAFTA accomplished its trade and investment goals, helping to forge integrated supply chains between Canada, Mexico, and the U.S., especially in the auto industry. NAFTA also encouraged more Mexico-U.S. migration, a migration hump.

Freer trade speeded up changes in all three countries, including movement out of agriculture in Mexico and deindustrialization in Canada and the U.S. Workers displaced from factory jobs in Canada and the U.S. did not move to Mexico, but many children in the already poor rural Mexican families dependent on small-scale production of corn (a product that could be imported cheaper from the U.S.) soon realized that they could not get ahead farming as their parents had done for generations. The young people needed geographic and occupational mobility, viz., to get out of rural Mexico and small-scale farming. The result was a Mexico-U.S. migration hump that peaked in 2000.

An average of over 3,000 Mexicans a day were apprehended just inside U.S. borders during the late 1990s, when the Mexican labor force increased by a million a year but only 350,000 formal sector jobs were created annually. The U.S., by contrast, was adding over 10,000 jobs a workday or 2.5 million a year, and many farm, construction, and service employers were eager to hire rural Mexicans with relatively little education.

The Mexican government and many researchers urged the U.S. government to expand and create new guest worker programs so that Mexican workers could enter the U.S. legally. President Bill Clinton strongly opposed new and expanded guest worker programs, saying: "When these programs were tried in the past, many temporary guestworkers stayed permanently—and illegally—in this country. Hundreds of thousands of immigrants now residing in the U.S. first came as temporary workers, and their presence became a magnet for other illegal immigration." In other words, Clinton rejected the notion that large-scale Mexico-U.S. migration was inevitable and feared that admitting some Mexicans as guest workers would further increase rather than decrease illegal migration.

By 2007, over 10 percent of the 120 million people born in Mexico were living in the U.S., and 60 percent of the estimated 12 million unauthorized foreigners in the U.S. were Mexicans. Over eight million unauthorized foreigners were in the U.S. labor force, making one in 20 U.S. workers unauthorized.

The 2008-09 recession slowed Mexico-U.S. migration, as the U.S. unemployment rate topped 10 percent and federal and state enforcement efforts made it more difficult for unauthorized foreigners to enter the U.S. and find jobs. Mexico-U.S. migration began falling, so that the upsurge in Mexico-U.S. migration between 1990 and 2010 appears as a hump, first rising with the changes wrought by NAFTA before falling below the level that would have occurred if there had not been NAFTA.

NAFTA contributed to faster economic and job growth in Mexico that "saved" unwanted migration in the long run, but increased migration in the short term. The NAFTA experience shows that industrial countries can succeed in "attacking the root causes" of unwanted migration with freer trade, but there may be a migration hump that persists for a decade or two. There are many reasons for migration humps, but the simplest is that freer trade can displace workers quickly, while time is normally required to invest in factories or other businesses that create jobs in the poorer countries. If workers made worse off by freer trade have connections to jobs abroad, they may cross national borders, leading to a migration hump.

What's Next?

Mexico-U.S. migration is poised to remain on a downward trajectory due to slower labor force growth in Mexico and better education systems in rural areas that prepare Mexican youth for jobs in Mexico. At the same time, the U.S. has made it more difficult to cross the U.S.-Mexico border illegally and work, and this combination of decreasing push factors in Mexico, tougher and more costly illegal border crossings, and more difficulty finding work in the U.S. promise less illegal Mexico-U.S. migration in the future. However, legal guest worker migration from Mexico to the U.S. (and Canada) is rising, with 150,000 or more work H-2A and H-2B visas issued each year to Mexicans to fill seasonal U.S. jobs.

U.S. agriculture, which has been a port of entry to the U.S. labor market for rural Mexicans, is complaining of labor shortages and asking for easier access to legal guest workers. The policy question is whether to make it easier for U.S. farmers to hire rural Mexicans as guest workers, since fewer are arriving as unauthorized workers. Rising labor costs are encouraging mechanization, and the next decade is likely to witness a race between machines and migrant guest workers in U.S. farm fields.

Philip Martin is Professor of Agricultural and Resource Economics, emeritus, at UC Davis. He is also Chair of the UC Comparative Immigration & Integration Program and Editor of Migration News and Rural Migration News.

THE ECONOMICS BEHIND U.S.-MEXICO MIGRATION

By Giovanni Peri

Abstract: *Immigration from Mexico has been steadily declining in the last decade for demographic and economic reasons and due to the lack of appropriate legal immigration policies. Employment-based visas for non-college educated workers, regularization of undocumented workers, and continued availability of visas for family reunification represent mechanisms to ensure a stable number of workers from Mexico. Immigration legislation with forward-looking planning would benefit U.S. workers, U.S. employers, and Mexican immigrants.*

The largest migration corridor between any two countries in the world is formed by the ten million Mexicans living in the United States. This migration relationship has great economic significance for both Mexico and the U.S. In the next decade, three policy decisions related to Mexican immigrants will crucially affect the economy of the United States and especially of its border states (California, Arizona, New Mexico, and Texas). The importance and special nature of this relationship implies that it would be economically beneficial to reform important aspects of U.S. immigration policies to ensure a stable number of workers from Mexico.

Employment-based Visas for Non-college Educated Workers

The inflow of migrants from Mexico who filled jobs in agriculture, construction, and personal, domestic, and food services steadily increased in the 1990s and early 2000s. While most of those Mexican workers had low formal schooling (at most a high school degree), they had very high employment rates and their manual and practical skills filled jobs needed for entire sectors to grow. The inflow of Mexicans contributed to keeping the wage of manual jobs in those sectors relatively low as natives left those jobs and moved to positions that are more "skilled." This encouraged investment in and expansion of those sectors and contributed to employment creation in complementary jobs, often taken by native workers.

Immigration from Mexico has been steadily declining in the last decade for demographic and economic reasons and due to the lack of appropriate legal immigration policies. During the last five years, more Mexicans returned to Mexico than arrived in the United States. This decline in the supply of less-educated workers doing manual-type jobs will certainly have important consequences in entire sectors, leading to a slowdown in hiring for crucial positions because of the increased cost of filling them. In the long run, automation and mechanization will replace the demand for some of those jobs. Machines have already replaced jobs in agriculture, manufacturing, and services that can be easily mechanized. But some sophisticated manual jobs may be hard to mechanize at a reasonable cost.

An alternative, more beneficial to economic growth would be to allow more documented migration of less-educated workers, in the form of temporary visas and employment-based permits for people without a college degree. The introduction of a system like the H-1B program, but for jobs that do not require a college degree, would allow a larger inflow of non-college educated Mexican workers. Issuing initially temporary permits, with the option of renewing them if sponsored by the employer, and keeping their number at the level driven by labor demand, would prevent the decline of those types of jobs and allow those sectors to continue growing.

Regularization of Undocumented Workers

Undocumented workers currently supply 4% of U.S. labor. They represent 40% of workers with no high school degree and constitute about 85% of agricultural workers. In California, Arizona, and Texas, sectors such as construction, hospitality, and personal services depend heavily on undocumented workers. If the government pursues a policy of deportation of these workers, large sectors of the economy will bear sizable costs as they struggle to find labor and decline, while many American workers working in those sectors will see their opportunities reduced. Contrary to the rhetoric, research shows that the departure of Mexicans from local economies did not create jobs for Americans (Clemens, Lewis and Postel, 2017; Lee, Peri and Yasenov 2017), but produced instead a contraction of local economies.

Indeed, a path to legal status would aid economic and employment growth by increasing the productivity and wages of these workers. Workers who can enjoy legal status would become more efficient, because they would have a larger range of jobs available to them. The workers would invest more in learning skills and language and, in the long run, would increase their productivity. Their wages would grow and so would their consumption, stimulating local economies with important spillover effects on natives. Particularly important would be the effect of legal status for children and young adults (the so-called "Dreamers"). They would be encouraged to get an education if documented, because they would be able to reap the economic returns from it. These investments in human capital would result in a positive fiscal contribution for the U.S. government by Dreamers who attain a higher education level than the national average.

Family Reunification Program

Family reunification has been the main channel for legal Mexican immigration in recent decades. Immigrants who came to the U.S. to join family members are usually employed in the labor market and contribute to the economy. They also contribute to strengthening family networks, which often constitute channels that foster connections between local U.S. and Mexican economies. Research shows that more immigrants connected to networks of origin increase trade between locations (Rauch and Trindade, 2003). While an employment-based immigration program may be a more efficient way of selecting those immigrants who are in demand by U.S. employers, it would be incorrect to think that more employment-based visas will change substantially the type of immigration from Mexico. Most Mexicans come to the U.S. to work and support their family and they will continue to do so if legal ways of entry exist. It will be crucial to maintain the size of the family reunification program, or, if it were downsized, it would be important to scale up employment-based visas, accordingly, to avoid the reduction in supply of those manual skills described above.

Another related benefit of immigration of families from Mexico is their larger fertility relative to natives. Aging baby boomers continue to leave the labor force—a phenomenon that will produce a contraction of its growth—and a significant aging of the U.S. population is projected. Immigration from Mexico can be a factor slowing down these phenomena (even if, in the long run, fertility transition will set in for those families, too).

In conclusion, legislating immigration laws and negotiating migration agreements that ensure a stable number of workers from Mexico, within the frame of legality and with forward-looking planning, would be the most beneficial approach for U.S. economic growth. It would benefit U.S. workers, U.S. employers, and Mexican immigrants.

Giovanni Peri is Professor and Department Chair of Economics at UC Davis.

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NAFTA, VALUE ADDED AND TRADE-IN-TASKS

By Antonio Rodriguez-Lopez

Abstract: *Back-of-the-envelope calculations indicate that the U.S. trade deficit with Mexico is in fact a trade deficit with other countries that export intermediate inputs to Mexican firms, who assemble all the inputs to produce U.S.-bound final goods. Furthermore, productivity increases in Mexico are stalled and there has been a dramatic redistribution of the value created by firms in Mexico from salaries to capital gains. In light of this, a NAFTA renegotiation that targets rules of origin and Mexican labor-market conditions is long overdue and will benefit Mexico in the long run.*

Since NAFTA came into effect in 1994, real gross trade between Mexico and the U.S. has more than quadrupled, growing at an impressive rate of 15 percent per year during its first seven years, and then slowing down to a 3 percent growth rate between 2000 and 2016. In terms of gross trade value, Mexico is the second major exporter to the U.S. (after China), but is also the second export destination of U.S. goods (after Canada). In 2016, nominal U.S. imports from Mexico were $294 billion, while U.S. exports to Mexico were $231 billion, yielding a U.S. trade deficit of $63 billion.

Gross trade values, however, can be misleading because they are subject to substantial double counting, particularly if trade between countries is based on global supply chains where inputs cross borders multiple times before a final consumption good is completed. Moreover, when more than two countries are involved in a global supply chain, which is very common, gross trade values can give a very inaccurate picture of true trade balances.

Suppose, for example, that total trade between Mexico and the U.S. consists of a single $100 phone. The production of this phone needs three inputs: (1) An input valued at $60 and provided by the U.S.; (2) An input valued at $30 and provided by China; and (3) An input valued at $10 and provided by Mexico.

Inputs 1 and 2 are shipped to Mexico, where input 3 is added and the phone is then shipped to the U.S. for final consumption. In this case, the true U.S. trade deficit from importing this phone is $40, composed of a $30 deficit with China (from input 2), and a $10 deficit with Mexico (from input 3). Gross trade statistics, however, show a different picture, attributing a $40 trade deficit of the U.S. with Mexico, and a $30 trade deficit of Mexico with China. Although the U.S. trade deficit continues to be $40, all of it is attributed to Mexico when in reality only $10 of the phone value was added by Mexico.

Double counting and third-country involvement are both very relevant in U.S.-Mexico trade, which is heavily based on highly integrated supply chains. According to INEGI, 62.4 percent of Mexican manufacturing exports in 2015 were part of global supply chains. More importantly, INEGI calculates that the domestic value added in Mexico's global manufacturing exports in 2015 was only 45.6 percent of their gross value, with numbers fluctuating from 16.3 percent in audio and video equipment to 65.7 percent in the production of motor vehicles.

As an example of how dramatically different the U.S.-Mexico trade picture can be when we use value-added trade, let us take the results of Koopman, Wang and Wei (2014), who estimate using 2004 data that 74.6 percent of U.S. gross exports are value-added U.S. exports, while only 51.6 percent of Mexican gross exports are value-added Mexican exports. Assuming that these numbers apply for U.S.-Mexico trade in 2016, that implies that U.S. value-added exports to Mexico are $172.3 billion (74.6 percent of $231 billion), and Mexican value-added exports to the U.S. are $151.8 billion (51.6 percent of $294.2 billion). These numbers would indicate that the U.S. had a $20.5 billion surplus with Mexico!

Hence, in this simple back-of-the-envelope exercise, the U.S. trade deficit with Mexico from gross trade values is in fact a U.S. trade deficit with other countries that export intermediate inputs to Mexican firms, who assemble all the inputs to produce U.S.-bound final goods. This is not an implausible story, considering that Mexico has large trade deficits with input suppliers such as China and South Korea—Mexican data from 2016 shows Mexican trade deficits of $64.1 billion with China and $11.1 billion with South Korea.

This takes us to another important issue regarding U.S.-Mexico trade: the type of tasks or activities embodied in the value added of Mexican exports. If we arrange all the tasks needed to produce a final consumption good from the lowest-skill task (such as jobs in an assembly line) to the highest-skill task (such as a job in product research and development), trade theory tells us that with NAFTA, Mexico would specialize in lower-indexed tasks, while the U.S. and Canada would specialize in higher-indexed tasks. This indeed happened, but in the long term, focusing on low value-added tasks is hardly a good mechanism to ensure sustained productivity gains from trade.

With NAFTA, the Mexican path for continuous productivity gains is through incremental innovations in production processes leading through time to the employment of more sophisticated (and higher value-added) tasks. Although this process was present in the first years of NAFTA, it was abruptly interrupted—with a few exceptions, such as in the motor vehicle industry—after China took off in the early 2000s. Had Mexico moved up consistently through the skill ladder, the expected benefits from NAFTA would have materialized, especially for Mexican workers.

In this respect, data from INEGI shows that of the domestic value added in Mexican global manufacturing production in 2015, only 19.5 percent corresponded to salaries (a steep decline from its 36.7 percent share in 2003). In contrast, capital gains—labeled as gross operating surplus—accounted for 53.2 percent of Mexican value added in 2015 (up from a 35.9 percent share in 2003). Note that the decline in the labor share almost exactly matches the increase in the capital share. Shockingly, these numbers imply that the valued added of Mexican labor was merely 8.9 percent of the gross value of Mexican global exports in 2015.

In light of this, a NAFTA renegotiation that targets rules of origin and Mexican labor-market conditions is appropriate and will benefit Mexico in the long run. On the one hand, stricter rules of origin will allow Mexican firms to take over the production of more sophisticated (and higher value-added) inputs. Of course, this also depends on the ability of Mexico to provide higher-skilled, more educated workers. On the other hand, given the dramatic redistribution of Mexican value-added shares from labor to capital during the last years, it seems there is enough room for improvements in Mexican labor conditions without hurting the country's competitiveness.

The U.S., which quite possibly has a trade surplus in value added with Mexico, will also benefit from stricter rules of origin, as more activities will be performed in the NAFTA area. But what about U.S. jobs? A common narrative is that NAFTA destroys jobs in the U.S., which later appear in Mexico. According to this popular rhetoric against NAFTA, the correlation between U.S. and Mexican manufacturing employment should be negative: As jobs are destroyed in the U.S., they are created in Mexico. However, the manufacturing employment indexes for the U.S. and Mexico since 1993 show that this is not the case. In fact, the correlation between U.S. and Mexican manufacturing employment is positive and remarkably high at 0.835. Even if we take year-to-year percentage changes, the correlation remains very high at 0.635. That is, in general U.S. and Mexican manufacturing employment move in the same direction, suggesting that—at least at the aggregate level—U.S. and Mexican workers are complementary rather than substitutes.

Hence, although industries may indeed move plants from the U.S. to Mexico, the efficiency gains from the global supply chain are large enough to allow these industries to expand their U.S. employment—U.S. firms destroy some jobs (mostly low-skilled and highly routine), but the expansion in employment in the tasks that remain in the U.S. more than makes up for the job losses. Hence, the key issue for the U.S. is how to retool the released workers so that they can be reabsorbed in other activities with similar pay and benefits.

Antonio Rodriguez-Lopez is an Associate Professor of Economics at UC Irvine and a specialist in international trade.

DEVELOPING A WORKFORCE FOR THE GLOBAL ECONOMY

By Harley Shaiken

Abstract: *NAFTA was expected to expand trade, create jobs, and raise wages across North America. Trade certainly took off, but critics of the agreement point to U.S. manufacturing job losses and stagnant or falling real wages for workers in both the U.S. and Mexico. Rather than walk away from trade with Mexico, a far better and more realistic alternative is a trade agreement that ensures improved rights for Mexican labor, simultaneously enhancing the bargaining position of U.S. and Canadian workers. Absent changes to labor standards, we condemn workers in North America to more dislocation and lower wages and destroy an opportunity for truly innovative workforce development and highly competitive economies.*

Trade can be a powerful force to fuel strong sustainable economic growth. The choice a trade agreement provides is for living standards to harmonize upwards, laying the basis for a broadly shared prosperity, or to slide downwards, with damaging consequences for workers and communities. The promise of NAFTA almost a quarter century ago was to expand trade, create jobs, and raise wages across North America. Trade certainly took off, but the reality has been far different for jobs and wages.

While profits flowed to investors and large corporations, U.S. manufacturing workers saw severe job dislocation, and workers in the U.S. and Mexico faced stagnant or falling real wages. As the NAFTA renegotiations unfold, labor rights have emerged as a central concern. The issue isn't exactly new. Two months before the vote in 1993, I wrote an opinion piece in *The Washington Post* that began, "Among the flurry of statistics on NAFTA one fact stands out: Mexican workers are producing considerably more and earning considerably less than they did at the beginning of the 1980s. This combination of higher productivity and lower wages could send both U.S. jobs and wages heading south."

What do conditions look like on the ground now? I accompanied Congressman Sander M. Levin, the senior Democrat on the U.S. House Ways and Means Committee, on a fact-finding trip to Mexico in August 2017 to find out.

The booming auto industry in Mexico—almost 20 percent of manufacturing GDP and over a third of manufacturing exports—is a place to start. The performance of this industry is a tribute to Mexican workers and offers real possibilities for Mexico. Consider a new $1 billion BMW assembly plant in the northern Mexican state of San Luis Potosí that will produce the BMW 3 series, a luxury sports sedan that costs $40,000 or more. The gleaming state-of-the-art plant will employ 1,500 workers when it opens in 2019. Typically, new plants such as this one achieve productivity and quality comparable or even higher than in the U.S. or Canada, potentially paving the way for high wages for workers and a road to the middle class in Mexico.

What will these BMW workers actually earn? They'll start between $1.10 and $2.53 an hour, according to Bloomberg. Are these just market forces of supply and demand working themselves out? Not at all. A company union, typical of much of Mexico's export sector, negotiated a "protection" contract in 2014 before a single worker was even hired. These wages aren't simply low, they are suppressed by a lack of labor rights.

Investors might cheer in the short run, but depressed wages damage Mexico in the long run. Rock-bottom wages in a world-class assembly plant set a standard that leads to even lower wages in supplier plants and other spinoff jobs throughout the economy. The flip side of depressed wages is diminished purchasing power and slower economic growth. Moreover, Mexican workers trapped in high-productivity poverty set a standard that will press down on wages in the U.S. and Canada. In the U.S., the context for this downward pull is that the average pretax real income per adult of the bottom 50% has been stagnant from 1980 to 2014, according to UC Berkeley Professor Emmanuel Saez. In fact, men's median wages for full-time work have been mired at mid-1975 levels, according to the 2017 Census Bureau report on "Income and Poverty in the United States." In 2016, the median for a year-round, full-time worker was $51,640 compared with $51,766 in 1975, all expressed in real 2016 dollars.

A labor system stacked against workers has distorted comparative advantage, Ricardo's nineteenth century notion that if each country concentrates on what it does best, all countries benefit. Comparative advantage based on innovation, quality, and productivity fosters sharp competition that may be tough but can be in everyone's interest. Mexico's comparative advantage, however, has become a lack of labor rights. Moreover, suppressed wages in Mexico combined with an investment security on par with Ohio exerts a magnetic attraction for new investment.

Mexico is projected to become the fifth largest auto producer in the world by 2020, producing 5 million light vehicles annually. Five new plants will open between 2016 and 2019 alone. And output is not simply small low-margin cars, but includes the Audi Q5, Lincoln MKZ, and Cadillac Escalade, among other luxury offerings.

What does this mean for jobs? The Economic Policy Institute concludes that between 1993 and 2013, the U.S. lost 850,000 jobs as a result of NAFTA—and this figure does not include the impact of much of the new surge in auto investment. U.S. auto jobs have slid from 1,275,000 in 1998 to 934,000 in 2016, a loss of 341,000 jobs. In Mexico, auto jobs increased from 185,000 in 1998 to 740,000 in 2016, a gain of 565,000. Last year, almost 80 percent of Mexico's output was exported to the U.S. and 9 percent to Canada.

The issue, however, isn't simply the employment effects of trade between the U.S. and Mexico but rather the impact of NAFTA as a model—strong investment guarantees and weak or nonexistent labor rights—for U.S. trade engagement with the world. U.S. manufacturing jobs overall slid from 17.6 million in 1998 to 12.3 million in 2015, a drop of 30 percent, or over 5 million jobs.

Clearly, many factors played a significant role in this job loss from automation to new ways of organizing work. Paul Krugman, however, points out that as much as half of the dislocation between 2000 and 2016 could be attributed to offshoring. Daron Acemoglu and colleagues also reported in a 2016 paper that Chinese imports from 1999-2011 displaced 2-2.4 million jobs, 1 million of which were directly in manufacturing.

The problem is not a growing, vibrant Mexican economy or auto industry—that could be in the interest of all countries in a trade agreement—but rather severely depressed wages as the lure for new investment. That combination leads to high-productivity poverty. On my recent trip to Mexico, a female leader of a highly regarded NGO in Piedras Negras, a Mexican border town with many assembly plants, told us "eggs are a luxury item now" because wages have shrunk so drastically.

After delaying labor reform for two decades, Mexico ratified a constitutional amendment on February 17, 2017, that added much-needed transparency to the labor relations system. The amendment allows workers to vote for union officers and to ratify contracts. While the reform is a step in the right direction, the "secondary" legislation to implement it has yet to be passed. The final result could diminish or even negate the reform's impact. It's hardly encouraging that the proposed legislation to add transparency was put together without input from independent unions, among other stakeholders.

Is the solution to simply turn our back on Mexico? No, this approach is neither desirable nor feasible. A far better protection for U.S. and Canadian workers is a trade agreement that ensures better rights for Mexican workers. If Mexican labor rights were better protected, the bargaining position of U.S. and Canadian workers would improve and of course the reverse is equally true. Corporations would benefit from expanding markets and trade could fuel what the legendary U.S. labor leader Walter Reuther called "high velocity purchasing power."

Strong language and enforcement in the agreement are necessary, but hardly sufficient. Demonstrated reform in the labor area in practice must be the precondition for signing the new deal, not simply its promise. Otherwise, the new agreement will lock in a dysfunctional and destructive status quo for another quarter century.

There are many critical issues in the NAFTA renegotiation beyond labor standards—from climate change to dispute settlement to rules of origin. Absent changes to labor standards, however, we condemn workers in Canada, Mexico, and the United States to more dislocation and lower wages.

Without demonstrated labor reform in Mexico, the danger is that we go back to the future. I concluded my 1993 *Washington Post* article by saying, "The real issue is that U.S. workers will be competing with Mexican workers under circumstances in which Mexican workers have little leverage to change their economic situation.… Accepting NAFTA on these terms could do more to knock U.S. workers out of the middle class than enable Mexican workers to enter it."

Will this conclusion describe economic conditions a quarter century from now? To avoid this, a renegotiated trade agreement must build a highway to the middle class for workers across North America, laying the basis for innovative workforce development, highly competitive economies, and democratic societies.

Harley Shaiken is Class of 1930 Professor of Letters and Science and Director of the Center for Latin American Studies at UC Berkeley, where he is a Professor at the Graduate School of Education and a member of the Department of Geography.

WILL RENEGOTIATING NAFTA MAKE CHINA GREAT AGAIN?

By Alan Spearot

Abstract: *Reverting to a pre-NAFTA policy environment may leave Mexico, the U.S., and Canada worse off than before NAFTA was signed, as firms exporting from a post-WTO China may more readily replace decreased trade within the NAFTA zone. Alternatively, deepening integration among NAFTA countries would skew the competitive advantage toward North American businesses, increasing trade within the region while crowding out trade from China and other outsiders. Meeting the challenge of making trade work for all communities will likely be more difficult if we adopt policies that ultimately improve the market position of the region's largest competitor, rather than increasing the efficiency of the North American market.*

A critical aspect of all strategic interactions is the response of outsiders. In trade policy, this is certainly the case for any regional trade agreement. Upon implementation, the economic benefits accruing to its members can either be amplified or mitigated depending on the response of countries outside the agreement. In the case of NAFTA, there is an obvious outsider that complicates any efforts to renegotiate the agreement: China.

Indeed, it is difficult to even refer to China as an "outsider" to the NAFTA zone, since in many ways it is the ultimate insider. Billions of dollars of trade and investment flow into and out of China every year, and our economies, in practical terms, are permanently linked through common firms, supply chains, and dependence on resources. Trade from China has always been a natural competitor to trade within the NAFTA region, and over time, has had a profound effect on the efficacy of NAFTA itself.[34]

NAFTA initially increased the share of imports that were sourced within the NAFTA zone between the years 1994 and 2001. But this market share began to decline after 2001, which was around the time China became a permanent member of the WTO.[35] After this point, the dependence of the NAFTA zone on itself slowly reverted toward its pre-NAFTA averages. Indeed, at present, *the*

[34] For example, Feenstra and Kee (2007) show that increased variety of goods from China reduced the variety of goods imported from Mexico.

[35] WTO membership gave China continued MFN access to the U.S. market, which prior to accession required yearly congressional approval. For an analysis of removing this uncertainty, see Handley and Limao (2017).

NAFTA zone appears to be only modestly more dependent on itself than it was before the agreement was signed.[36]

With China such an important exporter to the NAFTA zone, what should we expect to happen if the U.S. backs out of NAFTA? Implicit in this thought experiment is that NAFTA countries will implement most-favored nation tariffs and other policy barriers that limit trade between the U.S. and Mexico (and perhaps also the U.S. and Canada if the Canada-United States Free Trade Agreement is also terminated).[37] Ultimately, the direct effect of these barriers will be to make the NAFTA market less competitive, especially the U.S. In this new equilibrium, one usually expects higher domestic prices, which consumers dislike, as do firms that use goods as inputs to production. However, tariff revenues will rise and other domestic firms will enjoy the less competitive environment. Raising tariffs, the argument goes, protects domestic industries and workers by reducing foreign competition.

However, with a large exporter such as China, these domestic gains will be attenuated, perhaps very strongly, by Chinese sales to each NAFTA market. Absent additional barriers imposed on imports from China, firms exporting from China will recognize that they can substitute for the decreased exports within the NAFTA zone.[38] This effect is particularly important since we have integrated further with China since NAFTA was signed. Thus, in the presence of a trading outsider such as China that has grown considerably over the last few decades, terminating NAFTA may actually leave countries *worse off* than before NAFTA was signed in the first place. Simply put, we would be reverting to a pre-NAFTA *policy environment*, but in an *economic environment* with a far more formidable global competitor.

As an alternative, consider a scenario in which NAFTA countries attempt to deepen the agreement, with the ultimate goal of making the NAFTA zone more efficient. This could be accomplished by policies that increase common governance, offer enhanced flexibility in labor markets, and generally limit non-tariff barriers to commerce within the NAFTA zone. However unlikely these types of improvements might seem, especially in today's political

[36] Before NAFTA, approximately 25% of imports (excluding raw materials) to NAFTA countries came from other NAFTA countries. This share reached a peak in 2001 at 40%, but fell to approximately 30% by 2016.
[37] Some officials indicate that Canada and Mexico intend to implement NAFTA between themselves even if the U.S. leaves. See "Mexico, Canada to stay in NAFTA even if U.S. leaves: minister," Reuters, August 31, 2017.
[38] Importantly, increased barriers on China would likely run afoul of WTO trade rules, since U.S. tariffs are mostly set at their negotiated bindings.

climate, the stated negotiating objectives of the U.S. trade representative do actually include some sensible ideas for enhanced trade facilitation within NAFTA.[39]

One effect of such policies would be to lower prices and perhaps increase consumer choice, both excellent outcomes for consumers, especially the poor. However, a deepened agreement would also provide a meaningful buttress against increased import competition from China. Deepening integration within the NAFTA zone would skew the competitive advantage toward businesses that operate within the NAFTA zone, increasing trade within the region while crowding out trade from outsiders, China in particular.

Of course, nothing of this speaks to the effects of NAFTA on its individual constituents. Indeed, much of the motivation behind the popular and academic discussions of trade lies in trade's effects on workers and local communities.[40] With a focus squarely on international negotiations, even the best trade deals rarely address the domestic policies that are required to make trade work for all communities. Workers must transition to new industries and locations, and government can play a role in this transition. Critically for any renegotiation of NAFTA, this transition of workers is likely to be more difficult if we adopt policies that ultimately improve the market position of the region's largest competitor, rather than increasing the efficiency of the North American market.

Alan Spearot is an Associate Professor of Economics at UC Santa Cruz and a specialist in international trade, industrial organization, and applied econometrics.

[39] See the section on "Customs Trade Facilitation, and Rules of Origin" on pages 5 and 6 in "Summary of Objectives for the NAFTA Renegotiation," Executive Office of the President.

[40] The impact of trade shocks varies considerably across localities, depending on their dominant industries, and has been used to evaluate the impact of trade on jobs (Autor, Dorn and Hanson, 2013).

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COMPETING IN AN ERA OF FARM LABOR SCARCITY

By J. Edward Taylor

Abstract: *Agriculture has long been a flashpoint in international trade negotiations. But a shrinking and aging hired farm workforce is set to change the face of farming in North America. As a result, farmers in the U.S. and Mexico are taking steps to grow more food with fewer workers by improving technologies and farm labor management strategies. The competitiveness of U.S. agriculture, as well as the welfare of farmworkers and of the communities in which they live, depends on how we as a society adapt to a new era of farm labor scarcity.*

U.S. farmers can no longer count on rural Mexico to provide a steady supply of low-wage workers. The factors pulling Mexicans out of farm work, such as rising education and growing service economies, are at play in other developing countries as well. Instead, as farmworker wages rise, farmers in the U.S. and Mexico are taking steps to grow more food with fewer workers by improving technologies and farm labor management strategies. The big question for farmers and researchers is whether new labor-saving technologies will make up for the shrinking farm labor supply, and what the implications will be for farm workers and the communities in which they live.

Until recently, U.S. farmers had access to an abundant supply of farmworkers, mostly from rural Mexico. But the hired farm workforce is shrinking and aging, as fewer people in rural Mexico are growing up to be farmworkers. A new UC Davis study estimates that the number of farmworkers from rural Mexico is decreasing by 150,000 per year. This means U.S. and Mexican farmers have to compete for a shrinking number of farmworkers.

There are three major reasons for this declining farm workforce. First, rural Mexicans are becoming more educated. Average schooling is 4.9 years for rural Mexicans fifty or older; for people in their twenties it is 9.7 years. Better-educated children eschew farm work in Mexico, just as they do in the United States. Second, Mexican families are getting smaller. In the 1960s, Mexican women had nearly seven children each. Today they have just over two—about the same as women in the U.S. Third, Mexico’s workforce is shifting out of agriculture and into a service-based economy, just like the U.S. workforce did several decades ago. In short, what is good for rural Mexico in this case creates challenges for U.S. farmers.

These findings have far-reaching implications for farmers and policy makers. U.S. farmers can no longer count on rural Mexico to provide a steady supply of low-wage workers. Immigration will not be a solution to U.S. farm labor problems in the future. Guest worker programs are only a short-term option: They will have to recruit from an ever-smaller pool of available farmworkers in Mexico. There is little hope of recruiting enough farm workers from other countries to take the place of Mexican workers. U.S. farmers would have to seek workers from more distant countries. Mexico has a new program to import farmworkers from Guatemala, but the Central American farm workforce is far too small to meet farm labor demands of the United States, Mexico, and Central America. The factors pulling Mexicans out of farm work, such as rising education and growing service economies, are at play in other developing countries as well.

U.S. farmers could respond to farm labor shortages by growing fewer fresh fruits and vegetables that require large amounts of labor, but consumers' demand for these foods is growing. Instead, as farmworker wages rise, farmers in the U.S. and Mexico are taking steps to grow more food with fewer workers by improving technologies and farm labor management strategies. The big question for farmers and researchers is whether new labor-saving technologies will make up for the shrinking farm labor supply, and what the implications will be for farm workers and the communities in which they live. There are already many technology success stories, including mechanical wine-grape harvesters, dry-on-the-vine raisins, and shake-and-catch nut harvesters. Mechanical engineers are teaming up with information and technology startups in Silicon Valley and elsewhere to develop robotic solutions such as artificial intelligence-assisted weeding and thinning machines and even robotic fruit harvesters that pick only the ripe fruit.

Research and development, infrastructure, and the farm workforce itself will have to change in this era of farm labor scarcity. Federal and state governments, social science researchers, and nonprofit foundations will have to think about the roles they ought to play to keep agriculture competitive while ensuring that farmworkers and rural communities benefit. As universities and the private sector collaborate to invent novel ways to confront the farm labor challenge, farmers will have to learn about new technologies. The internet will have to reach out into farmers' fields. A teched-up agriculture requires a teched-up workforce. Our educational system, including high schools, community colleges, and universities, will have to prepare a new generation of workers with the skills to manage new crop technologies. Rather than importing low-skilled farmworkers, the U.S. might well import agricultural engineers from Mexico, whose universities currently produce many more engineers per capita than U.S. universities do.

Technologies make farmworkers more productive, and this makes it possible for farmers to pay higher wages in a new age of labor scarcity. Some crops and tasks are easier to mechanize than others. Rising wages benefit farmworkers and the communities where they live only if workers have the skills demanded by new technologies, and if lower-skilled workers can shift their labor from newly mechanized crops and tasks to others that are more difficult to mechanize. Innovations that keep an aging farm workforce employed and productive are needed while researchers develop robots that can perform tasks that seem simple for humans but are challenging for machines. Some of those innovations are not so high-tech, such as growing berries on platforms in the fields that save workers' backs, or power-assisted pruning shears for orchards.

The competitiveness of U.S. agriculture, as well as the welfare of farmworkers and of the communities in which they live, depends on how we as a society adapt to a new era of farm labor scarcity. One thing is certain: One way or another, farmers will have to adjust, and if we could step in and out of H.G. Wells' time machine, we would see that both farms and the farm labor force will look very different in the not-so-distant future.

J. Edward Taylor is a Professor of Agricultural and Resource Economics at UC Davis, where he directs the Rural Economies of the Americas Program (REAP) at the Institute of Governmental Affairs.

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THE LABOR MARKET IMPACTS OF NAFTA

By Greg C. Wright

Abstract: *International trade has led to overall gains for the U.S., while simultaneously causing a reshuffling of the type of work being done. Although the net benefits from trade agreements such as NAFTA may be positive, the hollowing out of vulnerable communities has understandably led to the deterioration of the NAFTA brand in the eyes of many Americans. While nearly all the jobs that were lost are gone for good, an important strength of recent empirical work has been to clearly identify the regions, industries, and workers that were most exposed to the downsides of specific trade policies. The renegotiation of NAFTA could be accompanied by targeted efforts to help these communities become more engaged with the modern economy.*

Economic research on the impact of international trade on labor markets has made important progress in recent years. Some of the news has been sobering—for instance, hundreds of thousands of manufacturing workers likely lost their jobs due to China's entry into the World Trade Organization (Autor, Dorn and Hanson, 2013). Similarly, NAFTA has had a lesser, but still negative, employment impact in specific industries and geographies (McLaren and Hakobyan, 2012).

But there is good news as well: Despite the job losses, both China's WTO entry and NAFTA led to net gains for the U.S. overall (Caliendo, Dvorkin and Parro, 2015; Caliendo and Parro, 2015). This is a common story when it comes to international trade, namely that job losses tend to be concentrated in specific regions and industries but are typically offset by more widespread gains for everyone. Specifically, the gains come in part from cheaper and more varied products for consumers and in part from an increase in production efficiency for firms, who get access to new inputs and a larger market for their products.

In general, international trade drives economic growth and lifts all boats, as evidenced by the strong correlation between trade, economic growth, and incomes across nearly all countries and over long periods of time (Donaldson, 2015). Moreover, trade—even trade with low-income countries—has little or no impact on the total number of jobs in the economy, a statement that may seem counterintuitive but can be seen given the lack of historical correlation between changes in the U.S. unemployment rate and changes in the volume of U.S. trade.

On the other hand, trade leads to a continuous reshuffling of the type of work being done, as new jobs are created and old jobs die. Within the U.S. this happens as the global demand for different U.S. products rises and falls, and as U.S. firms restructure their supply chains in search of greater efficiency and profits. For instance, it's no secret that over the past two decades U.S. manufacturers have found it profitable to offshore some parts of their production processes to countries with lower-wage workers. But in normal years these labor market disruptions are indistinguishable from the job-market churning that naturally occurs in a large, healthy economy.

However, in the face of an unusually large trade shock the disruption can be more substantial and, critically, can lead to negative spillovers for local communities that are most exposed to trade. Workers affected by free trade agreements like NAFTA are not only likely to end up in lower-paying jobs (Ebenstein, Harrison and McMillan, 2014), but may rely more on public benefits over their lifetimes (Autor, Dorn, Hanson and Song, 2014) or become less valuable marriage partners (Autor, Dorn and Hanson, 2017). These shocks can be harmful to the affected workers and the communities in which they live, often for decades into the future (Dix-Carneiro and Kovak, 2015).

So while the overall benefits from trade agreements such as NAFTA may be positive, the hollowing out of vulnerable communities has understandably led to the deterioration of the NAFTA brand in the eyes of many Americans. Some of these Americans now see a possible renegotiation of the agreement as a chance to claw back some gains.

But the truth of the matter is this: While NAFTA should be modernized in a variety of dimensions, nearly all the jobs that were lost are gone for good. In fact, the vast majority of these jobs would have disappeared even in the absence of NAFTA, taken over by one variety of robot or another (Acemoglu and Restrepo, 2016). A steady decline in the manufacturing share of the workforce long preceded NAFTA.

This is because the manufacturing sector has been producing ever-more output with ever-fewer workers for decades, reflecting a rise in productivity that looks much like the rise in agricultural productivity that occurred a century ago. That period also saw a gradual shift of U.S. workers out of agriculture, as well as an angry backlash by agricultural workers whose livelihoods were being threatened. However, the stark parallels between these periods ultimately suggest that the current shift away from manufacturing work is both inevitable and, in the long run, good for U.S. workers.

Nevertheless, a modern, wealthy country should manage structural changes in its economy in a humane way. In the case of NAFTA, much more could have been done. And many of the communities still suffer, with the opioid crisis the latest example of a struggle that is probably not unrelated to the trade shocks of the past three decades.

One way of making partial amends would be to include U.S. government support for affected communities as part of the renegotiation of NAFTA. In fact, one of the strengths of recent empirical work in international trade has been to clearly identify the regions, industries, and workers that were most exposed to the downsides of specific trade policies. This work could guide targeted efforts to help these communities become more engaged with the modern economy.

Greg C. Wright is an Assistant Professor of Economics at UC Merced.